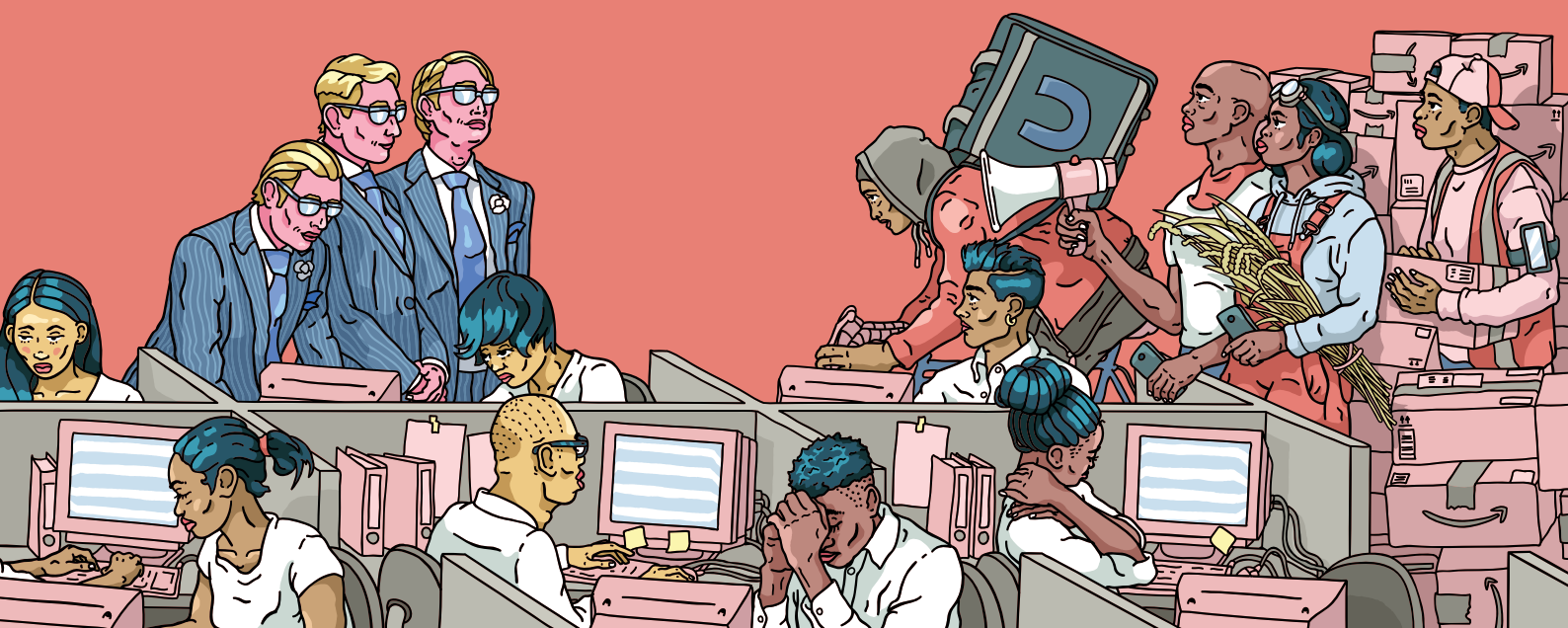
DIGITAL CAPITALISM

6 week essential course for activists to understand how digitalisation is shaping our world

tni 50 years 1974 - 2024

WEEK 3

Digital colonialism: Geopolitics of data and development



1 China vs the US

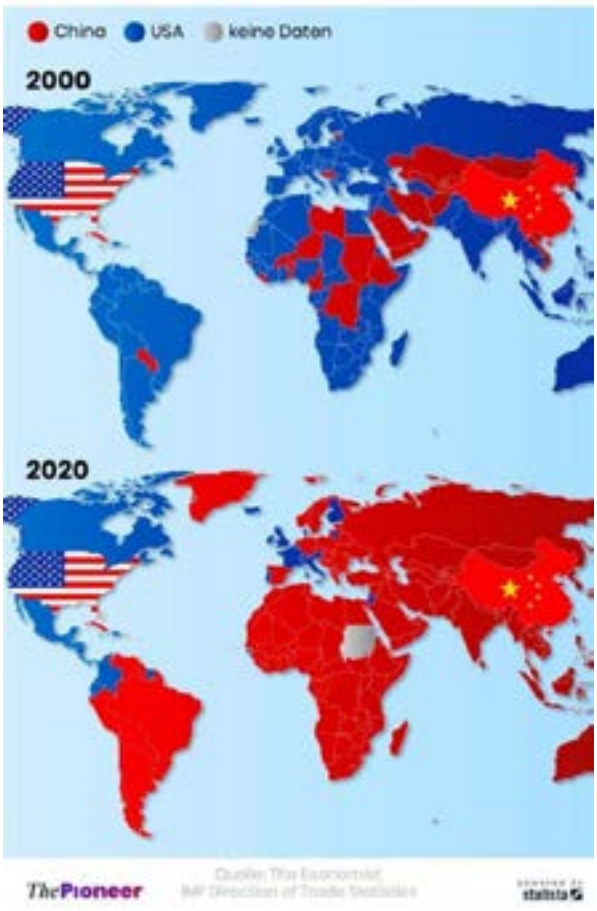
The myth states that the digital economy began to take shape in the US garages of affluent families during the 1990s. At that time China did not, however, contribute significantly to global GDP. So, what happened next? China made the decision to pursue the same digital industrialisation method, but behind closed doors. With a population of 1.3 billion and a strong public infrastructure, China promised to protect technology businesses from international competition. This is how China's government, in collaboration with regional businesses, introduced the North American technical corporate model to the Chinese market.

What emerged was a strategic alliance between corporations and the Chinese government, since it stimulated national companies with a massive amount of consumers. Furthermore, the data collected by these companies belonged not only to them, but also to the State. This allowed for the public sector to design incentives to shape a new Chinese society according to the new demands of the Communist Party.

This social credit system is the way that the Chinese government has to shape the behavior of their citizens, having scores for what the government considers good or bad behavior, and being able to access social benefits depending on the score you have in the social credit. Thus, surveillance and loss of privacy became issues for Chinese people as they did for citizens in the US.

Although China initially constructed its own internal monopoly and authority within its national boundaries, it gradually expanded its technological frontiers to be able to compete on a global scale in a wide range of markets and within emerging economies.

United States and China's main trade partners 2000–2020

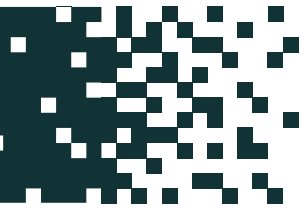


Source: The Pioneer. Available at: **https://www.statista.com/topics/4698/sino-us-trading-relationship/#editorsPicks**

Other factors also drove China's determination to broaden its commercial boundaries. First, due to growing consumption which led to a search for green alternatives, it made large investments in mining and energy industries, which are the main resources of the digital economy. Second, China grew to be a major player in telecommunications globally. The investment in raw materials and energy, together with the expansion in telecommunications, make China expand across the globe trying to capture and control the telecom market. In fact, the current strategic conflict between the US and China over control of the upcoming communication protocols depends on the deployment of the 5G global network, where the US wants an open source based system, while China promotes a closed system of the 5G networks.

China's progress is well-known on a globe that formerly seemed to be ruled by a single power of the US. We are leaving the world of unipolarity and moving into one that we might categorize as bipolar or multipolar.

2 Data value chains - how the global south is position



It is not an overstatement to say that without data, the digital economy as we know it would not exist. In the digital economy, 'digital intelligence', construed through data – powers economic systems, activities and processes and reorders economic relations and organizations

Data is often alluded to as the new oil. But unlike oil, data does not occur naturally but is rather appropriated. In order to appropriate data, it must be rendered valuable. Value derived from datafication may be monetary, social and institutionalized. This value is not only potentially recurrent in nature, but new forms of value that did not exist before can also be made possible through data capital.

For instance, when we relate to each other on content platforms such as Facebook, Instagram or TikTok, our everyday life is converted almost "naturally" into a data stream generating valuable insights. Eg. Facebook's timeline. When a smartwatch tracks our physical activities and movement to generate personalized insights about our fitness and well-being, the underlying cloud platform is also collating a wider pool of locational and demographic data from all its users, which is of interest and value to health care companies, insurance and so on.

When our economic activities (purchasing goods and services, financial transactions) are mediated by digital commerce platforms, they are able to glean powerful and useful intelligence for every segment of the value chain process. Consider the case of the Chinese retail platform Shein, which is able to predict consumer demand and move from design to global production and delivery in a matter of days through tracking user engagement with product listings (for stocks which do not exist).[1]

Thus, as all our social relations and economic transactions morph onto a digitized fabric, our everyday activities and life itself are also subsequently shaped and altered through the mediation

of data in a feedback loop. Through this process of appropriation and reappropriation, data not only acquires value but also gets privatized and enclosed within proprietary systems and algorithmic flows.

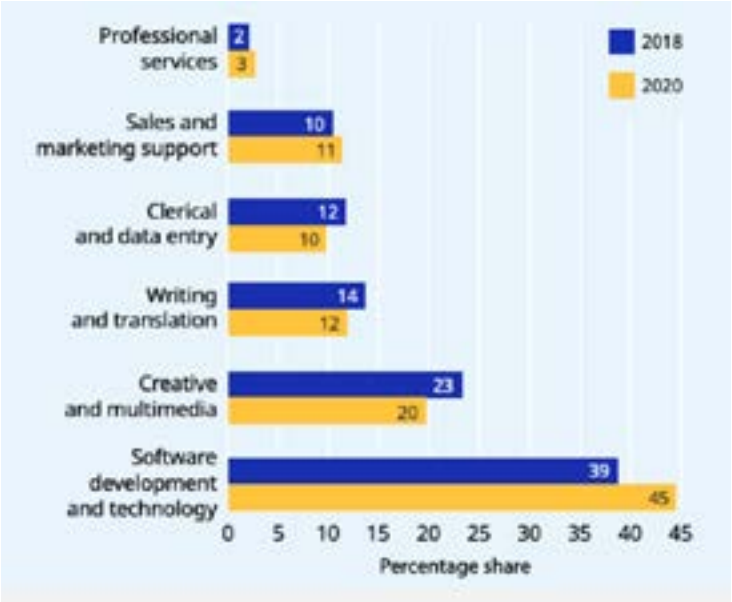
Some scholars have argued that the datafication of social life signals a move towards a "colonization of life." Data colonialism can be said to have paved the way for a new stage of capitalism: the capitalization of life without limit.[2] Others have pointed to the rent seeking structures that data control and monetization helps enable through a process of 'assetization'.[3] An illustration of this is the way everything from cars to smartphones, televisions and other everyday objects can be controlled centrally by a range of digital and algorithmic 'kill-switches', which can be activated for non-compliance with the hard coded terms and conditions of the platform.[4]

We may deduce from studying the value chain of the digital industry that individual data has no value. Only when data is aggregated does it gain relative value. Whatsmore, data storage has strategic value rather than economic value[5]. In other words, it's crucial for data storage that information be connected, housed in an ideal infrastructure, uses little energy, and is located in a place where governments won't intrude. This is what actually enables the sector to develop and consolidate all the data to offer its intelligence services.

The packaging and marketing of the digital industry focuses on the hardware and software needed to use and store the information generated by algorithms and its processing. This is valuable and significant, since it is an industry that generates an increasing amount of jobs in the global labour market, as well as large amounts of profits globally.

Thus, we can see that value in economic terms is generated where there is a greater concentration of human labour, and that human labour is captured and subsumed by a small number of countries through intellectual property.

The share of online labour tasks performed in software development and technology work has increased from 2018 to 2020.



Source: ILO World Employment and Social Outlook 2021. Available at: **https://ilabour.oii.ox.ac.uk/ilo-report-2021/**

2 Facing the digital industry: the case of peripheral countries.

In the history of humanity, there has never been a time when such a large number of people are actively participating in a single global chain of production. Actually , everyone who has access to an electronic device and an online network is already benefiting, at the very least, with the production of data, which is the raw material in a data value chain. Of course, data does not ensure that we will receive an income; in fact, we do not. These 'raw materials' are extracted by technological businesses, who privatize them before exporting them to servers, many of which are situated in tax havens[6], where algorithms are used to process all the data.

What place do peripheral nations have in these global value chains, though?

To begin with, peripheral nations produce raw materials but are not compensated for doing so (as we previously stated, every person and device connected to the internet does as well). In fact, they aren't even allowed to charge taxes for performing those tasks. It would seem logical to assume that a country might at least levy border taxes if it produces large amounts of raw materials and exports them to other nations. This is not feasible, though, and we shall go into more detail about it in the following unit.

Compared to other businesses, technological enterprises face fewer fiscal responsibilities, including income taxes as well as border taxes. This is due to the fact that they employ very sophisticated tactics to evade those taxes, like transferring profits to tax havens or exerting pressure on local governments. The "Amazon Method" is the name given to Amazon's tax evading scheme since it has been so effective[7], which involves movements of money and legal addresses across the world, basing mainly its operations in Luxembourg

On the other hand, the digital industry is labour intensive. As a result, a large number of highly qualified individuals are required to create and develop the algorithms that will expand the frontiers of digital capitalism - developing the new technologies that gather information from a wider range of human activities, thereby incorporating additional forms of social interaction and production. Finding innovative ways to extract surplus value from life itself has become the focus of innovation. Due to the lack of sufficient trained digital technicians some regions of the world offer engineers and programmers exceptionally high wages.

This industry requires additional workers for two reasons: to expand and to reduce pay. And this is where peripheral countries are key: they have that labour supply. These countries frequently offer services with a lower cost of labor, such as remote programming, system support, and updates, or even exporting "codelines" as commodities. Silicon Valley consequently outsources programming services to nations with cheaper wages than the US, like Argentina, Chile, Brazil, and India. This establishes a dividing line between an overpaid elite and an outsourced exploited rest which takes care of the toxic or operational tasks.

This economic structure highlights how it replicates existing inequities, and supports theorists such as Amir and Prebisch's arguments for the structural underpinnings of these inequities. First, we can seePrebisch's dependency theory, which establishes that underdeveloped nations are economically dependent on and exploited by developed countries, leading to a worsening of their terms of trade over time[8]. Second, there is proof of Samir Amin's colonialist view of peripheral capitalism: peripheral nations export goods to central nations, which then are re-imported with added-value, creating even more unequal trading conditions[9]. In this case, nations export programming services, but the ownership of the intellectual property, packaging, and design remains in the nations disputing digital hegemony. These nations are responsible for assembling pre-developed software into technology products and exporting them to peripheral countries. As we can see, economic dependence repeats itself in the digital industry.

In terms of the hardware industry, less developed nations supply minerals like lithium, nickel, or tin for the manufacture of batteries. Additionally, they contribute with the manufacturing of additional equipment and their packaging. However, as they participate in politically and economically driven industries that compete for the extractivism domain, they are unable to generate aggregated value.

Developing nations have made progress in terms of intellectual property, concept creation, and software or hardware design. However, these accomplishments tend to be purchased by large corporations, increasing market monopolization. Free Trade Agreements are crucial when it comes to maintaining the colonial and dependency status of developing nations related to minerals and extractivism. This issue will be addressed in the next unit.

3 The EU in the tech sector

In terms of legislation, the EU is the region that is working the hardest in developing new regulations. Their aim is ostensibly to establish basic rules for technical companies so that the population is not harmed by the digital economy. Over the last few years, the EU has attempted to bring order to an unregulated market with initiatives including auditing algorithms, taxation, data protection, and monopolistic fractures.

However, these regulations do not achieve what needs to be done: making the digital industry a competitive market for non-monopolistic businesses. This is because it is not only the EU's responsibility—the biggest technology companies are mainly Chinese and North American. Also, the growing influence of the lobby made by big tech companies in Europe stopped some important regulations from shaping the digital economy in favor of an alternative structure of the system.

But this does not mean that Europe is not developing a digital industry - far from it. Indeed, the EU's biggest bet is to upgrade its local industry through intelligence put into everyday objects, commonly referred to as the internet of things (IoT). A car needs maps and intelligent systems to drive itself. A refrigerator needs to know what it contains and what the family consumes in order to suggest purchases. A traffic management software needs to know the state of urban mobility in real time, and so on. And this seems to be the EU's main bet, upgrading its ecosystem of technology companies and heavy industry to a new smart upgrade.

The expansion of these European companies, however, appears to have stagnated years ago.

The value growth rates of American and Chinese companies have eclipsed their European counterparts

Source: Statista

In the graph above we can see how the growth rate of the most valuable companies in Europe seems to have stagnated compared to China or the US, and this is because these technology companies are increasingly becoming platforms of platforms. What does this mean? The large technology companies have become so monopolistic and have concentrated so much data that it is difficult to develop systems to replace them without incurring high costs. As a result, industrial companies, unable to develop efficient and competitive systems, rely on the services of larger companies for this upgrade.

In other words, software can be developed to help European cars better navigate traffic in cities, but it must be developed using Google maps, to name just one example. Thus, the presence of large US technological giants in Europe is growing progressively. They not only provide services to European companies, but also lobby governments, especially to obtain agreements that benefit them in terms of supranational regulations, as we will see in the next chapter.

4 Digital divide: the ones that are left behind

Whether we look at the production of data for the development of AI and other products, or whether we look at the processing, development, or sale of digital products, for everyone, it is necessary to be connected to the network. In other words, to participate in this new global value chain in one way or another requires a connected citizenry and taking advantage of what the internet has to offer.

We could say that being connected is no guarantee of being able to take advantage of this productive change, but it is undoubtedly the first step in considering a digital industrialization strategy. Indeed, anyone who is not properly connected to the Internet today loses the ability to get a good job, consume at competitive prices, get information and access essential public services, among other things.

That is why it is important to analyze the existing digital gaps, summed up in four categories:

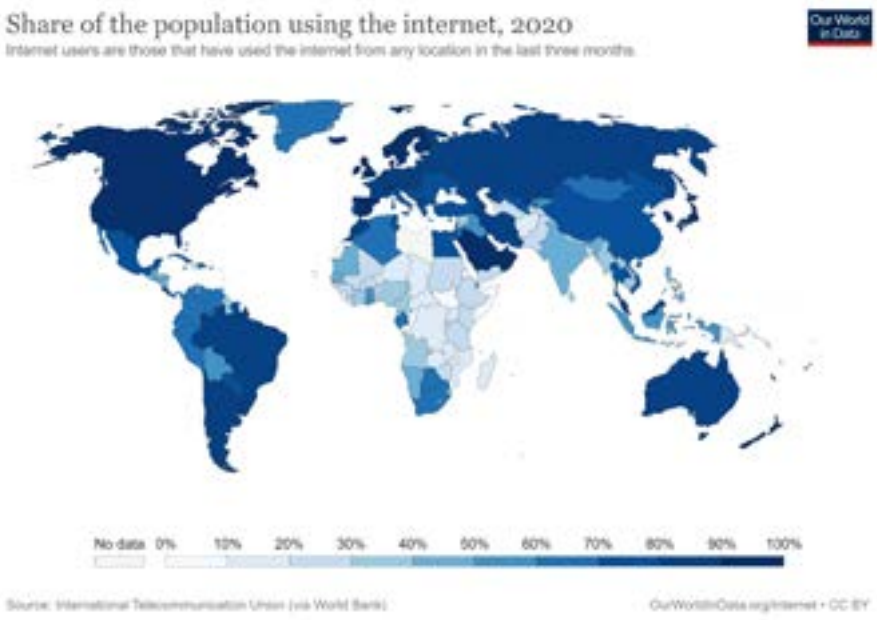
1. Internet access

Nowadays the Internet can be accessed through a multiplicity of ways: cable modem, fiber optic, satellite, among others. Not all of them are the same, nor do they have the same speed and stability. There are countries that already have an operational 5G network and there are others that are far from having this telecommunications update. The physical internet network can also vary within countries. The following is 2020 from the World Bank:

Region	Individuals using the Internet (% of population)
World	60
Arab World	69
Caribbean small states	58
Central Europe and the Baltic	82
East Asia & Pacific	69
European Union	85
Fragile and conflict affected situations	28
Heavily indebted poor countries (HIPC)	25
Latin America & Caribbean	74
Least developed countries: UN classification	24
Middle East & North Africa	78
North America	92
OECD members	86
Pacific island small states	39
South Asia	39
Sub-Saharan Africa	30
High income	90
Low & middle income	54
Low income	21
Lower middle income	45
Middle income	57
Upper middle income	73

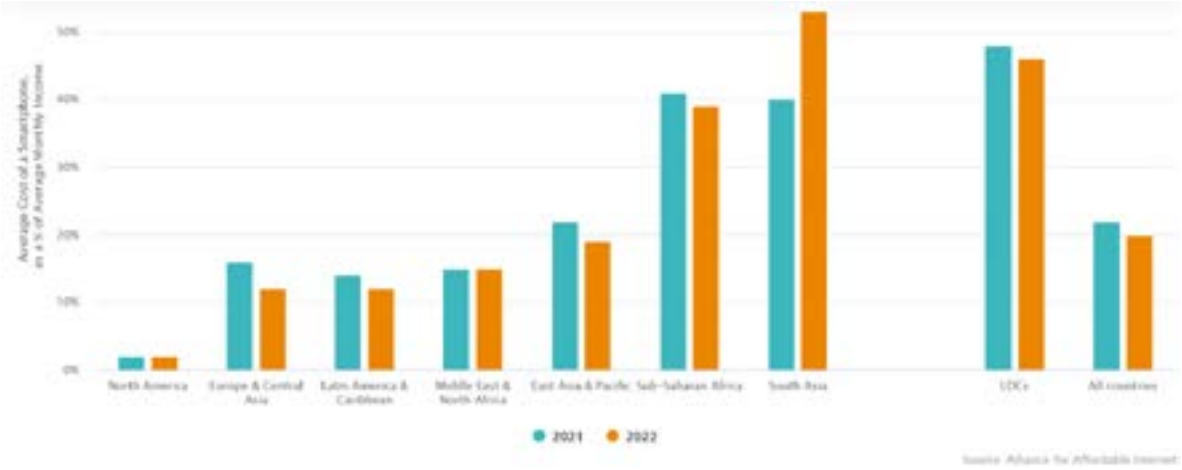
Source: World Bank. Available at: **https://data.worldbank.org/indicator/IT.NET.USER.ZS**

The above table clearly shows significant differences between regions with the poorest nations having less than third of the access of the richest.



2. Access to devices

Mobile devices cover more and more activities, which is why the requirements for their use are also increasing. Nowadays, for many jobs, not only a good bandwidth is needed, but also a good device that supports data processing, has the capacity to store the required data, has a good camera and processor, as well as good security levels, among other issues. Just accessing a virtual classroom through a videoconferencing platform requires a minimum technological capacity for the call to be seen correctly and heard without inconveniences. This is aggravated the more applications and programs there are on the device and the more it is used.



The graph below shows how the devices are more inaccessible in poorer regions.

MOST AFFORDABLE			LEAST AFFORDABLE		
1	United Kingdom	**0.70%** (US$26)	1	Azerbaijan	**333.37%** (US$1,158)
2	Turks & Caicos Is.	**0.74%** (US$19)	2	Tajikistan	**290.02%** (US$221)
3	Liechtenstein	**0.78%** (US$143)	3	Comoros	**137.20%** (US$170)
4	Bermuda	**0.90%** (US$89)	4	Lebanon	**123.79%** (US$1,157)
5	Ireland	**1.07%** (US$60)	5	Liberia	**110.94%** (US$49)

Source: Alliance for affordable internet. Available at **https://a4ai.org/research/device-pricing-2022/**

Platform delivery workers have denounced the dependence on expensive phones countless times: having one of these apps running on the phone for hours requires a good device with a good battery, processor and a good data plan. All these requirements are expensive. In addition, delivery workers are constantly exposed.

3. Digital tools, its uses and its knowledge

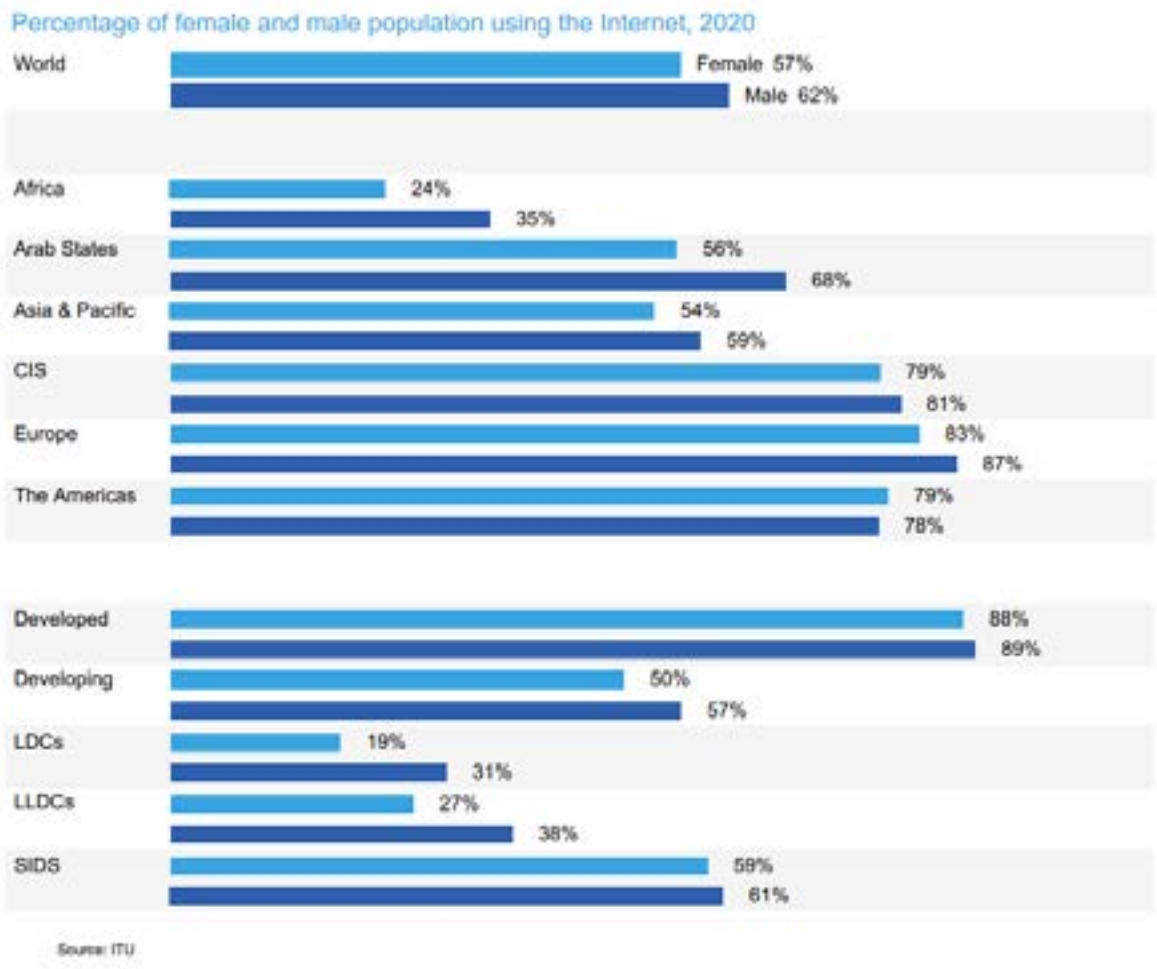
Having access to the Internet and a good device is important, but what happens if you don't know its potential and how to use it? The skills needed to take advantage of the Internet are increasingly complex and less taught. From searching for information, to solving everyday problems, to using existing tools, these are all skills that are increasingly necessary in the digital environment. The ITU (International Telecommunication Union) estimates that in 40 countries around the world, 50% of people do not know how to attach a file to an e-mail.

Most of the studies that exist on the skills deficit focus on the employability of people to enter the world of work[10]. But many other skills are needed that have to do with a new agenda of augmented literacies[11]. The Internet is not only the place where we get jobs, it is the place where we get information, access fundamental public services such as health and education, communicate, solve everyday problems, become consumers and even exercise democracy. In addition to practical knowledge, the necessary abilities also include social, didactic, civic, expressive, recreational, data, and informational sensibility. To effectively use, create, and build virtual worlds, a thorough training and instructional strategy is required.

This gap extends to all countries, but is widening in those with lower Internet penetration and lower educational quality.

4. Gender

The gender digital gap comprises the previous ones but differentiating between men and women, which adds new aspects to the debate. The gender digital divide shows how women in some regions of the world have lower quality devices, less access to the Internet, and less knowledge about its uses. This denotes a clear gap in terms of knowledge in technological development. Added to this is the digital discrimination that women suffer both in virtual spaces and in the stereotyping of women through technological devices such as voice assistants in products (e.g. voice in GPS, Alexa which reproduce gender bias). This inequality is pronounced in peripheral countries. It can be seen in the table below how the gender internet access gap increases in less developed countries vis a vis more developed ones.



Source: ITU. Available at **https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2021.pdf**

Likewise, in terms of uses, it is documented that women use digital technologies much more for communication, while men use them for problem solving and entertainment. However, recent studies show that this gap is narrowing as the age range of the population changes: younger women are more dynamic and more likely to be online than men[12].

Finally, the widest gap can be observed in services related to development and programming. Globally, it is estimated that only 26.7% of jobs in the technology industry are filled by women[13]. This generates bias in the production and development of technological tools that are not produced with a gender perspective, automating machismo and patriarchal stereotypes in technological developments.

5 Different data governance models

The steady capture of data by Big Tech and their host countries has major implications for development, justice and global equity. The disparities in control over data and its economic value has widened the gap between developed and developing countries, and between capital and labour. UNCTAD in its Digital Economy **Report 2021** highlights a 'data-divide' between countries of the Global South and North when it comes to the ability to own, control and harness data resources into valuable intelligence, and translate the same into opportunities for development.[14]

In an economy where digital intelligence is ever more central to production, countries and communities of the Global South that lack data processing and AI capabilities will be unable to optimize their data resources. Forced to relinquish control of their own data, extracted and locked up within AI systems of transnational capital, they have limited means to fair share of the benefits. This results in gross economic unfairness in the global digital economy and 'algorithmic coloniality'.[15]

> ***The lack of a globally accepted governance regime to regulate data's social and economic applications only perpetuates this status quo of economic concentration and deepens inequalities in the AI paradigm. Compounding this inequity, is the aggressive push for cross border data flows in the global economy, that benefit a few powerful countries whose corporations enclose data and assert de facto ownership over the same.***

Further, as datafication alters how value is counted and distributed and therefore shapes the structures of choice in the economy, the substance of people's rights also gets redefined in the process . A visceral illustration of this is the way capital uses data as a way of both exerting control as well as withholding value over labour[16]. Through data based systems of work allocation, incentives and various other behavioral nudges, as well as surveillance the platform model can control endless reserves of cheap labor, turning them into atomized cogs for the 'algorithmic wheel'. Data is thus not only monopolized by platforms but weaponized against workers and used to impose new forms of control and discipline.[17] Another arena this is seen is in the crucial sector of welfare. Data based systems have become increasingly integrated with welfare and governance functions. Without thoughtful design principles and techno-legal frameworks that safeguard citizen rights, the potential for exclusion and denial of rights is high. Australia's Robodebt scheme, for example, deployed a deeply flawed automated debt assessment and recovery on welfare recipients. Through an automated data-matching system that compared Centrelink records with averaged income data from the Australian Taxation Office, the system issued false or incorrectly calculated debt notices to hundreds of citizens.[18]

6 Democratic data futures

Mapping the global data governance debates

The dominant approaches to data governance have emerged notably from the US, EU, China and some parts of the Global South, such as India. The Chinese model promotes state control over the digital economy, and an emphasis on sovereignty through a firm policy of data localization with respect to data created within its borders and in accordance between levels and stakeholders including policy makers, bureaucracy and the private sector.[19] The US vision in contrast advocates against barriers to free flows of data as a cornerstone policy in order to help its Big Tech interests thrive, something it aggressively pushes for through bilateral and regional trade agreements.

The EU in contrast to these two approaches, has sought to establish itself as a policy standard setter with interventionist approaches such as General Data Protection Regulation (GDPR), and the recently enacted Digital Markets Act.[20] While lacking a notable tech industry, with its significant economic clout as a single market, the EU exercises regulatory influence, also referred to as the 'Brussels Effect' over multiple jurisdictions that strive to comply with EU regulations and/or model their policies in line with the EU to be able to pursue economic opportunities with the bloc.[21]

Amidst these approaches, India in the Global South has forged its own approach, focused on a public/social role for data. India has proposed a community approach to data recognizing data rights in associated communities (producers, stakeholders, communities of identity, location, interest).[22] India has also developed models for Digital Public Goods in finance, health and agriculture based on public data architecture, that offer useful directions for an alternative framing around data value creation.[23]

Table 2. Policy approaches to data governance

Policy/Model	What it governs	Salient features	Limitations
EU General Data Protection Regulation (GDPR)	Personal data	• Allows limitation of data • Enables data subject to withdraw data and/or port it to other service providers	• Overemphasizes individual consent as a form of a control • Does not cover data arising from deanonymization and aggregation of data
EU draft Data Governance Act[24]	Personal and aggregated	• Proposes common European data spaces within which data sharing and data pooling can happen • Facilitates establishment of "data altruism organizations" to enable pooling of non-personal data for non-profit and general interest purposes	• Does not fully address privacy risks of non-personal data like profiling • Does not fully account for market fairness and presence of monopolies • Allows anonymized data to be used in an unrestricted manner
India's community data approach	Non-personal data	• Recognizes data rights in associated communities	• Difficulties in establishing data communities a priori • Approach does not fully address how claims will be managed and operationalised for democratizing data value[25]

A democratic data-future: the way forward

In the 2021 UNCTAD Digital Economy Report, UN Secretary General António Guterres highlights that: "Data are multidimensional, and their use has implications not just for trade and economic development but also for human rights, peace and security. Responses are also needed to mitigate the risk of abuse and misuse of data by states, non-state actors or the private sector."[26]

The socio-political and economic aspects of data demand an integrated, legal-policy approach to governance, centered on data justice and integrating both negative freedoms (such as freedom from surveillance) and positive rights (such as right to access). As an important starting point, data privacy and protection that recognizes both individual and collective aspects of privacy, has to be basic to all national data laws and agreements. Second, a just global digital and data governance framework based on an independent, representative multilateral mechanism, backed by an international treaty (based on human rights, including economic rights) is necessary to deal with current global inequities.

While many have argued for the recognition of ownership rights over personal data as the road to data sovereignty [27], the pitfalls of such a logic is that it renders data into private property and obscures the structural crisis of data capitalism by reducing it to a "choice" to share/not share one's own data. Robust data protection frameworks, including international norms and agreements, should put the control of data firmly in the hands of the individuals as data subjects, and communities as originators or generators of data.

Beyond frameworks that protect citizens' civil-political rights and privacy, policy must also address the problems of data concentration. Economic data rights of individuals, communities and workers are important to ensure equity and justice, nationally and globally.[28] Further, given that data's greatest economic value is in the patterns found in aggregated non-personal data, this must be a core focus of regulation. To prevent the network-data effect that produces monopolies, we need a structural separation of data value chains.[29] Alternative governance frameworks for data and digital intelligence as common pool resources need to be explored.[30]

In a time when imperialist trade wars and intellectual property rights regimes define the contours of global digital and data governance, the loudest echoes from the power corridors have been in favor of a global free flow of data, which basically means that whoever collects data globally retains it, and its entire value. Rather than enforcing a sweeping data localization or an unconditional stance on data flows, data should be appropriately categorized based on legal and human rights requirements as well as the national and developmental interests of specific nations. Further, it is important that cross border data flows are based on social and economic justice, and observe principles like fairness and justice, transparency, lawfulness, and reciprocity in relation to data related benefits.

An alternative path

The umbrella term 'data stewardship' has been used to refer to fledgling initiatives – data sharing pools, data cooperatives, data trusts etc., which are organized around the collaborative governance of data resources and follow a cooperativist/socially motivated model of data generation and value accrual. In a collectivist approach to data governance,a group of people who decide who can access this data and how. Examples of these include Worker Info Exchange, an opt-in data cooperative for workers, working to contest algorithmic decision-making processes. Similarly, Driver's Seat in the US is a gig-worker owned technology platform that empowers ride-share and delivery drivers to use their own data to take control of their work at both the individual and collective level.

These niche experiments represent an alternative model for data governance and value generation. While they do have the potential to promote data sovereignty and create public data infrastructure, their sustainability depends on how payoffs for social equity can be ensured through appropriate institutional frameworks. To unlock the generative potential of data and intelligence, and socialize data value, (meso-level) models may not succeed without (macro-level) public law on data governance.[31]

NOTES

1 Interview with Paul Roland, Clean Clothes Campaign. (Forthcoming). State of Big Tech:Dismantling Digital Enclosures. IT for Change.

2 Couldry, N., & Mejias, U. A. (2019). Data colonialism: Rethinking big data's relation to the contemporary subject. Television & New Media, 20(4), 336-349.

3 Birch, K., & Muniesa, F. (Eds.). (2020). Assetization: turning things into assets in technoscientific capitalism. MIT Press.

4 Perzanowski, A., & Schultz, J. (2016). The end of ownership: Personal property in the digital economy. MIT Press.

5 Scasserra, S., & Foronda, A. (2021). Banking on data How the world's tax havens became the data centres for the digital economy. Policy. Available at: **https://www.tni.org/files/publication-downloads/banking_on_data_-_tni_-_web_final.pdf**

6 Scasserra, S., & Foronda, A. (2021). Banking on data How the world's tax havens became the data centres for the digital economy. Policy. Available at: **https://www.tni.org/files/publication-downloads/banking_on_data_-_tni_-_web_final.pdf**

7 Phillips, R., Pyle, J., & Palan, R. (2021). The Amazon Method: How to take advantage of the international state system to avoid paying tax. Study for The Left in the European Parliament, Brussels. Available at: **https://left.eu/content/uploads/2021/05/THEamazonMETHOD-1.pdf**

8 Prebisch, R. (1988). Dependencia, interdependencia y desarrollo. Revista de la CEPAL.

9 Amin, S. (2001). Imperialismo y globalización. Presentación Foro Social Mundial, Porto Alegre.

10 International Telecommunication Union (2021). Digital Skills Insights. Available at: **https://academy.itu.int/sites/default/files/media2/file/21-00668_Digital-Skill-Insight-210831_CSD%20Edits%206_Accessible-HD.pdf**

11 Ferrarelii, M. (2021). Alfabetismos aumentados: producir, expresarse y colaborar en la cultura digital. Austral Comunicación. vol. 10, no.2, pp. 395-411. DOI: **https://doi.org/10.26422/aucom.2021.1002.fer**

12 Fallows, D. (2005). How women and men use the Internet. Available at: **https://www.pewresearch.org/internet/2005/12/28/how-women-and-men-use-the-internet/**

13 Howarth, J. (2022). 74+ Shocking Women In Tech Statistics. Available at: **https://explodingtopics.com/blog/women-in-tech**

14 UNCTAD. (2021). Digital Economy Report 2021. Cross-border data flows and development: For whom the data flow. UNCTAD. **https://unctad.org/system/files/official-document/der2021_en.pdf**

15 Paris Peace Forum. (2021). Beyond the North-South Fork on the Road to AI Governance: An Action Plan for Democratic and Distributive Integrity. **https://digitalrights.ai/report/**

16 Gurumurthy, A., & Chami, N. (2022). Beyond data bodies: New directions for a feminist theory of data sovereignty. Available at SSRN 4037321.

17 Gurumurthy, A., Bharthur, D., Korjan, A. (2022). The future of work we seek- a global, cross-sectoral agenda for philanthropy on workers and the digital economy. IT for Change; Athreya, B. (2021). **Social Relations under Surveillance Capitalism: Is Solidarity Still Possible?** Bot Populi. **https://botpopuli.net/social-relations-under-surveillance-capitalism-is-solidarity-still-possible/**

18 **https://www.bbc.com/news/world-australia-54970253**

19 Interview with Luca Belli. (2022). State of Big Tech: Dismantling Digital Enclosures. IT for Change

20 Bharthur, D. & Sen, S. (2022). The Big Wave of Platform Regulation is Here – What's Next? Bot Populi. **https://botpopuli.net/the-big-wave-of-platform-regulation-is-here-whats-next/**

21 Ibid

22 **https://prsindia.org/policy/report-summaries/non-personal-data-governance-framework**

23 **https://www.niti.gov.in/sites/default/files/2020-09/DEPA-Book.pdf**

24 Gurumurthy, A. & Chami, N. (2021). **Governing the Resource of Data: To What End and for Whom? Conceptual Building Blocks of a Semi-Commons Approach**. IT for Change. **https://itforchange.net/sites/default/files/1741/WP23-Governing-the-Resource-of-Data-AG-NC.pdf**

25 Singh, P.J, & Gurumurthy, A. (2021). Economic Governance of Data Balancing individualist-property approaches with a community rights framework. IT for Change. **https://itforchange.net/sites/default/files/1880/Economic-governance-of-data.pdf**

26 UNCTAD. (2021). Digital Economy Report 2021. Cross-border data flows and development: For whom the data flow. UNCTAD. **https://unctad.org/system/files/official-document/der2021_en.pdf**

27 Jurcys, P. (2020, July 23). Personal Data Ownership: Legal, economic, and political reasons for individual ownership of user-held data. Towards Data Science. https://towardsdatascience.com/personal-data-ownership-f3b62e6ed07d

28 Singh, P.J. (2019, July 09). **Looking beyond privacy: The importance of economic rights to our data**. The Wire.

29 Singh, P. J. (2020). Breaking up Big Tech: Separation of its data, cloud and intelligence layers. **https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3873151**

30 Singh, P.J . (2019). Data and Digital Intelligence Commons: Making a Case for Community Ownership. IT for Change. **https://itforchange.net/sites/default/files/add/DGN_Data-commons.pdf**

31 Korjan, A. & Narayan, V. (2021). **Socializing Data Value: Reflections on the State of Play**. IT for Change. **https://itforchange.net/sites/default/files/1948/Socializing-Data-Value-Reflections-on-the-State-of-Play-2021.pdf**

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