From "digital divide" to "digital equality": Unpacking the digital inequality paradox

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Flawed though they may be, the World Summit on the Information Society (WSIS) and Global Digital Compact (GDC) are likely our only hope of mobilising the global cooperation required to redress widening digital inequalities and to harness technological innovations for humanity.

This report starts with a brief history and background to the dynamic and complex issues at the heart of WSIS and the GDC. It proceeds to identify the wicked policy problems arising from digital inequality and data injustice, through an intersectional inequality lens and from a Majority World perspective. Then, the report provides a global digital public goods framing for the global governance of the intensifying process of digitalisation and datafication. In doing so, it surfaces critical areas that could contribute significantly to more equitable and just digital policy outcomes.

WSIS and the potential of the internet for inclusive development

The rapidly evolving processes of digitalisation at the close of the previous millennium had placed information and communications technologies (ICTs) at the centre of development discourses. Investments in more efficient and lower-cost converging broadcasting and telecommunications platforms and mobile infrastructure had pushed ICTs onto the agendas of the G7, development banks and multilateral institutions, specifically the UN – its significance culminating in a global, multistakeholder and member state-driven summit. WSIS was held first in Geneva in 2003, then in Tunis

in 2005, the two stages of the summit eliciting a global commitment towards building a "people-centred, inclusive and development-oriented Information Society."[2]

The summit was an acknowledgement that up to that point, communications, both broadcasting and particularly telecommunications, had largely not been people-centred, or inclusive, and had not contributed significantly to development – certainly not in the global South.

For many, WSIS gave pause to reflect on the failure of previous efforts to redress inequalities in communication. Touchstones of these ambitions for a "New World Information Order" were the UNESCO 1980 MacBride report, *Many Voices, One World*,[3] and the Maitland Report.[4] Not only had the information asymmetries and injustices that had been identified 20 years previously not been ameliorated, but in many ways, they had been perpetuated and amplified by increasingly globalised communication systems. With the concentration of commercial global news networks and the decline in public broadcasting, there was also little diversity or unity in the dominant communication order envisioned by MacBride.

The digital divide – the telecommunications gap between individuals, households and firms within and among countries – that the Maitland Report sought to rectify persisted and was central to the WSIS global commitments. With new mobile technologies and the rise of the internet, the summit foresaw ubiquitous access to information with economic prospects that would level development outcomes of globalisation. But there was much to be done. At the time of WSIS 2003 in Geneva, the reference to people on Manhattan Island in New York having more households connected than the whole of Africa had become a mantra. South Africa, the sub-Saharan country with the highest fixed-line penetration, stood at only 9%

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2   https://www.itu.int/net/wsis/docs/geneva/official/dop.html

3   https://en.wikipedia.org/wiki/MacBride_report

4   https://www.itu.int/en/history/Pages/MaitlandReport.aspx

of the population, with other sub-Saharan countries trailing way behind at 1% and 2%.

The internet emerged amidst these developments as the latest general-purpose technology cutting across sectors, firms and individuals' social and economic existence. Unlike previous general-purpose technologies (such as electricity), the internet was transnational, non-state and potentially unifying. Its development promise was reflected in strategies such as the Sustainable Development Goals (SDGs) with its seven underlying ICT sub-targets.[5]

Not only did the dynamic technological developments have significant implications for economic efficiencies and new opportunities, but also for the democratic and social movements that both drove and were enabled by the expansion of the internet at the turn of the millennium. Globalisation, intensified by new media technologies, allowed localised actors to enter the international arenas that had previously been exclusive to nation-states.[6] Instantaneous and borderless communication made possible the mobilisation of people around the world on issues of social justice. These included the Occupy Wall Street social movement against corporate excesses and national democratic resistance to repressive states, such as the unprecedented uprisings in North Africa in the so-called Arab Spring.

Eroded promises

The excitement about the potential of the internet and social networks to disrupt and transform dominant power relations, both within countries and geopolitically, was tempered by the response of states in countering dissent. This was done through traditional forms of coercion and violence and through their leveraging of social networks for purposes of surveillance and repression.[7]

By WSIS+10 in 2013, the promise of a free and open internet, providing unlimited access to information for all, was significantly eroded, including through the increasing commercialisation of content with paywalls and "walled gardens" restricting access. Moreover, as broadband infrastructure was increasingly liberalised, the varying quality of services according to price packages raised concerns about net neutrality on public infrastructure, even as it was privately provisioned.

Datafication was accompanied by the rise of platformisation and "over-the-top" (OTT) services, particularly social networking. Users shifted from being consumers of data and information to becoming unwitting data subjects. Although advanced data-driven technologies initially appeared to offer new forms of wide-reaching social and economic engagement, they also ushered in a global monopoly of platforms extracting massive amounts of data from users, in what Zuboff describes as "surveillance capitalism"[8] and Couldry and Meijas more contentiously describe as "data colonialism".[9]

The Global Digital Compact

Fast forward two decades since WSIS, and we see renewed calls for digital inclusion in the wake of the COVID-19 pandemic. The inability of billions of people to mitigate the health and economic risks associated with pandemics and lockdowns by digitally substituting for their work, schooling and public services, including social grants to ensure their survival, has highlighted the compounding effect of digital inequality on underlying structural inequalities. The uneven capabilities of nations in the digital era to deploy the internet for post-pandemic economic and social reconstruction shows the unevenness of the "progress" afforded by high-speed broadband internet envisaged 20 years ago.

This unevenness, marginalisation and exclusion apply not only to economic and social participation, and global competitiveness, but also to exercising effective citizenship. Rather than fostering political inclusion, increased digitalisation is accompanied by a sense of democratic erosion, disinformation and disorder in an increasingly digitalised public sphere.[10]

5   https://www.itu.int/en/mediacentre/backgrounders/Pages/icts-to-achieve-the-united-nations-sustainable-development-goals.aspx

6   Castells, M. (2011). *The Rise of the Network Society.* Wiley. https://books.google.com.uy/books/about/The_Rise_of_the_Network_Society.html?id=FihjywtjTdUC&redir_esc=y; Sassen, S. (2013). Expelled: Humans in Capitalism's Deepening Crisis. *Journal of World-Systems Research, 19*(2), 198-201. https://doi.org/10.5195/jwsr.2013.495

7   Gillwald, A., & Wavre, V. (2024). Rerouting Geopolitics: Narratives and the Political Power of Communications. In C. Padovani et al. (Eds.), *Global Communication Governance at the Crossroads.* Spring International Publishing; International Telecommunication Union. (2022). *Measuring digital development: Facts and figures 2022.* https://www.itu.int/itu-d/reports/statistics/facts-figures-2022

8   Zuboff, S. (2018). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power.* Profile Books.

9   Couldry, N., & Mejias, U. (2018). *Data colonialism: Rethinking big data's relation to the contemporary subject.* SAGE Publications. https://eprints.lse.ac.uk/89511/1/Couldry_Data-colonialism_Accepted.pdf

10   Research ICT Africa. (2022). After Access surveys [dataset]. https://researchictafrica.net/data/after-access-surveys

Reflecting this sentiment, UN Secretary-General António Guterres has identified digitalisation as one of "two seismic shifts" that will shape the 21st century, the other being climate change. He has warned that unless urgently addressed on a planetary scale, digitalisation will exacerbate already extreme inequalities. With digitalisation being one of the central pillars of the UN's "Our Common Agenda", Guterres has called for the GDC to "outline shared principles for an open, free and secure digital future for all"[11] and improve the progress made towards the SDGs. Occurring 20 years after WSIS, the GDC has been able to highlight the growing complexity and transversal nature of digitalisation and datafication, and the need for global collaboration in the governance of monopoly platforms to limit the harms associated with advanced data-driven technologies such as machine learning and artificial intelligence (AI). However, the linkages between foundational inequality and the uneven impact of those harms, and the distribution of opportunities associated with the deployment of large-scale digital technologies, remain opaque. In terms of solutions, there is little acknowledgement of the need for new ways to redress inequality if we want different outcomes.

The policy limitations of the digital divide seen as "connectivity"

One of the reasons why policies of the past two decades have failed to produce more equitable outcomes is because of the way in which digital inequality has been very narrowly conceived of as a digital divide – as a supply-side, infrastructure and connectivity gap. WSIS+10 identified the high cost of digital services driven by the cost of business models or ineffectual regulation as a cause for the highly uneven digital access rates. As a result, the discourse on the digital divide shifted from the issue of ensuring sufficient infrastructure, to addressing "affordable access".

The need for significant bandwidth to fulfil some of the most basic requirements for social and economic inclusion was acknowledged by the Broadband Commission for Sustainable Development, which employed the language of "meaningful access" in its Digital Cooperation Roadmap.[12] This did extend the concept of universal and affordable broadband access to the need for sufficient quality bandwidth to be able to benefit from the internet, and more recently to an acknowledgement that this needs to be coupled with investments in digital skills, localised digital content, accessible hardware, and cybersecurity measures. But the focus continues to be on connectivity in the framing documents of the GDC, even in the arguably progressive efforts of the G20 under the leadership of India and now Brazil to develop a transformative digital agenda.[13]

WSIS+20 and persistent digital inequality

The WSIS+20 review process in 2025 will be informed by the GDC to be adopted at the Summit of the Future later in 2024. The WSIS review outcome document will also be an input into the 2030 Sustainable Development Agenda. As the processes strengthen their alignment, and "as new technologies deepen their imprint on societies," they are intended to provide an opportunity to assess "the continuity and progress toward the aim of a people-centred and multistakeholder approach to global digital transformation."[14]

In doing so, one can only be struck by the greatest continuity being persistent digital inequality and the lack of progress toward "digital transformation" – a term now used so loosely as to have lost its meaning. Despite the commitments to harnessing the disruptive potential of dynamic and adaptive general-purpose technologies, first the internet and now advanced data-driven technologies of AI and machine learning, progress has been extremely uneven both between and within countries. In any serious assessment there must also be concerns about the absence of both data and analysis to critically assess our progress. With the limited decision-making power of global multistakeholder processes, it is questionable how transformative the outcomes of the processes can be. Can the multistakeholder process of consensus building between states, the private sector and civil society (academia and the technical community) redress digital inequality and digitally perpetuated injustices? Given the outcomes of powerful interests reflected in dominant intellectual property, trade and taxation regimes, the international standards and business models associated with them and increasing concentration in the hands of a few large tech companies with

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11 United Nations. (2021). *Our Common Agenda: Report of the Secretary-General.* https://www.un.org/en/common-agenda

12 https://www.un.org/en/content/digital-cooperation-roadmap

13 International Telecommunication Union. (2022). Op. cit.

14 UNDESA. (n/d). WSIS+20 and IGF+20 Review by the UN General Assembly (2025). https://www.intgovforum.org/en/content/wsis20-and-igf20-review-by-the-un-general-assembly-2025

resources to lobby and influence well beyond the means of even mature economies, can the WSIS review process critically engage with these issues?

And what are the implications of this for the Sustainable Development Agenda? Has there been progress on the global commitments made 20 years ago? Have digital policy reforms produced more people-centred, inclusive knowledge societies? Have ICTs been able to contribute to the SDGs to which they have been associated? The answers are: partially, no and we don't know.

Data as an essential public good

The fact of the matter is there is little data at the international level to really assess our progress towards the digital targets of the SDGs, especially in the global South – other than knowing that we are far off from them.[15] There is no comprehensive and complete global data available that can be used to establish a baseline from which progress towards the SDG targets can be measured and that can be disaggregated to identify and address the unequal impact of digitalisation on different categories of people or communities. This is particularly so in the global South, where the vast majority of people reside – many of them far removed from the transformative potential of digital technologies.

The need for high-quality public statistical data is recognised in the UN statistical system, specifically the International Telecommunication Union (ITU) as the entity responsible for the development of digital indicators. Together with the UN Conference on Trade and Development (UNCTAD), the ITU was responsible for establishing a multistakeholder Partnership for Measuring the Information Society following the WSIS, and in the first decade considerable progress was made in reviewing and extending telecommunications indicators to universal digital indicators. Yet there is no system in place to support the costly collection of particularly demand-side data, which is essential for policy, planning and implementation and to measure and assess outcomes and the progress being made towards more sustainable development.

With prepaid mobile services being the predominant form of telephony and internet access in the global South, traditional supply-side administrative data is unable to identify even unique subscribers from the active SIM cards in a country. It also cannot provide disaggregated data on gender, education or income, particularly for those offline and marginalised from different digital services, in order to assess precise points of policy intervention necessary for governance in the public interest.

With little provisioning of digital data as part of the public statistics required to build the evidence needed for policy formulation, patchy administrative data is drawn together through often spurious estimations and forecasting. These are complemented by incomplete private data and studies that are not required to meet national statistical standards. Often collected in support of industry interests, they have become the problematic, but unproblematised, global reference points and the default evidence base for countries without alternative data sources or their own public statistics.

High-level aggregated data at national level such as GNI per capita or internet penetration, for example, masks the inequalities that exist within countries. This is even more the case when data is aggregated at the regional level with very different levels of development, such as is done in Latin America or Asia but even more so Africa, with all its states and diversity. Even disaggregated categories of data such as gender, for example, when aggregated at national, regional or global levels conceal the heterogeneity within categories of indicators such as men or women, whose common challenges to accessing the internet are far better explained by poverty, lack of education or employment.

The digital inequality paradox

While many of the policy objectives of WSIS remain valid today and hopes of contributing to the SDGs as elusive, the conditions under which WSIS+20 takes place are far more globalised, dynamic and therefore challenging. Efforts to ensure digital equality, not simply inclusion, have also become more complex than they were a decade or two ago when policy concerns around the "digital divide" reflected narrow connectivity challenges resulting from a lack of access to basic communication services.

Rather than reducing inequality, data-driven technologies have exacerbated inequality over the past two decades. Redressing this "digital inequality paradox" has become one of the most

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15 This has been conceded by the former ITU Secretary-General on several occasions of the WSIS and Internet Governance Forum (IGF) and by the director general of GSMA, which represents mobile network operators worldwide, at the WSIS High-Level Panel in 2018.

wicked policy problems of our time. The paradox lies in the fact that as more people come online and as some are able to use digital services more productively, digital inequality has increased. This is because people are differently connected to advanced technologies and these technologies are layered over underlying foundational infrastructures. Inequalities exist not only between those online and those offline (as is the case in a voice and basic text environment), there is a significant disparity between those who have the technical and financial resources to use the internet actively and even productively and those who are "barely" online, passively using tiny bits of data to communicate intermittently as many people in the Majority World do.[16]

Intersectional inequality

Adopting an intersectional approach to understanding inequality can help to overcome the homogenising language of marginality, exclusion and poverty common in the WSIS process and UN processes more generally. It can also overcome the binary constructions and gender essentialism manifest within the UN system and across many of the problematic "gender and digital divide" studies that currently inform policy in the absence of public statistics. Arguably more importantly in terms of policy of redress, it also draws attention to the relevance of analytically significant political economy and feminist concepts of social context, power relations, social inequality, relationality, social justice and complexity.[17]

Although the seminal literature on intersectionality is largely qualitative and grapples with the many complex issues of inequality that cannot be quantified, it is necessary to inform policy empirically through rigorous, disaggregated data to ensure the precise points of policy intervention. Yet as discussed above, there is very little quantitative data measuring digital policy outcomes, and what does exist fails to assess the intersectional nature of marginalisation.

The After Access survey[18] undertaken by Research ICT Africa (RIA) across the global South demonstrates that the most marginalised are not a single category of people but those located at the intersections of multiple inequalities – class, race and gender, and in some countries ethnicity, caste or religion. These inequalities in the digital realm can be quantified in relation to geographic location (urban/rural), age, income and education. When facing these inequalities, the possibilities of full substitution of the digital are limited, preventing society as a whole from harvesting the cost savings from a more efficient service delivery to the most-in-need.

Within its binary construction of gender, inequalities that exist between men and women have long been recognised within the UN development agenda, yet there is in fact very little data on women. This is because data is not generally collected in this area and because when it is, the data is not or cannot be disaggregated.

Studies conducted by RIA over the years have shown that using descriptive indicators alone to measure the gender gap tend to mask inequalities across groups of men and women.[19] These studies have also demonstrated that the disparities in internet access exist not only between men and women, but also among women within countries. What they show is whether living in rural areas or city slums, women located at the intersection of other factors of exclusion, such as class and race (and associated marginalisation from education and employment), will experience even greater digital inequality than women generally.

From this intersectional perspective, the highly uneven impact of digitalisation, datafication and now platformisation is not caused by a single factor and cannot be redressed by attention to a single cause. Those at the intersections of multiple inequalities are least able to enjoy the opportunities and least able to mitigate the risks associated with rapidly advancing technology. With the layering of advanced data-driven technologies over existing digital inequalities, the poor outcomes

16 Gillwald, A. (2020, 5 October). COVID-19 compounds effect of digital inequality. *Research ICT Africa.* https://researchictafrica.net/2020/10/05/gillwald-covid-19-compounds-effect-of-digital-inequality

17 Collins, P. H., & Bilge, S. (2020). *Intersectionality*. John Wiley & Sons.

18 The After Access survey was last undertaken across 20 counties in Africa, Southeast Asia and Latin America in 2018 and in eight African countries again in 2023. Limited surveys were undertaken in some countries during the pandemic. See https://www.afteraccess.net

19 Gillwald, A., & Mothobi, O. (2019). *After Access 2018: A demand-side view of mobile internet from 10 African countries.* https://researchictafrica.net/wp/wp-content/uploads/2019/05/2019_After-Access_Africa-Comparative-report.pdf; Khan, S., Deen-Swarray, M., & Chair, C. (2016). *Taking the Microscope to ICT Gender Gaps in Africa*. CPRsouth Zanzibar Conference Proceedings. https://researchictafrica.net/publications/Conference_Publications/2016_Chair_Deen-Swarray_Khand_Taking_a_microscope_to_ICT_gender_gaps_in_Africa_CPRsouth_Best_Paper.pdf; Deen-Swarray, M., Gillwald, A., Khan, S., & Morrell, A. (2012). *Lifting the veil on ICT gender indicators in Africa*. Research ICT Africa. https://www.researchictafrica.net/publications/Evidence_for_ICT_Policy_Action/Policy_Paper_13_-_Lifting_the_veil_on_gender_ICT_indicators_in_Africa.pdf

of existing policies are arguably amplified and result in an even greater exclusion of people from the potential to improve lives and livelihoods.

Active inclusion of all those affected by decisions in processes of policy formulation, regulation and governance is essential to ensure more equitable and just digital and data outcomes.

The exclusion of people from online financial services, remote and platform work and digital production makes them invisible in the data extracted by global monopoly digital platforms for the purposes of creating lucrative digital intelligence. As a result, particularly Black women are absent, underrepresented and discriminated against in the algorithmic decision making that is being opaquely used to make and direct decisions that affect them.

Data justice

These intensifying global processes of digitalisation and datafication are simultaneously accompanied by a plethora of individual and (particularly poorly understood and defined) collective risks that, unmitigated, could result in widespread harms to human rights, sustainable development and democracy.[20]

With the global crisis precipitated by COVID-19, the growing dominance and linkages of data, big data analytics, the internet of things (IoT) and algorithms placed data as a key resource in public management and economic reconstruction. This has amplified the need for data governance and institutional arrangements to reduce the current unevenness of negative impacts and opportunities within and between countries.

The emerging literature and practice of data governance have mostly been approached from a negative regulatory perspective. That is to say, it has sought to prevent harms in relation to rights violations and mitigate associated risks – particularly privacy and security but also freedom of expression. Positive discrimination to redress intersectional inequality, in the areas of access to affordable, adequate quality broadband, consumer protection, data protection, public procurement and data access and sharing, is required.

While various global and local epistemic communities are grappling with these issues, increasingly in relation to AI becoming the next general-purpose technology, very little of this

has focused on economic governance. Yet there are many areas of data governance such as data availability, accessibility, usability and integrity, as well as concerns about ownership and impacts on trade and competition, that require positive regulatory or governance intervention.

Beyond the challenges of safeguarding citizens as data subjects, states are challenged by the need to create an enabling environment for data value creation locally, in the face of increasing global concentration in digital and data global markets. The need for economic regulation to ensure public access to quality public data and local innovation creates opportunities for greater participation by marginalised groups. Ensuring historically marginalised groups gain access to the foundational digital and data infrastructures, and services on top of which these platforms and services operate, in order to be better represented is the primary way to deal with bias in the giant datasets that dominate commercial activity.[21]

Balancing current commercial, supply-side valuation of data used in the allocation of resources and which has produced the outcomes that we have, with the demand-side valuation in the allocation of resources that recognise their social value including as common goods, is necessary to ensure more inclusive and equitable policy outcomes.

Global governance of digital public goods

The rise of the internet as a global digital public good underpinning global trade and financial and information flows requires new forms of global cooperation. Awareness about the value of data for socioeconomic development and its ability to contribute to the realisation of the 2030 SDGs has become increasingly prevalent. The shift in traditional power relations between states, markets and citizens in global governance has blurred notions of "international" and "national" and of what constitutes public and private. After several decades of private interests dominating evolving forms of data governance, the role of public regulation of the internet and specifically platforms has re-emerged as a priority.[22]

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20 Research ICT Africa. (2022). After Access surveys [dataset]. https://researchictafrica.net/data/after-access-surveys

21 Gillwald, A., & Partridge, A. (2022). *Gendered Nature of Digital Inequality: Evidence for policy considerations*. UN Women. https://www.unwomen.org/sites/default/files/2022-10/_Background%20Paper_Alison%20Gillwald_Digital%20Inequality.pdf

22 Research ICT Africa. (2023). *Research ICT Africa's Submission to the Global Digital Compact*. https://researchictafrica.net/wp/wp-content/uploads/2023/05/Global-Digital-Compact-Submission-fnl-formatted.pdf

The current challenges to ensure the provision of global digital public goods lie in the increasing complexity and adaptiveness of the global communications systems and the shifting global governance responses to these. These include complementary and competing systems of governance ranging from nation-state-based multilateral systems that have traditionally governed and coordinated global development, to new multistakeholder formations accommodating state, private sector and civil society interests, as well as to new forms of private authority, both commercial and non-commercial, as found in the Internet Corporation for Assigned Names and Numbers (ICANN).

In economic terms, data can be understood as a public good in that it is inherently non-rivalrous (at the technical level, it is infinitely usable without detracting from another person's ability to use it). It is naturally non-excludable, which means that there are no natural barriers to multiple people using the same data at once. Although there are attempts to render data excludable through technological and sometimes legal means, these are not inherently features of data. Attempts to limit access, whether for purposes of commercialisation or security, can be regulated to be non-excludable. For example, data that is made open under an internationally recognised licence or public statistics can be regulated to be accessible like free-to-air public broadcasting, as a classical public good.

Underpinning the policy and regulation of global digital public goods is that they are a common good that has to be made available to all. While the concept of paying for national public goods such as providing education or protecting clean air is widely understood, it is less clear who should be held responsible for general-purpose global public goods, such as the internet, that serve the common interest. While investment in global public goods has traditionally taken the form of official development assistance, this has produced highly uneven results. Because of this, new forms of international cooperation and institutions that will support the development of global digital public goods and ensure greater digital inclusion are necessary.[23]

However, a global consensus on the good governance of the internet as a public good only emerges, in considerable measure, to the extent that countries can reproduce this consensus at the national (or regional and sub-regional) level (e.g. creating the conditions for private delivery of public goods such as the internet, or complying with global agreements to enforce cybersecurity). Therefore, treating the internet, data or cybersecurity, indeed global governance, as a global public good can only be defended through implementation at a national level in *all* countries, including developing countries.

Conclusions and actions steps

The world is a very different place 20 years on and one of the things that has changed most is digitalisation and datafication of human planetary existence. This dramatic transformation of the world accompanied by planetary degradation, internecine wars, democratic erosion and severe challenges to the multilateral system meant to hold it together, demands that strategic moments such as WSIS+20 or the GDC are used to challenge the perpetuation of inequality and injustice through digitalisation, datafication and platformisation. For too long the exacerbation of inequality has been treated as an inevitable outcome of innovation and progress, about which little can be done.

While the inherently paradoxical nature of digital inequality makes it impossible to eliminate for as long as structural inequality persists, the success of WSIS+20 and the GDC will be the degree to which they are able to provide a way in which it can be managed through global governance and collective action. Moreover, there are some systemic issues that can be redressed through policy intervention.

Global governance and national-level policy formulation need to develop from their sectoral silos into transversal digital and data policy that recognises the role of digital public goods as central to contemporary forms of democratic participation and as key inputs and enablers of economic transformation. This needs to happen together with human development strategies and rights-preserving regulatory arrangements to redress intersectional inequality and foster integrity in the information environment. Acknowledging the political economy of developing countries will be essential to high social value post-pandemic economic reconstruction and the building of more democratic, inclusive social compacts.

At the very least, effective policy will require the regulation of global digital public goods such

23 Gillwald, A., & van der Spuy, A. (2019). *The Governance of Global Digital Public Goods: Not Just a Crisis for Africa*. GigaNet Annual Symposium, Berlin, Germany. https://www.giga-net. org/2019symposiumPapers/34_Gillwald_VanderSpuy_Global-Governance.pdf

as spectrum, internet and data to ensure access to the means of communication and production, and a system of governance to mitigate the associated risks. To promote more equitable and just outcomes, economic regulation (as well as other regulatory arrangements) is necessary to enable the more even distribution of the opportunities arising from the data economy, not only the prevention of harms to democracy and development.

It is important that while global reform and donor agendas and resources have been diverted from foundational digital inequality and its measurement for purposes of policy intervention to issues of data and algorithmic governance, resources are found to collect public data so that the foundational connections between inequitable outcomes are demonstrated. The increasingly complex and adaptive data systems are not unrelated to the exclusion of significant parts of the global population in the digital polity and economy. If there are to be more equitable outcomes, far more effective data collection is essential to enable disaggregated analyses by sex, income, education, employment and age for the informed and innovative policy that will be required to regulate these dynamic, complex and adaptive information systems. This will require multilateral agencies, development banks and states to move beyond the rhetoric of statistics as a public good. To ensure that standardised, non-proprietary data is publicly available for public planning, research and preferential commercial benefits for marginalised groups, concerted policy intervention and the dedication of resources to make this happen will be required.[24]

With the intensification of datafication, the uneven distribution of benefits associated with the new forms of value creation both between and within countries requires new forms of regulation and global governance to be effective. The rise of monopoly platforms that drive the global economy on the basis of the extraction of vast amounts of user-generated data that is converted

into intelligence and super-profits has severe implications for those invisible or underrepresented in the data sets used for algorithmic decision making underpinning daily platform life. While the harms associated with such data-extractive value creation such as breaches of data subjects' privacy rights or online abuse and gender violence are universal, their impacts are highly uneven. Many people are unable to exercise their rights online (and very often offline). Even where data regulators may have been established, the institutional and legal challenges of extra-jurisdictional enforcement are impossible without global cooperation and alignment that most developing countries do not necessarily have the institutional capacity to engage in.[25]

The implications of failing to address digital inequality, as a reflection of structural inequality, are evidenced in the intensifying global processes of digitalisation and datafication which are simultaneously accompanied by a plethora of individual and (particularly poorly understood and defined) collective risks. Unmitigated, these are resulting in widespread harms, not only to first-generation rights of privacy and freedom of expression with implications for democracy, but to second and third-generation rights with implications for equitable, just and sustainable development. To promote more equitable and just outcomes, economic regulation is needed in conjunction with data governance to ensure the protection of personal data, data portability and non-digital alternatives to safeguard consumer welfare and digital labour rights. Economic regulation is also necessary to enable a more even distribution of the opportunities arising from the data economy, not only the prevention of harms to democracy and development. Positive discrimination to redress intersectional inequality in the areas of access to affordable, adequate quality broadband, public procurement and data access and sharing, through the creation of digital and data commons is required.

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24 Research ICT Africa. (2023). Op. cit.

25 Gillwald, A., & Partridge, A. (2022). Op. cit.