



Governance of the platform economy in developing countries and emerging economies

Focus: African perspectives

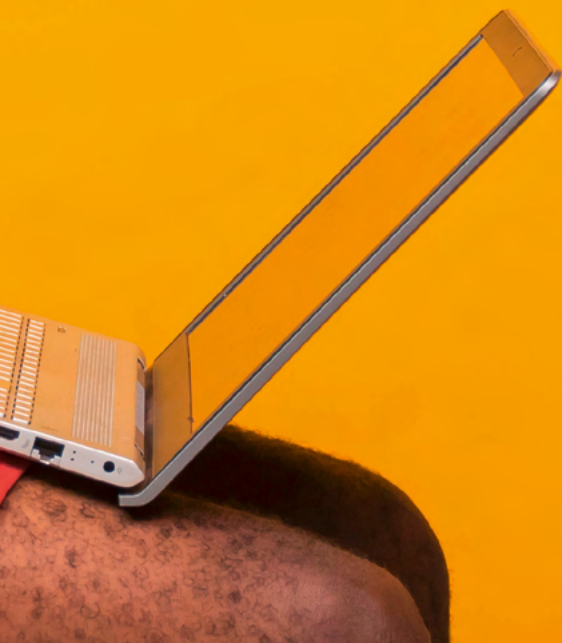
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Focus: African perspectives



‘We need to bring far more diverse voices to the table, particularly from developing countries and traditionally marginalised groups. Important digital issues have often been decided behind closed doors, without the involvement of those who are most affected by the decisions.’

(Report of the UN Secretary-General’s High-level Panel on Digital Cooperation, 2019)¹



Foreword

All over the world platform companies are transforming markets and sectors, ranging from retail to health care, transport, financial services, the media and energy, to name just a few. The COVID-19 pandemic has accelerated digitalisation globally and thus supported the rise of the platform economy.

The increasing significance of the platform economy has unleashed conflicting effects. On the one hand, it promises innovation, new social impetus and economic growth as a result of disruptive business models and technologies. On the other, it is creating entirely new economic and societal challenges, for example in the areas of communication and opinion-forming, competition, labour markets, data protection and sovereignty, and in terms of reducing inequalities.

Against this background, governments and civil societies all over the world have to consider what form adequate governance approaches for digital transformation may take. What regulatory policy or policies are needed for environmentally sustainable and inclusive economic development in the age of the platform economy? This publication asked 68 experts from all over the world to identify and assess the challenges that arise from digital transformation.

Although the publication looks at trends for developing countries and emerging economies all over the world, special attention is paid to the continent of Africa. Digital transformation offers Africa particular potential for development. Infrastructure can be built from scratch and obsolete technologies can be bypassed (leapfrogging). In coming years, digital skills and digital infrastructure will play a central role in Africa's economic development. Even today, numerous African start-ups and platform companies with innovative and creative digital ideas generate added value for their communities. The same holds true for international tech companies who invest on the African continent. At the same time, the radical structural change brought about by the platform economy raises numerous questions for actors in politics, administration and civil society:

How can a broad impact and digital gender equality and equal opportunities be achieved in the course of digital transformation? How can African companies hold their own in competition with the world's market leaders from the global north and what frameworks are required for local entrepreneurs? Can the platform economy make a significant contribution to creating good and future-proof jobs for many people or will existing disparities just be amplified?

How can opportunities for democracy, opinion-forming and a strong civil society be used and risks (e.g. fake news) be reduced?

This study wishes to make a contribution to discussions in this complex and exciting area.



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Furthermore, the results of our survey show that the platform economy also poses new challenges to development cooperation. New approaches in governance and regulatory policy require innovative tools for delivering advice and capacity development.



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List of abbreviations

AI	Artificial Intelligence
API	Application Programming Interface
ATAF	African Tax Administration Forum
AU	African Union
BEPS	Base Erosion and Profit Shifting
BMZ	German Federal Ministry for Economic Cooperation and Development
BPO	Business Process Outsourcing
CITA	(Nigerian) Companies Income Tax Act
DC	Development Cooperation
DIE	German Development Institute
EMSD	Emerging Markets Sustainability Dialogues
EU	European Union
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation of the European Union
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GSMA	Groupe Spéciale Mobile Association (global association of mobile operators)
IFC	International Finance Corporation (organisation of the World Bank Group for private sector promotion)
ICT	Information and Communication Technology
IoT	Internet of Things
ITU	International Telecommunication Union
LDC	Least Developed Countries
MGG	Managing Global Governance Academy (course run by the German Development Institute)
NGN	Nigerian Naira (Nigerian currency)
OECD	Organisation for Economic Co-operation and Development
SDG	Sustainable Development Goal
SSA	Sub-Saharan Africa
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNCTAD	United Nations Conference on Trade and Development
USD	US dollar

1.0 Introduction

Digitalisation is significantly increasing the pace of change in production and consumption habits – both in industrial countries and in developing countries and emerging economies. New technologies permeate all areas of life and are moving economic transactions and social interactions either entirely or partially into the digital arena.

Digital platforms are central mechanisms of digital transformation. The platform economy has rapidly assumed global dimensions and is fundamentally changing a large number of economic sectors. Seven out of the ten most valuable companies in the world are based on platform business models.² Some of these companies were only founded after the turn of the millennium and have grown at an unprecedented rate. These platforms operate globally and have strong positions in their markets – Google, for example, has over 90% of the market for internet searches and Facebook has 66% of the global market for social media.³

The United Nations Conference on Trade and Development (UNCTAD)⁴ defines platforms as follows:

‘Digital platforms provide the mechanisms for bringing together a set of parties to interact online. Transaction platforms are markets with an online infrastructure that supports exchanges between a number of different parties. They have become a core business model for

*major digital corporations (such as Amazon, Alibaba, Facebook and Ebay), as well as those that are supporting digitally enabled sectors (such as Uber, Didi Chuxing or Airbnb)’.*⁵ (UNCTAD, Digital Economy Report 2019)

The transformation towards a platform economy offers considerable potential for development – for example, through new innovative services, skipping inefficient technology stages (known as technology leapfrogging), knowledge transfer, new employment possibilities and innovations. At the same time, political and administrative systems are faced with entirely new governance challenges as a result of the radical structural change that comes with the platform economy.

In view of the tendency of platform companies to establish monopolies or oligopolies due to network effects, what form should a modern policy framework take? Are the approaches adopted to date for taxing companies with digital business models still appropriate for our times? How can the creation of value be increased locally in a digital age? How can the potential generated by new digital communication methods for opinion-forming and democratic processes be harnessed and negative effects (e.g. fake news) minimised?

These are just some of the questions that policy-makers and the regulatory authorities have to grapple with in the age of the platform economy.

This publication provides an introduction to the effects of digital transformation and the platform economy and forms a basis for discussion. The publication is targeted at employees of ministries, authorities, non-governmental organisations, universities, research institutions and projects in development and international cooperation.

The publication is primarily aimed at those who are looking for an overview of governance and economic policy matters in the context of the platform economy, in particular in developing countries and emerging economies.

On the basis of a global survey of decision-makers and professionals in the development and interna-

tional cooperation sector, the effects expected in 10 policy dimensions are recorded and their consequences for policy and administration presented. Below is a brief overview of the survey and its results. The next section illustrates the 10 policy dimensions covered in the survey. Here the trends that define the platform economy and possible regulatory approaches are highlighted. It includes assessments by the surveyed experts as well as data, background information and concrete examples on the respective topics. In their comments, the professionals make a detailed assessment of each policy dimension and take special regional and sectoral factors into account.

Finally, there is an interview with Kenyan digital expert Nanjira Sambuli on the results of the study. In this interview she outlines the specific opportunities and challenges the platform economy poses for the continent of Africa.

EMSD survey on digital transformation

In 2020 the Emerging Markets Sustainability Dialogues (EMSD) programme surveyed 68 decision-makers and professionals, most of whom came from developing countries and emerging economies. They were asked which trends and policy challenges could be identified in their countries in connection with digitalisation and the platform economy.

The aim of the survey was to gauge the mood regarding the effects of digitalisation in general and the platform economy in particular.

In addition, the participants were asked where they saw governance challenges and how they assessed the relevance of these for their countries.

The survey does not claim to be a scientific study. Participants were professionals in the field of development policy with different levels of expertise in relation to digitalisation. The responses of those surveyed reflect their personal perceptions and assessments.

68 participants from four continents

The study participants are members of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH's Global Leadership Academy (GLAC) network or are alumni of the Managing Global Governance Academy (MGG) run by the German Development Institute (DIE).

They come from 26 states on different continents (see Fig. 1). Most of the professionals interviewed work in politics and the public sector: other areas represented are academia and education, the non-profit sector and the private and financial sector.

Figure 1: Number of participants per country

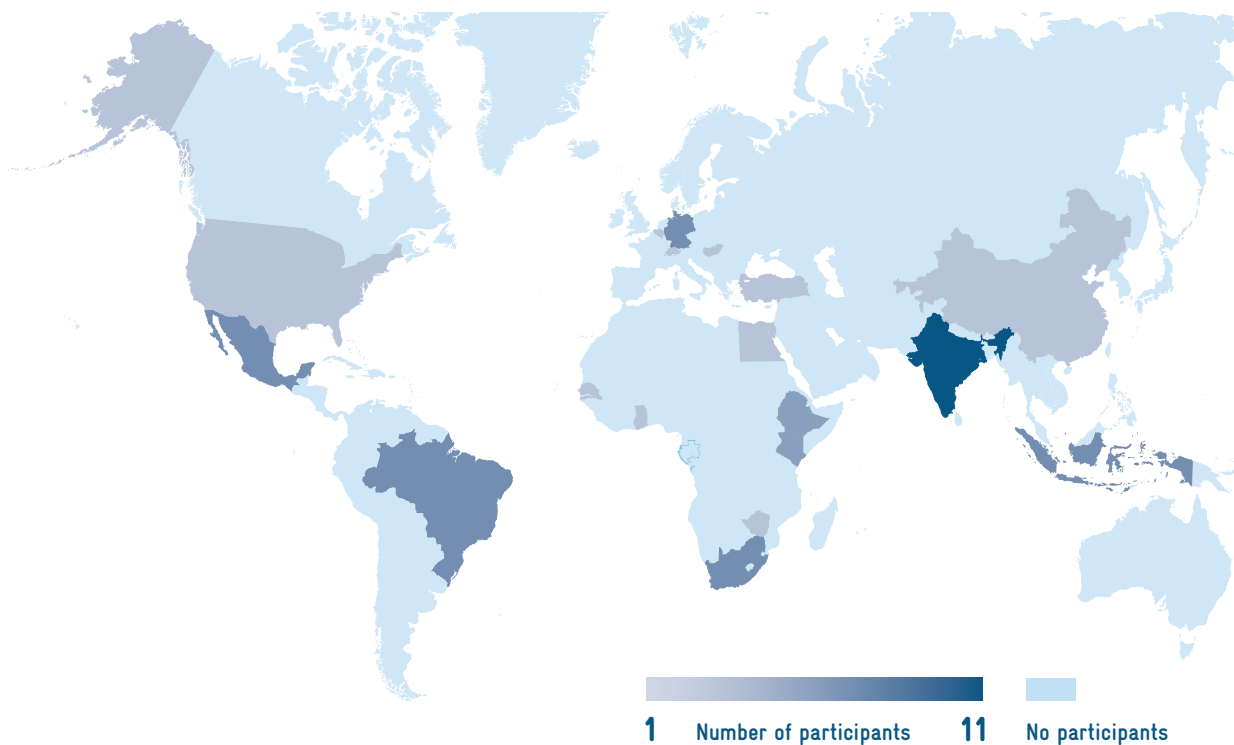
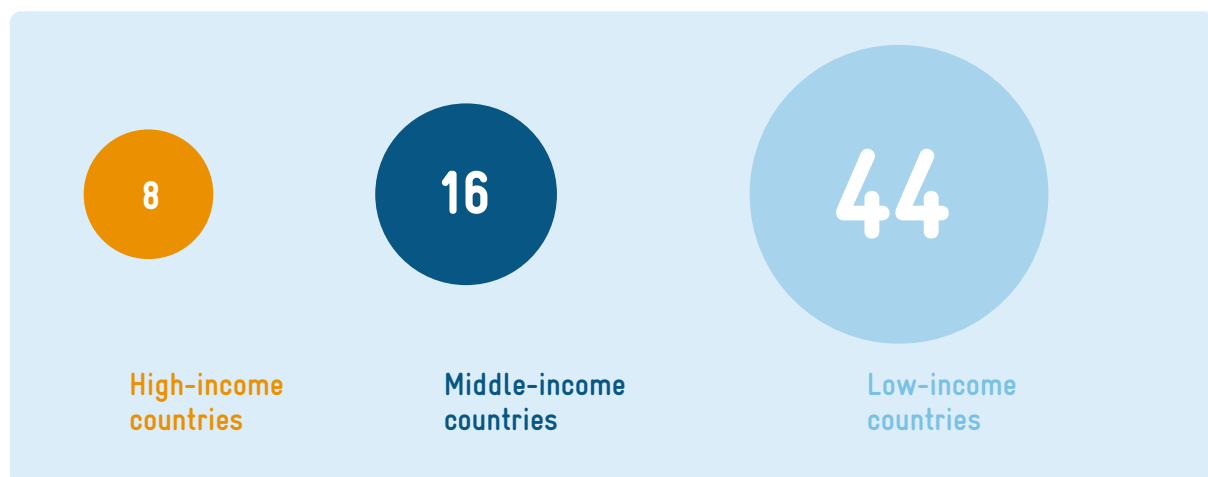


Figure 2: Participants according to level of national income



Global Leadership Academy:

The Global Leadership Academy commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by GIZ provides the opportunity for those in positions of responsibility from all areas of society to discover new solutions for global challenges and to develop innovative approaches in their areas of influence to implement the 2030 Agenda.

The Global Leadership Academy works with prestigious cooperation partners to run leadership development programmes that focus on dialogue and work across different policy areas. It is responsible for devising these formats, implementing the programme and ensuring quality together with the cooperation partners. Starting in 2012, this has led to the creation of a network with nearly 700 people in 114 countries and more than 25 cooperation partners that implement change projects.

Website: <https://www.we-do-change.org/>

Managing Global Governance Academy:

The Managing Global Governance Academy based at the German Development Institute (DIE) brings together highly qualified young managers from government institutions, think tanks, research institutions, civil society and the private sector from emerging economies in the Global South and from Europe. It is the main aim of the course to prepare future change makers for a professional and private life that is dedicated to sustainable development in their home country and in the world.

Website: <https://www.die-gdi.de/ausbildung/mgg-academy/>

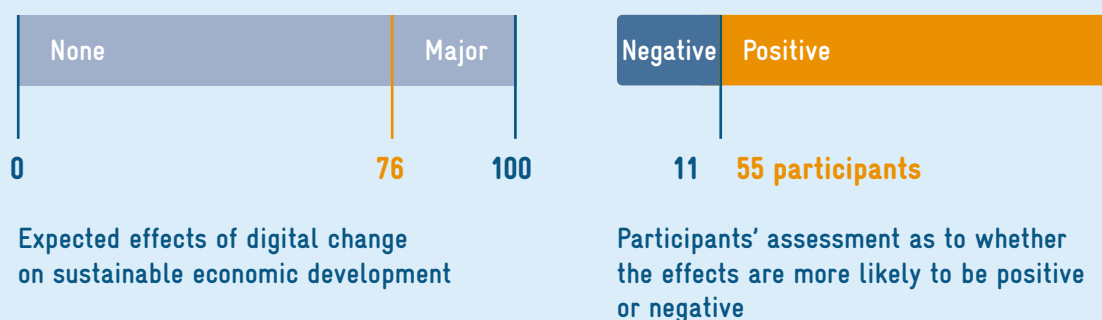
German Development Institute:

The German Development Institute, which has its headquarters in the UN city of Bonn, is one of the world's leading think tanks and research institutions in the field of global development and international cooperation.

This Institute, which operates on an interdisciplinary basis, brings together research, advice and training and forms an interface between theory and practice.

Website: <https://www.die-gdi.de/>

Figure 3: Expected impact of digital transformation



Survey results

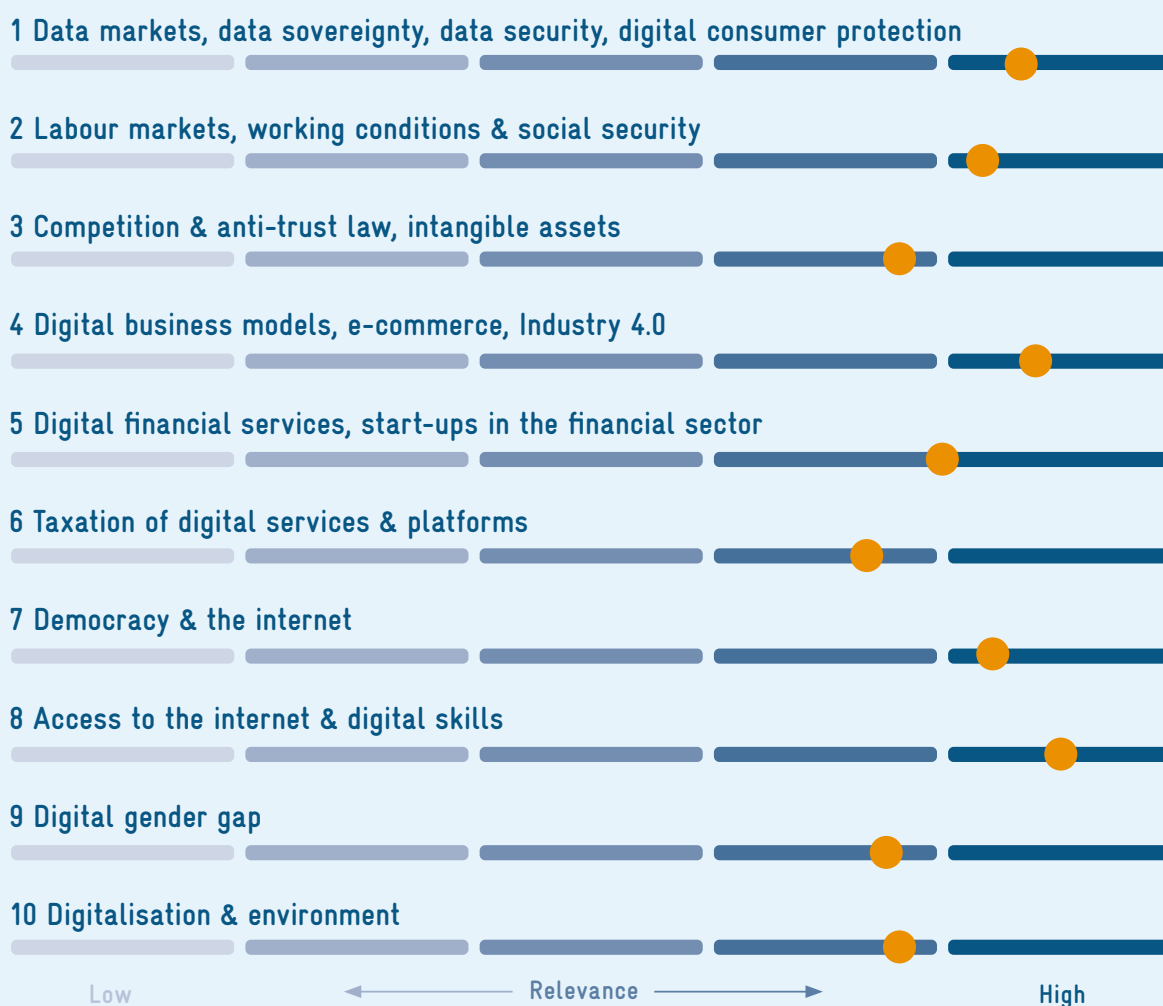
The professionals surveyed expect the platform economy and digitalisation to have major effects on economic development in their countries. In the responses, digitalisation and the platform economy were mainly seen as an opportunity for sustainable development. However, for 16% of those surveyed, the risks were the dominant factor. Here the assessment of digitalisation as a risk did not correlate with specific regions or sectors (see page 11, Fig. 3).

In order to identify needs in the partner countries, the professionals were asked to rate the relevance of different policy dimensions in relation to digitalisation and the platform economy.

The overview of dimensions shows that those surveyed attributed high to very high relevance to all policy dimensions (see Fig. 4).

A large majority of participants considered that their country was inadequately prepared when it came to the challenges posed by the platform economy. Only 3% of those surveyed are of the opinion that their country is well prepared and 72% are of the view that their country is prepared in some areas. 25% responded that, in their opinion, their country is not prepared for the economic and social changes brought about by the platform economy (see page 13, Fig. 5).

Figure 4: Priority attributed to the 10 policy dimensions



How can international development actors help their partner governments to master the challenges brought about by the platform economy?

The participants consider that *capacity building & training* (4.3 out of a possible 5 points) followed by

high-level *political discussions* (3.8/5) are suitable tools.

Provision of *analysis & statistics* (3.6/5) and the delivery of *advisory services* (3.5/5) are also considered relevant (see Fig. 6).

Figure 5: Participants' assessment as to whether their country is prepared for the challenges of digitalisation

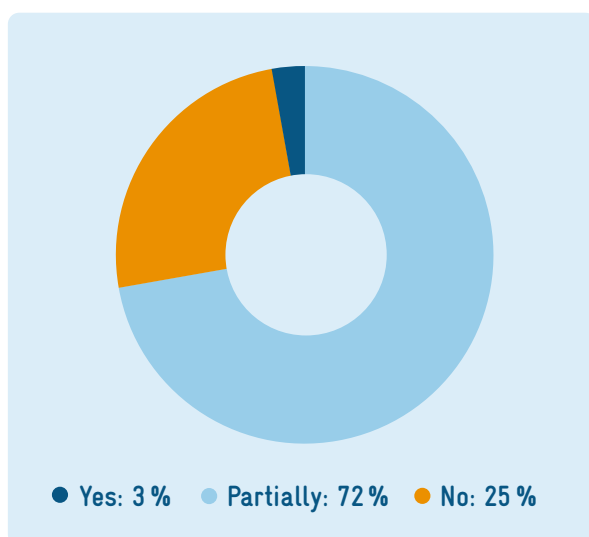
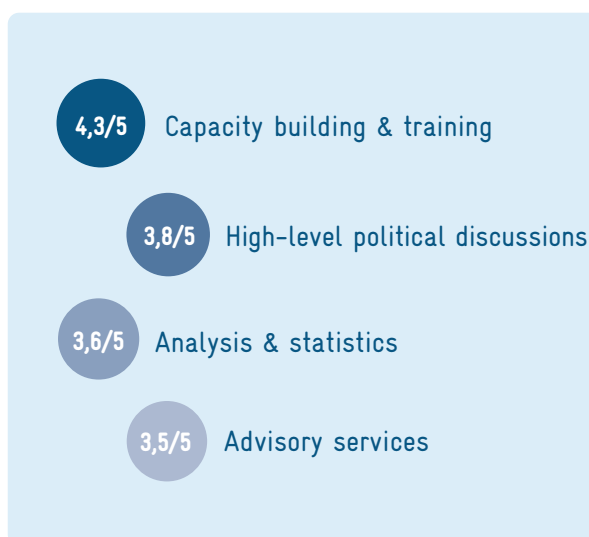


Figure 6: Demand for development cooperation tools



Emerging Markets Sustainability Dialogues (EMSD)

A global programme implemented by GIZ, EMSD serves as an incubator and knowledge platform for innovative sustainability solutions in and with emerging markets. To this end, EMSD brings together change agents from think tanks as well as the public, private and financial sectors in multi-stakeholder dialogues focused on three core topics: 'Sustainable Infrastructure', 'Sustainable Finance' and 'Digital Solutions for Sustainability'. To ensure a lasting impact, EMSD and its partners scale promising solutions across GIZ's global network and through transformation processes such as the G20 engagement groups.



2.0

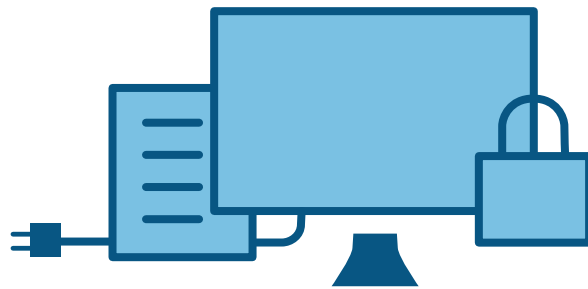
Policy dimensions



2.1 Data is becoming the resource of the 21st century

→ Policy dimension:

- Data markets
- Data sovereignty
- Data security
- Digital consumer protection



Relevance:



Survey results:

77%

Question:

‘What relevance should policy-makers attribute to the policy dimension “data markets, data sovereignty, data security and digital consumer protection” in their countries?’

of those surveyed awarded a minimum of 4 out of 5 possible points.



Core statement:

Until recently, data was generally free but, as a result of the rapid growth in data flows and increased economic use, it became subject to market forces. With this background in mind, those involved in policy and administration in industrialised countries, developing countries and emerging economies are paying greater attention to issues relating to digital data protection, regulation of digital markets and data sovereignty.

Regional perspective

In general, participants from Asia and Latin America rated this survey item as being very important.

- **Asia: 4.6 out of 5** possible points
- **Latin America: 4,4 out of 5** possible points



Sectoral perspective

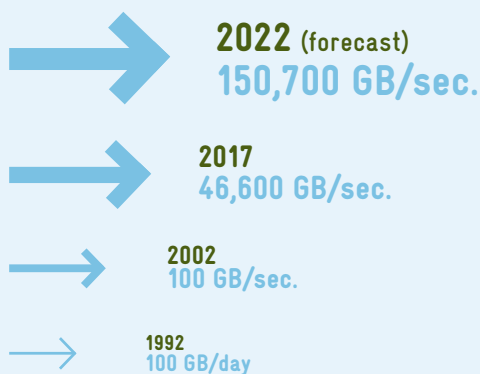
This dimension was most important to participants from the academia & education sector **4,4 out of 5** possible points.



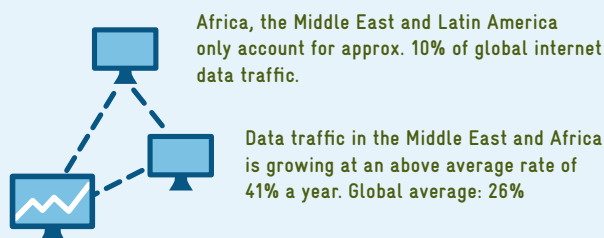
Academia & education

Facts and figures:

Strong growth of data traffic, measured as global IP traffic⁶



Forecast for internet data traffic during the period 2017–2020 according to regions of the world⁷



Africa's data processing capacity is also increasing with the growth in data flows, even if this increase is comparatively moderate⁸

Undersea fibreoptic cable for Facebook and partners
Length: 37,000 km
Name: 2Africa
Planned start-up: 2023

In 2019 the continent of Africa had more than

80 computer centres.

To put this in perspective: globally there are around

4.657 computer centres.



Brief overview

- As the information in the facts and figures (left-hand column) shows, the transfer of social interactions to the digital space has increased dramatically since the turn of the millennium. This means every *click, like, share or swipe* is generating data on the internet that can be traced back to the user (groups). Increasing data density allows detailed user profiles to be produced, which permits a precise analysis and, in part, prediction of behaviour patterns.
- Digital platforms specialise in the professional processing of data and generate economic value through its use. This involves evaluating immense data flows with the aid of artificial intelligence (AI) to analyse and model needs and behaviour patterns.
- As a result of digital networking of production factors, data is becoming a basic resource, even beyond the platform industry – take for example automatic communication between devices (*internet of things*, or IoT). Vera Songwe, Executive Secretary of the United Nations Economic Commission for Africa, identified ‘data as the world's most important commodity’ for generating economic growth.⁹
- The disclosure and processing of personal data and its use in data markets raises questions about the lawfulness of data collection and ownership rights, power of disposal, digital protection of personality rights and data security.¹⁰ In addition to the challenge of ensuring that data is secure in commercial or public interactions, it is increasingly becoming necessary to protect data from criminal attacks from the internet (*cyber crimes*).
- The problem of lawful data collection is becoming even more relevant as a result of the COVID-19 pandemic: for instance, there has been an exponential rise in the use of digital means of communication (e.g. Zoom) and online services (e.g. increasing orders with online delivery services). Furthermore, governments and authorities have introduced tracing apps to track the spread of infection as a means of fighting the pandemic.

- The rise in the data economy raises the question of which new regulatory requirements to protect personal data and national data sovereignty are being created. Many governments have taken the initiative here: according to UNCTAD, to date only 34 countries have not yet passed corresponding laws.¹¹ In Africa, however, only 17 states have passed comprehensive data protection legislation. The legislative process is still under way in other states.¹²
 - The General Data Protection Regulation (GDPR) of the European Union (EU), which takes a regional approach to regulating data processing, is often considered an international standard for protecting personal data.¹³ It is a common, pan-European, directly applicable legal standard that regulates data collection and storage in favour of users. Other states have followed Europe's example and introduced similar regulations (e.g. Brazil, India, Japan and South Korea).¹⁴
 - Data protection regulations can, however, only guarantee full protection of personal data in the geographical area covered, even if service providers from other countries and regions undertake to comply with the rules. Data transferred from Europe via a platform service provider to be stored in a computer centre outside the EU cannot, in practice, be protected against unlawful access. The computer centre is subject to the competent courts of the state in which it is located. For this reason, regulation should go hand in hand with an adequate digital infrastructure in order to give effective protection.¹⁵ The GAIA-X project is currently creating the basis for a comprehensive European digital infrastructure which ensures data sovereignty.¹⁶
 - Regional regulations for digital internal markets will be key in the future. This will not only ensure protection of personal data with the help of modern standards for the data infrastructure and internal and supranational data traffic, but will also maximise the economic potential of digitalisation. In this connection, the data flagship launched jointly by the European Union and the African Union (AU) is a promising initiative.
- An example: Data Protection Africa¹⁷**
- Data Protection Africa is a publicly accessible online portal on data protection that is operated by the South African consultancy firm ALT Advisory.
 - The online portal publishes information on the data protection regulations in 32 African countries and their enforcement.
 - Relevant court judgements on different aspects of data protection are also collated on the portal.

References for further reading and the final notes for all sections can be found in the Annex from page 68 onwards.

2.2 Platforms change forms of work and employment relationships

→ Policy dimension:

- Labour markets
- Working conditions & social security



Relevance:



Survey results:

Labour market regulation scores on average **4,1 out of 5** possible points.



Question:

‘What relevance should policy-makers attribute to the policy dimension “labour markets, working conditions & social security” in their countries?’

Regional perspective

Participants from **Latin America** considered this dimension to be particularly important, awarding **4.4 out of 5** possible points.

Core statement:

Digital platforms change the way in which services are performed. Platforms that connect workers with customers (*gig economy*) create jobs and open up new opportunities for developing countries and emerging economies (e.g. through formalising work). At the same time this structural change creates new conflicts between innovation and traditional sectors (e.g. *ride hailing apps* vs. conventional taxis).

Sectoral perspective

Participants from the fields of **non-profit** (4.5 out of 5 possible points) and **academia & education** (4.5 out of 5 possible points) consider this dimension to be particularly relevant.



Non-profit



Academia & education

Perspective according to income level

Tends to be more significant with increasing income:

Middle-income countries (lower range): 4 out of 5 possible points,

Middle-income countries (upper range): 4.2 out of 5 possible points,

High-income countries: 4.3 out of 5 possible points.



Facts and figures:

In the Global South, it is estimated that 30 million workers found jobs through platforms in 2019 (gig workers).¹⁸




30 million

In a study conducted in eight African countries, the number of platform workers was estimated to be approx. 4,8 million.¹⁹



4,8 million

Platforms create jobs in South Africa.²⁰



30 %

A survey conducted by the Fairwork Foundation of South Africans who worked via a platform showed that approx. 30% of those surveyed were previously unemployed.

Brief overview

- The platform economy creates new types of working relationships. Digital platforms connect service providers, who are often self-employed, with customers for largely short-term work (*gigs*), reducing transaction costs in the process. As a rule, a distinction is made between work required at a specific location and web-based platform work.
- For platform work at a specific location, services are procured digitally but provided on site. This includes things like taxi rides, domestic help and logistics services. In contrast, web-based platform work is carried out on a fully digital basis and, with internet access, can be performed anywhere – examples include information technology services and creative work.
- Platforms make it easier to access the market because of the low entry barriers. This increases earnings potential, including for workers with fewer formal qualifications. Online platforms create a global sales market for individual services. Developing countries and emerging economies are often at an advantage when it comes to costs. This includes both less sophisticated work – known as click work (e.g. labelling graphics) – as well as standardised processes such as call centre services and even highly qualified areas such as IT services or creative work.²¹
- The platform work also demonstrates other effects, depending on the degree of formality of the labour market. In informal markets, platform work represents a first step towards formalising the labour market on account of the registration of workers and formal payment. As labour markets in developing countries are typically more informal, the fact that work is formalised can have particularly positive effects. However, better regulation in relation to taxation of workers may prove to be a disincentive to moving from the informal labour market to the formal sector. Policy-makers therefore face the challenge of striking a balance between effective regulation of platform work and incentives to formalise work.
- Formal working relationships are visible to policy-makers and can be regulated. For labour markets that already operate on a formal footing, there is a risk that working relationships conducted via

platforms can be more insecure. The protective mechanisms established under labour law no longer apply due to the service provider's pseudo self-employment, even though the platforms still have the *de facto* authority to issue the worker with instructions.

- Highly qualified online work, in particular, requires digital skills. Suitable general conditions are vital if the potential of digital work is to be exploited to the full to support the economic development of developing countries and emerging economies. Alongside fair working conditions, these include the promotion of a digital infrastructure in particular.
- Platform work entails new requirements for the regulation of labour markets and social insurance systems. The first laws in which gig work is taken into account have already entered into force, for example in California:²² since January 2020, companies have had to overcome higher hurdles before they can classify platform workers as self-employed. This aims to strengthen social protection for gig workers. However, several platform companies have successfully introduced a ballot proposition (Proposition 22) to vote against this law so that they can be exempted from the new regulation.²³
- A study by the think tanks Cenfri (South Africa) and JustJobs Network (India) in six African and Asian countries found that there are currently no specific regulations on platform work in these countries. The authors of the study point out that those responsible for policy and administration, including in the Global South, are faced with the new challenge of creating a modern framework to regulate work in the platform economy that reflects the degree of digitalisation in their country.²⁴

An example: Fairwork Foundation²⁵

- The Fairwork Foundation is a BMZ-financed project run by the Oxford Internet Institute which aims to improve standards in the global gig economy.
- The Fairwork Foundation evaluates digital platforms on the basis of five principles for fair work and produces a ranking. The principles were developed with a number of actors, including the International Labour Organization. They are: Fair remuneration, reasonable working conditions and contracts, fair management and the right to representation. Fairwork Foundation awards a maximum of 10 points in collaboration with local institutions. Where it can be shown that the minimum standards have been met, one point is awarded per category, with a bonus point for more extensive measures.
- Platforms were evaluated in India and South Africa in 2019 and 2020, although to date no organisation has received the maximum number of points. The top performers are SweepSouth, GetTOD and NoSweat in South Africa and Urban Company in India, each receiving eight points.
- Based on the assessment, targeted measures to boost capacities and adapt structures are implemented in cooperation with the platforms in order to improve working conditions.

2.3 Digital platforms pose new challenges for open competition

→ Policy dimension:

- Competition & anti-trust law
- Intangible assets



Relevance:



Data from the survey:

3,8 / 5

Question:

‘What relevance should policy-makers attribute to the policy dimension “competition & anti-trust law, intangible assets” in their countries?’

points is the average score given for this policy dimension.



Core statement:

The specific business model with multi-faceted user relationships creates network effects. As a result, markets with digital platforms are prone to monopolies or oligopolies Existing competition regulations are often not sufficient to take these new circumstances into account and to respond appropriately to the rapid growth of the platforms.

Regional perspective

Comparing the results from the different regions of the world, it is the participants from Asia who attach most importance to this dimension, with 3.9 out of 5 possible points.

Sectoral perspective

Participants from the academia & education sector attach most importance to this dimension, with 3.8 out of 5 possible points.



Academia & education

Facts and figures:

Platform companies are becoming powerful global players:

Seven of the ten most valuable companies in the world are based on platform business models.²⁶

By **2025** it is forecast that **30 %** of global sales revenues generated by companies will be achieved with the aid of platform models.²⁷

Network effects and high costs of change allow digital platforms to obtain a strong market position

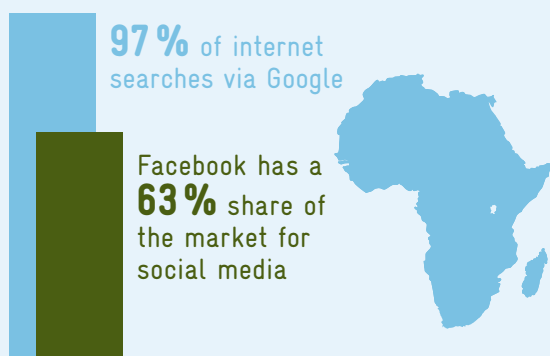
 Google has captured **90 %** of the market for internet searches

Facebook has a **66 %** share of the global market for social media.²⁸



Amazon accounts for more than one third of global online retail trade.²⁹

The figures in Africa are similar³⁰:



Brief overview

- The business model of platforms is based on handling the interactions between different user groups, thereby reducing the transaction costs for users. A distinction is made between advertising platforms (e.g. Facebook) and transaction platforms (e.g. Amazon).³¹ Advertising platforms publish adverts from third parties. In contrast, transaction platforms are paid for their agency services (e.g. via a fee for acting as an intermediary between the contracting parties).
- Platforms generate network effects. This means that the platform becomes more and more useful for individuals as the number of actors who are active on the platform increases. This subsequently increases the cost of changing to other providers (the lock-in effect). One example of this effect are ride-hailing platforms (e.g. Uber) that connect taxi drivers with customers. The more drivers who use the platform, the shorter the waiting times for passengers. The reverse also applies: it becomes less attractive to change to platforms with a smaller number of users. This dynamic means that individual platform providers routinely become very strong in the market.³²
- This preferential position in the market allows key platform actors to distort the market through unconventional measures. These include limiting access to the platform, prioritising the company's own products or transferring user data to other areas of the business.
- The dynamic transformation of traditional markets to the digital platform economy has implications for competition and anti-trust law. This trend has been accelerated further by the COVID-19 pandemic and the already strong growth of many platform companies, increasing the pressure on the regulatory authorities.
- Current regulations look at pricing power and possible price fixing. However, platforms do not use the same price setting mechanisms as in conventional markets; as users 'pay' with their data, the conventional focus on price changes as a result of monopolies or oligopolies is not so

effective. Users can access Google's search engine free of charge but, in exchange, Google gains valuable data on user behaviour. In addition to this, there are new supervisory questions such as those relating to the ownership and monetarisation of the data collected. Regulatory authorities are therefore increasingly taking further factors into account such as consumer and data protection, costs of change and the opportunities for new companies to enter the market.

- Competition authorities and politicians are increasingly responding to the new types of challenges posed by the platform economy. An example is the involvement of the Organisation for Economic Co-operation and Development (OECD). Its Competition Committee has held several discussions, conferences and workshops for those who hold positions in the fields of competition policy and regulation. In addition, in 2016 the OECD classified the digital economy and innovation as long-term topics for discussion and in 2018 published a report on regulating competition for multi-site platforms.³³
- Regulating competition in Africa takes very different forms. While some states do not have any legal regulations in this area, Kenya and Egypt have already made specific adjustments to regulate digital platforms. For instance, the Egyptian competition authorities only allowed Uber to buy the *ride-hailing* company Careem on the provision that it lowered entry barriers, dispensed with exclusivity clauses with business partners and disclosed travel data to the authorities. Furthermore, they stipulated that an independent trustee had to be appointed to monitor adherence to the agreements.³⁴ Kenya has adjusted the definition of markets that are relevant for

competition law so that these now expressly also include the special factors that apply to multi-site platform markets.³⁵

Further examples of regulatory initiatives

- In 2018, the Indian Government passed a new law on online trading to prevent online traders such as Amazon and Flipkart from adopting anti-competitive practices. The regulation prohibits the platforms from offering products from companies in which they hold a stake.³⁶
- With the Digital Markets Act, the EU Commission has proposed principles relating to competition law that apply to online platforms. One of the aims here is to prevent unfair barriers to entry.³⁷
- In 2020, the United States International Trade Commission launched an initiative to examine how platform companies behave in relation to competition. This involved the big five in the sector having to disclose information for analysis on all takeovers of companies in the last 10 years.³⁸ In addition to this, at the end of July 2020 the CEOs of the platform companies Google, Apple, Facebook and Amazon had to appear before the United States Congress to answer questions about doubtful practices under competition law.^{39,40} A report was published by the United States Congress in October 2020 based on this hearing and other sources.⁴¹ The United States Department of Justice has also accused Google of breaches of competition law.⁴²

2.4 Digitalisation permits new business models and forms of production

→ Policy dimension:

- Digital business models
- E-commerce
- Industry 4.0



Relevance:



Data from the survey:

For the participants, this dimension is the **second most important**, scoring **4.3 out of 5** possible points on average.

Question:

‘What relevance should policy-makers attribute to the policy dimension “digital business models, e-commerce, Industry 4.0” in their countries?’

This policy dimension scores **4.3 out of 5** possible points.



Core statement:

With digitalisation, new business models are possible. Autonomous communication and new technologies promise quantum leaps in production. However, developing countries need innovative ecosystems and digital skills so that the population in these countries can benefit from the opportunities offered by digitalisation. Policy-makers must determine the best way to design the regulatory framework in order to benefit from the opportunities associated with digital business models, e-commerce and Industry 4.0 and at the same time minimise the associated risks.

Perspective according to income level

For participants from the lower range of middle-income countries, this is the most important of the 10 policy dimensions: **4.5 out of 5** possible points.



Regional perspective

For respondents from Africa, digital business models are the second most important dimension, with **4.3 out of 5** possible points overall (the most important dimension for participants from Africa is access to the internet, scoring **4.6 out of 5** possible points).

Sectoral perspective

The participants from the non-profit sector assign the highest priority to this dimension, with **4.7 out of 5** possible points. No dimension was rated more highly by those surveyed from the non-profit sector.



Non-profit

Facts and figures:

E-commerce volumes (worldwide and Africa)

Worldwide e-commerce volumes in 2017:
USD 29,37 trillion

+ 13 %

compared to the previous year⁴³

Sales volumes of African e-commerce markets in 2020 (estimated):
USD 19,8 billion

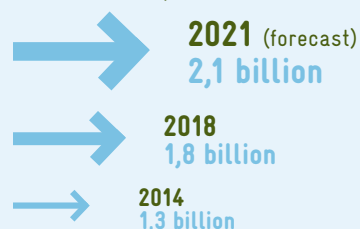
+ 42 %

compared to the previous year⁴⁴

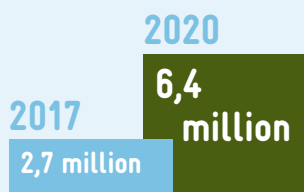


Number of purchasers (worldwide and Africa)

More digital purchasers worldwide; a further increase is expected⁴⁵:



The number of active customers on the African online trading platform Jumia has more than doubled in three years.⁴⁶



Industry 4.0 in South Africa⁴⁷

Digitalisation & automation up to 2030 (net)

Potentially new jobs: **+ 1,2 Mio.**

University graduates required for technical tasks **+ 1,7 Mio.**



Brief overview

- Digitalisation has fundamentally changed the world of business. Companies that systematically digitalise their processes, products and services can grow extremely quickly thanks to new technologies. Digital, easily scalable business models provide opportunities for exponential growth. Higher computing power through the continuous improvement in processors, greater connectivity and intelligent use of data and analytics allow rapid progress to be made. This aspect is closely related to the 2030 Agenda and the Sustainable Development Goals (SDGs), especially SDG 9: Industry, Innovation and Infrastructure.
- Digitalisation not only changes production and the service sector; it also changes business models. Many new digital platforms are created as a result of this. These change the relationships between providers and users. Platforms are becoming increasingly important in the context of e-commerce, where goods and services are available at lower prices and with a more varied selection than from brick-and-mortar outlets.
- However, it must be emphasised that just a few digital platform providers from the USA or China dominate the market, for example in the areas of infrastructure services, social media, e-commerce and search engines. The risk here for developing countries is that platforms will give them lower priority in the global data value chain and they will have to accept competitive disadvantages as a result of the financial outlay for purchasing data.
- Even platform providers from developing countries and emerging economies are sometimes under the influence of industrialised countries. For instance, the large e-commerce platform Jumia, which was originally dubbed the 'African Amazon', has come in for criticism because neither the developer team nor the company management are based in Africa.
- The comparatively low use of e-commerce in countries with low income indicates potential for development. This is because integration into global value chains holds out hope of economic growth, although high barriers exist. Internet

access is needed to use e-commerce platforms. Furthermore, electronic payment is often required and by extension access to bank accounts or a means of transferring money via mobile devices (mobile money). However, poorer sections of the population, in particular, often do not have access to these payment options. Finally, e-commerce companies have to overcome high logistical obstacles in developing countries because considerable effort is often required to transport the goods from the seller to the customer.

- In order to create better conditions for successful e-commerce, aspects such as infrastructure for information and communications technologies (ICT), logistics and mobile payment systems with a global reach need to be expanded, and favourable regulatory conditions also need to be established. These are particularly effective if they are embedded in connection with different sectors such as consumer protection, tax policy, competition law, trade policy and environmental protection.
- Disruptive digital technologies also lead to new combinations for Industry 4.0, which bring about fundamental changes in production. Central mechanisms include mass personalisation⁴⁸, the use of intelligent analytics, the man-machine interaction and the latest production methods (e.g. 3D printers). Industry 4.0 will drive forward and accelerate changes in production methods.
- The fact that the survey participants rated this policy dimension very highly demonstrates that this topic will be very relevant for policy-makers in the next few years. This is because a well-designed general framework can have a long-term effect on economic development.

An example: Konga.com

- Konga.com is an e-commerce platform established in 2012 that operates from and for Nigeria. The online marketplace for third-party vendors offers products in many different categories; these include consumer electronics, fashion, household appliances, books, children's toys, and health and hygiene articles.
- The company has its own logistics service (KXPRESS) and its own online payment solution called KongaPay.
- After it was taken over by Zinox (a Nigerian computer manufacturer and trader), the company has positioned itself in Africa as a vendor that uses many different channels to contact its customers.
- In March 2019, Early Metrics (a rating agency for start-ups) counted Konga among the best 14% out of a group of 2,100 start-ups from all over the world.

2.5 Digital financial services enable financial inclusion

→ Policy dimension:

- Digital financial services
- Start-ups in the financial sector



Relevance:



Data from the survey:

4/5

Question:

‘What relevance should policy-makers attribute to the policy dimension “digital financial services, start-ups in the financial sector” in their countries?’

points is the average score given for this policy dimension.



Core statement:

Digital technologies revolutionise the financial sector with innovative approaches. The key promise of *fintech* is the removal of barriers in the financial sector through mobile phone or web-based solutions. Africa has largely leapfrogged the development stage of conventional bank accounts and is the global leader in the use of *mobile money* apps.

Perspective according to income level

Compared to other income levels, participants from middle-income countries in the lower range rate this dimension as very important, with **4.2 out of 5** possible points.



Regional perspective

The participants from Asia rate this dimension as very important, with **4.4 out of 5** possible points.



Non-profit

Sectoral perspective

Participants from the non-profit and academia & education sectors rate the dimension as being of above-average importance, with **4.1 out of 5** possible points (average: **4 out of 5** possible points).



Academia & education

Facts and figures:

Financial inclusion (as at: 2017)⁴⁹

1,7 billion adults do not have a bank account – nearly all live in developing countries, 56 % of them are women.



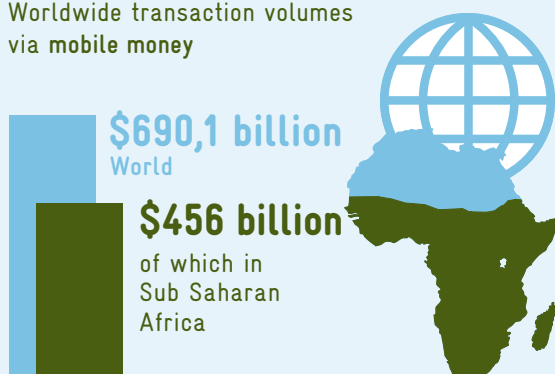
Use of mobile money (as at: 2019)⁵⁰

There are more than one billion registered mobile money accounts worldwide, including 469 million in SubSaharan Africa (SSA).



2019

Worldwide transaction volumes via mobile money



Brief overview

- The internet and other modern technologies make it possible to redesign financial services. These digital financial services are grouped together under the term fintech (financial services technologies).
- Digital financial services can make a significant contribution to financial inclusion. They give both individuals and companies access to cheap financial products/services⁵¹, simplifying transactions between different actors. Financial inclusion is a key element for achieving several SDGs. These include SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 10 (Reduced Inequalities) and SDG 12 (Responsible Consumption and Production).
- Furthermore, developing countries can skip the evolution of conventional financial services (*leap-frogging*) or close gaps in the infrastructure with the help of digital financial services. An example of this is mobile money: 'Mobile money – the ability to send, receive and store money using a mobile phone – has brought financial services to people who have long been ignored by traditional banks. It reaches remote regions without physical bank branches.' (Report of the UN Secretary-General's High-level Panel on Digital Cooperation, 2019)⁵²
- Many African states are much more advanced than most industrialised countries when it comes to *mobile money*. One African application that illustrates the progressive nature and use of mobile money in Africa is M-Pesa.
- M-Pesa is a system for processing basic financial transactions that is widely used in Africa. Since M-Pesa was launched in Kenya in 2007, payments can be processed by mobile phone, without the need to have a bank account.
- Cash can be paid in or withdrawn via traders (M-Pesa agents) and converted into a digital balance in the account.⁵³ This has had a positive effect on the prosperity of the Kenyan population. A study has provided evidence that approx. 2% of Kenyan households (approx. 194,000) have been

able to get out of poverty through using M-Pesa as a savings and real-time money transfer account. Women, in particular, benefit from M-Pesa, as they gain greater scope for action through mobile money and are more economically active.^{54, 55}

- However, the rise of M-Pesa also has negative consequences. M-Pesa has a strong position in the market because of the large number of users. It has faced criticism that its application programming interface (API) can only be used by digital entrepreneurs to a limited extent and that the service is associated with high hidden transaction costs. The Bill & Melinda Gates Foundation has raised the issue that a mobile money transaction on the Kenyan market for USD 1.50 incurs transaction costs of USD 0.30.^{56, 57}
- Apart from mobile money applications, new decentralised and transparent data storage technologies such as the blockchain provide more security and transparency for financial transactions. However, even applications based on blockchain entail risks. For example, cryptocurrencies⁵⁸ that use blockchains are criticised because they allow transactions to be executed anonymously. A study came to the conclusion that around 46% of transactions serve illegal purposes.⁵⁹ Regulatory authorities therefore need to design the framework in such a way that cryptocurrencies can make a positive contribution to economic growth.
- Fintechs are a catalyst for the entire digital economy. However, effective development of fintechs is highly dependent on the respective framework. This includes, for example, a suitable infrastructure, the availability of the internet and mobile phones and monitoring by the regulatory authorities, paying close attention to data protection and data security (e.g. the EU's PSD II). In addition to this, sustainable promotion of interoperability between mobile money accounts, banks and APIs is particularly important.
- Modern regulatory approaches are essential in order to ensure financial stability and legal certainty in the highly dynamic field of digital financial

services. At the same time, the innovative potential of fintechs must not be suppressed. Real laboratories (regulatory sandboxes) represent a very promising solution here, because they provide an opportunity to test innovations and regulatory concepts under real conditions.

An example: Moneywave^{60, 61}

- Moneywave is a platform for payment services. It provides a service for local traders to send money immediately to any bank or mobile money account in selected African countries (currently Kenya, Nigeria and Ghana). Previously, this would have taken several days. An API layer is integrated into the trader's business platform. This allows payments to be made and received in every format, i.e. via bank transfer, card or cash.

2.6 Digital platforms – striking a balance between boundless opportunities and national taxation

→ Policy dimension:

- Taxation of digital services & platforms



Relevance:



Data from the survey:

3,7/5

Question:

‘What relevance should policy-makers attribute to the policy dimension “taxation of digital services & platforms” in their countries?’

points is the average score given for this policy dimension.



Core statement:

The fact that services are being moved to the digital realm presents states with the challenge of how to tax these services appropriately. Digital companies frequently manage to drastically reduce their tax burden through clever tax planning. New tax regulations for digital services are crucial so that profits can be taxed at the place where they are made.

This will allow developing countries and emerging economies to profit from the growth of these services, because generally this is not where the platform companies have their headquarters.

Perspective according to income level

Major differences in rating this dimension between participants from middle-income countries in the lower range (4 out of 5 possible points) and participants from middle-income countries in the upper range (3.3 out of 5 possible points).

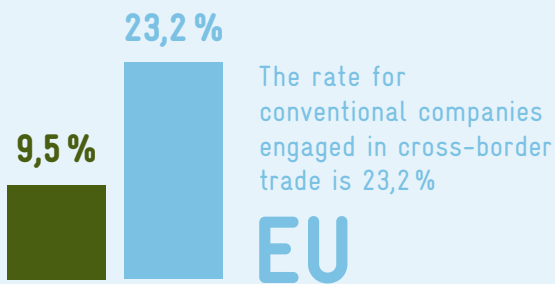


Regional perspective

For participants from Asia, the tax aspects were by far the most important, as they rated this aspect with 4.3 out of 5 possible points, followed by participants from Africa, with 3.8 out of 5 possible points.

Facts and figures:

In the EU, the effective average rate of taxation for multinational digital companies is 9,5 %⁶²



Each year up to USD 240 billion is missing from national budgets because of base erosion and profit shifting.⁶³

– USD 240 billion

According to estimates, two thirds of all international e-commerce transactions are processed via platforms.⁶⁴



Brief overview

- Taxation of companies and economic transactions form the basis for state revenues and the associated provision of community goods. It is therefore essential for states to generate solid tax receipts, and companies, as economic stakeholders with responsibility in society (corporate citizens), have an obligation to pay a reasonable amount for the use of public infrastructure. Equally, states benefit from a thriving digital economy and must ensure that they remain attractive as a place for companies to do business.
- In this context, governments are required to strike a balance between taxation and economic development. An outcome of the global economy is that states compete with each other and companies deliberately exploit the different national tax regulations and rates to maximise their profit. As developing countries are more reliant on receipts from corporate taxation, they are disproportionately affected by companies' tax avoidance strategies.
- In the context of the 2030 Agenda too, tax receipts are highly relevant as a contribution of states towards financing the SDGs. UNCTAD estimates that the annual shortfall in finance for achieving the SDGs by 2030 is approx. USD 2.5 billion.⁶⁵ Developing countries and emerging economies, in particular, do not have sufficient capacity to generate adequate tax receipts and use these for their country's sustainable economic development. It is therefore all the more important to regulate the fast-growing digital economy at an early stage.
- In view of the fact that digital transactions and business models are becoming more significant, questions about taxation of these new sectors are even more relevant. The OECD considers that the aspects of the digital economy listed below have far-reaching consequences for taxing companies:⁶⁶
 1. Digitalisation allows companies to expand into new markets without having a physical presence (scale without mass).
 2. The value created by digital companies is increasingly derived from intangible assets (software, algorithms or data).

3. User data is making an ever greater contribution to value creation.
- As a result of these factors, it is becoming easier to separate value creation from taxation geographically and the problem of multinational companies planning in such a way that they minimise their tax burden (base erosion and profit shifting)⁶⁷ has intensified. As the taxation systems that currently apply are based on companies being physically present in the country of taxation and intangible assets are highly significant in value creation, the tax regulations must be adapted systematically.
 - Studies by the Taskforce on the Digital Economy as part of the OECD/G20 Inclusive Framework show that action is required. However, no internationally binding agreements have been reached yet. This can primarily be attributed to the fact that the individual countries have different views.
 - Some states have already taken action and have passed unilateral regulations to compensate for the absence of multilateral solutions. France and South Africa, for instance, levy tax on digital services that are provided for users in their countries, regardless of where the service provider is physically present.⁶⁸ Indonesia has also implemented a 10% tax on digital cross-border services and intangible assets.^{69,70}
 - Recently, several states in Africa have followed South Africa's example and are taxing services from foreign service providers that are delivered digitally. Examples include Angola, Algeria and Cameroon.⁷¹ When taxing services it is important to prevent taxes being shifted to users, as this would reduce the development potential.
 - Taxation of the digital economy is being discussed in Africa at AU level.⁷² The outcome statement of the 4th High Level Tax Policy Dialogue notes that the African Tax Administration Forum (ATAF) is developing guidelines for designing a digital tax (digital services tax) for African countries. The statement also concludes that African countries need to develop their capacity to record and track digital transactions substantially.
 - In view of these challenges and the global dimension of the digital economy and competitive tax regimes, multilateral solutions on future taxation of the digital economy must be found.

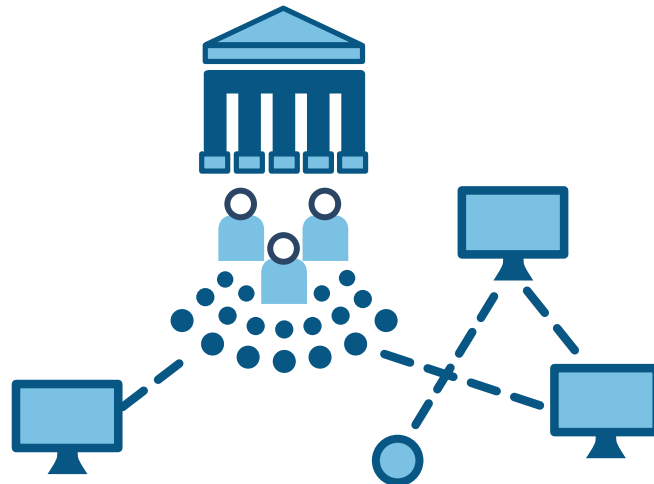
An example: taxation of digital services in Nigeria

- The concept of 'significant economic presence' has been incorporated into the Nigerian Companies Income Tax Act (CITA) through the Nigerian Finance Act (2019). The purpose of the concept is to calculate the revenues generated within the country by non-resident companies that offer digital and other specified services in Nigeria.⁷³
- A catalogue of criteria in the CITA implementing regulation issued by the Nigerian Ministry of Finance defines in greater detail the significant economic presence of foreign companies that offer digital services in Nigeria.⁷⁴

2.7 Democracy versus the internet?

→ Policy dimension:

- Democracy & the internet



Relevance:



Data from the survey:

44%

of those surveyed give this dimension the maximum 5 points.

Question:

‘What relevance should policy-makers attribute to the policy dimension “democracy & the internet” in their countries?’

This policy dimension scores 4.1 out of 5 possible points.



Core statement:

The internet is considered be a democratising medium. Democracies can be nurtured by the internet through better information, decentral communication and social participation. Nevertheless, digital interaction is not an end in itself: it can only support analogue endeavours. At the same time, more cases are occurring where states with anti-democratic values are instrumentalising the internet to secure their hold on power.

Regional perspective

Respondents from Latin America consider this dimension to be particularly relevant, giving it **4.6 out of 5** possible points.



Academia & education

Sectoral perspective

Participants from all groups see democracy and the internet as very important dimensions:

- Academia & education: **4.4 out of 5** possible points,
- Authorities: **4.1 out of 5** possible points,
- Non-profit sector: **4.2 out of 5** possible points.



Authorities



Non-profit

Facts and figures:

Social networks are a source of information⁷⁵

A survey showed that WhatsApp is the main source of information for 79% of Brazilians.



Social media as a medium for political manipulation

During the US presidential elections in 2016, data from up to 87 million Facebook profiles was passed to the company Cambridge Analytica. This data was used in a targeted way to exert political influence.⁷⁶



87 million Facebook profiles

Brief overview

- Digital information channels change the interaction between citizens and the government when it comes to the provision of services and community participation. Firstly, authorities can organise services and administrative processes more efficiently using digital channels. Secondly, citizens can obtain better information about political matters and become involved in democratic processes.
- Digital reporting can make state activity more transparent. Governments use digital information channels to report on measures and results or to increase its citizens' involvement in participatory processes (e.g. through encouraging participation in budget planning). Equally, modern means of communication allow civil society to track processes more closely and to make wrongdoing public.
- Digital platforms and, in particular, social network providers play a central role in 'digital democracy'. Direct channels of information do not only connect governments and politicians to the population: the civilian population can also organise itself better. As an example, during the Arab Spring protests in 2011, social media was crucial for coordinating protesters in countries such as Tunisia and Egypt.⁷⁷
- Although digital technologies can improve information and mobilisation among the civilian population and, as a result, digital governance, they cannot replace analogue interaction. This means that existing (non-digital) social structures influence the way in which digital technologies work. Technological approaches must be integrated into social processes in order to achieve improvements in information and effective contribution. Here, civilian stakeholders can play a central role as intermediaries, for example to prepare information for large sections of the population and to act as intermediaries between digital and analogue interactions. An example of this is the Code for Ghana initiative that encourages the establishment of portals with freely usable data (open data) and makes people aware of the options available.⁷⁸

- Digital platforms do, however, conceal risks for democratic opinion-forming. Content optimised by algorithms brings with it the risk of one-sided reporting ('filter bubbles'). On top of this, social media is generally not moderated and the accuracy of content is not verified. These mechanisms facilitate breaches of fundamental rights (e.g. *hate speech*) or have a targeted negative effect on democratic processes as a result of false information (fake news).
 - There are a growing number of cases in which social media has influenced elections. There are suspicions that this was true for the presidential elections in the USA (2016), the Philippines (2016) and Brazil (2018). At times governments benefit from increasing dependency on online content, enabling them to secure their hold on power – for example through politically motivated internet blackouts. According to the non-governmental organisation Freedom House, 46% of all people with access to the internet live in countries where the authorities have temporarily switched off the internet, the mobile phone networks or access to social media.⁷⁹
 - The Chinese social credit system currently being planned is a well-known example of a digital political measure used by the government to increase its influence on citizens' lives. The system assesses how citizens behave and awards points. Citizens who act in the way the government wants them to are rewarded (e.g. through tax reductions or cheaper rates for public transport), whereas citizens with a low points score have to accept disadvantages (e.g. limited access to public services).⁸⁰
 - Initially, platform providers tried to wash their hands of responsibility. However, the first platforms recently started flagging content that is clearly wrong or incites hatred.⁸¹ For instance, Twitter and Facebook blocked the accounts of ex-US-President Trump because of his behaviour when the United States Capitol was stormed in 2021.⁸²
 - States must find suitable solutions to make their actions more transparent and make political and government actors more accountable. Furthermore, the potential of digitalisation should be harnessed to increase the population's involvement in political processes. When doing this, states should ensure that basic democratic rights are protected, even in the digital space.
- An example: MobiSAM platform to improve local public services in South Africa⁸³**
- The project is setting up a digital platform for citizens in order to provide information about inadequate basic services in the public sector. The data is collated by the platform and made available to local authorities and civic associations.
 - The platform allows direct communication between individual citizens and the local authorities. As an additional benefit, reports on problems flagged by the platform can be used to set political priorities. Finally, publication of the messages serves to increase the accountability of authorities and public bodies.
 - The project was launched by Rhodes University in South Africa as part of the Making All Voices Count project.

2.8 Access to the internet is becoming a basic right

→ Policy dimension:

- Access to the internet & digital skills



Relevance:



Data from the survey:

With **4.5 out of a possible 5** points, this dimension obtained the **highest average score of all dimensions.**

Question:

‘What relevance should policy-makers attribute to the policy dimension “access to the internet & digital skills” in their countries?’

4,5/5

points is the average score given for this policy dimension.



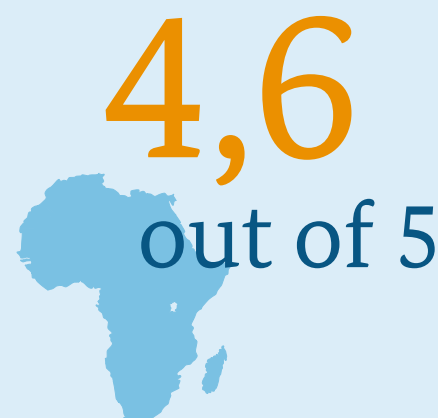
Core statement:

Today access to the internet is a central element of modern life. Participation in social and economic progress is limited without the internet. More and more people are connected to each other all over the world thanks to the expansion of the internet. However, there are still inequalities, for example between urban agglomerations and rural areas. Furthermore, a lack of *digital skills* means that not everyone can use the internet. More inclusive general conditions are therefore required to make good the promise that the internet will be a tool in reducing inequality.

Regional perspective

Out of all the regions, the participants from **Latin America** attach the greatest importance to this dimension, with **4.7 out of 5** possible points.

Respondents from **Africa** rate this dimension as being of above average importance, with **4.6 out of 5** possible points (average: **4.5 points**).



Perspective according to income level

For respondents from **middle-income countries in the upper range** this is, with **4.6 out of 5** possible points, the most important of all the dimensions.

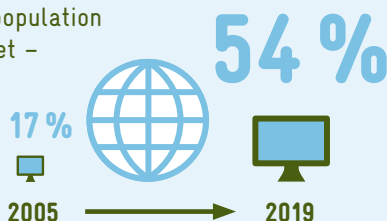


Facts and figures:

Internet usage is increasing globally⁸⁴

In 2019, around 4.1 billion people worldwide had access to the internet.

In 2005 approx. 17 % of the world's population used the internet – in 2019 it was around ca. 54 %



Internet usage depends on the region and development status⁸⁵

- In industrialised countries, over 86 % of people use the internet (2019).
- In contrast, only 19 % of the population of least developed countries (LDCs) use the internet (2019).

86 %



Industrialised countries

19 %



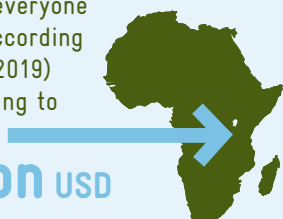
LDCs

Better internet access for Africa

In order to ensure affordable and high-quality internet access for everyone in Africa by 2030, according to the World Bank (2019) investments amounting to

100 billion USD

are required.⁸⁶



Brief overview

- In a world in which business processes, education and social interaction are increasingly digital, access to the internet is a prerequisite for participating in development. In this context, access means, firstly, a secure, affordable and efficient internet connection and, secondly, users with digital skills. It is likely that the lack of internet access will intensify social inequality. During the COVID-19 pandemic it has become clear that the internet is now a well-established key element of social and economic progress.
- Because of its significance, this dimension can make a contribution to many SDGs but particularly to **SDG 9** (Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation) and **SDG 10** (Reduce inequality).
- The positive effects of the internet do not reach everyone. Although around 90% of the world's population lived in the range of a 3G network or a more sophisticated mobile phone network in 2019, only slightly more than half of the world's population had access to the internet. Considerable differences exist within countries as regards internet access – between the north and the south, urban and rural areas, men and women, and different social classes. More especially, groups that are already marginalised risk being left further behind. In spite of increasing internet use, fewer than 20% of people in the world's least developed countries have access to the internet.⁸⁷
- One of the major reasons for this is the cost. In 2019, the cost of a fixed-line broadband connection came to more than 2% of the gross national income per capita in 91 developing countries: only in five industrialised states were the costs equally high. The position was similar for the cost of a mobile broadband connection.⁸⁸ In addition to this, the hardware costs are also a barrier to internet use in developing countries. In a low-income country, a smartphone with basic functions costs 1.2 monthly salaries and a laptop costs three to four monthly salaries.⁸⁹ Governments could create suitable frameworks to reduce costs for internet access through targeted incentives.

- A further barrier to access is a lack of knowledge and skills in respect of ICT technologies. According to the International Telecommunications Union (ITU),⁹⁰ not even half of the population in 40 out of 84 countries have basic computer skills (including, for instance, the ability to copy files).⁹¹
- At the same time, there is a very high demand for digital skills both in developing countries and emerging economies to safeguard economic prosperity. The International Finance Corporation (IFC)⁹² predicts that, by 2030, digital skills will be required for 230 million jobs in Sub-Saharan Africa.⁹³ This means that initiatives are urgently needed in developing countries and emerging economies to hone these skills. In the meantime, appropriate measures are being implemented by international organisations (e.g. the World Bank⁹⁴ or UNESCO⁹⁵), corporations (e.g. Microsoft⁹⁶, Huawei⁹⁷) and bilateral donors (e.g. BMZ).⁹⁸ Effective policy-making can reinforce the impact of these measures.
- It is important to improve network coverage to enhance the potential of the internet. Major platform providers such as Google and Facebook are now involved in developing the internet in Africa. The significant involvement of private providers is viewed critically in some quarters because the sovereignty of internet access and data is placed in the hands of private actors. In contrast to governments, these actors have very little accountability towards citizens. India, for instance, decided against this course of action and refused Facebook's offer of free internet. Policy-makers and regulatory authorities can create general conditions that encourage private investment in infrastructure but, at the same time, grant free access to the internet and regulate the use of data.
- A new key technology in connection with mobile phone networks is the 5G mobile phone standard, which offers much higher transmission speeds and lower latency compared to previous mobile phone standards.⁹⁹ Apart from significant cross-sector efficiency gains, it makes new applications such as autonomous driving, decentralised power networks and more precise manufacturing processes (Industry 4.0) possible.¹⁰⁰
- However, many developing countries and emerging economies will not be able to introduce the 5G standard in the near future. In Sub-Saharan Africa, reasons for this include the costs associated with rolling out the 5G infrastructure, an inadequate power supply, the lack of state incentives and very low demand from the population.¹⁰¹ While 46% of the population of Sub-Saharan Africa live within range of a 4G network, only 9% actually use it.¹⁰²
- The survey participants confirm that this policy dimension is extremely relevant. Appropriate political measures can help ensure that countries, institutions and citizens have better internet access.

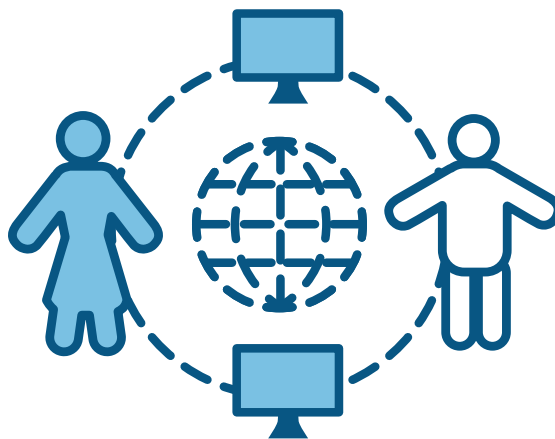
An example: Moja platform

- With the Moja platform, the internet provider BRCK provides a public WiFi network with free access to the internet and a content platform with videos, music, books and other content
- BRCK was founded in 2013; Moja WiFi was first launched in Kenya, followed by South Africa in 2019.
- Instead of making cash payments, users can pay for their participation with certain activities – for example, by filling in questionnaires, undertaking small tasks or through interactive ads. In this way the system gives internet users advantages (access to the internet) and the companies are paid by the users' engagement. Digital inclusion of these individuals gives companies access to a new target group.
- As an example, access to the internet and to the platform is provided in buses.

2.9 The gender gap is becoming digital

→ Policy dimension:

- Digital gender gap



Relevance:



Data from
the survey:

3,8/5

Question:

‘What relevance should policy-makers attribute to the policy dimension “digital gender gap” in their countries?’

points is the average score given for this policy dimension.



Core statement:

Access to the internet has tremendous potential to improve living conditions, especially for women. However, there is a danger that economic and socio-cultural factors will prevent these opportunities from being used.

Sectoral perspective

Far more than any other group of participants, the decision-makers from the **non-profit sector** rated this topic as being the most relevant:

4.6 out of 5 possible points.



Non-profit

Regional perspective

The participants from the **Latin American** states attach most importance to this dimension, with **4.1 out of 5** possible points.



Perspective according to income level

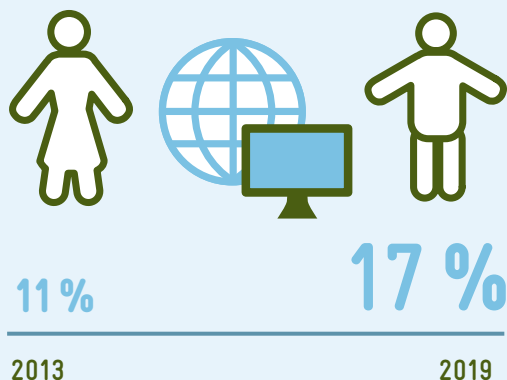
Out of all the income groups, the participants from the countries with **middle incomes in the lower range** attach most importance to this dimension, with **3.9 out of 5** possible points.



Facts and figures:

Gender gap in per cent¹⁰³

The internet user gender gap¹⁰⁴ has seen a global increase: in 2013 it was 11% but the figure in 2019 was 17%.

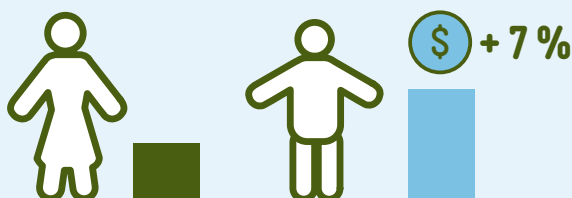


It also increased in Africa: in 2013 it was approx. 21%, but as high as 33% in 2019.

Differences between men and women in the platform economy

The wage and salary gap between men and women in analogue employment markets can also be seen in digital markets:

- Men on the Uber platform earn an average of 7% an hour more than women.¹⁰⁵



Brief overview

- More and more people are using the internet. However, more men than women are online and this is true in all areas of the world. This difference is part of the digital divide, a phenomenon that describes the differences that exist between the genders and within and between countries, regions, sectors and socio-economic groups in respect of access to the internet and ICT resources and skills.¹⁰⁶
- The digital gender gap is addressed in the 2030 Agenda and the Sustainable Development Goals: SDG 5 on gender equality includes under target 5.b the goal to 'enhance the use of enabling technology, in particular information and communications technology (ICT), to promote the empowerment of women'.¹⁰⁷
- Internet usage can be an important aspect in sustainable development. However, the *digital divide* prevents women from exploiting this development potential to the same extent as men.
- Digital platforms offer flexible work options such as the provision of services on-demand so that users gain access to the domestic or even the international labour market. Women, in particular, could be integrated better into value chains thanks to flexible offers of work on platforms. Furthermore, platforms such as M-Pesa simplify payment transactions and, by extension, the financial inclusion and independence of women.
- Mobile phones and smartphones make it easier to access the internet and also give women greater security. However, women from low-income and middle-income countries are less likely than men to own such a device. For every 100 men who own a mobile phone, only 92 women have one and for every 100 men who own a smartphone, only 80 women have one.¹⁰⁸
- The fact that women are less likely to own a mobile phone and also less likely to use the mobile internet can be attributed to very similar reasons: the costs, a (perceived) lack of the necessary skills, security concerns and, in some cases, a lack of social acceptance regarding women owning smartphones.¹⁰⁹ Another factor that prevents

women from using the mobile internet is that, in some cases, women do not perceive the mobile internet as being very relevant because, for example, it does not give them enough access to content that relates to their region or is in their language.¹¹⁰

- As a way to close the mobile internet gender gap, the Groupe Spéciale Mobile Association (GSMA)¹¹¹ – an association of mobile phone operators – recommends that policy-makers and regulatory authorities promote access to mobile phones, for instance by subsidising mobile devices or low-cost finance in cooperation with the private sector.¹¹² In addition, GSMA recommends enhancing the digital skills of girls and women, designing digital spaces to appeal to women, giving better advice to girls and women about the dangers of the internet and passing laws to tackle digital harassment.¹¹³
- To enable policy-makers to design their political measures more effectively, it is also important to collect gender-specific disaggregated data about the effects of digitalisation. Differentiated data can be used to shape gender-conscious policies that have clearly defined equality objectives and put systems in place to measure progress.¹¹⁴
- Politicians are aware of the problem of gender inequality in the digital realm. The Heads of State and Government of the G20 have, among other things, declared their support for the G20 initiative #eSkills4Girls, which promotes the development of digital skills among women and girls in developing countries. BMZ also contributes to several projects under this initiative, for instance via the Africa Code Week, in which young people are taught programming skills.¹¹⁵ In addition, private stakeholders are also involved in closing the digital divide. For example, from March to April 2019, Microsoft gave 450,000 young women the opportunity to gain initial programming skills via the #MakeWhatsNext campaign.¹¹⁶

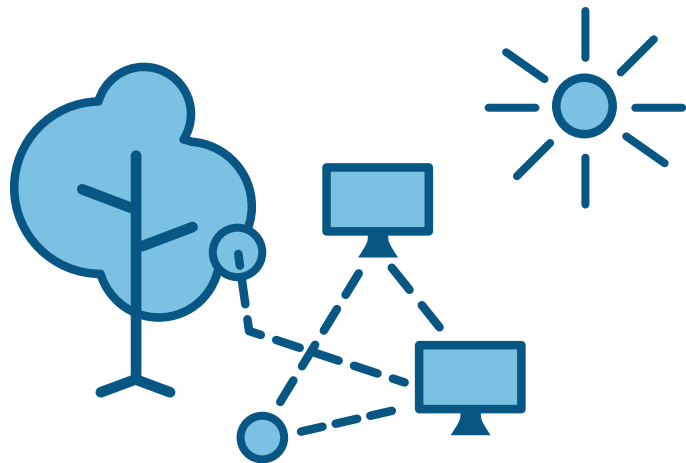
An example: WeCode – promoting women in Rwanda by creating jobs [part of the #eSkills4Girls initiative]

- Digitalisation provides an opportunity to create new and well-paid jobs in Rwanda. However, the IT sector is traditionally a male domain.
- The WeCode programme, which focuses on women and is an agency for business process outsourcing (BPO), worked with GIZ from 2016 to 2019 to close the gender gap.
- Participants attend an 11-week bootcamp where they are taught coding skills and learn the skills they need for their day-to-day work.
- The best participants move on to a more advanced training course lasting 15 weeks to train as specialised software developers.
- The best graduates from the second course are offered a permanent position at the WeCode academy for BPO.
- By 2019, around 900 women had benefited from the initiative.
- The project was commissioned by BMZ.

2.10 Digitalisation for the environment

→ Policy dimension:

- Digitalisation & the environment



Relevance:



Data from the survey:

3,8/5

Question:

‘What relevance should policy-makers attribute to the policy dimension “digitalisation & the environment” in their countries?’

points is the average score given for this policy dimension.



Core statement:

Digital technologies have immense potential to make society more environmentally sustainable. However, to achieve this, digital companies must change direction completely and take a more sustainable approach to hardware and computer centres.

Sectoral perspective

Participants from academia & education (4.4 out of 5 possible points) and the non-profit sector (4.3 out of 5 possible points) attribute the greatest relevance to this dimension.



Non-profit

Regional perspective

Participants from Europe give environmental sustainability the highest score, with 4 out of 5 possible points.

Participants from Asia and Latin America also attach above-average importance to the environmental dimension, with each awarding 3.9 out of 5 possible points.



Academia & education

Facts and figures:

Potential to reduce emissions through intelligent traffic systems

-2,6 Gt  **CO_{2e}**

ICT has the potential to save up to 2.6 gigatonnes of CO_{2e} by 2030 through networked traffic and logistics control.¹¹⁷

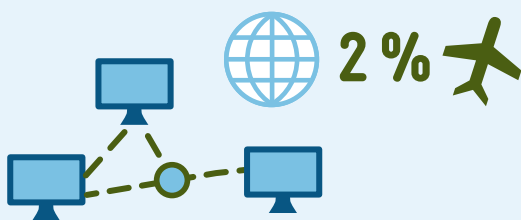
Artificial intelligence to protect biodiversity¹¹⁸

Up to 32 million hectares of forest around the world can be saved by 2030 thanks to AI.

AI  **32 million**
can save up to **hectares of forest**

CO₂ emissions from the internet¹¹⁹

Data processing in computer centres accounts for around 2% of global CO₂ emissions. This corresponds to the CO₂ output of all international air traffic.



Brief overview

- The digital economy is a central element in achieving the climate targets outlined in the Paris Agreement, as it can stimulate innovation to enable more efficient use of resources in other areas (e.g. agriculture, Industry 4.0 and smart cities).¹²⁰
- Digital technologies have the potential firstly to reduce emissions in regions with a high output and, secondly, to drive forward environmentally sustainable development in regions with comparatively low emissions rates (e.g. Africa).
- In the light of the very rapid growth in user numbers and data volumes, however, there are questions about the sustainability of the digital economy and associated services.
- According to a short Bitkom study, ICT devices (including consumer electronics) may have produced up to 1.1 billion Mt CO_{2e} of greenhouse gases in 2020. The study also estimates that telecommunications networks and computer centres each emitted 200 to 250 megatonnes of CO₂ in 2020. Overall, a comparison with other studies shows that 1.8% to 3.2% of global greenhouse gas emissions can be attributed to the manufacture, use and disposal of 'digital devices and infrastructures'.¹²¹
- Looking at computer centres, a development towards more sustainability can be seen. Data traffic between 2010 and 2015 increased by a factor of four and the number of mobile phone users grew by 30%. At the same time, however, emissions and energy consumption fell by 15% thanks to improvements in energy efficiency.
- According to estimates in the Exponential Roadmap,¹²² a multi-actor consortium established to achieve the climate targets in the Paris Agreement, greenhouse gas emissions must be reduced by 50% by 2030 to reach this goal. One of the ways in which this can be achieved is to systematically change the energy sources for computer centres to renewable energy. Leading companies have set themselves ambitious goals here. Apple already draws 100% of its energy from climate-friendly sources and is endeavouring to achieve this rate with its suppliers as well. Microsoft has

announced that it will be carbon-negative by 2030. Governments could set ambitious binding sustainability targets for certain sectors or even the entire state and monitor the implementation of these targets. Many states have already set themselves the target of being net zero by a certain date, including Costa Rica (by 2021), Norway (by 2030) and Finland (by 2035).¹²³

- The platforms can make a key contribution to the transformation to more sustainable means of production and consumption. In this context, platforms for the sharing economy can help to reduce the negative effects on the climate (e.g. by renting/shared use of housing, vehicles, etc.).
- Car sharing, which is generally platform-based, has positive effects for the environment. A survey of 363 car-sharing users in the Netherlands showed that car-sharing users cause 13-18% fewer greenhouse gas emissions (240 to 390 kg CO₂) than car owners.¹²⁴
- Another example of the potential positive effects of platforms are peer-to-peer electricity trading platforms. Peer-to-peer electricity trading allows private households to purchase decentrally generated green energy at attractive prices or to feed it back to the grid,¹²⁵ providing incentives for people to use renewable forms of energy. One example of an electricity trading platform in a developing country is SOLshare in Bangladesh.^{126,127}
- Apart from the trading platforms already mentioned, AI applications can also improve energy efficiency – for example, through analysing electricity consumption and distributing electricity with the help of smart grids. Another benefit is that electricity generation can be predicted relatively precisely on the basis of historical data and weather forecasts. Also, the construction of energy storage facilities provides scope for using wind power and solar systems more efficiently.¹²⁸
- Equally, market platforms that operate internationally burden the environment through high logistics requirements because they deliver their products all over the world. In this context, local platforms with short delivery chains can make a contribution to reducing environmental pollution.

- Sector-specific and cross-sector policies with sustainability targets can help to harness the potential of digital technologies for environmentally sustainable development. Innovation and research are a central element developing digital solutions further. Governments can contribute by providing targeted incentives that establish innovation ecosystems for new technologies. Finally, an adequate infrastructure is required so that the digital applications can achieve their full impact.

An example: Clickgreen

Greenpeace's Clickgreen initiative analyses the sustainability of the largest internet companies. Here the focus is on a clean energy transition. Clickgreen publishes an annual report and assesses companies on its website: www.clickclean.org/international/en/





3.0

Expert interview
on digitalisation
in Africa

3.0 Expert interview on digitalisation in Africa

In the previous sections, different dimensions of the challenges relating to governance in the platform economy were highlighted. The survey of professionals from all over the world has been supplemented by research data and examples from Africa. This gave it a regional accent.

To provide an insider's view of the study findings, the internationally acclaimed digital expert Nanjira Sambuli from Kenya was asked to identify and evaluate the implications of digital transformation in the African context. The following interview also looks at future trends in digitalisation and brings this publication to a close.



Nanjira Sambuli

is a researcher, political analyst and advocacy strategist specialising in ICT adoption. She highlights the effect that ICT adoption has on governance, the media, entrepreneurship and culture, with an emphasis on genderspecific implications.

Ms Sambuli is a member of the Lancet and Financial Times Global Commission on Governing Health Futures 2030, a Board Member of The New Humanitarian, Development Gateway, Digital Impact Alliance (DIAL) and Co-Chairperson of the Transform Health Coalition. She is also a Ford Global Fellow in the inaugural cohort (2020–2021). Ms Sambuli also advises the Preparing Civil Society for the Fourth Industrial Revolution project of the World Economic Forum and the <A+> Alliance for Inclusive Algorithms and is a member of the Advisory Board for *Latitude: Rethinking Power Relations – for a decolonised and non-racial world* (Goethe- Institute).

Ms Sambuli was in charge of the political advocacy work to promote digital equality regarding access and use of the internet for the World Wide Web Foundation (2016–2020). Here her work focused on the foundation for promoting women's online rights. Prior to that, she worked at the iHub in Nairobi, where she provided strategic advice on promoting technological innovation research in the East Africa Region.

She served as a member of the Board for the United Nations Secretary General's High-Level Panel on Digital Cooperation (2018–19), as a Trustee at UK Citizens Online Democracy (mySociety) (2016–2019) and as Deputy Chairperson of the United Nations Secretary General's High-Level Panel for Women's Economic Empowerment (2016–17).

Do you have a concrete example that illustrates how profoundly digitalisation can change our life and our society?

Digital transformation can come across as a buzzword. Often, it is misconstrued as merely describing new and flashy gadgets and concepts like the Internet of Things, Artificial Intelligence or the blockchain. In reality, it is also about the more mundane tools and techniques that modify ways of doing things in a manner that is contextual and appropriate for a community. It can be as prosaic as adapting existing power supply lines for internet provision (broadband over power lines). Therefore, it is helpful to have a broader understanding of what comprises digital transformation to accommodate the disparate ways it is evolving and emerging.

A sound example of what I will call a ‘multidimensional digital transformation’ is community networks, such as the Mankosi project in rural South Africa¹²⁹, that are providing internet access to rural and marginalised communities; typically, these are groups for whom the typical infrastructure and prevailing business models may not readily cater. The Mankosi community network utilises inexpensive devices (radio transmitters) installed around the village, each acting as a node; these then ‘communicate’ with one another creating a wireless network. In this way, a cheap, low-energy set of technologies is able to power access to voice and internet data, and in turn make these services more affordable for the community.

What is so special about Mankosi?

What is fascinating about the Mankosi project – and community networks models broadly – is the cooperative model that drives them. Community members are involved in every stage, from the initial deliberation to set up such a network in a community, to negotiating the pricing, maintenance and how revenues generated are used. This showcases alternative digital transformation models that are bottom-up and community-driven, making them truly sustainable. They’re also scalable, in that scale is achieved by creating community-owned networks that bring together nodes that are serving communities in a contextually appropriate manner. For instance, a community neighbouring Mankosi has been inspired by this and set up its own network, following the same cooperative and consultative approach, rather than merely expanding the Mankosi one to reach the community.

Eventually, the concept of scale in the region will refer to a wider network of the small networks serving these communities, thus providing an alternative (and more viable) way of thinking about scale in digital transformation initiatives. This scalability bears potential for the creation of sustainable, localised digital economies for the area. Furthermore, in focusing the digitalisation efforts at the community level, additional benefits like learning new skills to maintain these networks are created for society members. This is the case in Mankosi, where a

previously unemployed community member is now a network technician.¹³⁰ The reliability of the internet network has also allowed others to become online freelancers without having to go to the bigger towns to apply for work.¹³¹ In my view, approaches such as these showcase what we aspire towards with digital transformation, where technologies unlock myriads of benefits for the communities in which they are introduced.

What role can digitalisation play for sustainable development? What are key opportunities, but also risks and challenges – in general, no focus on Africa?

We are living in the age of digitalisation, in which the lines between what is considered analogue and digital are blurring. The COVID-19 pandemic has accelerated this digitalisation. Working, schooling, accessing health care, commerce and much more now relies on digital infrastructure, and in many cases is the primary way of accessing public goods and services. Therefore, digitalisation has a crucial role to play in development and the global goals, both by progressing in sustainable ways such as using clean energy, and also in catalysing progress across existing development domains such as education.

There are plenty of proven and possible opportunities for digitalisation in development. The much-celebrated example of M-Pesa in Kenya is a testament to how telecommunications infrastructure can be leveraged for financial inclusion. However, digitalisation does not develop or evolve in a neutral context; it is not solely a technological process. Without this being sufficiently understood and factored in, digitalisation can bear challenges and even risks. Challenges may include digital development initiatives, such as procuring laptops and tablets for

e-learning, without accounting for the readiness of school infrastructure such as electricity supply and teacher readiness; in some areas whether there are classrooms at all. This well-intentioned project might even turn out to be harmful in the long run when it is abandoned and requisite investments are not readily available to support a holistic perspective to digitising education, incorporating the non-technical determinants of overall success.

Another risk that digitalisation is already bringing about includes digital divides between those who are connected and those who are not. Unequal access to digital opportunities is also widening the existing divides and inequalities; studies have shown that factors like income and education drive who is able to afford a digital connection.¹³² The pandemic has showcased this to not just be a problem in developing countries, but also in developed nations where, even with more advanced digitalisation, the transition to online learning has not been smooth, and has in fact left out millions of schoolchildren from accessing education as a result.¹³³

In your eyes, what characterises digitalisation in Africa? What are the differences compared with other regions in the world? But also, what are the differences across and within different African countries?

Digitalisation in Africa is characterised by a heterogeneous set of dynamics. Suffice it to say, the continent is a diverse one; some countries are in more advanced stages of their digitalisation processes than others. This is notable in aspects like how internet affordability varies¹³⁴, or which countries can speak of internet-enabled economies as contributors to the gross domestic product (GDP). Countries like Kenya and Nigeria, for instance, have made strides towards

an internet-powered economy with well-established digital infrastructures supporting areas like finance and agriculture; others like Niger and Burundi are in the nascent stages of doing the same. Additionally, in most African countries, there will be differing digital development levels between urban and rural areas, with the former being more connected.

One key difference to other regions might perhaps be the 'late starter' aspect, in which the continent is undergoing digitalisation as the latest digital technologies and approaches come to market. For the most part, African nations are not per se contending with legacy technologies to be upgraded. In turn, this has enabled countries to base digital infrastructure on mobile and wireless technology, for instance. At the same time, much of the continent is still in the nascent stages of infrastructure investments in enabling areas such as power/energy, roads and railways, and in social spheres such as education and health. This presents a unique dimension through which development on the continent can be organised in a wholesome approach, using best-practice approaches and the latest technologies.

At the same time, this prospect isn't without its challenges. While digitalisation is becoming an infrastructure investment priority, it is also myopic to pursue it per se, without streamlining it with the realities in economic and even social dimensions. To illustrate, mobile apps to keep farmers apprised of the latest market prices are well and good, but even better is if farmers have the requisite tools – such as means of irrigating their farm or seeds and fertiliser – to ensure they have crops to provide in the market place. Additionally, this kind of digital leapfrogging cannot bypass the fact that said farmers will also need transport infrastructure like roads to move their goods from the farms to markets.¹³⁵

As well, it would be fallacious to assume that these farmers can readily afford a smartphone and internet bundles or have the interest or know-how to continually access the tech applications supposedly developed to benefit them.

Too often, the discourse on *leapfrogging* and digitalisation in Africa fixates on the technological intervention, as if its success is determined in a vacuum. This has dealt a blow to an otherwise strategic opportunity for the continent to get digitalisation right, given its unique set of circumstances (as discussed above).

What have been the most impactful digital developments in the African continent in the past years?

To which factors do you attribute these developments?

The 'mobile revolution' – that is, the innovations over mobile connectivity infrastructure – has been a cornerstone digital development on the continent. Mobile devices are increasingly within reach for many Africans. Coupled with internet access, this has allowed novel developments over mobile internet and other mobile telephony features in sectors as varied as finance, education, health care and agriculture, to name but a few. This can be attributed to the sound investments made in the telecommunications sector, that set up a sound baseline for mobile and wireless technologies to drive the advancement of digitalisation across the continent. As mentioned earlier, the relative absence of legacy technologies and subsequently, fewer regulatory rigidities has allowed for these developments and mobile-based innovation to take off. Furthermore, this has been driven by visionaries who have understood the continent's context and potential for growth along the various sectors, thus stewarding the role of technology as an accelerator.

How do you expect digitalisation to evolve during the next 3–5 years?

In which areas (or policy dimensions) do you expect the highest impact from digitalisation (positive or negative)?

What would you personally see as priority areas?

Digital divides will strongly determine the net impact of digitalisation in the near term. While there have been significant gains in connecting people globally, only over half the global population is online and able to enjoy the requisite benefits. COVID-19 has jumpstarted a truly digital era, as digital technologies have become a lifeline, and now a mainstay for how we work, study, convene and much more. At the same time, this has been practically impossible for those who do not have available, affordable and meaningful connectivity.¹³⁶ Closing the digital divide – even as we adopt emerging technologies like 5G that promise faster connections – will be critical. There is an urgent need to prioritise holistic policy frameworks and dedicated investments if we are to speak of unlocking viable and competitive digital economies globally.

Addressing the socio-cultural determinants of how digitalisation impacts development and societies will also be a critical matter in the coming years. Here, I refer to the underlying questions and assumptions around who develops and designs technologies and the worldviews that inform their creations, which in turn shape our digital experiences. We must further scrutinise if and how they consult the communities who are intended ‘beneficiaries’. The power to develop solutions – and especially the resources available to support this – remain concentrated in Western capitals, predominantly accruing to urban, white males who shape the tools impacting our lives and our human rights in a digital age. We will need the enforcement and accounting for laudable ideals

like Principles for Digital Development and AI Ethics as some of the guardrails for developing equitable digital futures.¹³⁷

All the aforementioned challenges demand attention and action, not just as an afterthought or as an affirmative action issue. Furthermore, it is imperative to ensure that this is not perceived as solely a development sector issue; it must also resonate and inform the technology innovation, research and development (R&D) stages.

What is the role of civil society in shaping a sustainable and inclusive digital society (e.g. businesses, media and academia)?

Businesses (private sector) have been leading in the investments, research and development of digital innovations, which is a welcome, continued role. They must, however, commit to building inclusively and sustainably – as champions of the SDGs themselves, and to lodestars such as the UN Guiding Principles on Business and Human Rights. It is laudable, for example, to see leading tech companies showcasing their commitment to climate action by outlining their plans to reduce carbon emissions.¹³⁸ However, they must also ensure that they adhere to such goals and be held accountable for how they do so over and above signalling commitment to them. More importantly, they should be constantly challenged to be transparent about how they make amendments and offer recourse where unintended harms and risks are brought to light.

Academia’s intellectual inquiry is also important, and ought to incorporate inter/multi/cross/trans-disciplinary lenses to discourses and assessments. Digitalisation is as technical a matter, as it is socio-cultural, political and economic. Likewise, the media

have a critical role to play in investigating and narrating digital developments, bypassing mere tech hype and drilling down to substance, centring human and environmental impacts of the increasing use of digital technologies.

In civil society – from local to international non-governmental organisations – we see the rise of digital rights initiatives, as well as more traditional organisations like labour unions and human rights groups expanding the scope of their work to incorporate the unfolding dynamics of the digital age. This is a commendable progression, as the question of inclusive and sustainable digital development needs ‘old and new’ thinking alike, especially for championing transparency, accountability, and other emerging good practices such as collaborating with other sectors on AI Ethics and upholding privacy-by-design to maximise the benefits and minimise harms from digitalisation. Each sector thus has a lot to offer to our collective experience of digitalisation.

All sectors also have to work together to ensure cross-sectoral flows of expertise and lessons learned, and to shape the rules of engagement and governance for the digital age. This calls for digital cooperation, engaging diverse voices across geographies and sectors on the benefits, risks and harms caused and posed by digital technologies, to in turn shape the guardrails that govern digital progress.¹³⁹ We see this in the Internet Governance Forum (IGF), a process that takes a multi-stakeholder approach, engaging actors from all the sectors at local, regional and global IGFs. In this way, diverse voices contribute insights on the opportunities, challenges and risks arising from and through the internet – including its contributions to achieving the Sustainable Development Goals.

Where do you see the biggest challenges for policy-makers to govern/regulate the digital economy in emerging markets? What solutions do you recommend to policy-makers?

In my experience, the digital literacy and savviness of policy-makers themselves is an overlooked issue. It is assumed that they are well informed on the emergent issues and even on the basics, which is not often the case. As such, opportunities for their continuous interaction with digital developments need to be actively cultivated; they could entail frequent engagements with local digital innovation communities, academia and civil society, policy-maker workshops/webinars or other modes deemed appropriate in different contexts to ensure that those shaping digital policies are knowledgeable, and can serve the public interest in a digitalising age.

Related to this is the challenge of having policies, laws and regulations updated or created to serve present-day digital realities. It is often said that innovation outpaces regulation/policy, and while that may be the case, it need not become a fact that renders policy-making a static element. It is imperative that a new way of thinking about and working on policies in a digital age is pursued, such as the concept of regulatory sandboxes in the financial technology (*fintech*) sector.¹⁴⁰ Here, policy-makers and innovators work together to figure out how the former can formulate regulations that do not stifle innovation, while the latter can pursue responsible innovation.

Policy-making in a digital age calls for multidisciplinary inputs, as technologies are finding use in virtually all spheres of society. A cross-sector approach, coupled with online and offline consultations, will help policy-makers navigate tensions such as taxing the digital economy without stifling local digital SMEs. Presently, we see that, while policy moves to introduce digital taxes which are targeted at the tech multinationals, in effect it is the local innovators and consumers who bear the brunt, further stalling the net gains that can be achieved in the long term. Thus, there is an interesting opportunity for emerging markets to lead on agile policy-making, leveraging the very tools and techniques that digital technologies introduce. Faster, interactive consultation with constituencies affected by various aspects of digital advancements should be embraced to achieve this.

How can international development partners support this transformation process?

What do development organisations need to do better or differently? What instruments are lacking for meaningful cooperation (e.g. dialogue formats, advisory services, new partnerships, technological solutions)?

International development partners ought to engage more in actively listening to the constituencies in emerging and developing markets that they purport to serve. All too often, they peddle solutions in search of development problems; in the digital age, this leads to the perverse practice of technological solutionism, where a certain technology fad is posited as the solution, say, for education, and is a precondition for receiving international development support. This has led to many white elephant projects, often abandoned and unaccounted for. Meanwhile, the same resources could be put to more effective and sustainable use if there were more consultation and humility in supporting communities in the Global South.

Meaningful cooperation will only stem from recalibrating how the international development community approaches emerging and developing markets. Rather than merely supporting the flashy and fanciful, it is time to put adequate support to the proven and possible at the (hyper) local level. This entails, for instance, supporting initiatives to support policy-makers' training (through local and regional government training schools or multi-stakeholder workshops).¹⁴¹ It is also crucial that international development actors dedicatedly support work in civil society. The local collectives, networks and organisations in this sector – who work directly with the communities to be served – are best placed to determine how to best address the intersection of issues that help or hinder digital and development. All this necessitates trust that people in developing markets are the experts, including through our lived experiences, and that we are not helpless and merely waiting for interventions from the West. These recommendations for international development reform predate digitalisation; the positive action to make them a reality is the missing link to unlocking sustainable, meaningful development in a digital age that leaves no one behind.

To conclude, what is your personal outlook for the years to come? Would you have recommendations for (future) policy-makers?

In this emergent era, policy-making in the public interest can and should be exciting. The tools, techniques and good practices are more readily available than ever; it is possible to learn (and contribute to) lessons on what has (not) worked from practically every corner of the globe, and customise this for our specific contexts. It is time, in Africa and other regions, to reform the space of policy and policy-making. We have all the insights, expertise and even technologies we need to start making it happen; we must match this with the moral fortitude and political will to actualise the numerous recommendations from various sectors, and most importantly, from the communities looking to public policy to see their voices and desires reflected and realised.



The background of the image is a composite of three distinct visual elements. At the top, there is a clear, solid blue sky. Below the sky is a wall with a mottled, greyish-blue texture, possibly made of stone or concrete. In the bottom-left corner, a person's hand with a brown complexion is visible, holding a piece of white fabric or a cloth. The overall composition is simple and modern.

4.0

Annex

4.0 Annex

- 1 UN Secretary General's High-Level Panel (2019). The age of digital interdependence. Report of the UN Secretary-General's High-level Panel on Digital Cooperation. <https://digitalcooperation.org/wp-content/uploads/2019/06/DigitalCooperation-report-for-web.pdf>
- 2 TheInnovator (2019). <https://innovator.news/the-platform-economy-3c09439b56?gi=839049d86098>
- 3 UNCTAD (2019). Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
- 4 UNCTAD's aim is to obtain a more just and more effective access for developing countries to the advantages of the globalised economy.
- 5 When defining platforms, UNCTAD distinguishes between transaction platforms and innovation platforms. This publication focuses on transaction platforms, because the effects they have on economic sectors is more direct. The purpose of innovation platforms is often for shared usage or development of solutions as part of a defined group of participants (e.g. companies, industrial associations). UNCTAD (2019). Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>

Annex to section 2.1

Bibliography

- UNCTAD, 2019. Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
 - Hogan Lovells, 2019. A turning Point for Tech – Global Survey on Digital Regulation. <https://www.hoganlovells.com/en/publications/a-turning-point-for-tech-global-survey-on-digital-regulation>
 - Internet & Jurisdiction Policy Network, 2019. Internet & Jurisdiction Global Status Report 2019. <https://www.internetjurisdiction.net/news/release-of-worlds-first-internet-jurisdiction-global-status-report>
 - 2017. Privacy is Paramount – Personal Data Protection in Africa. https://www2.deloitte.com/content/dam/Deloitte/za/Documents/risk/za_Privacy_is_Paramount-Personal_Data_Protection_in_Africa.pdf
- 6 UNCTAD, 2019. Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
 - 7 UNCTAD, 2019. Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
 - 8 2Africa. <https://www.2africacable.com/datacentermap>. <https://www.datacentermap.com/datacenters.html>
 - 9 Financial Times (2019). Africa must take a leading role in the data economy <https://www.ft.com/content/cbef0cb8-ee5f-11e9-a55a-30afa498db1b>
 - 10 Internet & Jurisdiction Policy Network (2019). Internet & Jurisdiction Global Status Report 2019. <https://www.internetjurisdiction.net/news/release-of-worlds-first-internet-jurisdiction-global-status-report>
 - 11 UNCTAD (Stand: 2020). https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Data-Protection-Laws.aspx
 - 12 Deloitte (2017). Privacy is Paramount Personal Data Protection in Africa. https://www2.deloitte.com/content/dam/Deloitte/za/Documents/risk/za_Privacy_is_Paramount-Personal_Data_Protection_in_Africa.pdf
 - 13 Internet & Jurisdiction Policy Network (2019). Internet & Jurisdiction Global Status Report 2019. <https://www.internetjurisdiction.net/news/release-of-worlds-first-internet-jurisdiction-global-status-report>
 - 14 UNCTAD (2019). Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
 - 15 Meinel, C. (4.10.2020). Deutschland gibt seine Souveränität am Router ab. Frankfurter Allgemeine Zeitung.
 - 16 <https://www.bmwi.de/Redaktion/DE/Dossier/gaia-x.html>
 - 17 Data Protection Africa (o.J.). <https://dataprotection.africa/about/>

Annex to section 2.2

Bibliography

- Aneja, U. Chetty, K., Albrie, R., Rapetti, M., (2019). How to promote Worker Wellbeing in the Platform Economy in the Global South. T20 Japan 2019 Policy Brief. <https://t20japan.org/policy-brief-promote-worker-wellbeing-platform-economy/>
- Bester, H. van der Linden, A. Dewan, S. 2020. Policy Options for Regulating Platform Work. Cenfri: Cape Town, ZA. Policy-options-for-regulating-platform-work_Nov-2020-2.pdf (cenfri.org)
- International Labour Organization, 2018. Digital Labour Platforms and the Future of Work: Towards decent work in the online world. Geneva. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_645337.pdf
- Fairwork. 2019. The Five Pillars of Fairwork: Labour Standards in the Platform Economy. Oxford, UK; Manchester, UK; Cape Town, South Africa; Bangalore, India. <https://fair.work/publications/>
- Melia, E. 2020. African Jobs in the Digital Era – Export Options with a Focus on Online Labour. Discussion Paper 3/2020. Deutsches Institut für Entwicklungspolitik. https://www.die-gdi.de/uploads/media/DP_3.2020.pdf

-
- 18 Fairwork Foundation (2019). <https://fair.work/wp-content/uploads//97/2019/10/--The-information-refers-to-both-platform-work-that-relates-to-a-specific-location-and-also-web-based-platform-work.>
 - 19 Cenfri (2018). https://cenfri.org/wp-content/uploads/2018/11/i2iRICTA-infographic_V2.pdf;
 - 20 Fairwork Foundation (2020). Fairwork South Africa Ratings 2020: Labour Standards in the Gig Economy. <https://fair.work/wp-content/uploads/sites/97/2020/04/Fairwork-South-Africa-2020-report.pdf>
 - 21 Melia (2020). African Jobs in the Digital Era – Export Options with a Focus on Online Labour. Discussion Paper 3/2020. Deutsches Institut für Entwicklungspolitik. <https://www.die-gdi.de/en/discussion-paper/article/african-jobs-in-the-digital-era-export-options-with-a-focus-on-online-labour/>
 - 22 CNN (2020). <https://edition.cnn.com/2020/01/09/perspectives/california-ab5/index.html>
 - 23 Platform companies such as Uber have contributed just under USD 200 million to support the campaign, making it the most expensive voting initiative in history at federal state level. On 3 November 2020 Californian voters agreed to Proposition 22. With this, platform workers will continue to be classed as self-employed. <https://www.theguardian.com/us-news/2020/nov/04/california-election-voters-prop-22-uber-lyft>
 - 24 Bester, van der Linden, Dewan. 2020. Policy Options for Regulating Platform Work. Cenfri: Cape Town, ZA. Policy-options-for-regulating-platform-work_Nov-2020-2.pdf (cenfri.org)
 - 25 Fairwork. 2019. The Five Pillars of Fairwork: Labour Standards in the Platform Economy. Oxford, UK; Manchester, UK; Cape Town, South Africa; Bangalore, India. <https://fair.work/publications/>

Annex to section 2.3

Bibliography

- UNCTAD, 2019. Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
- Hogan Lovells, 2019. A turning Point for Tech – Global Survey on Digital Regulation. <https://www.hoganlovells.com/en/publications/a-turning-point-for-tech-global-survey-on-digital-regulation>
- Internet & Jurisdiction Policy Network, 2019. Internet & Jurisdiction Global Status Report 2019. <https://www.internetjurisdiction.net/news/release-of-worlds-first-internet-jurisdiction-global-status-report>
- BMWi, 2019. A new competition framework for the digital economy – Report by the commission “Competition Law 4.0”. https://www.bmwi.de/Redaktion/EN/Downloads/a/a-new-competition-framework.pdf?__blob=publicationFile&v=2
- Baker McKenzie, 2019. An Overview of Competition and Antitrust Regulation in Africa. <https://www.bakermckenzie.com/en/insight/publications/guides/overview-competition-antitrust-regulations-africa>

-
- 26 TheInnovator (2019). <https://innovator.news/the-platform-economy-3c09439b56>
 - 27 McKinsey & Company (2018). If you're not building an ecosystem, chances are your competitors are. <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-strategy-and-corporate-finance-blog/if-youre-not-building-an-ecosystem-chances-are-your-competitors-are>
 - 28 UNCTAD (2019). Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
 - 29 UNCTAD (2019). Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
 - 30 Statcounter (2020). <https://gs.statcounter.com/search-engine-market-share/all/africa>
 - 31 BMWi (2019). A new competition framework for the digital economy – Report by the commission “Competition Law 4.0”. https://www.bmwi.de/Redaktion/EN/Downloads/a/a-new-competition-framework.pdf?__blob=publicationFile&v=2 https://www.bmwi.de/Redaktion/EN/Downloads/a/a-new-competition-framework.pdf?__blob=publicationFile&v=2
 - 32 Medium (2017). <https://medium.com/@heosphoros22/uber-and-the-network-effect-b6a4395c58ab>
 - 33 OECD (o.J.). <https://www.oecd.org/competition/digital-economy-innovation-and-competition.htm>
 - 34 Reuters (2019). <https://www.reuters.com/article/us-careem-m-a-uber-idUSKBN1YX07Q>
 - 35 [https://www.cak.go.ke/sites/default/files/Guidelines%20on%20Relevant%20Market%20Definition%20\(1\).pdf](https://www.cak.go.ke/sites/default/files/Guidelines%20on%20Relevant%20Market%20Definition%20(1).pdf)

- 36 CNBC (2018). <https://www.cnbc.com/2018/12/26/indias-tightens-e-commerce-rules-likely-to-hit-amazon-flipkart.html>
- 37 European Commission (2020). <https://ec.europa.eu/digital-single-market/en/digital-services-act-package>
- 38 FTC (2020). <https://www.ftc.gov/news-events/press-releases/2020/02/ftc-examine-past-acquisitions-large-technology-companies>
- 39 The Guardian (2020). <https://www.theguardian.com/commentisfree/2020/jul/31/big-tech-house-historic-antitrust-hearing-times-have-changed>
- 40 New York Times (2020). <https://www.nytimes.com/2020/07/30/business/dealbook/tech-hearing-highlights.html>
- 41 New York Times (2020). <https://www.nytimes.com/interactive/2020/10/06/technology/house-antitrust-report-big-tech.html>
- 42 New York Times (2020). <https://www.nytimes.com/2020/07/30/business/dealbook/tech-hearing-highlights.html>

Annex to section 2.4

Bibliography

- UNCTAD (2019), Digital Economy Report 2019 – Value Creation and Capture: Implications for Developing Countries. https://unctad.org/en/PublicationsLibrary/der2019_en.pdf
- OECD (2019), Unlocking the Potential of E-commerce. <http://www.oecd.org/going-digital/unlocking-the-potential-of-e-commerce.pdf>
- McKinsey & Company (2018), Industry 4.0: Reinvigorating ASEAN Manufacturing for the Future. <https://www.mckinsey.com/~/media/mckinsey/business%20functions/operations/our%20insights/industry%204%200%20reinvigorating%20asean%20manufacturing%20for%20the%20future/industry-4-0-reinvigorating-asean-manufacturing-for-the-future.ashx>
- McKinsey & Company (2019), The future of work in South Africa – Digitisation, productivity and job creation. <https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Middle%20East%20and%20Africa/The%20future%20of%20work%20in%20South%20Africa%20Digitisation%20productivity%20and%20job%20creation/The-future-of-work-in-South-Africa.ashx>

- 43 UNCTAD (2019), Digital Economy Report 2019 – Value Creation and Capture: Implications for Developing Countries. https://unctad.org/en/PublicationsLibrary/der2019_en.pdf
- 44 Statista (2020). <https://www.statista.com/outlook/243/630/ecommerce/africa>
- 45 Statista (2018). <https://www.statista.com/statistics/251666/number-of-digital-buyers-worldwide/>
- 46 Statista (2020). <https://www.statista.com/statistics/1043008/annual-active-customers-jumia/>

- 47 McKinsey & Company (2019), The future of work in South Africa – Digitisation, productivity and job creation. <https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Middle%20East%20and%20Africa/The%20future%20of%20work%20in%20South%20Africa%20Digitisation%20productivity%20and%20job%20creation/The-future-of-work-in-South-Africa.ashx>
- 48 Mass-personalised products are products that are produced in large numbers but at the same time can be adapted by the manufacturer to accommodate customers' specific preferences. Deloitte (2019). <https://www2.deloitte.com/content/dam/Deloitte/ch/Documents/consumer-business/ch-en-consumer-business-made-to-order-consumer-review.pdf>

Annex to section 2.5

Bibliography

- UNCTAD (2019), Digital Economy Report 2019 – Value Creation and Capture: Implications for Developing Countries. https://unctad.org/en/PublicationsLibrary/der2019_en.pdf
- International Monetary Fund, Amadou N Sy et al. (2019), fintech in Sub-Saharan African Countries: A Game Changer? <https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2019/02/13/fintech-in-Sub-Saharan-African-Countries-A-Game-Changer-46376>
- GSMA (2019) State of the Industry Report on Mobile Money. <https://www.gsma.com/sotir/wp-content/uploads/2020/03/GSMA-State-of-the-Industry-Report-on-Mobile-Money-2019-Full-Report.pdf>
- GSMA Mobile Money Development Tracker in 2019. <https://www.gsma.com/mobilemoneymetrics/#global?y=2019?v=overview?g=global>

- 49 The World Bank Group. The Global Findex Database 2017. <https://globalfindex.worldbank.org/>
- 50 GSMA (2019) State of the Industry Report on Mobile Money. <https://www.gsma.com/sotir/wp-content/uploads/2020/03/GSMA-State-of-the-Industry-Report-on-Mobile-Money-2019-Full-Report.pdf>
- 51 World Bank (o.J.). <https://www.worldbank.org/en/topic/financialinclusion/overview>
- 52 UN Secretary General's High-Level Panel (2019), the age of digital interdependence. Report of the UN Secretary-General's High-level Panel on Digital Cooperation. <https://digitalcooperation.org/wp-content/uploads/2019/06/DigitalCooperation-report-for-web.pdf>
- 53 Vodafone (2017). <https://www.vodafone.com/perspectives/blog/m-pesa-created>
- 54 Suri, Tavneet and Jack, William (2016). The long-run poverty and gender impacts of mobile money. Science 354 (6317), 1288-1292. [doi: 10.1126/science.aah5309]. <https://science.sciencemag.org/content/354/6317/1288>
- 55 World Bank (2018). <https://www.worldbank.org/en/news/feature/2018/10/03/what-kenya-s-mobile-money-success-could-mean-for-the-arab-world>
- 56 Bill & Melinda Gates Foundation (2013). Fighting poverty, profitably Transforming the economics of payments to build sustainable, inclusive financial systems.

- 57 EY (2020). How Africa's growing mobile money market is evolving. https://www.ey.com/en_ps/banking-capital-markets/how-africa-s-growing-mobile-money-market-is-evolving
- 58 Cryptocurrencies are virtual currencies which as a rule are neither created nor controlled by central banks and which are stored, transferred and traded electronically. (European Parliament (2018). Cryptocurrencies and blockchain – Legal context and implications for financial crime, money laundering and tax evasion.
- 59 Sean Foley, Jonathan R Karlsen, Tālis J Putniņš, Sex, Drugs, and Bitcoin: How Much Illegal Activity Is Financed through Cryptocurrencies?, *The Review of Financial Studies*, Volume 32, Issue 5, May 2019, Pages 1798–1853, <https://doi.org/10.1093/rfs/hhz015>
- 60 Flutterwave (o.J.). <https://flutterwave.com/us/about>
- 61 Moneywave (o.J.). <https://moneywave.flutterwave.com/>
- 69 JAKARTA GLOBE (2020). <https://jakartaglobe.id/business/indonesia-to-start-collecting-10-vat-from-netflix-spotify-in-july>
- 70 International Tax Review (2020). <https://www.internationaltaxreview.com/article/b1mtmjhgwp5833/indonesia-imposes-vat-on-imported-digital-supplies>
- 71 Taxamo (2020). <https://blog.taxamo.com/insights/africa-digital-services-tax>
- 72 e.g. the 4th High Level Tax Policy Dialogue: Taxing Rights for Africa in the New World & Effects of COVID-19: The role of tax policymakers & Tax administrators (August 2020). The ATAF High-Level Tax Policy Dialogue event took place as early as August 2019: Ensuring Africa's Place in the taxation of the Digital Economy.
- 73 AndersenTax (2020). <https://andersentax.ng/minister-of-finance-issues-companies-income-tax-significant-economic-presence-order-2020/>
- 74 1. The foreign company generates gross sales or profits of more than 25 million NGN (approx. USD 65,000) because it:

- Offers streaming services or downloads of digital content;
- Transfers data obtained from the digital activity of Nigerian users;
- Offers goods or services that are not technical, management, advisory or professional services;
- Offers intermediary services via a digital platform that connects the provider with the customer.

2. The foreign company uses a Nigerian domain name (.ng) or has a website registered in Nigeria.
3. The foreign company deliberately and continuously interacts with people in Nigeria by focusing its website or digital platform on target groups in Nigeria (for example, if prices, invoices and payment options are indicated in the Nigerian national currency).

Annex to section 2.6

Bibliography

- OECD, 2018. OECD/G20 Base Erosion and Profit Shifting Project: Tax Challenges Arising from Digitalisation – Interim Report 2018. <https://www.oecd-ilibrary.org/docserver/9789264293083-en.pdf?expires=1617734243&id=id&accname=guest&checksum=2A89122A93F93611D6B57A54A2610BD1>
- UNCTAD, 2019. Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2466>
- Rukundo, Solomon 2020. ICDT Working Paper 105. Addressing the Challenges of Taxation of the Digital Economy: Lessons for African Countries. <https://www.ictd.ac/publication/addressing-challenges-taxation-digital-economy-lessons-african-countries/>
- World Economic Forum, 2019. Why we need a new and global approach to taxing big companies by Jayati Ghosh, Professor of Economics, Jawaharlal Nehru University. <https://www.weforum.org/agenda/2019/04/how-to-tax-a-multinational/>

62 European Commission (2018, p. 4): https://ec.europa.eu/taxation_customs/sites/taxation/files/communication_fair_taxation_digital_economy_21032018_en.pdf

63 OECD. <https://www.oecd.org/tax/beps/about/>

64 OECD (2019). <https://www.oecd.org/tax/consumption/the-role-of-digital-platforms-in-the-collection-of-vat-gst-on-online-sales.pdf>

65 UNCTAD (2014). "World Investment Report: Investing in the SDGs: An Action Plan." United Nations Conference on Trade and Development.

66 OECD (2018), Tax Challenges Arising from Digitalisation – Interim Report 2018: Inclusive Framework on BEPS, OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264293083-en>

67 'Base erosion and profit sharing' are tax avoidance strategies of companies where they deliberately exploit the tax rates and regulations that vary from country to country in order to reduce their tax burden.

68 KPMG (2019). <https://home.kpmg/us/en/home/insights/2019/07/tnf-france-digital-services-tax-enacted.html>

Annex to section 2.7

Bibliography

- German Federal Ministry for Economic Affairs and Energy, 2017. White paper on digital platforms: Digitale Ordnungspolitik für Wachstum, Innovation, Wettbewerb und Teilhabe (only in German) <https://www.bmwi.de/Redaktion/DE/Publikationen/Digitale-Welt/weissbuch-digitale-plattformen.html>
- The German Marshall Fund of the United States (GMF), 2020. Safeguarding Digital Democracy Digital Innovation and Democracy Initiative Roadmap. <http://www.gmfus.org/publications/safeguarding-democracy-against-disinformation>
- McGee, R. with Edwards, D.; Anderson, C.; Hudson, H. and Feruglio, F. (2018) Appropriating technology for accountability: messages from Making All Voices Count, Making All Voices Count Research Report, Brighton: IDS
- Ronak Gopaldas. 2019. Digital Dictatorship versus Digital Democracy in Africa. Policy Insights 75, October 2019. South African Institute of International Affairs (SAIIA). <https://media.africaportal.org/documents/Policy-Insights-75-gopaldas.pdf>

- 75 Radio Senado (2019). <https://www12.senado.leg.br/radio/1/noticia/pesquisa-aponta-que-whatsapp-e-a-principal-fonte-de-informacao-de-79-dos-entrevistados>
- 76 The New York Times (2018). <https://www.nytimes.com/2018/04/04/technology/mark-zuckerberg-testify-congress.html>
- 77 Federal Agency for Civic Education (2011). <https://www.bpb.de/internationales/afrika/arabischer-fruehling/52420/die-rolle-der-neuen-medien>
- 78 McGee, R. mit Edwards, D.; Anderson, C.; Hudson, H. und Feruglio, F. (2018) Appropriating technology for accountability: messages from Making All Voices Count, Making All Voices Count Research Report, Brighton: IDS
- 79 Freedom House (2019). Freedom on the Net 2019: The Crisis of Social Media. https://freedomhouse.org/sites/default/files/2019-11/11042019_Report_FH_FOTN_2019_final_Public_Download.pdf
- 80 Bertelsmann Stiftung (o.J.). https://www.bertelsmann-stiftung.de/fileadmin/files/aam/Asia-Book_A_03_China_Social_Credit_System.pdf
- 81 BBC (2020). Trump Covid post deleted by Facebook and hidden by Twitter. <https://www.bbc.com/news/technology-54440662>
- 82 The Economist. January 16-22
- 83 Making All Voices Count. <https://www.makingallvoicescount.org/project/mobisam/>

Annex to section 2.8

Bibliography

- GSM Association (2019), 2019 Mobile Industry Impact Report: Sustainable Development Goals. https://www.gsma.com/betterfuture/2019sdgimpactreport/wp-content/uploads/2019/09/SDG_Report_2019_ExecSummary_Web_Singles.pdf
- We Are Social & Hootsuite (2020), Digital 2020 – Global Digital Overview. <https://wearesocial.com/blog/2020/01/digital-2020-3-8-billion-people-use-social-media>
- ITU/UNESCO Broadband Commission for Sustainable Development (2019), The State of Broadband 2019 – Broadband as a Foundation for Sustainable Development. https://www.itu.int/dms_pub/itu-s/opb/pol/S-POL-BROADBAND.20-2019-PDF-E.pdf
- GSMA, Mobile Internet Connectivity 2019: Sub-Saharan Africa Factsheet (2019). <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/07/Mobile-Internet-Connectivity-SSA-Factsheet.pdf>

- 84 ITU (2019). Measuring digital development. Facts and figures 2019. <https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>
- 85 ITU (2019). Measuring digital development. Facts and figures 2019. <https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>
- 86 World Bank (2019). <https://www.worldbank.org/en/news/press-release/2019/10/17/achieving-broadband-access-for-all-in-africa-comes-with-a-100-billion-price-tag>
- 87 ITU (2018). Measuring the Information Society Report Volume 1. <https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2018/MISR-2018-Vol-1-E.pdf>

- 88 ITU (2019). Measuring digital development – facts and figures 2019. <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2019.pdf>
- 89 World Economic Forum in collaboration with the Boston Consulting Group. Accelerating Digital Inclusion in the New Normal – PLAYBOOK July 2020.
- 90 The International Telecommunications Union of the United Nations promotes better international connectivity in communications networks. International Telecommunications Union (o.J.). <https://www.itu.int/en/about/Pages/default.aspx>
- 91 ITU (2019). Measuring digital development: Facts and figures 2019. <https://www.itu.int/en/ITU-D/Statistics/pages/facts/default.aspx>
- 92 The International Finance Corporation (IFC) is the World Bank Group's development bank, which is responsible for supporting the private sector in developing countries and emerging economies. Source: IFC (n.d.): http://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/home
- 93 IFC (2019). Digital Skills in Sub-Saharan Africa Spotlight on Ghana. https://www.ifc.org/wps/wcm/connect/ed6362b3-aa34-42ac-ae9f-c739904951b1/Digital+Skills_Final_WEB_5-7-19.pdf?MOD=AJPERES
- 94 World Bank (2020). <https://www.worldbank.org/en/news/feature/2020/04/14/digital-skills-for-all-african-students-what-will-it-take>
- 95 UNESCO (2019). <https://en.unesco.org/news/two-hundred-young-students-empowered-digital-skills-mozambique>
- 96 Microsoft (2019). <https://news.microsoft.com/en-xm/2019/04/30/the-more-girls-in-ict-the-better-for-technology-and-the-world/>
- 97 Huawei (2020). <https://blog.huawei.com/2020/03/30/student-voices-digital-skills-build-futures-digitruck/>
- 98 BMZ (o.J.). https://www.bmz.de/de/service/sonderseiten/ikt/ziele_digitalisierung_03_eskills4girls/index.html
- 99 Bitkom (o.J.). <https://www.bitkom.org/Themen/Politik-Recht/Telekommunikationspolitik/Facts-Views-5G>
- 100 Fraunhofer-Institut für Integrierte Schaltungen IIS (2018). <https://www.iis.fraunhofer.de/de/magazin/2018/5g.html>
- 101 DW (2019). Is Africa ready for 5G? <https://www.dw.com/en/is-africa-ready-for-5g/a-51474261>
- 102 GSMA (2019). 5G in Sub-Saharan Africa: laying the foundations. <https://www.gsma.com/subsaharanafrica/resources/5g-in-sub-saharan-africa-laying-the-foundations>

Annex to section 2.9

Bibliography

- OECD (2018), Bridging the Digital Gender Divide – Include, Upskill, Innovate. <http://www.oecd.org/internet/bridging-the-digital-gender-divide.pdf>
- GSM Association (2020), Connected Women – The Mobile Gender Gap Report 2020. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/02/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf>
- W20 Japan (2019), Policy Brief – The Digital Gender Gap. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/Digital-Equity-Policy-Brief-W20-Japan.pdf>
- World Wide Web Foundation (2015). Women's Rights Online: Translating Access into Empowerment. <https://webfoundation.org/research/womens-rights-online-2015/>

- UNICEF (2020) COVID-19 and education: The digital gender divide among adolescents in sub-Saharan Africa. <https://blogs.unicef.org/evidence-for-action/covid-19-and-education-the-digital-gender-divide-among-adolescents-in-sub-saharan-africa/>

- 103 ITU (2019). Measuring digital development Facts and Figures 2019. <https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>
- 104 Internet user gender gap: Difference between internet usage rates of men and women in proportion to the internet usage rates of men (expressed in per cent)
- 105 (Information from 2020, in USD). Cook, Cody; Diamond, Rebecca; Hall, Jonathan V.; List, John A.; Oyer, Paul (2019). The Gender Earnings Gap in the Gig Economy: Evidence from over a Million Rideshare Drivers. <https://web.stanford.edu/~diamondr/UberPayGap.pdf>
- 106 OECD (2018). Bridging the Digital Gender Divide. <http://www.oecd.org/digital/bridging-the-digital-gender-divide.pdf>
- 107 Schweizerische Eidgenossenschaft (2020). <https://www.eda.admin.ch/agenda2030/de/home/agenda-2030/die-17-ziele-fuer-eine-nachhaltige-entwicklung/ziel-5-geschlechtergleichstellung-erreichen-und-alle-frauen.html>
- 108 GSMA (2020). The Mobile Gender Gap Report. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf>
- 109 GSMA (2020). The Mobile Gender Gap Report. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf>
- 110 GSMA (2020). The Mobile Gender Gap Report. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf>
- 111 <https://www.gsma.com/aboutus/>
- 112 GSMA (2020). The Mobile Gender Gap Report. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf>
- 113 GSMA (2020). The Mobile Gender Gap Report. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf>
- 114 Sicut, Mehetaj & Chemutai. Leveraging ICT Technologies in Closing the Gender Gap. <http://documents1.worldbank.org/curated/en/891391578289050252/pdf/Leveraging-ICT-Technologies-in-Closing-the-Gender-Gap.pdf>
- 115 G20. Annex to the final declaration of the G20 summit G20 Initiative #eSkills4Girls A new future for women and girls in the digital economy <http://www.g20.utoronto.ca/2017/2017-g20-initiative-eskills4girls-de.pdf>
- 116 Microsoft (2019). The more girls in ICT, the better for technology and the world. <https://news.microsoft.com/en-xm/2019/04/30/the-more-girls-in-ict-the-better-for-technology-and-the-world/>

Annex to section 2.10

Bibliography

- CEPS, 2019. Sustainability in the Age of Platforms. <https://www.ceps.eu/wp-content/uploads/2019/06/Sustainability-in-the-Age-of-Platforms-2.pdf>
- Falk et al. (2019). Exponential Roadmap – Scaling 36 Solutions to Halve Emissions by 2030. https://exponentialroadmap.org/wp-content/uploads/2019/09/ExponentialRoadmap_1.5_20190919_Single-Pages.pdf

- 117 GeSI – GLOBAL Esustainability INITIATIVE & Accenture Strategy (2015). #SMARTer2030 ICT Solutions for 21st Century Challenges http://smarter2030.gesi.org/downloads/Full_report.pdf
- 118 PwC & Microsoft (2019). <https://www.pwc.co.uk/sustainability-climate-change/assets/pdf/how-ai-can-enable-a-sustainable-future.pdf>
- 119 Independent (2016). <https://www.independent.co.uk/environment/global-warming-data-centres-consume-three-times-much-energy-next-decade-experts-warn-a6830086.html>
- 120 2030 (2019). Exponential Roadmap. https://exponentialroadmap.org/wp-content/uploads/2019/09/ExponentialRoadmap_1.5_20190919_Single-Pages.pdf
- 121 Bitkom (2020). Klimaschutz durch digitale Technologien – Chancen und Risiken. https://www.bitkom.org/sites/default/files/2020-05/2020-05_bitkom_klimastudie_digitalisierung.pdf
- 122 The Exponential Roadmap is a multi-disciplinary cooperation to meet the targets of the Paris Agreement on climate change, which was initiated by Future Earth, the WWF, Ericsson, the KTH Royal Institute of Technology, the Potsdam Institute for Climate Impact Research (PIK), the Stockholm Resilience Centre, Sitra, Mission 2020 and Internet of Planet.
- 123 2030 (2019). Exponential Roadmap. https://exponentialroadmap.org/wp-content/uploads/2019/09/ExponentialRoadmap_1.5_20190919_Single-Pages.pdf
- 124 Nijland, Hans und van Meerkerk, Jordy (2017). Mobility and environmental impacts of car sharing in the Netherlands. Environmental Innovation and Societal Transitions 23. DOI: 10.1016/j.eist.2017.02.001. https://www.researchgate.net/publication/314206924_Mobility_and_environmental_impacts_of_car_sharing_in_the_Netherlands
- 125 IRENA (2020). PEER-TO-PEER ELECTRICITY TRADING INNOVATION LANDSCAPE BRIEF. https://irena.org/-/media/Files/IRENA/Agency/Publication/2020/Jul/IRENA_Peer-to-peer_trading_2020.pdf?la=en&hash=D3E25A5BBA6FAC15B9C193F64CA3C8CBFE3F6F41
- 126 UNFCCC (o.J.). ME SOLshare: Peer-to-Peer Smart Village Grids | Bangladesh <https://unfccc.int/climate-action/momentum-for-change/ict-solutions/solshare>
- 127 IRENA (2020). PEER-TO-PEER ELECTRICITY TRADING INNOVATION LANDSCAPE BRIEF. https://irena.org/-/media/Files/IRENA/Agency/Publication/2020/Jul/IRENA_Peer-to-peer_trading_2020.pdf?la=en&hash=D3E25A5BBA6FAC15B9C193F64CA3C8CBFE3F6F41
- 128 Forbes (2019). <https://www.forbes.com/sites/pikeresearch/2019/10/03/ai-starts-to-live-up-to-its-energy-efficiency-potential/>

Annex to section 3.0

- 129 The Conversation (2017). How a rural community built South Africa's first ISP owned and run by a cooperative. <https://theconversation.com/how-a-rural-community-built-south-africas-first-isp-owned-and-run-by-a-cooperative-87448>
- 130 Wapa (2019). The rural community that built a network. <https://wapa.org.za/node/263>
- 131 SABC News (2020). Mankosi in Eastern Cape develops SA's first community-owned internet service provider. <https://www.sabcnews.com/sabcnews/mankosi-in-eastern-cape-develops-sas-first-community-owned-internet-service-provider/>
- 132 Alliance for Affordable Internet (2015). The 2015-16 Affordability Report. <https://a4ai.org/affordability-report/report/2015/>
- 133 The Markup (2020). How Many Americans Lack High-Speed Internet? <https://themarkup.org/ask-the-markup/2020/03/26/how-many-americans-lack-high-speed-internet>
- 134 Alliance for Affordable Internet (2019). 2019 Affordability Report – Regional Snapshot: Africa. https://1e8q3q16vyc81g8l3h3md6q5f5e-wpengine.netdna-ssl.com/wp-content/uploads/2019/12/AR2019_Africa-Regional_Screen_AW.pdf
- 135 The Economist (2016). Look before you leap, August 6th. <https://www.economist.com/business/2016/08/04/look-before-you-leap>
- 136 Alliance for Affordable Internet (o.J.). Meaningful Connectivity – unlocking the full power of internet access. <https://a4ai.org/meaningful-connectivity/>
- 137 Principles for Digital Development (o.J.). <http://www.digitalprinciples.org>
- 138 Reuters (2020). Factbox: Big Tech and their carbon pledges. <https://www.reuters.com/article/us-climate-change-tech-factbox-idUSKBN1ZF2E7>
- 139 <https://www.un.org/en/sg-digital-cooperation-panel>
- 140 CGAP (2019). Blog Series Regulatory Sandboxes: What Have We Learned So Far? <https://www.cgap.org/blog/series/regulatory-sandboxes-what-have-we-learned-so-far>
- 141 World Wide Web Foundation (2019). Championing gender-responsive policies in the digital sector. <https://webfoundation.org/2019/04/championing-gender-responsive-policies-in-the-digital-sector1/>



A person with glasses is looking at a smartphone. The background is a blurred indoor setting. A blue surface is visible in the foreground.

5.0

Glossary

5.0 Glossary

Activities of German technical cooperation in a digital context

Digitalisation offers considerable potential, especially for developing countries and emerging economies, which can be harnessed through effective development cooperation. For this reason, digitalisation is a core topic in German technical cooperation. BMZ has commissioned a large number of Development Cooperation (DC) projects. Below you will therefore find cross-references to BMZ's activities with a strong emphasis on digitalisation.

BMZ's digital strategy

The Sustainable Development Goals of the 2030 Agenda can only be attained with new digital technologies. From the perspective of German DC, digitalisation in developing countries therefore offers particular potential and opportunities in relation to the five priority areas: work, local innovations, equality of opportunity, good governance and human rights, and data for development. For the digital strategy '**Digitalisation for development**', BMZ sets concrete objectives for digitalisation in German development policy. BMZ focuses on these areas and is extending its commitment.

Link to 'Digitalisation for development' digital strategy: **Digitalisation for development (bmz.de)**

Digital Toolkit

The '**Digitalisation Toolkit**' website provides an overview of how digital technologies are used in German DC, along with a number of practical aids.

Link to the 'Digitalisation Toolkit' website:
<https://toolkit-digitalisierung.de/en/digital-strategy/>

The digital portfolio of German development cooperation

The 'Digital portfolio of German DC' is an overview of all German development cooperation projects in which digitalisation plays a significant role – for example, the digital portfolio contains more than 900 projects with digital components that have been commissioned by BMZ.

These include projects which have been commissioned in partnership with other donor organisations and carried out by a very wide range of implementing organisations.

Link to Digital portfolio of German DC:
<https://digitalportfolio.toolkit-digitalisierung.de/en/login/>

BMZ's Digital Economy Newsletter

A subscription to **BMZ's Digital Economy Newsletter** offers more information about technological trends such as blockchain, drones and BMZ's cooperation with tech companies.

Link to BMZ's Digital Economy Newsletter:
<https://toolkit-digitalisierung.de/newsletter/>

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