

THE GOVERNANCE OF GLOBAL DIGITAL PUBLIC GOODS: NOT JUST A CRISIS FOR AFRICA

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WORK IN PROGRESS

Abstract

The rise of the Internet as a global public good underpinning global trade, financial and information flows requires new forms of global cooperation. Under these conditions of flux and uncertainty, developing countries, far more starkly than mature economies, must counter the digital inequality paradox that as individuals, and aggregated as countries, connect to more advanced services the divide between and within countries increases. This relates not only to connectivity but with increased digitisation and 'datafication' from the rise 'surveillance capitalism', the risks and inevitable harms associated with large numbers of marginalised people coming online at the national level.

This paper proceeds from a political economy perspective. We track the shifts in notions of public and private global governance, authority and the public sphere in the current complex and parallel practices of global governance, and examine the changing interplay between states, markets and citizens in new forms of global governance. In doing so, we distil the current challenges to ensure the provision of digital global public goods and, as a result, to propose alternative strategies or means to deal with current failures.

We find that the challenges of global governance lie in the increasing complexity and adaptiveness of the global communications system 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. It also includes new multistakeholder formations accommodating state, private sector and civil society interests to new forms of private authority, both commercial and non-commercial as found in ICANN. We observe that Africa has been almost invisible in these developments.

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 public regulation of the internet and specifically platforms has re-emerged. The unrestrained rise of monopolistic global platforms producing massive amounts of private data which has been commodified with little regard for the social and negative implications for the data subjects, has

now had tangible negative impacts on issues as significant elections. Ideas reflected in global governance new forms of 'public' are best understood as practices or communities of practice, distinct from traditional state notions of 'public'. This has produced normative dilemmas that have both challenged and reinforced liberal democratic norms as global governance has been either transformed or reconstituted. Nevertheless, despite these new forms of 'public' which may fulfil the public interest mandate the state continues to have a critical enabling role. The arising question is how Africa can better locate itself in global governance processes, not only to ensure better outcomes in its diverse interests but to more actively do so in setting global agendas. Understanding the Internet as an (impure) global public good - non-rivalrous and non-excludable essential services - however, reveals other interests in Africa (and other developing regions) acquiring global governance capacity. This is because the internet or good governance of it (cybersecurity or data protection for example) only emerges, in considerable measure to the extent to which countries can help to reproduce them at the national level. Governments of mature economies see and respond to the Internet as a strategic good which can only be defended through the implementation at a national level in all countries including developing countries, often through imperfect global governance consensus.

From a developing country public policy perspective, understanding the implications of these developments in terms of (impure) global public goods, provides points for policy intervention. This can enable the delivery of global public goods such as the internet and good governance through public-private and civil society interplays in an equitable and public interested manner. The sections below provides examples of governance of these complex and adaptive global public goods and the formal and informal ways in which this plays out at the regional and national level. This is distilled into a typology to distinguish different modes of governance that have emerged to deal with the complexity and adaptation of the internet. To understand how governments might enable the realisation of global public goods at the national level we draw on the literature calling for the restoration of demand-side valuation of public goods to counter distortions resulting from the exclusive supply-side, commercial valuation of them that emerged with the liberalisation of markets

Introduction

After the climate crisis, the wickedest challenge facing the world is arguably the governance of the Internet as a global digital public good and as an impure public good preserving the characteristics of non-excludability and non-rivalry. The digitisation of the economy and society and, as an output of it, the datafication of almost everything we do, have enabled public service delivery, promoted economic efficiency, democratised means of production, and driven further innovation. From a public interest policy perspective, however, these developments have been extremely uneven both between countries and within them. They are accompanied by a plethora

of poorly defined collective and individual risks that unmitigated could result in widespread harms.

As more people have come online – generating massive amounts of personal information or ‘data fumes’ (Taylor, 2017) – evolving global digital platforms extracting great economic value from this data to grow into the biggest corporations on earth. Operating similarly to global monopolies, without reference to national boundaries or ‘normal’ jurisdictional constraints (Internet Society, 2019), they appear to be both unaccountable to anyone (c.f. Moore & Tambini, 2018) and potentially reshaping and degrading (through constant monitoring and surveillance) our very lives (Couldry & Mejias, 2019).

Governance of the Internet as a global public good

With the digitisation of communications technologies, together with the mutually reinforcing liberalisation of markets that has driven the rise of global markets and players, there is increased recognition of the need for far greater governance of increasingly global public goods (e.g., UN HLPDC, 2019). The rise of the Internet as a global public good required for global trade, financial and information flows requires new forms of global cooperation to effectively govern the data and content being generated exponentially on it. And to be effective, global governance instruments must be adopted and implemented at the national level.

Multilateral institutions responsible for the international coordination of member states that have traditionally enabled the opening up of markets and the setting of international standards to enable global markets, have already been modified to include the private sector interests driving market expansion and a range of new institutions have emerged to govern the Internet. Dominant interests within both traditional and new entities determine the agenda and influence decision-making, whether through international treatise or regional regulation at the economic community level. Implementation occurs formally, but also through epistemic networks of development banks and multilateral agencies active in developing countries (Haas, 1992).

New organisations dedicated to Internet governance are not member state-based or driven but generally adopt a collaborative or ‘multistakeholder’ approach to governance, usually with predominance of one of the stakeholder groups (Van der Spuy, 2017). On a technical level, this includes policy platforms like the Internet Engineering Task Force (IETF) and the International Corporation for Assigned Names and Numbers (ICANN). Besides agencies such as the World Trade Organization (WTO) or World Intellectual Property Organization (WIPO) working toward the development of formal agreements between member states to enable free trade or the protection of intellectual property respectively, significant lobbying resources are now dedicated by global interests (e.g., the World Economic Forum), the global mobile industry association (GSMA), and even some big platforms and applications (e.g., Facebook and its WhatsApp and Instagram applications, or Google (Alphabet)) on convincing governments to enable their big

data businesses to be more globally competitive by benefiting from the data of users in the global South.

Even with these modifications and the belated inclusion of civil society representation in some of the multistakeholder processes that have increasingly defined internet governance since the World Summit on the Information Society and the standing multistakeholder forums that emerged - such as the Internet Governance Forum they are arguably no longer equipped to deal with the governance along with the global monopoly platforms and applications they have given rise to. This has also resulted in more ad hoc forums such as the recent convening by New Zealand Prime Minister Jacinda Ardern, and French President, Emmanuel Macron brought together Heads of State and Government and leaders from the tech sector to [adopt the Christchurch Call](#) - . Challenges of global governance lie in the increasing complexity and adaptiveness of the global communications system over which nation-states, and particularly developing countries, appear to have little control. Multiple, competing interest coalesce around these contemporary digital governance questions.

Dominant global interests driving Internet governance understand that global public goods emerge, in large measure, in response to the extent to which countries can help to produce them at the national level. Governments of mature economies see and respond to the Internet as a strategic good which needs to be defended through the implementation, at a national level on the basis of a global governance consensus (which often excludes even governments, but often at the member state level, other important governance stakeholders such as the private sector or civil society from the global South). Internet governance is, as a result, at the core of most developed governments' international relations agendas. Witness the support of various governments' International Affairs Ministries for the annual Internet Governance Forum (IGF), the Stockholm Internet Forum, and the Freedom Online Coalition (FOC), to name just a few.

Like all public goods, in order to manage the negative externalities associated with its universality, someone has to provide the resources required to build and maintain the Internet. For this reason, much funding for development of the Internet and tools to govern it where states are unable to do so themselves are invested by mature states' international affairs or development departments or ministries, or the funding is provided to multilateral agencies or other third parties to do. While these efforts sometimes have positive outcomes- depending on where the funding comes from - they are also used to launder foreign countries' policies, to model laws on dominant regimes through policy harmonisation strategies in developing countries, or to shift policy discussions to more favourable forums (Hosein, 2006); often to serve dominant commercial interests.

As a result, global North institutional and governance frameworks are frequently exported and adopted uncritically for local use even in the absence of local research and policy formulation. Yet for most African countries it is something that happens external to them and from which they need to safeguard their national interests and sovereignty (Calandro, Zingales & Gillwald, 2017).

This is because historically, African countries have largely been the recipients of policy and governance frameworks engineered by big governments, big business and, more recently, big tech in the global North - despite the very significant impact such policies and programmes have on their economies and societies.

From a public policy perspective, understanding the implications of these developments in terms of global public goods provides points for policy intervention to govern the Internet in an equitable manner. This paper proceeds from a political economy perspective suited to understanding the implications of these developments in terms of national and global public goods. Although it draws on the notion of public goods as non-rivalrous and non-excludable, it does not use the concept in a narrow instrumentalist fashion. Instead, we use it to analyse the interplay between global, regional and national institutions and processes of global governance, the power relations between the actors involved, and the interests that determine outcomes in the public and private sphere. We track the shifts in notions of public and private global governance, authority and the public sphere in the current complex and parallel practices of global governance, and examine the changing interplay between states, markets and citizens in new forms of global governance. In doing so, we aim to enable the distillation of current challenges to ensure the provision of digital global public goods and, as a result, to propose alternative strategies or means to deal with current failures.

The sections below provide examples of governance of these complex and adaptive global public goods and the formal and informal ways in which this plays out at the regional and national level which distilled into a typology to distinguish different modes of governance that have emerged to deal with the complexity and adaptation of the internet. To understand how governments might enable the realisation of global public goods at the national level we draw on the literature calling for the restoration of demand side valuation of public goods to counter distortions resulting from the exclusive supply-side, commercial valuation of them that emerged with the liberalisation of markets.

Research problem

With the increasing complexity and adaptiveness of the global communications system, both new and more traditional forms of governance are proving incapable of providing adequate tools for the governance of global public goods such as the Internet.

Even its normative governance framework, which tended to be defined by neoliberal self-regulatory or laissez-faire approaches, is facing strain and is under significant strain to provide ways to circumscribe the anti-competitive behaviour of some global digital corporations (Internet Society, 2019).

The inadequacy of existing governance mechanisms has become increasingly evident with recent global data scandals and revelations about the (mis)management of extensive amounts of data being commercialised in what has been referred to as 'surveillance capitalism' (Zuboff, 2015) or

‘data colonialism’ (Couldry & Mejias, 2019). Formal institutional arrangements and a mushrooming of non-governmental and intergovernmental forums trying to intervene in digital crisis upon crisis have proved unable to deal with some of the emerging challenges of global governance of public goods such as the Internet and associated goods of cybersecurity, cyber stability, and data governance.

At least a number of multistakeholder forums have now recognised the need for new forms of international cooperation to manage the negative implications of datafication and digitisation (e.g., the Internet & Jurisdiction Project or the Forum on Information and Democracy). For example, the UN Secretary-General’s High-Level Panel on Digital Cooperation highlights, in its first outcome report, the need for ‘...international cooperation to ensure an open, safe and trustworthy cyber space and to harness digital technologies for global human benefit.’ by identifying seven broader areas of action, including ensuring access for all to ‘digital public goods’.

While new multilateral and multistakeholder international frameworks drawing on traditional liberal democratic norms are being developed in the global North, these are being countered by countries like China and Russia that are not in agreement on safeguarding a ‘free and open’ Internet through the prevention of fragmentation or the safeguarding of human rights. And as in earlier forms of Internet governance, African participation (and leadership) in these evolving processes has been minimal. In fact, several African countries previously unaligned on many of the normative questions of Internet governance seem supportive of Russia’s data localisation measures to ostensibly protect their citizens’ data, while others admire China’s digital protectionist measures to support increasingly repressive regimes that are facing political dissent through the mobilisation of people online. As the Internet becomes increasingly central to national economic development and democratic outcomes, ensuring public interest outcomes (like universality, equity and quality) of global public goods governance as has ensuring that benefits that can accrue from the applications and services on the Internet are enjoyed by all.

Research questions

Some overarching questions these problems raise, include:

- How do we ensure the realisation of global public goods at the national level, especially in developing countries?
- What frameworks do we need to reduce harms and mitigate risks, especially as large numbers of potentially marginalised people come online?
- How do we govern the private delivery of global public goods?
- What role does and should the private sector play in its own governance?
- Who should pay for global public goods?

- How effective are African agendas on harmonisation or Western efforts to secure at least normative framework in Africa to realise global public goods?
- What policy interventions could more equitably allocate resources (from spectrum to data) to ensure meaningful access to quality global public goods in the digital era at a national level?
- If the Internet and data are viewed as global public goods that can support sustainable development under the right circumstances, how can African policymakers promote a more just means of enabling access to it for the significant majority of Africans who remain offline?
- While data governance can be met with data protection law and regulation, what is required at a policy and implementation level to address inequality and ensure data justice in a context of extreme digital inequality?

Conceptual framework

With shifting notions of international and national, public and private we draw on Best & Gheciu (2014) to explore the current 'disruption and transition' in global governance in terms of the shifting conceptions of public and private – including respective roles and responsibilities – in response to the limitations of both state and neoliberal ideas reflected in public governance. Their conceptualisation of the 'public' as a set of practices contributes to the growing literature on the blurring of boundaries between public and private in global governance and helps to contest traditional conceptualisations in international relations and even international political economy that public and private are 'ontologically separate domains of social life, governed by different logics and association with specific sites' (Best & Gheciu 2014:3). Only by construing global governance as public practices, they contend, can we understand the novel forms of 'public' that are currently emerging and '... the complex way in which different forms of 'public' are gaining in significance' (2014:5). In our analysis, we draw from their challenge to the existing literature on private authority, public goods and the global public sphere.

The public-private divide has been central to the debate on global governance. Following the Second World War, we saw the rise of multilateralism to coordinate and manage common interests and conflicts of nation-states with increasing extra-jurisdictional challenges. This created new public spaces for international engagement beyond the nation state but still equated 'public' with the state. The Westphalian sovereign state was the public realm and the individual, whether organised into family or business, was the private realm.

Such polarised views of the state as public and the market as private have tended to inform structuralist and neoliberal prescriptions (as well as post-positivist rejections of both their normative bases) that have also stripped development studies (relevant to policy and governance) of a rational basis for intellectual engagement. (Schwartz 2010)

Best & Gheciu (2014) posit that 'public' now takes a different form than it has traditionally. Rather than a bounded realm or space, it must be conceptualised as a collection of social practices. They define practices as "meaningful patterns of activity that enable individuals and communities to

reproduce their world. These may be habitual or tacit or self-conscious and strategic. They are also ideational and material. They may take the form of public consultation, structured spaces for deliberation and for providing public goods (like the Internet)".

Practices also often occur through 'communities of practice' for example that reinforce certain practices: stabilise rules and norms by reinforcing international claims of authority by developing new practices. However, they can also transform assumptions or redefine boundaries or categories.

Best & Gheciu contend that this reconceptualisation of public as practices enables one to disaggregate the public, examining the ways in which different kinds of activities and activities are construed as 'public' in diverse contexts. It also exposes the power relations involved in defining a particular good, procedure or actors as public.

This paper also draws on Kaul *et al.* (2003), who extrapolates the concept of public goods from national to global levels. They demonstrate that and identify the Internet and knowledge as dimensions of global goods and governance. Such global public goods emerge in response to the extent that all countries help produce them (i.e., create the conditions for private delivery of public goods such as the Internet, for example, or comply with global agreements or consensus to ensure public goods such as cybersecurity are enforced).

Yet, while the concept of paying for national public goods such as education or clean air is widely understood, it is less clear who should be held responsible for general-purpose global public goods that serve the common interest. While investment in global public goods has traditionally taken the form of official development assistance (ODA), Kaul *et al.* (2003) also appeal for new forms of international cooperation and institutions that will support the development of global public goods and ensure greater digital inclusion.

This paper applies this understanding of the need for effective governance of global public goods to the role of developing countries in Internet governance. It uses the concept to track and explain the funding of overt technical assistance and tacit lobbying of various interests represented by multilateral agencies, global digital platforms, and industry associations to ensure the implementation of global frameworks for cybersecurity, data protection and data governance more generally at the regional and national level, but in relation to their potential for enforcing the legitimate taxation of revenues by global platforms that, without physical presence in countries, are unenforceable.

Frischmann (2005) notes that despite the extensive role of private and commercial delivery of information infrastructure, with the increased positive externalities derived from digital infrastructure (including data governance), the role of the state as coordinator and regulator in ensuring its provision and management is still required to ensure widespread access by citizens and the overall distribution of social gains and the mitigation of risks. Therefore the growing prevalence of collaborative forms of public goods governance does not mean the end of the

sovereign state, but it does change its nature and obligations in an increasingly integrated world. In the state-market interplay, the state plays an important enabling role of coordinating the private delivery of public goods and in ensuring the governance of global public goods at the national level.

Regulatory, economic analyses of privately delivered public goods rely on the commercial, supply-side value of information, financial and e-trade flows with regards to the governance of global public goods. To develop alternative global governance rationales, the paper makes the case for recognising the oft ignored demand-side value of public goods that are more likely to ensure digital inclusion in a developing country context in the governance of global public goods. A demand-side, value-creation-focused analysis highlights that the outputs of digital infrastructure industries are generally public and 'non-market' goods that create positive multipliers in both economy and society (Frischmann, 2005:918).

Drawing on Ostrom's (2009) theory of common pool resources, we use Frischmann (2005; 2012) to examine why some classes of key resources (like spectrum or data) need demand-side valuation as opposed to the usual supply-side valuations to properly recognise and account for their public utility. Besides infrastructure resources being fundamental to generating greater value when used as inputs into a wide range of productive processes, the outputs of infrastructure industries are generally public and non-market goods that create positive multipliers in both the economy and society. In the predominantly mobile markets of Africa, spectrum is a critical infrastructure.

We argue that this conceptualisation of critical resources can be extended to data as a key resource for consumption and production in the data-driven economy. Demand-side valuation, whether of spectrum or of data, enables public interest governance of a resource as a non-rivalrous, low-excludability public good that can be accessed for the purposes of public planning, entrepreneurship and democratic accountability. Such a demand-side approach enables the creation of a spectrum commons, allowing those who are unable to afford commercial services to access data through unlicensed spectrum to provide and use services. Regarding data governance, doing so also enables policy perspectives to shift from data protection to broader issues of data justice (c.f., Heeks & Shekhar, 2019; Taylor, 2017).

Drawing on Ulrich Beck's theory of globalized risk (e.g., 2006; 1992), we also propose ways to mitigate the harms seemingly inevitably associated with exposing citizens to global public goods like the Internet, including the use of citizens' data in big data and algorithm-driven platforms that protect their rights both to expression and information while safeguarding anonymity and privacy.

Methodology

Methodologically, this paper is contextualised by building an African case for national digital policy interventions in Internet governance to secure global public goods, in the context of regional, continental, and international frameworks.

Given the unique and evolving challenges related to the potential use and abuse of data by both the public and private sector, the interrelationship of supply- and demand-side measures to redress digital inequality is arguably becoming increasingly important in public interest policy. This paper maps some of the diverse formal and informal global initiatives that are at play, how successfully they are being domesticated (or not) at the continental, regional economic community (REC) level and whether the formal and informal efforts at building normative coherence are gaining any traction and why. This is done through a political economy lens which, through institutional analysis and an assessment of interests at play, seeks to understand current global governance outcomes and how these might be shifted to ensure the more even and equitable distribution of global public goods.

It does so by mapping formal initiatives at different levels through desk research and the tracking of institutional agendas, including the African Union Commission, the Southern African Development Community (SADC), and the South African government. It also tracks the participation of institutions at this level in international forums and structures of global governance. It identifies informal initiatives of the GSMA, the World Economic Forum (WEF), and lobbying efforts of global platforms, and seeks to assess at least some of their impact.

Through high-level interviews with senior officials in different institutions, the paper analyses the outcomes of these initiatives where they are already evident, or indicates what the intended purpose of the initiative was. Finally, it maps these outcomes against the policy objectives of these public goods and the commitment to public interest governance of global public goods intended to create a safe, secure and trusted Internet for all.

Addressing the digital inequality paradox

As some people in parts of the world gain increasing access and opportunities to develop an increasing number of global digital products and services and others, the vast majority are not, the degrees of marginality increase. As technology evolves from voice to data services and advanced technologies, the Internet of Things (IoT) and artificial intelligence (AI) become increasingly pervasive. But at the same time, digital inequality is also amplified in what we call a 'digital inequality paradox', which has a number of damning defining elements. Not only is the gap between connected and unconnected people greater, but the divide expands between, on one hand, those who are minimally or barely connected (i.e., with low quality or speed of connectivity) and/or those who only consume a limited number of basic services (e.g., those using zero-rated services like Facebook's Free Basics), and, on the other hand, those with the

resources and capabilities, both financial and human, to more optimally use the Internet and its advanced services and applications.

What happens to the offline or marginal or potentially vulnerable users? Leaving aside the issue of whether participating in this new privatised data society is indeed something to strive for, non-users cannot even choose whether to have their data commercialised for services apparently to enhance their user experience, resulting in the continued entrenchment of significant algorithmic and machine learning biases. Besides the bias of exclusion, inclusion is paradoxically also becoming a public prerogative, as evidenced by the digital and biometric IDs being promoted by major donor agencies in developmental contexts. Potentially vulnerable communities like refugees have little choice but to participate in a new public-private digital domain, with the increasing privatisation of civil and refugee registrations meaning that data applications are not only commercial, but public and humanitarian (Madianou, 2019).

When they are online, vulnerable communities often do not have the skills or quality of access (in terms of broadband speed or latency) to actually benefit from the oft-lauded developmental potential of the Internet (UNGA, 2015). For example, only a fraction of Africans are able to make 'productive' use of the Internet to enhance their well-being or to improve efficiency in their livelihoods. Even greater numbers of users are unable to assert their rights online and to safeguard their personal data (RIA After Access Survey, 2019).

Similarly, as more people come online who lack the awareness or skills to exercise their rights, they tend to be more vulnerable to accompanying digital risks. The seemingly unavoidable risks of connectivity is globalised (c.f. Beck, 1992) and thus impact users across the world (Couldry & Mejias, 2019), but have unequal effects and are thus likely to deepen inequalities for those who lack the skills or knowledge to mitigate such risks (Van der Spuy, 2019).

The digital inequality paradox is arguably one of the greatest policy challenges for nations in an increasingly globalised digital economy and society underpinned by global public goods. The intractability of the policy problem of digital inequality lies in the growing complexity and adaptiveness of global and globalised communications systems over which traditional public actors, nation states, and particularly developing countries, or existing multilateral systems appear to have little control.

Governance responses

As the Internet has become more central to social and economic inclusion (and political manipulation!) the call for or against Internet regulation, or governance of the behaviour of the big corporations that have come to dominate it (Moore & Tambini, 2018), have become more central to wider 'public interest' digital policy (Mansell, 2012). Without adequate governance frameworks to safeguard the rights of new and future digital natives, digital inclusion is unlikely to result inequitable economic and political inclusion. The lack of efficient governance responses

to digital dominance (Internet Society, 2019; Moore & Tambini, 2018), as well as trends of so-called 'data colonialism' (Couldry & Mejias, 2019) or 'techno-colonialism' (Madianou, 2019), is not only an African, but a global problem – although it will have more detrimental impacts in developmental contexts (Van der Spuy, 2019). How the Internet is inevitably regulated and governed will determine the degree to which it is exclusionary or inclusionary.

Ensuring access and meaningful use of the internet as a global public good relates not only to the classical public interest notions of universality, equity and quality. Governance as a global public good, including cybersecurity and data protection, are as effective as their weakest link. Currently, this is developing countries without the institutional endowments to realise these global goods at the national level.

While issues of related data and digital harms and risks are prioritised from a governance perspective, in at least some contexts, broad, public policy challenges cannot be divorced from governance challenges pertaining to the Internet's underlying infrastructure and citizens' access to it (usually viewed as narrow, technical governance challenges) (Souter, 2012 & 2009). From a rights and policy perspective, 'broad' and 'narrow' challenges must be addressed together, as the protection of rights online, when the bulk of citizens are offline, cannot fulfil governments' constitutional mandate. Similarly, if one adopts one interpretation of the Internet as layered (including access; services and infrastructure; and content and applications) (c.f. Internet Society, 2019), then we argue that developmental governance responses must consider the Internet as a whole – across all layers.

Yet, the governance of global public goods of the Internet in terms of issues like digital rights, cybersecurity or data governance is currently largely dealt with as distinct from the underlying infrastructure and citizens' access to it. We argue that from a rights and public interest policy perspective, these issues need to be understood together, as the protection of rights online, when the bulk of citizens are offline, cannot fulfil governments' constitutional mandate and fails to comply with the United Nations' recognition of access to the Internet as an enabler of the sustainable development (UNGA, 2015). Discussing Internet governance narrowly in relation to the Internet's protocol layer or the interface between infrastructure and content only, risks assuming the critical infrastructure and services underpinning are universally in place to provide the 'free, and open' Internet' aspired to, for all.

Internet governance also no longer be treated as only a sectoral matter of dealing with specific challenges to critical resource management in the Internet's different layers. It needs to be understood as a complex interplay of states and markets at national; regional and increasingly global levels; with rules of formal institutions of global governance; and regional governance intersecting with dominant (albeit contested) norms and practices of more informal multistakeholder forums; while blurring the the lines between the public and private realms.

Public interest policy should, therefore, help to ensure that the Internet is more universal, equitable and of standardised higher quality. It remains crucial, nevertheless, from a public policy

perspective to have a clearer understanding of the different regulatory instruments available at different levels of what is increasingly a common purpose technology at the centre of global trade and innovation.

Although some have argued that the Internet is free from regulatory oversight (e.g., Barlow, 1996) or jurisdictional restraints (Maier, 2010; Johnson & Post, 1996) and should remain so, the Internet has never been a 'law-free zone'; nor was it ever separate from external legal constraints (Sunstein, 2001:139). How the Internet was designed has both allowed and disallowed specific types of behaviour online, meaning that the actions that led to the creation of the Internet were already acts of governance (Van der Spuy, 2017).

Today Internet governance needs to be understood as the complex web of governance that directly and indirectly impacts on it. The governance of the Internet can not be understood outside of other forms of global governance which have likewise been impacted by the Internet, including issues of security and human rights. The global governance system traditionally was a public domain in which global covenants and treatise bound nation states. The division between public and private was between the state and the individual or collectively the family of the firm. Since the second world war, traditional liberal democratic values formed the basis of this public domain.

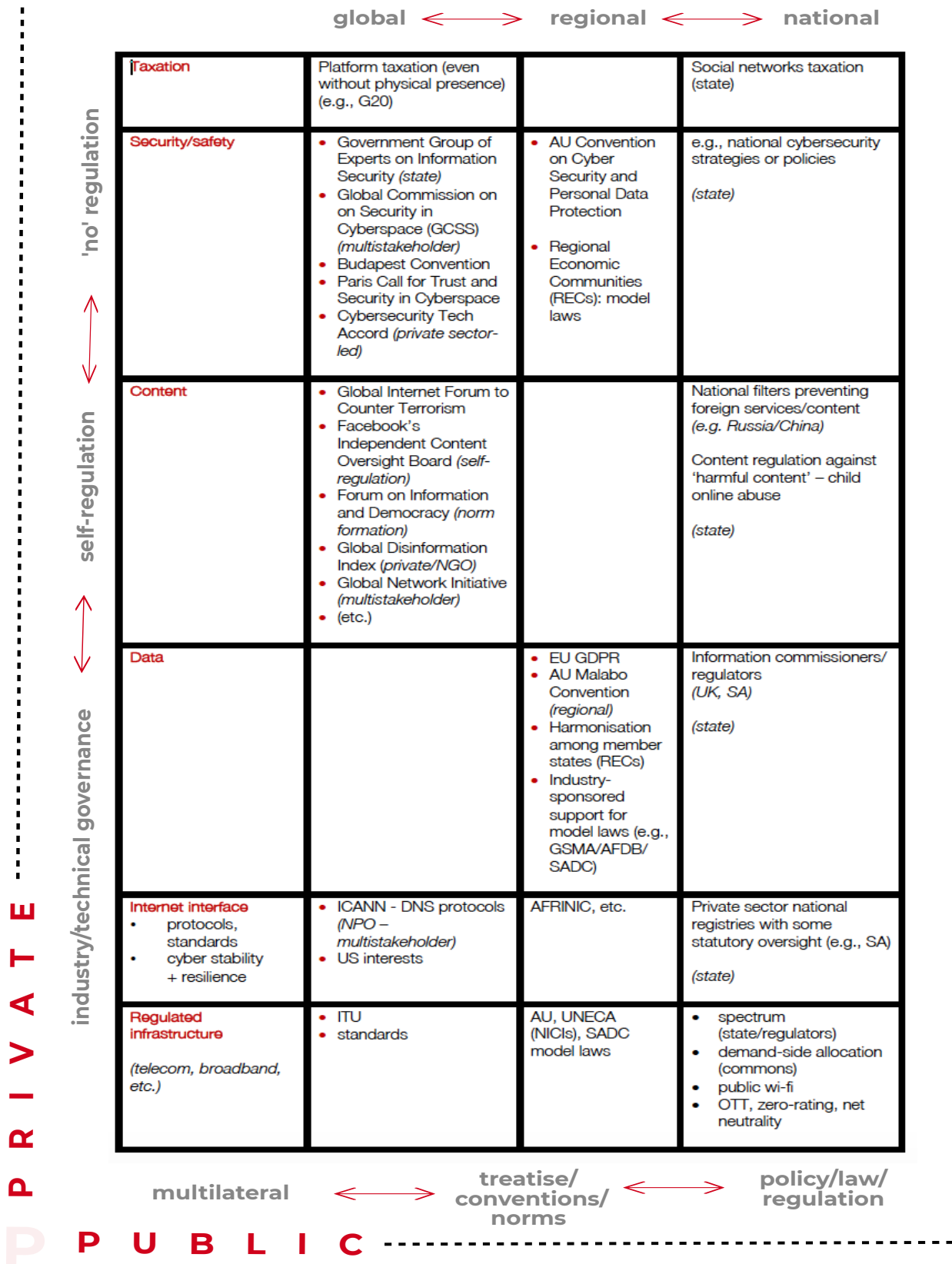
In global governance, we can no longer assume that public practices are associated with the state and its citizenry. Porter notes that although the Internet appears to reconstitute the old public sphere on a global scale, it is more complex, both material and ideal, public and private, national and transnational (2014):

Challenges to the legitimacy of actors and values as the basis of the public domain, have resulted in a normative dilemma which has produced the emergence of new forms 'public'. The multiple public practices that have often emerge to fill state failures have a '...the much thinner basis for legitimacy' (Best & Gheciu, 2014:7). The character of these new forms of private and public authority determine the nature of global governance of global public goods, which are only realised to the degree they are instituted at the national and local level at what form it takes.

As Best & Gheciu point out, we are emerging from a period in which the private was greatly expanded at the expense of the public to one in which the public is emerging, but in entirely new forms that are revealed in their public processes. We are witnessing not only shifts in private authority, nor a new kind of governance itself as a public good or a return to the old public sphere. Instead, recent changes can be best captured '... by understanding them as a new kind of public logic, in which the various practices that we associate with the public and private had been disaggregated and recombined in new and potent ways...' (quoted in Porter, 2014: 10) – albeit with different degrees of success.

A proposed typology of global governance of digital public goods

GOVERNANCE FRAMEWORK



This paper seeks to demonstrate that to ensure equitable access to and use of increasingly global

public goods, they can no longer be addressed independently of each other, especially when one of the central challenges of realising public goods is the failure to get them implemented at national level in especially developing countries.

In order to meet public interest objectives, multiple regulatory interventions are required to ensure the delivery of the Internet as a global public good. The first is the infrastructure and services. While the International Telecommunication Union (ITU) continues to be responsible for the global coordination of scarce resources and standards for the interoperability of global communications systems, the delivery of services has taken place at the national level originally as public utility regulation. However, from the mid-1990s in the global South, following the WTO General Agreement on Trade in Services (GATS), the management of infrastructure occurred through the economic regulation of markets to ensure fair, competitive outcomes that enhance consumer welfare and to provide affordable access to expanding broadband infrastructure.

Regulatory and business models based on critical infrastructure resource management traditionally allocated through the commercial, supply-side valuation of spectrum through auctions or competitive licensing are being challenged by the plethora of services and applications operating 'over-the-top' (OTT) of existing infrastructure. Traditional rights associated with licences and access ruling for cost-based interconnection, facilities leasing or peering do not apply commercial revenue-sharing because they cannot be practically enforced.

While telecom operators have sought regulatory intervention to compel OTTs to share revenue through traditional global governance forums such as the ITU World Radio Conference, innovative late entrant operators in developing countries have partnered with the social networking giant, Facebook, to offer zero-rated services such as Free Basics and WhatsApp. Such services have successfully attracted new audiences of price-sensitive, often first-time Internet customers to struggling networks, but only expose them to a compartmentalised version of the Internet-as-defined-by-Facebook. While net neutrality pundits decry these developments, they also have a number of positive public policy outcomes in a developing country context (Gillwald et al. 2017)

To conceptualise this, we have developed a matrix to isolate examples of existing and required points of policy and regulatory intervention and identify the emerging issues arising from the convergence of previously distinct platforms, services, products and devices; requiring diverse forms of global governance (and we contend new forms of global collaboration) to address them. The matrix locates different elements of global digital public goods on a spectrum of global, regional and national governance. We contend that digital infrastructure is governed, at one end, by national policy, law and regulation and unregulated or self-regulated global platforms, services and applications at the other end. Between these are regional regulations and guidelines and various forms of self-regulation that are arguably currently failing from a public interest perspective. While the state has abdicated its public interests responsibilities to the private sector, in some cases with disastrous outcomes, most recently the Cambridge Analytica debacle, a

plethora of alternative public practices sometimes by organised multistakeholder forums at other times through more informal of NGO and social movement practices defending the public interest on issues.

Typology of multiple forms of governance

The development of the Internet as a global public good underpinning global trade, financial and information flows has challenged traditional national-international governance interplays. Historically, sovereign states have exercised control over public communications systems operating in their jurisdiction. To deal with any issues arising between national systems, they entered in bilateral agreements. Over the past century, an array of multilateral agencies, including the ITU, evolved to manage global affairs that extended beyond these bilateral arrangements; setting standards and managing the allocation global natural resources on the basis of treaties and conventions that stood for years. Since the Second World War, regional and global conventions and treatise sought to bind countries together, sometimes through tied aid or conditional loans, in sufficiently consensual arrangements reflecting the dominant norms of the larger liberal democracies.

The intensification of globalisation with the liberalisation of markets (not least of all as a result of the digitalisation of communications systems) (Freeman & Perez, 1988) gave rise to whole new array of global institutions to deal with intellectual property and trade, such as WIPO and WTO. These intersected with the traditional sectoral multilateral institutions such as the ITU, requiring it to review its century-old international communications coordination mandate to remain relevant in the rapidly shifting landscape. With the WTO *General Agreement on Tariffs and Services* governing the increasingly globalised communication market in the interests of powerful private sector interests, the ITU underwent a massive organisational shake-up, broadened its focus to the new area of market regulation, and established a new bureau focusing on development to support member states with these unfamiliar issues. The decision-making processes of multilateral member state institutions, which were traditionally exclusionary of private sector and civil society, started offering membership initially to the private sector and subsequently to civil society (or parts of it). This form of membership remains the reserve of large corporations and only the largest, most established civil society organisations able to afford costly memberships. The ITU also looked to the emerging public Internet and at least attempted to assume its traditional and (for it, at least) logical, role in standard setting and global coordination.

The Internet had, by then, expanded from a North American academic and military research communication system into a global research communication system requiring some degree of standardisation and interoperability. As the Internet began to expand to wider public use, a new form of governance emerged that would preserve the private, narrow scope of technical

coordination of the Internet. The Internet Assigned Numbers Authority (IANA) function that was explicitly responsible for the coordination of the domain naming system (DNS) Root, Internet protocol (IP) addressing and other Internet protocol resources was approved for transition in 1997 to a private, non-profit organisation, the Internet Corporation for Assigned Names and Numbers (ICANN). After a decade of operating under contract to the US Department of Commerce and under pressure from multistakeholder groups that the Internet was a global public good that could not be governed by a single nation-state, IANA formally transitioned under the stewardship of the NTIA and amidst extensive multistakeholder consultation to ICANN in 2015.

Participation in the consultative process was inevitably private sector and Northern hemisphere-centric. Assumptions of connectivity, not to mention technical expertise, unwittingly undermined efforts of inclusion. Unlike the World Summit on the Information Society (WSIS) and arising initiatives like the Internet Governance Forum (IGF), almost exclusively, the solutions proposed for making ICANN a more transparent, accountable and accessible organisation were underpinned by assumptions – from opening up procurement to crowdsourcing decisions – of affordable access to the Internet and technical expertise to contribute to ICANN.

The ICANN President's [Strategy Panel on Multistakeholder Innovation](#) to redesign ICANN and its multistakeholder decision-making process is a case in point. There was one 'human' solution which sought ways of getting those currently marginalised from participation to places where they could engage directly to influence outcomes. Despite efforts to broaden the discussion with the inclusion of a panel of Africans (Bitange Ndemo from Kenya and Alison Gillwald from South Africa), the process primarily took place online in the connected world and those with a voice already within the ICANN community and web-based epistemic communities already talking among themselves (Gillwald, 2014). For many practitioners and scholars, circumscribing Internet governance in this way was essential to retain the technical integrity of the Internet and to isolate it from the often quite arbitrary actions in many countries and the variously negative outcomes of regulated infrastructures within them.

While the resulting arrangements do exclude states other than in ICANN's expanded government advisory committee (GAC), private sector participation of more mature economy corporations and technical community ensures that their interests are reflected and safeguarded in the private sector-leaning multistakeholder institutional design of ICANN. Developing countries, certainly most African countries traditionally able to exercise their vote as legally equivalent member states within multilateral agencies, have become even further marginalised from these new forms of global governance (including ICANN and IGF).

Outlets for concerns of human rights and development and civil society inclusion were instead raised and managed outside of the formal multilateral or new forms of global governance offered by ICANN in non-decision making forums, largely with UN structures.

This does not mean that global governance is no longer undertaken by states, within and without international member state organisations. As Drezner (2004) has contended, powerful states

continue to exercise their power and preferences to protect their interests through ‘foreign policy substitutes, such as coercion, inducements, delegation, and forum shopping across different international institutions to advance their desired preferences into desired outcomes’ (Drezner, 2004:478, cited in Mueller & Changi, 2010). However, while the nation-state has not been ousted from global decision-making, it can no longer do so without reference to other stakeholders and an increasingly diverse and complex system of global governance.

The European Commission’s General Data Protection Regulation (GDPR) provides the most advanced regional case of favouring extensive data protection frameworks. The development and implementation of it seeks to uphold data protection and privacy rights and obligations for individual citizens of the European Union and the European Economic Area. However, the ‘success’ of this regional response is exceptional.

Without the legal coherence (threatened as it may be) and enforcement mechanisms of the European Union, buy-in by the African Union and local RECs, as well as related attempts to harmonise rules to enable the rise of digital economies, is limited and even where states accede, they are seldom implemented or domesticated (Calandro, 2018). Countries in Sub-Saharan Africa have resisted ratifying treaties which seek to ensure the stability of cyberspace or to protect personal data used as electronic identifiers, inhibiting the realisation of global public goods. Only a handful of states have signed the AU Convention on Cybersecurity and Personal Data Protection (2014), which seeks to align practices on the continent with global norms and standards.

Like all public goods, in order to manage the negative externalities associated with its universality, someone has to provide the resources required to build and maintain the Internet. For this reason, much funding for the development of the Internet (e.g., digital inclusion initiatives) and tools to govern it (e.g., cybersecurity maturity assessments), where states are unable to do so themselves are invested by mature states’ international affairs or development departments or ministries. In some instances, such funding is also provided to multilateral agencies or other third parties.

While these efforts might have some positive outcomes, they are also used to launder foreign countries’ policies or to model laws on dominant regimes through policy harmonisation strategies in developing countries, or to shift policy discussions to more favourable forums (Hosein, 2006) – often to serve dominant commercial interests. As a result, global North institutional and governance frameworks are often exported and adopted uncritically for local use even in the absence of local research and policy formulation. But for most African countries, it is something that happens *to* them and from which they need to safeguard their national interests and sovereignty (Calandro, Gillwald & Zingales, 2013). This is because historically, African countries have largely been the recipients of policy and governance frameworks engineered by big governments, big business and, more recently, big tech in the global North,

despite the very significant impact such policies and programmes have on their economies and societies.

Under these conditions of flux and uncertainty, developing countries must create the conditions necessary to attract the infrastructure investments required for related technological developments to permeate the economy and society, while also managing the inevitable impacts and risks of digitisation and globalisation at the national level. As more people come online, data is produced as a granular by-product of their participation online. Innovative global technology platforms have used this data, coupled network effects in double-sided markets (Moore & Tambini, 2018; Wu, 2018), to become some of the biggest corporations on earth. The so-called 'digital giants' (companies like the GAFA – Google, Apple, Facebook and Amazon) are neither bound by national boundaries nor by most national laws (Maier, 2010; Johnson & Post, 1996) and are therefore accountable to few. Nevertheless, policymakers in especially the global North are starting to consider more effective ways of regulating them, often using a *mélange* of competition, taxation, data and consumer protection laws (Internet Society, 2019).

As developing countries bring their populations online for the first time, they will need to engage with countries and institutions attempting to govern global public goods to protect their countries from the negative multipliers associated with improved network effects and mitigate the risks associated with marginalised communities lacking sufficient skills to protect themselves from data abuses (Van der Spuy, 2019).

Africa's place in global governance frameworks

Due to the complexity of this network of networks, multistakeholder approaches – which enable diverse stakeholders with an interest in the Internet's future to have a say in the ways in which the Internet evolves and is used (c.f., WSIS, 2005) have become popular albeit not altogether unproblematic (Van der Spuy, 2017). Such collaborative approaches often create tensions with multilateral or nation state-driven regulatory approaches, and are especially difficult for policymakers from developing countries to actively participate and engage in (Van der Spuy, 2017).

In a paper by Calandro, Gillwald & Zingales, the largely negative experience for Africa in multistakeholder systems of Internet governance up to 2013 are mapped. Some of the reasons for disappointing outcomes include the absence of nascent nature of the Internet industry and civil society organizations in many African countries. Even where local civil society do exist, with the exception of Kenya in Sub-Saharan Africa, their exclusion from the delegations of national governments to international meetings is the norm. In addition, where international meetings are open to non-governmental entities, and participation is permitted independently of formal state delegations, they tend to take place in venues requiring resources for travel and accommodation,

as well as visa requirements, to which civil society organisations seldom have access. This is, of course, different for industry and large multinational operators, which tend to have a presence in such forums and are often included in government delegations. As a result, civil society organisations from developing countries are generally unable to advocate at national, regional and inter-governmental levels (Gillwald, 2014)

Outside of civil society, until recently, an African agenda on Internet governance was far from being defined. The African Union has, over the past few years, sought to put issues of digital governance on its agenda. The AU Summit, held in Kigali in January 2018, officially adopted the *African Union Declaration on Internet Governance*, which acknowledges the need for localising Internet governance discussions and related public policy matters to enable, develop and support local Internet/digital economy; recognises that multistakeholder processes have become an essential and unique approach to engagement in addressing Internet and other policy development processes and to tackling complex issues; and acknowledges that Internet governance principles should exemplify and uphold the basic tenets of an open, accessible, resilient, inter-operable Internet. Specifically, the agenda commits to advancing multistakeholder approaches that are open, participatory, inclusive, transparent, collaborative, consensus-driven, and that respect cultural, gender and linguistic diversity and which seek to promote accountability and full participation of governments, the private sector, civil society, the technical community and users. Importantly, like the *WSIS' Tunis Agenda* (2005), it acknowledges that the roles and responsibilities of the different stakeholders can vary depending on the issue under consideration – a fluidity of meaning which has caused problems at international level due to similar wording in the working definition of Internet governance in the *Tunis Agenda*.

Despite these develops, the year since the declaration saw various damaging Internet governance moves on the continent. Examples include a nine-month Internet shut-down in Cameroon and retrogressive social networking taxes implemented in Uganda and astronomically high blogging taxes in Tanzania. These 'sin taxes' have pushed the poor offline and silenced political dissent, freedom of expression and freedom of sexual identity. The intersection of rent extraction by the state through retrogressive taxation with social control and political dissent are undermining efforts at digital inclusion but also creating failure points in the delivery and governance of global public goods. In Chad, the country with some of the lowest Internet penetration rates and highest prices on the continent and where the Internet was shut down for almost a year before the African Union accepting the invitation of the President of Chad to host the 2019 African Internet Governance Forum there.

Demand-side valuation of public goods to ensure equitability

The traditional rationale for the monopoly provisioning of communications infrastructure in the form of public utilities was based on demand-side value associated with public goods. However, as markets became liberalised and the delivery of public services moved to the private sector, the

focus of regulation also shifted to commercial supply-side value associated with private goods (along with the extraction of rents through excessive valuing of licences and fees through creation of artificial scarcity by auctions) (Melody, 2001). But these were not ordinary private goods. They were public goods delivered by the private sector and thus required regulation to ensure they were delivered affordably (Hirshmann, 1958). In both the analysis of problems and the proposal of solutions, policymakers thus need to take into account ‘...complex motivational structures and... diverse private-for-profit, governmental, and community institutional arrangements that operate at multiple scales to generate productive and innovative, as well as destructive and perverse outcomes’ (North, 1990 & 2005, cited in Ostrom, 2009 (Gillwald, 2019)).

Historically, debates about resource management tended to be polarised into market versus state control of resources. Markets are generally narrowly construed as closed or proprietary, while state ownership is interpreted as potentially more public and open. As something of a middle way, advocates of open access frequently call for the creation or the protection of a commons (Frischmann, 2005), which hypothetically serves as an alternative to state control and generally amounts to the rejection of resource management (even if regulated) through market relations that are associated with private control. As Frischmann (2005) points out, however, the ‘prescriptive call’ arising from the revisiting of the commons is underdeveloped from an economic perspective. While, on the private control side, robust economic theory supports the notion of a market mechanism with minimal government regulation that informs the approach to much ‘best practice’ infrastructure reforms, theoretical support for the implementation of ‘infrastructure’ commons is still mainly lacking (Frischmann, 2005).

Drawing on Ostrom’s (2009) theory of common-pool resources, Frischmann (2012 & 2005) presents an economic case for why some classes of key resources need to be managed in a more accessible manner. While conventional economic analyses of infrastructure focus primarily on the supply-side value of infrastructure and the profit imperative in network investment and regulation, Frischmann (2012) explores demand-side considerations to analyse how infrastructure resources generate value for consumers.

Three key insights emerge from adopting a demand-side, value-creation-focused analysis. The first, as also found in other infrastructure theories, is that infrastructure resources are fundamental and generate value when used as inputs into a wide range of productive processes. The second insight highlights that the outputs of infrastructure industries are generally public and ‘non-market’ goods that create positive multipliers in both economy and society. The third insight is that ‘managing infrastructure resources in an openly accessible manner may be socially desirable when it facilitates ... downstream activities’ (Frischmann, 2005:918).

Building on traditional economic concepts used in welfare analyses of infrastructure resources and the societal demand for such resources, Frischmann (2005) puts forward a new theory of infrastructure. He notes that despite the extensive role of private and commercial delivery of information infrastructure, with the increased positive externalities derived from information

infrastructure, the role of the state as coordinator and regulator in ensuring its provision and management is still required to ensure widespread access by citizens and the overall distribution of social gains.

Data governance and justice

Despite the low levels of Internet penetration on the continent, Africans' digital personas and data are nevertheless being used to feed into, improve, and alter emerging technologies. As more Africans come online, data is also produced as a granular by-product of their participation online.

Indeed, the need to harness data commons for development purposes has gained traction over the past year at various intergovernmental processes, including the ITU's AI for Good summit, the World Government Summit, and the outcome report of the UN Secretary-General's High-Level Panel on Digital Cooperation (HLP DC, 2019). In the latter, a 'Digital Commons Architecture' is proposed in order to synergise better efforts by governments, civil society and the private sector 'to ensure that digital technologies promote the SDGs' and to 'address risks of social harm' (*ibid*, 2019).

The risk of social harm is important, as developing countries' citizens' data and privacy are just as at risk as more active data subjects in the global North. The collection and processing of massive amounts of personal data enable researchers, private and public sector organisations to infer not only Africans' faces (Hawkins, 2018), but their movements, activities and behaviour (Taylor, 2017). Policymakers, governments and development agencies have used data to classify and categorise people or – where data is unavailable – to omit them from data sets and the planning such data enables (e.g., for housing or benefits). In low-income or remote environments, furthermore, authorities' ability to gather data is often limited, meaning that some communities who are often already marginalised are at risk of suffering from data-driven discrimination due to resultant digital invisibility (Taylor, 2017).

These actions all influence the way people are seen and treated by the state and private sector – leading to significant 'ethical, political and practical implications' (Taylor, 2017). As far as the private sector is concerned, for instance, innovative global technology platforms have used such data, coupled with a fortunate mix of network effects in double-sided markets (Moore & Tambini, 2018; Wu, 2018), to become some of the biggest corporations on earth. The so-called 'digital giants' (companies like the GAFA – Google, Apple, Facebook and Amazon) are neither bound by national boundaries nor by most national laws (Maier, 2010; Johnson & Post, 1996), and are therefore accountable to few. But policymakers in especially the global North are starting to consider more effective ways of regulating them, often using a *mélange* of competition, taxation, data and consumer protection laws (Internet Society, 2019).

Digital underclasses (Helsper & Reisdorf, 2016) not only risk exploitation, invisibility or relative marginalisation (Eubanks, 2017), but also exposure to novel risk for which they may be ill

prepared due to lacking sufficient skills to protect themselves from data abuses (Van der Spuy, 2019). The growing emphasis on digital inclusion means users are also exposed to new global risks (Beck, 1992) – the impact of which will not be equal. Whether risk leads to harm – an outcome which can be understood in terms of severity, longevity, and type (e.g., economic, physical or psychological harm) (Livingstone, 2013) – depends on individuals’ and countries’ ability to adapt and prepare for new risks associated with digitisation. Failure to do so will expose them ‘to increased risk, diminished long-term economic security, [and] restricted access to educational opportunities and the labour market’ (Beck, cited Jarvis, 2006) – among other things.

Besides the proposal for a Digital Commons Architecture (UN HLPDC, 2019), data protection frameworks have become popular ways of attempting to mitigate risks of discrimination, under-representation and invisibility. Approaches have been vastly different from context to context, with probably the most noteworthy attempt being the GDPR and its attempt to protect the rights and responsibilities of EU citizens. While GDPR has only been operational since May 2018, it has already tended to favour big US digital giants to the detriment of smaller EU competitors who struggle to comply with its stringent reporting requirements (Jia, Zhe Jin & Wagman, 2018).

There is no unified approach to data protection in Africa, making it difficult for organisations to adapt and meet disparate requirements across the continent (Makulilo, 2016). Because only nine out of 55 AU member states have signed the African Union’s Convention on Cyber Security and Personal Data Protection (2014), it has low levels of support. In addition, only 19 African countries have, to date, enacted data protection and privacy laws, while six have laws in draft stages. The remaining countries either have no legislation or have no data available (Consumer International, 2018).

Where African personal data protection laws do exist, they restrict the transfer of personal data to third parties who are outside the borders of the country concerned unless the data is handled in a manner that complies with relevant data protection legislation, both to ensure data about citizens continue to be protected when exported, and as a critical component of being judged as providing ‘adequate’ protection by the EU.

Adequacy has been a key driver of African laws, relating to trading opportunities with the EU, and more recently cooperation on criminal justice and migration. Some businesses have argued this could potentially result in lost economic opportunities (Deloitte, 2017). In addition to legislative disparities, differences in the activeness and efficiencies of data protection authorities on the continent pose a compliance challenge for organization and could expose African users to global risk. Africa therefore faces unique and diverse data protection challenges which accompany our increased use of and exposure to the data revolution.

Considerable resources have gone into ensuring the alignment at the national and regional level in the areas of cybersecurity and data protection as critical global public goods. Multilateral agencies such as the ITU and Commonwealth Telecommunication Union (CTO) have provided capacity building and technical assistance to the African Union, regional economic communities,

and national governments to create the conditions for secure international e-trade and services. This has been supplemented by technical assistance from the World Bank who provide support for programmes to assess the cybersecurity readiness of developing countries. Although these initiatives are developed on assumptions of rule of law, democratic governance and competitive markets, there is seldom any overt human rights framing to the guidelines and frameworks provided.

The introduction of GDPR, with its focus on privacy (arguably at the expense of other rights), has resulted in a new flurry of activity in SADC around data protection. This is at least partly because of compliance requirements and the fact that global industry associations are putting considerable resources into lobbying development banks and regional economic communities to ensure alignment in markets in which they operate. GSMA has provided resources to the African Development Bank, for example, to provide a framework or model of data protection for SADC, that is accompanied by extensive lobbying of the officials and consultants to ensure its GDPR compliance. While data protection is a critical aspect of good public governance for nations and economic communities, such technical assistance should be used by developing countries to develop a framework or revise existing legislation on consumer data protection that is context-specific to region or country – its institutional endowments, resources and development objectives – and safeguards the data of its citizens while enabling cross-border trade and services.

Conclusion

As a global network of networks, the Internet provides the global public goods for which a necessary new form of cooperation is required for global trade, financial and information flows. We find that the challenges of global governance lie in the increasing complexity and adaptiveness of the global communications system.

From a political economy perspective, we analysed the power relations and interests in the shifting interplay between states, markets and citizens to develop a typology of new forms of global governance. These complementary and competing systems of governance range from traditional multilateral systems that have governed global developments to new multistakeholder formations accommodating state, private sector and civil society interests. In this context, we examined the multiple forms of governance that existing alongside each other to deal with the complex adaptive system of the Internet. Global frameworks that have emerged to govern the Internet, technically, the ICANN, but also through more epistemically developed normative systems of governance that develop partially through international treatise or regional regulation that is carried by multilateral organisation. We observe that Africa has been mostly absent in these developments at a global level and efforts to domesticate global normative frameworks are largely unsuccessful.

From the typology of global governance we distil the current challenges to ensuring the provision of digital global public goods and, as a result, to propose alternative strategies or means to deal with current failures. From a developing country public policy perspective, understanding the implications of these developments in terms of (impure) global public goods, provides points for policy intervention to enable delivery of goods such as the internet and good governance (through public private and civil society) interplays in an equitable and public interested manner.

Understanding the Internet as an (impure) global public good - non-rivalrous and non-excludable essential services - however, reveals other interests in Africa (and other developing regions) acquiring global governance capacity beyond their own national interests. This is because the internet or good governance of it (cybersecurity or data protection) only emerges, in no small measure to the extent to which countries can help to reproduce them at the national level. Governments of mature economies see and respond to the Internet as a strategic good which can only be defended through the implementation at a national level in all countries including developing countries, often through imperfect global governance consensus. So, despite the the conventional notions of public traditionally embodied by the state, being usurped by the new forms of public practice the state remains a critical actor though in the absence of accountable institutions and strong competencies, other actors, private sector and civil society can be engaged in public processes to provide public goods often through tied aid from multilateral institutions or loans offered by development banks. Such imposed public processes tend to be highly instrumentalised and may lack the buy in of the state functionaries.

To understand how governments might enable the realisation of global public goods at the national level, we drew on the literature calling for the restoration of demand side valuation of public goods. This can assist with countering distortions resulting from the exclusive supply-side, commercial valuation of them that emerged with the liberalisation of markets, with relation to data governance. We explore further what has to done ensure data justice under conditions of inequality and marginalisation, not merely data protection compliance.

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