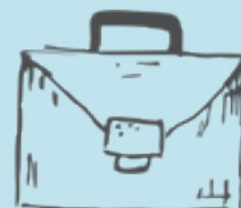
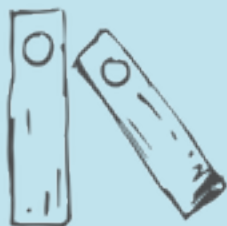


# PLATFORM PLANET

## DEVELOPMENT IN THE INTELLIGENCE ECONOMY



Anita Gurumurthy, Deepti Bharthur, Nandini Chami  
with Jai Vipra & Ira Anjali Anwar

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This report was produced as part of the research project 'Policy frameworks for digital platforms - Moving from openness to inclusion'. The project seeks to explore and articulate institutional-legal arrangements that are adequate to a future economy that best serves the ideas of development justice. This initiative is led by IT for Change, India, and supported by the International Development Research Centre (IDRC), Canada.

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# **Platform Planet: Development in the Intelligence Economy**

Anita Gurumurthy, Deepti Bharthur, Nandini Chami  
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# Table of Contents

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Executive Summary	7
1. Overview of the research	11
1.1 Rationale & Context	12
1.2 Methodology	13
2. Unravelling platformization – discussion of findings	35
2.1 Varied trajectories of platformization	35
2.2 The intelligence premium	42
2.3 Algorithmic optimization	52
2.4 Data as an economic resource	63
3. Conclusions – from ecosystems of value to ecologies of choice	67
3.1 Strategic choices framework for platform models	69
3.2 An alternative imaginary for the platform economy	74
4. Platform governance: the way forward	77
4.1 Governance challenges in the platform economy	78
4.2. Curbing digital monopolies	81
4.3 Creating an enabling environment for inclusive innovation	87
4.4 Redrafting worker rights in the gig economy	89
4.5 Building a data constitutionalism for the platform economy	91
5. Future Research Agendas	96
References	98

## List of Tables

---

Table 1. Sectoral Case Studies

Table 2. Legal Reviews

Table 3. Think Pieces

Table 4. Research Framework

Table 5. The Sticky Layers of MercadoLibre

Table 6. How Algorithms Game Actors

Table 7. Characteristics of Ownership, Algorithmic Control and Value  
Distribution in Platform Ecosystems

Table 8. Upgrading Sectoral Legislation for the Platform Economy, a Snapshot

Table 9. An Indicative Categorization of Ownership Rights in Data

## List of Figures

---

Figure 1. Platformization and the New Epoch of Economic Organization

Figure 2. A Strategic Choices Framework for Platform Models

Figure 3. Illustrations of Platform Models

## List of Boxes

---

Box 1. Platform myths explained

Box 2. Epistemic infrastructures in fintech, an Illustration

Box 3. Value maximization at the edges

Box 4. Russian and EU regulators' responses to Bayer's acquisition of Monsanto

Box 5. Essential platform infrastructure: the Indian approach

# CHAPTER 1

# Overview of the Research

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## 1.1 Rationale & Context

The platform model has emerged as a game changing force, transforming economic activity across key sectors (Srnicek, 2017; UNCTAD, 2018). Platforms orchestrate the production and exchange of products and services by optimizing relationships among a network of actors – consumers, advertisers, service providers, producers, suppliers and even objects (Kenny & Zysman, 2016; Srnicek, 2017). Platformization as the process of such a shift towards new modes of production and exchange serves as the pièce de résistance of global economic organization in the digital paradigm.

Whether in mainstream popular discourse or research, this turn in economic organization is emerging as a favored subject. Buoyant discourses celebrating ‘innovation’, ‘opportunity’ and ‘disruption’ today jostle with concerned echoes around the ‘Amazonification’ of the commercial world and the rise and rise of tech monopolies (C WorldWide Asset Management, 2018). Concerns about the global currents of platformization extend to the adverse terms of market engagement for smaller or less powerful players – workers, small producers and enterprises, developing nations – and the real-world outcomes for local development. Regulatory deficits present another challenge, as institutions struggle to respond to the public policy making imperative in relation to the platform economy (IT for Change, 2017b)<sup>1</sup>.

IT for Change’s research project, Policy Frameworks for Digital Platforms – Moving from Openness to Inclusion (2017 to 2019), is a scholarly attempt to understand the platformization phenomenon with an explicit focus on exploring and articulating the institutional-legal arrangements that are adequate to a future economy serving the ideas of development justice.

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<sup>1</sup> In our background paper, we outlined the case for focussed research enquiry on the platformization of the global economy. We touched upon some broad social and economic fallouts of the phenomenon – market capture, the access-for-data regime, the discursive influence of platform monopolies and crystallization of exploitative economic arrangements. We argued the need for forward looking policy frameworks as platforms become ubiquitous, to ensure that economies of the future are inclusive and equitable.

Platformization  
needs to be  
interrogated from  
the standpoint  
of development  
justice



This multi-country, cross-sectoral research project brings together learnings from a range of socio-economic contexts across the world, on the platformization phenomenon.

The following research questions were sought to be addressed through the project:

1. What are the social-relational architectures of the platform economy? Specifically,

- What are the discourses, norms and rules defining rights and obligations of actors in the platform ecosystem?
- How is power structured among actors in the platform ecosystem? What do empirical explorations of the platform ecosystem tell us about social, economic and gender justice?

2. What legal-institutional approaches can be used to future-proof the platform economy from inequality, injustice and exclusion? Specifically,

- What alternative conceptions of platformization are necessary to promote social, economic and gender justice in future economy and society?
- What synergies are necessary across technology, economic, and social policies to build a platform governance framework that promotes equality and inclusion?

This report is divided into four major sections. Chapter 1 provides an overview of the research and offers brief snapshots from the sectoral case studies, legal reviews and think pieces undertaken as part of the project. In Chapter 2, we present the major findings from the synthesis. The concluding arguments of the research, with a Strategic Choices Framework for Platform Models, is included in Chapter 3. In Chapter 4, we end with policy recommendations and directions for platform governance.

## 1.2 Methodology

### 1.2.1 Scope

As part of this project, twelve research studies using a case study method were undertaken in various sites in the Global North and

This multi-country, cross-sectoral research project brings together learnings from a range of socio-economic contexts across the world, on the platformization phenomenon

Platforms  
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of actors –  
consumers,  
advertisers,  
service providers,  
producers

South – in Asia, Africa, Europe, Latin America and North America<sup>2</sup>. These studies provide for a comparative analysis of the platformization phenomenon in a variety of contexts extending from advanced economies in the global north, to developing and less developed economies in the Global South. The research included:

**a. Sectoral Case Studies:** These studies (see Table 1) touch upon a broad range of sectors – e-commerce, ride-hailing, food delivery, agriculture and grocery e-tail, tourism, care work, video-on-demand, fintech and goods sharing– where digital platforms are rapidly on the rise.

**b. Legal Reviews:** These studies (see Table 2) are in-depth assessments of the evolving policy context with respect to, 1. the traditional domains of commerce regulation such as competition, consumer rights and labor rights as they become implicated in the activities of digital governance, and 2. data governance and the many contestations around it, both from the point of view of citizen rights and privacy as well as of data's economic value. Through primary and secondary research, collaborating teams developed a comprehensive state of play on the regulatory environment in their respective domains and geographies, and a research report with insights from one or more case-studies.

**c. Think Pieces:** A series of five think-pieces were also commissioned under the project that investigate stand-alone themes and issues in the platform economy. These essays (see Table 3) also inform the analysis presented in this report.

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<sup>2</sup> Following the development of a background paper that comprehensively laid down the problem statement and objectives of the project, an open call was issued in August 2017 for researchers. 62 applications from 32 countries were received in total and collaborating research teams were finalized after a two step evaluation process.

**Table 1. Sectoral Case Studies**

Asia			
Country	Domain	Focus	Method
China	Ride-hailing, Food delivery	Worker perspectives on platform work and the Chinese state's policy response in the context of its techno-nationalistic vision	Survey, Ethnography, Participant Observation, Interviews
India	Agriculture & Grocery e-tail	Impact of platformization on the livelihoods of small producers and traders at various stages of the agricultural supply chain	Interviews, Participant Observation, FGDs, Policy Analysis
Indonesia	Tourism	The economic, spatial, territorial and cultural implications of travel platforms in the travel and tourism sector in Indonesia for social inclusion	Interviews, Participant Observation, FGDs
Philippines	Carework	Impact of emerging digital platforms in care work in the Philippines on narratives of domestic work, gender and labor	Policy Analysis, Interviews
North America			
Country	Domain	Focus	Method
Canada	Goods-sharing	Data regimes in the platform economy in Canada and how they shape possibilities for collaboration and community building	Interviews, App Walkthrough <sup>3</sup> , Policy Analysis

<sup>3</sup> Deploys a walkthrough technique to systematically and forensically step through the various stages of app registration and entry, everyday use and discontinuation of use (Light et al, 2019, as cited in Reilly & Nieves, 2019)

**Table 1. Sectoral Case Studies (cont.)**

Latin America			
Country	Domain	Focus	Method
Argentina, Uruguay	E-commerce	The Rioplatense platform economy of Mercadolibre, a regional e-commerce ‘unicorn’ company	Interviews, Actor-Network Mapping, Discursive Analysis
Brazil	Video-on-Demand	Impact of Video on Demand (VoD) platforms on Brazilian cultural diversity and independent media	Policy Analysis, Interviews
Uruguay	Fintech	Peer-to-Peer (P2P) based lending platforms in Uruguay and the fintech regulatory environment in the country	Interviews, Policy Analysis

Africa			
Country	Domain	Focus	Method
Nigeria	Mobile money, E-commerce, Navigation	The institutional-regulatory context of platformization and digital economy in Nigeria and implications for the growth of domestic platforms	Content analysis, Interviews
South Africa	Ride-hailing	The operational and labor dynamics of ride-hailing platforms Uber and Taxify in South Africa in the context of ‘taxi wars’ in the country	Content analysis, Interviews

**Table 2. Legal Reviews**

European Union			
Country	Domain	Focus	Method
Belgium, France, Italy (EU)	Consumer Protection, Labor Rights, Data Governance	Gaps in European consumer protection and labor laws with respect to ride-hailing, gig work and accommodation platforms in Belgium, France and Italy	Interviews, Survey Policy Analysis, Stakeholder Consultation
UK	Data governance	UK's policy environment for data collection, analysis, and sharing in the context of laws such as the General Data Protection Regulation (GDPR), Investigatory Powers Act and the Digital Economy Act	Interviews, Policy Analysis, Stakeholder Consultation

**Table 3. Think Pieces**

Title	Focus
Show me the Money! Worker Well-Being on Labor Platforms in India	Assessment of worker well-being in the platform economy based on perspectives of blue-collar workers in ride-hailing and home-service platforms in India
Tipping the Scale: Notes on the Topologies of Big Data Platforms	Reflections about technical, policy, legal, design, and regulatory mechanisms that seek to hold algorithmic systems in platforms to account
See, Nudge, Control and Profit: Digital Platforms as Privatized Epistemic Infrastructures	Analysis of how digital platforms are reshaping knowledge production systems and the development outcomes of the same
The Rise of Ant Financial: The Double Articulation of 'Platformization' and 'Infrastructuralization' in China	Evaluation of the recent rise of Ant Financial in China and the power dynamics that characterize Chinese-style platform capitalism
Regulating Digital Media Platforms: Challenges and Initiatives in Thailand	Roadmap for regulatory sandbox approaches to digital content platforms as an alternative to heavy-handed regulation practices in Thailand

### 1.2.2 Method

Using the case study method, collaborating teams covered specific sectors and platforms, and domains of policy, situating their analysis within specific geographic sites of analysis. A research framework for the project was developed by the lead research team at IT for Change through a synthesis of the initial proposals and a literature review of the domain (See Table 4).

Depending on the specific contours of the study in question, elements of the research framework developed by the lead research team were included by collaborating teams into their research and analysis. A range of secondary methods were used by collaborating teams for data collection and analysis (see Tables 1,2) including interviews, surveys, ethnography, participant observation and policy analysis<sup>4</sup>.

Research reports and policy overviews authored by collaborating teams for their respective sites, and think-pieces were subsequently analyzed by the lead research team through a multi-step process as below.

- An initial template with broad pegs for analysis was developed, building on 1. the research framework (Gurumurthy & Bharthur, 2017), and 2. a first level review of research reports and policy overviews.
- This template was used as a guide to undertake close-reading of the research reports and to identify and excerpt key analytical threads from every study and think-piece in the project.
- Through a collaborative review and workshopping, emerging themes were debated and further refined.

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<sup>4</sup> Methods were deployed and used for analysis through different scholarly traditions by collaborating teams.

Table 4. Research Framework

<b>Level 1: Mapping the platform ecosystem</b>	<ul style="list-style-type: none"><li>• Actors that make up the platform ecosystem</li><li>• Structures that constitute the norms, rules and practices of the platform ecosystem</li><li>• Value created and distributed within the platform ecosystem</li></ul>
<b>Level 2: Analyzing development outcomes</b>	<ul style="list-style-type: none"><li>• Inclusion</li><li>• Choices</li><li>• Capabilities</li><li>• Location</li><li>• Identity</li></ul>
<b>Level 3: Constructing inclusive policy frameworks</b>	<ul style="list-style-type: none"><li>• Sectoral governance</li><li>• Social justice</li><li>• Economic equity</li></ul>

## Towards Inclusive Platformization in Nigeria

Kemi Ogunyemi, Martha Onyeajuwa, Ogechi Adeola, Uchechukwu Aneke, Chika Nwogu, Onyinyechi Akagha, Azeezat Ajibola

### What?

Study of three home grown Nigerian platforms, Konga, an e-commerce platform, Gomyway, a ride hailing platform, and Diamond Y'ello, a mobile money platform, to assess the interplay between systems of governance, digital environment and operations of platform companies.

### How?

Stakeholder interviews with platform owners, users and focus group discussions with consumers and users.

### Insights



Despite the growth in e-commerce in Nigeria, platforms operating in the space are yet to incur profits. Current players do not have the capacity to process more than 5000 orders per day, which limits their chances to scale up.



Challenges of poor broadband penetration, and high access costs, lack of energy infrastructure, and inadequate logistics are significant challenges to platform growth in Nigeria.



Poor cyber-security and high incidences of bank fraud have meant that platform users still mistrust online payment systems, thus hampering the adoption of digital platforms.



## Sectoral Case Studies



## Investigating the Operational and Labor Policy Frameworks for Taxi-Hailing Platforms- Case of Uber and Taxify In South Africa

Admire Mare, Sarah Chimu, Shepherd Mopfu

### What?

Study of two ride-hailing platforms in South Africa, Uber and Taxify, in the context of 'taxi wars' in the country.

### How?

Review of policy documents and media coverage; interviews with drivers working with ride-hailing platforms and operating metered taxis.

### Insights



High unemployment, accompanied by an influx of migrant labor from neighboring countries, has led to the rapid adoption of ride-hailing platforms in South Africa as a means of employment. In a highly unequal society, this has deepened existing fissures between 'insiders' (locals) and outsiders (African migrants who are depicted as 'job-stealers'), and between drivers working through platforms and metered taxi drivers.



In-transit heists have been a major safety issue for drivers on ride-hailing platforms. Cash-based rides are the most risky for drivers, who are not only under threat from roadside stick-ups, but also violence from competing, metered taxi drivers.



Despite its higher commission rates, Uber is the preferred platform for drivers, as the platform regulates the number of working hours (with a daily limit of 12 hours) and the number of drivers. Moreover, Uber's clientele is largely white and middle class and uses credit cards for payments. This further contributes to Uber's popularity among drivers in a context where holding cash is a safety risk for drivers.

## Deliver on the Promise of Platform Economy

Julie Yujie, Chen Sophie Ping Sun and Jack Linchuan Qiu

### What?

Study of worker perceptions in ride-hailing and food-delivery sectors in China's platform economy.

### How?

Surveys and virtual ethnography, participant observation, and interviews with workers and other stakeholders.

### Insights



The governance of digital platforms is ambiguous and inconsistent in China. For instance, the tight regulation of media content platforms (facilitating a virtual public sphere without potential for political action), diverges from the governance of platforms that mediate economic transaction (such as Didi), for which policies are largely undefined or ambiguous and thus favor platform growth.



China's burgeoning platform economy is deeply entrenched in the country's preexisting informal labor market, where labor is regulated under the system of "decentralized legal authoritarianism". This practice facilitates the governance of labor at the local level and contains collective action by workers. Varying localized regulations coupled with the reinforcement of informality via platformization are accentuating precarity for workers.



Algorithmic management of platform workers combines with existing labor practices to further diminish workers' bargaining power and segment them. This happens through various ways including real time-tracking, discriminatory job-allocations, and creation of hierarchies through reward and punishment.

# Farm to Fork: Understanding the Role of Digital Platforms in Agriculture, e-tail and FaaS

Anita Gurumurthy & Deepti Bharthur

## What?

Study of platformization of the Indian agricultural sector and its impact on the livelihoods of small producers and traders through three case studies – Ekgaon, a social enterprise model; Ninjacart, a for-profit market linkage platform; and e-NAM, the national agro-commodity trading platform

## How?

Participant observations, interviews and FGDs with farmers and farmer producer organizations, traders, market board representatives, and platform company CEOs.

## Insights



Current platform models in agriculture that have focussed mostly on business-to-business layers have a long way to go in tackling the long-standing problems of Indian agriculture. However, ethical data brokerage and contextualized intermediation practices, as seen in the case of Ekgaon and Ninjacart respectively, have been beneficial to farmers, who have seen gains through their association with these platforms.



Experiences with e-NAM, the public sector trading portal for agricultural commodities, have proven to be a mixed bag for farmers. Critical infrastructural gaps and the reticence of traders to engage with the online system render the platform a promising, but partial, solution. By integrating ancilliary activities that traditionally traders and commission agents have undertaken for farmers – such as warehousing, logistics and credit, e-NAM will likely have more benefits for farmers.



Lack of public data architecture and data governance models has a direct bearing on fledgling platforms and the prospects for platform innovation in Indian agriculture. Private data capture is either highly corporatized in the hands of TNCs or is siloed and fragmented amongst smaller players, thus reducing the overall competitiveness of the sector. Data held within government systems and agencies on agriculture, if opened up and made usable, can go a long way in mitigating this paucity.

## Making Travel Platforms Work for Women, Small Business Holders, and Marginalized Workers in Indonesia's Tourism Economy

Caitlin Bentley & Ilya Maharika

### What?

Study of online travel platforms for review, accommodation and transportation, in the context of Indonesia's tourism industry with a focus on exclusion/inclusion.

### How?

Qualitative and participatory methods, including GIS mapping, ethnographic observations, interviews and focus group discussions with workers, SMEs and larger businesses in Bali, Lombok and Yogyakarta.

### Insights



A GIS mapping of Yogyakarta revealed that over 70 percent of accommodation establishments are listed on TripAdvisor, with the total reach of all platforms, including Google, at 98.6 percent. This demonstrates an almost complete dependence on some form of digital platform in the tourism sector in Indonesia.



Workers in the tourism industry face a double whammy; they do not have a share in the platform-related gains of tourist establishments, and also bear the brunt of platform-induced volatility. If an establishment loses business due to bad reviews, worker earnings are affected.



In most cases, even if women officially run the tourist business, they prefer to let their husbands or sons manage all digital engagements, as they don't consider themselves adept at using technologies. Furthermore, for the majority of women interviewed, business ownership and platform use did not change their power or position within their family and community.

## Cleaning Ladies on Demand: Are Local Digital Platforms Transforming Domestic Work in the Philippines?

Liza Garcia & Jessamine Pacis

### What?

Study of three on-demand service platforms in the Philippines - Urbia, Clean Zone and Lingap Gailing Cleaning Consultants (LGCC), with a view to understand the changing nature of care work in the platform economy.

### How?

Policy mapping and semi structured interviews with different key informants – workers, platform owners, government agencies and unions. platform owners, government agencies and unions.

### Insights



Domestic work platforms in the Philippines use a human concierge, instead of an automated system or algorithm. This means that clients using online platforms to engage care workers can browse and select their service provider, but this option is not available to workers. Given high costs of internet in the country, this 'amphibian' platform model enjoys greater viability.



Though platforms have the potential to facilitate regular employment for workers, the current laws on domestic work do not mandate this. Only one of the platforms studied, Clean Zone, has hired domestic workers as salaried employees. The others do not offer women workers any formal protection, treating them instead as 'independent contractors'.



Platform-based work is not seen as a long term option by women workers. It is perceived as a source of supplementary income for the household or as transition work. Women's participation in these platforms does not seem to contribute to status gains in the household.



Women's participation in these platforms does not seem to contribute to status gains in the household.

## Mapping the Rioplatense Platform Economy-The case of MercadoLibre in Uruguay and Argentina

Alejandro Artopoulos & Ana Laura Rivoir

### What?

Analysis of the MercadoLibre e-commerce platform – actors, regulatory structures and norms, and how value is created and distributed in the ecosystem.

### How?

Stakeholder interviews with MercadoLibre's management and participating MSMEs, discourse analysis of the regulatory debate, mapping of the platform's actor-network.

### Insights



MercadoLibre is viewed as plugging critical infrastructural gaps around logistics and payment systems in Argentina. Its data driven practices have allowed the platform to venture into other services, for instance, the fintech market, with payment tools like 'Mercado Pago' and lending services for sellers such as 'Mercado Créditos'. While these services allow unbanked customers to access loans, they have also accentuated the dependency of small enterprises on the MercadoLibre ecosystem.



Due to geographic disparities, very small players are unable to access MercadoLibre's logistics networks as distribution lines that connect sellers to the platform are only accessible in more developed areas. As MercadoLibre becomes the dominant e-commerce platform in Latin America, not being part of the platform's ecosystem can result in high opportunity costs for those who are unconnected.



## Bits and Film – Policy For Digital Platforms in Media and Audio Visual Markets in Brazil

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Mariana Valente & Maria Luciano

### What?

Study of the impact of digital platforms on the Brazilian audiovisual market and regulation of VoD in the country.

### How?

Legal-policy analysis and interviews with different sectoral players to explore their interests and motivations.

### Insights



The Brazilian media industry, especially independent productions, have depended on state investments, which in turn rely on the taxation of the audio-visual market. However, VoD platforms are currently not subject to such taxation.



Regulatory discussions around platforms have largely focused on taxation, undermining the more complex issues around diversity policies such as preferential treatment and quotas for national and/or independent content on global platforms such as Netflix. This has negatively impacted national players, while providing incentives to VoD players.



Connectivity in Brazil remains geographically and economically unequal, and such inequalities reflect in the audience makeup for the VoD platform market. With the acceleration of platformization, this is likely to impact content production and selection, adversely affecting content diversity.

## Peer-to-Peer Lending platforms as Tools for Financial Inclusion in Uruguay

Mercedes Aguirre & Sandra Garcia-Rivadulla

### What?

Study of four Uruguayan P2P Lending platforms – Prezzta, TuTasa, Inversionate and Socius, and a mapping of the Uruguayan Central Bank's regulatory process with respect to the fintech industry.

### How?

Interviews with various stakeholders in, and a policy analysis of, the fintech regulatory landscape in Uruguay.

### Insights



The main value addition provided by P2P lending platforms is their credit rating algorithms, which allow for lower interest rates and higher coverage. They also facilitate tailor-made borrowing rates for individuals, effectively reducing entry barriers for small borrowers.



P2P lending platforms in Uruguay have been referred to as the 'financial Uber', a term disliked by market players. This association between Uber and fintech platforms is likely to have influenced the Central Bank's regulatory approach, resulting in stricter regulations and an eventual clamp-down on these platforms.



The current regulatory uncertainty around fintech is stifling the creation of new business, as well as limiting the potential benefits for underserved populations and SMEs that could have borrowed on P2P lending platforms on better terms. This could end up clearing the way for big global players such as Google, Facebook or Amazon to overtake the sector.



## Data Power Structures in the Goods Sharing Sector in Vancouver, Canada

Katherine Reilly & Carol Munoz




### What?

Exploration of two goods sharing platforms in Vancouver, British Columbia in Canada to understand their approach to data collection and management, and implications for the emerging data regime in Canada.

### How?

Policy analysis of emerging data regime through interviews with Canadian privacy experts and case study analysis of two platforms - Thingery and UrbanShare - using walkthrough and data audit techniques.

### Insights

-  Data gathering for audience, pricing and inventory intelligence may enable goods sharing platforms operating under a circular economy logic to improve their intermediation of transactions and achieve network effects in particular marketplaces.
-  The pressures of competitive advantage and privacy law stipulations have led both platforms, Thingery and Urbanshare, to view data as an operational resource that cannot be shared. Ironically, this means that data sourced from the community, for the purpose of providing a service to the community, cannot be used to improve community systems by either the members of that community, or the other actors who are working to serve it.
-  Canada's data policies overlook the potential of platforms to tackle over-consumption of cheap consumer goods imported from low wage markets, because they are focused on strategically situating Canadian companies as the gatekeepers of new platformized nodes on the global stage, including vis-a-vis those same low wage markets.



# Data Policies-Regulatory Approaches for Data-driven Platforms in the UK and EU

Arne Hintz & Jessica Brand

## What?

Review of the EU General Data Protection Regulation (GDPR), the UK Investigatory Powers (IP) Act and Digital Economy (DE) Act in the particular national and regional jurisdiction of the UK to examine how such laws shape, constrain or advance citizens' control over data that concerns them and that affects their lives.

## How?

Document analysis of the data policy landscape in the UK and semi structured interviews with diverse stakeholders.

## Insights



There are limits to individual approaches to data regulation, as data denotes the individual's place within a broader collective. Data, in that sense, is only ever valuable in relation to others. This is apparent in case of the categorizations, rankings and risk scores, where resources are allocated based on the comparison between individuals. Yet, current policy frameworks continue to focus solely on personal data and individual privacy.



The debate on ethical data use and the protections afforded by the GDPR may actually turn attention away from questions (and risks) of data collection. The specific mechanisms for enhancing user control by the GDPR, such as data portability, only apply to personal data. This excludes combinations of this data with data from other sources and inferred or derived data, which is more valuable.



While, so far, platforms have been enjoying freedoms for self-regulating user data collection, they are now subject to two parallel developments: Increased requirements for data access and data sharing by state institutions, and emerging calls for enhancing citizen control over data.



A citizen-oriented policy framework requires both user empowerment and robust legal restrictions for the collection and use of data.

## Legal Reviews

## Protection of Users in the Platform Economy- A European Perspective

Cynthia Delronge, Rossana Ducato, Anne-Grace Kleczewski, Enguerrand Marique, Alain Strowel, Céline Wattecamps

### What?

Analysis of legal systems related to platforms in Europe, focusing particularly on Belgium, France and Italy.

### How?

Online surveys, interviews and case studies of platform users in the transport and accommodation sectors to understand consumer issues, and stakeholder consultations to understand labor issues.

### Insights



The informational power of platforms gives them complete control over price-setting and manipulation of users towards certain preferred outcomes that benefit the platform. Platform users find themselves without enforceable access to clear customer policies on their engagement with the platform, including on issues such as privacy policies and customer support.



Categorized as 'self-employed', platform workers face precarious employment, which is further exacerbated by their spatial and temporal dispersion and consequent difficulty in organization and collective action.



Platforms create new forms of interactions and the traditional relationship between the service provider, the recipient, and the intermediary agent takes on new dimensions where the roles and responsibilities of platforms are often unclear. Therefore, while existing legislation needs to be enforced better over the platform economy, more platform-relevant regulation also needs to be developed.

## Think Pieces

### Show Me The Money! Worker Well-being on Labor Platforms in India

Urvashi Aneja & Aishwarya Sridhar

Much of the discussion on worker well-being and fair working conditions in the platform economy is dominated by the experiences of workers and markets in industrialized economies. Different disciplinary perspectives on well-being are hence needed to identify the facets that may be relevant for labor platforms in the Global South. This paper examines the perspectives of blue-collar workers on ride-hailing and home-service platforms such as Uber, Ola and Urbanclap in New Delhi, India. The research found that while income was the most important consideration for workers interviewed, they also had strong concerns about decision latitude, autonomy, co-worker support and gig insecurity, even if not framed in this language. Workers' sense of well-being was related to how fair the platform's terms of engagement seemed and how well they understood them. The paper also observes that workers tend not to frame well-being in the language of legal/formal entitlements but in terms of their past informal work experiences and those of their peers.

### See, Nudge, Control and Profit: Digital Platforms as Privatized Epistemic Infrastructures

Laura Mann & Gianluca Iazzolino

This paper explores the various ways in which digital platforms are reshaping competitive knowledge production systems within economies. It argues that while digital platforms have certain technological features that pose 'developmental challenges', political perceptions and coalitions will shape how each society responds to these technological affordances. Knowledge is not a benign thing shared openly and evenly across the globe. It is competitive. It structures economic rivalry between rich and poor countries. It determines trade positions. It shapes income levels and living standards. It influences who has power over property rights and who determines the rules of the economic game. On the one hand, national economies are competing with other national economies over the 'knowledge surplus' within the global economy, but on the other hand, actors within each national economy are competing over how that surplus is distributed across classes and social groups. Thus, in order to understand the impacts of information and communication technology on the global economy, we must understand the competitive and commercially driven nature of knowledge production systems both internationally and domestically.

## Regulating Digital Media Platforms: Challenges and Initiatives in Thailand

Supinya Klangnarong

In 2017, Thailand's National Broadcasting and Telecommunication Commission warned all major 'Over-the-top' (OTT) media platforms such as Facebook, Youtube and Netflix to register in Thailand, threatening to ban advertisements on their platforms if they failed to do so. This regulatory approach was criticized from different positions, by the online platforms themselves, but also civil society actors who feared that this was an attempt to curb freedom of expression in the country. This paper tracks the various regulatory challenges and failures emerging in the platform economy in the context of Thailand's fragile democracy. In doing so, it highlights the contentious nature of regulation when dealing with the expansion of the digital economy in states where civil liberties are an easy target. While the need for regulation to govern the unchecked power of big tech companies from the Global North has been recognized, this paper argues for alternative approaches which do not necessarily compromise human rights, such as the creation of 'regulatory sandboxes'.

## Tipping the Scale: Notes on the Topologies of Big Data Platforms

Maya Ganesh

This essay explores scale in terms of how it is shaped, and what it shapes in the context of digital platforms. The ambitions to scale and the metrics by which scale is known are particular fictions that enable a big data platform to function. When we examine scale in terms of optimization, we tend to think of scale in opposition to context, weaponizing the notion of 'context' in order to deliver goods and services calculated to be the most profitable. Another way to think about scale may be to consider platforms for the aberrant practices of citizenship, governance, politics and economics they create. We may then be able to rethink the imaginaries of power and agency that platforms shape.

## The Rise of Ant Financial: The Double Articulation of 'Platformization' and 'Infrastructuralization' in China

Hong Shen

This paper looks at the recent rise of Ant Financial, an affiliate fintech company of the Chinese Alibaba group, to elucidate the double articulation of "platformization" and "infrastructuralization" in China. The paper highlights three cases – the Alipay dispute in 2011, the Yu'e bao drama in 2013 and the monetization of Sesame Credit in 2016. In doing so, it foregrounds three vital types of power dynamics that have animated and characterized Chinese-style "platform capitalism". These include the complex interactions between transnational capital and state entities, the fierce power struggles between private and state capital, as well as the often-contradictory imperatives between basic infrastructures that offer services of great public value and private platforms that primarily pursue profits.



# CHAPTER 2

# Unravelling platformization

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## Discussion of findings

Platformization can be uniquely regional, national or local, with the historical contexts of development playing a significant role in shaping the course of platforms

In our research framework, we started with an understanding of platforms as “digital infrastructures” (Srnicek, 2017) — “a set of digital frameworks for social and marketplace interactions (Kenny & Zysman, 2016).”

Through our study, we proceeded to examine how platformization mediates a shift in the terms of such interactions. Our findings show that platforms restructure socio-economic relations, with far-reaching consequences for the real economy.

As network-data architectures that orchestrate production and exchange, platforms comprise new modes of value creation and distribution. Three inter-related aspects emerge as significant in our analysis:

- Platformization represents the movement from ‘size-scale’ economies to ‘intelligence-scale’ economies.
- Emerging as the defining ‘infrastructures of value’, platforms effect a paradigmatic shift in global economic organization.
- Outcomes of platformization are firmly located within the international political economy of data and development.

In the following sections, we discuss these aspects further.

## 2.1 Varied trajectories of platformization

**Finding:** Platforms emerge from varying historical contexts, economic motivations and development choices

Platformization processes follow varied trajectories that are contingent on a number of factors. While dominant models from the US and China have a large global footprint, platformization can be uniquely regional, national or local, with the historical contexts of development playing a significant role in shaping the course of platforms.



**a) Dominant models:** Propped up by a mix of favorable conditions – public investments in military research that contributed to the building of the internet, availability of highly skilled human resources, the growth of geographic hubs of innovation and an ideology widely known as Californian libertarianism – US tech companies have enjoyed a head start in the global digital arena, garnering a near-unbeatable competitive advantage. Silicon Valley giants such as Google, Facebook and Amazon have rapidly grown into monopolies riding on network effects and amassing data on a global scale. In global trade debates, the Big Tech lobby has fiercely guarded its territory, advocating for a single global digital market supported by unrestrained technology and data flows (UNCTAD, 2018).

Our research also points to the unique pathways of the Chinese model. Under the current leadership of President Xi Jinping, China's long-standing preoccupation with techno-nationalism has found new vigor in the idea of internet sovereignty (Chen & Ping, 2019; Shen, 2019). Having heavily filtered and regulated access to the global internet, the Chinese state has focused on developing its domestic digital and data infrastructure. Through initiatives such as the Belt and Road Initiative and the Digital Silk Route, China has also sought to expand its manufacturing and export market advantage through aggressive expansion of infrastructure that is integrated with digital layers (Chen & Ping, 2019).

Alongside these direct investments in infrastructure, the Chinese state has also provided major impetus for the growth of China's home-grown platform giants through a state-capital alliance (Chen, et al, 2019). E-commerce company Alibaba aims to become an indispensable infrastructure of the Chinese economy, just like water, electricity and land (Shen, 2019). Like Alibaba's other financial endeavors, Sesame Credit has been developed under the encouragement of the Chinese government. In 2015, China's central bank issued a notice to allow domestic digital platforms to develop pilot programs on social credit. Sesame Credit was born in this supportive policy environment and has soon become one of the dominant players, largely relying upon Alibaba's 400 million users, as well as its deep connections with various government bureaus. For example, apart from transaction data collected from its own platforms, Sesame Credit has also been able to integrate data from critical state agencies to its system, including the data from the Ministry of Public Security (Shen, 2019).

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## The Silicon Valley model thrives on barriers to entry such as IP and is reinforced by global north interests

**b) Developing country models:** The Silicon Valley model of digital disruption, spun as a story purely of unrelenting enterprise (despite evidence to the contrary), is widely evangelized as the winning formula for innovation in developing nations in Africa and Asia. But the model is hard to replicate, especially as it hinges on the capture of global markets and seamless access to and enclosure of data by dominant platforms (UNCTAD, 2018). The model also thrives on barriers to entry such as IP and is reinforced by Global North interests (Mann & Iazzolino, 2019) through a pervasive double-speak of ‘do as I say and not as I do’. While US Big Tech forcefully argues for developing nations to be open to free markets and competition, their country representatives continue to protect the former’s first mover advantage and entrenched network effects in global negotiations (Gurumurthy & Bharthur, 2018; Singh, 2018).

We find that platforms in developing countries innovate from vastly differing starting points, invariably working to create a market where structural disadvantages have to be tackled head on. As reflected in our research, developing country contexts are not attractive for big global platform players given poor digital and other infrastructural conditions. This has opened up the experimental ground for endogenous models led by local entrepreneurship. In Argentina, e-commerce giant MercadoLibre has filled in for public infrastructure by investing in the development of roads to sustain distribution networks for its activities and developed private logistics solutions to piggy-back on the national mail system. This has been the only way for the platform to overcome the colonial structures of centre to capillary models of connectivity<sup>5</sup> (Artopoulos, 2019). In the Philippines, expensive broadband and poor connectivity have led to platforms adopting an ‘amphibian’ characteristic. What are purely digital layers in other countries such as booking gigs, become manually intermediated at the back-end in the case of home-service platforms (Barrameda et al, 2019).

As African economies deal with premature de-industrialization (Rodrik, 2016),<sup>6</sup> their capacity to feed domestic demand for goods and services is declining, especially in countries like Nigeria where high

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<sup>5</sup> Designed to connect the capital city to various nodes without factoring in connectivity between smaller places

<sup>6</sup> Developing countries, Rodrick asserts “have experienced falling manufacturing shares in both employment and real value added, especially since the 1980s”.

purchasing power has led to the creation of a giant retail economy fuelled by Chinese goods (McKinsey, 2013). There is currently consumption-led growth without production capacity, largely through trade with China. In fact, Jumia, a pan African e-commerce platform has set up sourcing operations in the city of Shenzhen (Liao, 2018). Platforms such as Jumia and Konga are hailed as success stories that work despite the unfavorable factors. However, their potential for growth is predicated on a taken-for-granted dependence on Chinese goods and e-commerce platforms, and also hampered due to deficits in connectivity, logistics and banking. Current e-commerce actors in Africa are therefore unable to scale and do not have the capacity to process more than 5000 orders per day (Ogunyemi et al, 2019).

Countries like India have adopted a mixed approach, creating digital platforms as a basic infrastructural layer provisioned by public investment (UNCTAD, 2018). National policies have adopted a public goods approach, while also keeping room for private innovation and allowing for foreign capital and investments. IndiaStack, a set of open APIs created as a data infrastructure layer by different public bodies, is used by both public and private entities to build various applications. An instant real-time payment system, the Unified Payments Interface (UPI), has been developed by National Payments Corporation of India to facilitate inter-bank transactions and this has emerged as an important layer for all mainstream digital platforms. FarmerZone, which aims to provide Indian farmers with real-time input and market data, and e-NAM, an online public marketplace for agricultural commodities, are other examples of digital public goods in agriculture (Gurumurthy & Bharthur, 2019). Both serve as critical alternatives to the collection and privatization of agricultural data by big companies like Monsanto, who are in the process of developing digital platforms for agri-services (Plume, 2016).

What we note is that platformization in these home-grown models may not necessarily be anchored to local development concerns and priorities.

- Big regional players like MercadoLibre in Latin America who have become powerful super platforms with many affordances (see Table 5) and an ability to tackle local infrastructural deficits, are somewhat rare. The rhetoric of entrepreneurship and e-commerce as a means to achieving digital transformation obscures the fact

Countries like India have adopted a mixed approach, creating digital platforms that function as public goods

## E-commerce platforms in Africa operate in a context of domestic de-industrialization

that platformization by and large is characterized by the first mover advantage, and subsequent market consolidation through data capture on a global scale.

- The real economy connection, as for instance, in Africa may be weak. E-commerce platforms in Africa are typically caught between domestic de-industrialization and poor infrastructure on the one hand and volatile currency fluctuations and a nascent financial system on the other, having to rely on Chinese imports and operate in high risk market conditions (Liao, 2018).

On the other hand, policy intervention can also create the building blocks for digital industrialization that will incentivize digital entrepreneurship and reboot traditional sectors like agriculture. The India model is instructive for how domestic capacity for digital transformation, especially in developing countries, depends on certain basic digital and data infrastructure provisioned through a public goods model.

**c) Alternative models:** While the global platform economy is dominated by transnational corporations, platform architectures also support alternatives such as the solidarity economy or the social enterprise model. UrbanShare is a for-profit platform that gathers data to authenticate users, crowdsource product information, establish trust and communications between users and manage payments. The platform thus eliminates “pain points” within community transactions, all the while attempting to further a model of collaborative consumption (Reilly & Nieves, 2019). In India, social enterprise platforms such as Ekgaon and Vrutti, which work with farmer producer companies have successfully demonstrated the communitization of value in platform ecosystems through ethical data brokerage practices that allow farmers at the edges to secure fair prices in commodity markets (Gurumurthy & Bharthur, 2019). In Indonesia, trade unions and business consortia are building their own platform to connect hotels with tourism agencies, promote sustainable tourism and enrich the local economy (Bentley & Maharika, 2019).

While alternatives work in small pockets, they face many challenges. LGCC is a social enterprise platform for domestic workers in the Philippines, aiming to support workers from the LGBTQ community and women. LGCC charges a significantly higher service fee compared

to their competitors to be able to pay their workers a decent wage and also provide workers with necessary equipment. However, this strategy has reduced the platform's popularity, reflective of the fact that alternative models find it much harder to sustain their operations. Platforms in sectors like car-pooling such as Gomyways in Africa have tried and failed, not being able to find the resource backing to keep going (Ogunyemi et al, 2019). The norm in the platform economy, as we have also seen with aggregators like Uber, is to wipe out competition through predatory and anti-competitive practices or cannibalistic acquisitions.

Further, small platforms offering free services, like Rydygo and Warmshowers, which rely on self-governance standards, are unable to afford the costs of regulatory compliance (Delronge et al., 2019). If these platforms are held liable for a breach of trust like a data security mishap, they are not likely to be able to pay the fine or legal fees.

Alternative platform models not built for scale or inspired primarily by public/social value creation thus face an uphill path to success. In the case of Europe and Canada they have to grapple with regulatory burdens imposed by emerging data governance regimes modelled for large players (Delronge et al, 2019). Smaller players in developing countries face a hostile situation, having to find their feet or perish amidst the Goliaths in the platform economy backed by venture capital. While public investments into digital and data infrastructure and/or affirmative public policy support for smaller platforms in such contexts can boost their viability, the dominant policy discourse around data delegitimizes such measures as undesirable protectionism.

What our findings confirm is that there is no one-size-fits-all when it comes to platform-led economic pathways. Within and among nation-states, the socio-economic and political context, digital capacity, traditional competitive advantage and specific choices with regard to platform ownership, value distribution and actor-network governance distinguish platform types.

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Big platform companies have used intelligence-scale economies to entrench themselves and build a monopolistic advantage

## 2.2 The intelligence premium

**Finding:** Platforms work to recursively create and consolidate the intelligence premium

Traditional ties of market and societal intermediation that had once rested on kinship, patronage, community or council have today given way in a globalized context to new value chains. In this global system, platforms become the new interlocutor combining network effects and data-based intelligence. As the once-static technologies that drove productivity and managed labor now become dynamic (think global networks of data flows), competitive advantage shifts to a new value proposition.

Technologies at the base of productivity and labor performance in traditional size-scale economies were mechanical. In emerging intelligence-scale economies, network effects combine with an agile algorithmic apparatus, fusing manual tasks and cognitive functions (Fumagalli et al., 2019), optimizing this ecosystem of interconnected nodes unceasingly for profit maximization. Thus, the value proposition in economies of intelligence involves transferring mental processes and skill requirements away from workers and onto the platform infrastructure (Mann & Iazzolino, 2019).

Within the larger neoliberal capitalist system, big platform companies have used intelligence-scale economies to entrench themselves and build a monopolistic advantage. They have continuously honed their 'network-data advantage' to expand their current business as well as diversify into new sectors.

This is true for digital companies such as Google and Amazon, and also increasingly, for large transnational corporations in other sectors, such as Walmart in retail or Syngenta in agriculture. So rapid is this trend that by 2025, it is estimated that 30 percent of global economic activity, approximately \$60 trillion in revenues, will be mediated by digital platforms (McKinsey, 2018). Deloitte (2018) has predicted that by 2019, 70 percent of companies will acquire AI capabilities through cloud-based enterprise software, as having vast amounts of connected data points can open up the potential for AI in unprecedented ways.

Content and media platforms such as Facebook and Google have reaped the benefits of social transaction data generated by millions of

users. More than 80 percent of the content people watch on Netflix is discovered through the platform's algorithmic recommendation systems, which uses personal data from its network of subscribers to push content. Viewers' content consumption practices are broken down to microscopic levels – including the number of pauses in a given show – and such data then informs in-house content production as well as external licensing agreements. Further, such data is combined with other data gathered through resource intensive annotation to feed into machine learning (Valente & Luciano, 2019).

Similarly, P2P lending platforms are able to use financial intelligence gathered through user data and public datasets, for gaining a network of borrowers and lenders (Aguirre & Garcia-Rivadulla, 2019). In 2017, Chinese ride-hailing platform DiDi handled 20 to 25 million ride requests on a daily basis, carried out by four million drivers, thus processing 2,000 terabytes of data (Sawers, 2017, as cited in Chen, et al., 2019). DiDi has used its data to expand to a wide range of urban transport services in Chinese cities – taxis, private cars, bike-sharing and smart traffic systems, thus datafying the urban transport ecosystem and placing “itself at the center of the converging networks of information, traffic, and transactions” (Chen, et al., 2019).

Building on its successful e-commerce empire and investments in IoT, Alibaba's 'ET agricultural brain' AI platform (Business Wire, 2018) aims to provide intelligence based products and solutions and onboard various agricultural actors – seed companies, farmers, farm machinery companies – posing a real threat to traditional actors in the domain

Established companies have also made forays into the platform model in an effort to take back a share of the market. For instance, the success of Netflix in Brazil has prompted domestic telcos and broadcasters such as Globo, Telecine and Sky to start their own streaming platforms (Valente & Luciano, 2019).

Regardless of whether companies start as digital enterprises or become digitalized, economies of intelligence in the current global context propel an ever growing network-data advantage. In the pre-platform context, firms realized an innovation or knowledge premium (Mann & Iazzolino, 2019) when they adopted new technologically restructured business processes and became the first movers to disrupt the economic equilibrium. Today, platforms who are first

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movers reap ‘intelligence premium’, which is aggrandized through the totalizing control they have over the network-data layers (see Figure 1).

We find that platforms use their intelligence premium to grow their ecosystems in the following ways:

**a) Building interconnections across sectors and economic activities:**

By spreading their operations across different market segments and acquiring multiple capabilities, platforms entrench themselves in the digital economy. They become multi-functional and sticky, encompassing innumerable applications. Chinese super platforms WeChat and Meituan-Dianping are early exemplars that combine multiple features such as news, entertainment, restaurant reviews, food delivery and ride-hailing along with cross-cutting applications such as payment systems and digital wallets (Chen, et al., 2019). Similarly, travel platform TripAdvisor combines several features such as listing, ratings and reviews of attractions, hotels and restaurants, message boards for peer to peer discussions, also acting as a gateway for other travel booking platforms such as Booking.com, Traveloka and Expedia (Bentley & Maharika, 2019). Yu’ebo, Ant Financial’s fintech investment service offers higher interest rates than traditional bank deposits, and allows users to transfer and withdraw their shopping funds or revenues from its payment counterpart, Alipay, without penalty (Shen, 2019).

**Table 5. The sticky layers of MercadoLibre**

Mercado Pago	Payment gateway
Mercado Shops	Online storefront
Mercado Envíos	Logistics
Mercado Libre Publicidad	Adtech services
Mercado Créditos	Fintech loans for platform sellers
Mercado Puntos	Customer loyalty tool
Mercado Fondos	Virtual wallet



MercadoLibre uses Application Programming Interfaces (APIs) as a way to strengthen its platform operations, inviting independent software developers to create and implement solutions for expanding the platform's reach (See Table 5).

To date, the platform has created a payments system, virtual wallet, logistics solution, adtech service, fintech and alternative finance solutions, and a customer loyalty program (Artopoulos & Rivoir, 2019).

In less mature markets, platforms use hybrid strategies (offline-online, product-service) to build interconnections for value maximization. For instance, Cleanzone, a Philippines based care work platform is cashing in on the successes of its home-cleaning services and expanding into the retail business, with its own line of cleaning solutions (Barrameda et al, 2019).

**b) Privatization and capture of the market:** Where platforms once served as marketplaces for aggregation or intermediation of services, today they are increasingly seen as markets in themselves. On account of platformization, the market becomes a privatized economic sphere with redefined terms and rules of engagement.

For one, platforms have enormous and almost unilateral price setting power (Delronge et al, 2019), dynamically pushing costs up or down on the basis of algorithmic intelligence to an extent where price signaling, a fundamental tenet of the market system, fails entirely. Automated price variation means that players dependent on the platform are never quite aware of the terms of the transaction, except in real-time. Additionally, on ride-hailing platforms, for instance, user design aspects often forces user-attention towards confirming the transaction, rather than scrutinizing the price (Delronge et al, 2019). Platforms are able to exploit information asymmetry in other ways through specific techno-architectures, including misrepresenting supply and demand of goods and services, hyper-segmenting consumers, eliminating geographies that do not seem lucrative and constantly nudging users towards particular behavior.

All these trends point to market capture that traditional competition and anti-trust regulation fail to tackle. Not only are current laws inadequate, but they also burden less powerful actors in the ecosystem with the disproportionate costs of seeking redress. This allows

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platforms to circumvent established rules and policy safeguards, whether with respect to consumer protection, labor rights, or more recently, data protection laws such as the GDPR. While recent discourse has brought these concerns into the limelight, data protection continues to be a weak area of enforcement, and many companies continue to not comply with the GDPR, considering fines as simply the cost of doing business, as the profits even out the losses in the longer run (Hintz & Brand, 2019).

**c) Financialization of the platform model:** The unholy marriage between venture capital and tech giants has ensured that global capital flows today remain concentrated among a small group of actors through a cannibalistic swallowing up or elimination of smaller competition. For instance, TripAdvisor has in the past four years acquired cruise-booking, home-rental and travel planning platforms, and more recently, has also diversified into food-tech, investing in startups such as Fork and Eatigo (Tech Crunch, 2018).

Venture Capital (VC) investments into start-ups may not necessarily contribute to the local economy, notwithstanding all the hype around innovation and entrepreneurship. Through a relentless cash burn, VCs allow platforms to play the long game, eroding competition and facilitating market capture, even when profits are not in sight. For instance, DiDi, one of the most successful platforms in the world has failed to generate any net profits since its foundation (Chen, et al., 2019). In May 2019, ride-hailing platform Uber went public on the New York Stock Exchange, confident of hitting a valuation of \$120 billion. However, the company dashed all expectations a week after it issued its Initial Public Offering (IPO), losing more in share value than any publicly traded stock since 1975 (New York Times, 2019). Often, financial actors also prefer to back the winning side by watching and gaming investment portfolios that they create.

States in the Global South are highly dependent on global capital to build their budding platform ecosystems. Most leading platforms in India for example, are funded through global VC capital. Softbank, a leading financial player in the digital economy has invested in Ola (ride-hailing), Oyo (accommodation booking) and Paytm (digital payments) (Mint, 2019). Syngenta has funded agri-platform Ninjacart (Gurumurthy & Bharthur, 2019). China is an exception to this trend. Although Chinese platforms including Alibaba received large sums of

foreign money during the late 1990s and early 2000s, more recently the platform economy was restructured to be wholly-owned by Chinese nationals through entities such as Ant Financial (Shen, 2019).

**d) Centralizing intelligence:** Platforms use big data and digital intelligence to expand and optimize a totalizing control, in the following ways:

**Gatekeeping market participation:** Digital platforms allow new markets to emerge where none existed earlier, plugging the lack of information that earlier resulted in a 'missing market' (Akerlof, 1970)<sup>7</sup> and creating the necessary trust infrastructure. In the platform economy therefore, an ever-expanding possibility for connections enables new forms of exchange. As the research reveals, this could potentially create a basis for collaborative consumption. The social platform Warmshowers, for example, allows hikers and bicyclists to connect with people who are willing to offer up their homes for showers (Delronge et al, 2019). Hyper-local platforms for goods sharing in the city of Vancouver are another instantiation of a sharing economy (Reilly & Nieves, 2019).

The affordances of digital platforms for bridging information asymmetry and multiplying connections, however, has mostly given rise to exploitative business models. Fintech platforms use their immense algorithmic prowess to rank and sort potential borrowers, including only those deemed 'worthy' (Mann & Iazzolino, 2019). In Uruguay, P2P lending platform Prezzta eliminates over 85 percent of loan applications that are deemed high risk by its algorithmic apparatus (Aguirre & Garcia-Rivadulla, 2019).

The research also found that in Indonesia, when Booking.com first launched, the platform sent representatives to take appealing photographs and onboard home-stays who initially saw good returns from the arrangement. However, as more and more properties began to self-enlist on the platform, all local businesses were left completely dependent on the platform's algorithms for consumer traffic (Bentley & Maharika, 2019).

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<sup>7</sup> A missing market or 'market for lemons' where competitive exchanges become impossible given that quality of goods and services cannot be differentiated.

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**Eliminating competition:** Big data and algorithmic capacities are used by platforms to consolidate market power through micro-surveillance and micro-management of different member

nodes or constituent actors in the network. Uber for instance has awarded higher bonuses to double-appers – drivers offering services to both Lyft and Uber – in some cities, ensuring that these drivers drove for Uber and not Lyft, thus distorting upstream conditions to limit Lyft's ability to offer services to end consumers (Anchustegui & Nowag, 2017). By deploying the intelligence mined from transactions data on its digital marketplace, Amazon often indulges in predatory pricing and deep discounting of its private labels. This is part of a larger strategy to edge out competition from independent third-party sellers (Khan, 2016).

**Commodifying human experience:** The totalizing hold of platforms over the market hinges on continuing surveillance of consumer behavior and a tireless strive to improve upon the consumption experience, reduce the consumer's pain points and enhance individual gratification. The consumer does not simply order an item off an e-commerce website anymore. She has access to reviews and ratings on various options, product and price comparison, multiple shipping options and loyalty program perks, real-time tracking of the item in transit, not to mention easy returns and replacements and mechanisms to input her satisfaction level. The consumption experience on the platform is heightened with newer and newer data-based strategies which allow for hyper-personalization as in the case of Netflix's recommendation system (Valente & Luciano, 2019). Platforms offer omni-channel transaction and distribution using integrated data infrastructure for seamless experiences across devices and channels (Gurumurthy & Bharthur, 2019). Thus, through systematic datafication and algorithmic intervention, platforms commodify the human experience, moving products into the emerging zone of product-service hybrids

**e) Concentration as end game:** A global economy that is rapidly digitalizing is witness to increased consolidation of power in the hands of a few corporations – the rise of giant technology companies and enterprises that have grown bigger and bigger through the integration of digital layers, services and platforms in traditional sectors.

UNCTAD's (2018) Trade and Development Report points to how value creation and accumulation in supply chains is now controlled by economic actors who can bring in digitally enabled elements. Consider the fact that today, seven out of the ten most valuable companies in the world are driven through the platform model (Schenker, 2019). Also, platform companies widely employ discursive tactics – presenting themselves in win-win terms and circumventing regulatory oversight (see Box 1).

Their data advantage also allows technology companies to move nimbly and buy out potential competitors. TripAdvisor, faced with stagnating returns on its operations, has attempted to reinvent itself through new lines of acquisition, as has been previously discussed. Widening pools of invaluable data also enable tech giants to make calculated leaps into new markets. In 2016, Alibaba partnered with the SAIC Motor Corporation to jointly develop driverless cars, and also collaborated with the state-owned oil interest Sinopec on Big Data analytics and information security, thus making inroads into transportation and energy (Shen, 2019).

This means budding platform hubs in developing/periphery nations, struggling with regulatory deficits, risk losing out to established large technology companies who can simply swoop in and take over an emerging market whether that be a nascent on-demand care work market like in the Philippines (Barrameda et al, 2019) or the case of fintech in Uruguay where the stifling of local business could mean an easier entry point for bigger foreign firms in the future (Aguirre & Garcia-Rivadulla, 2019).

Smaller/mid-tier platforms which do survive tend to become dependent on larger platforms. In the tourism sector, a clear dependence is visible between major platforms that offer multiple services under one roof, such as TripAdvisor and Lonely Planet and platforms such as Expedia, which depend on the former for traffic (Bentley & Maharika, 2019)

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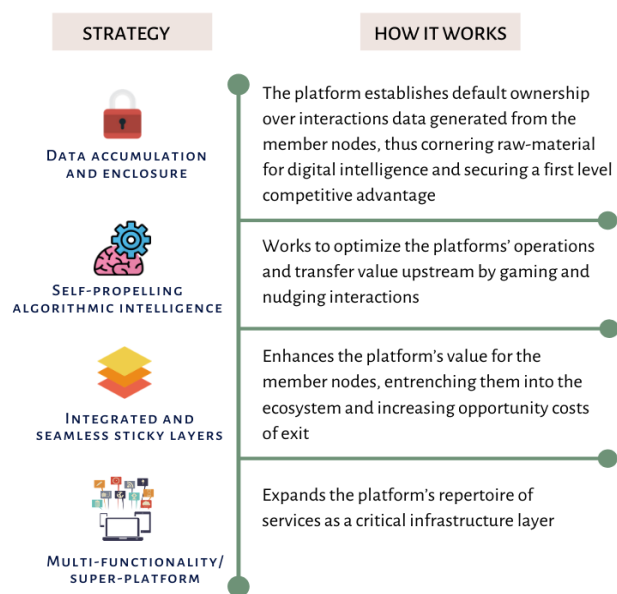
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FIGURE 1. PLATFORMIZATION AND THE NEW EPOCH OF ECONOMIC ORGANIZATION



## Box 1. Platform myths explained

Platforms represent the exalted promise of “a progressive and egalitarian arrangement” (Gillespie, 2010, p. 350, as cited in Ganesh, 2019). They co-opt narratives of inclusion and opportunity for smaller players, and in their self-representation often cast themselves as linear, transparent, objective and efficient – creating the myth of no-fuss convenience in ways that do not account for their topological complexity and expanse (Ganesh, 2019).

### Self-identification as mere ‘intermediaries’:

Platforms refer to themselves as mere connectors/intermediaries/aggregators in relation to law and policy, and portray themselves as neutral agents in the phenomenon (Cohen, 2017). Perpetuating a deliberate vagueness about their business identity, they distinguish themselves from traditional players, thus seeking to be exempt from the rules applicable in the domain. In Brazil, Netflix has for years avoided sector-specific taxes as well as diversity stipulations applicable to other traditional media actors through these strategies. A model for taxing was finally agreed within the government, but it has not yet been enacted into law (Valente & Luciano, 2019).

### Efficiency narratives to co-opt actors into the ecosystem:

Pasquale (2016, p.309, as cited in Mare et al, 2019) notes that platforms use narratives of efficiency, which include the reduction of transaction costs and the expansion of opportunities for individuals as ways to promote uptake and adoption. The platform economy is thus flattened out as an open terrain of abundant opportunity for the individual entrepreneurial agent. E-commerce companies often use ‘inclusion washing’ tactics – invoking the language of empowerment for women, rural producers etc. – to successfully gain entry into new markets. The reality however is that participation is a one way street and the terms of inclusion into the platform ecosystem often comes with higher costs and lower returns for smaller actors (See 2.3 (b) for more on this).

### The fallacy of the flexible gig:

“Work for yourself: Drive when you want, make money you need. Set your own schedule. Make money on your own terms. Let the app lead the way. Watch the money add up fast,” (Mare et al, 2019), and “Take orders with liberty and extra money made easy...” (Chen & Ping, 2019) are some examples of how platforms such as Uber (in South Africa) and Meituan (in China) appeal to workers to sign up for gigs. There is however a fundamental disjunct between how platforms present terms of economic participation for workers and how on-ground realities pan out. Platforms do not afford workers the protection of formal employment but still manage to retain control over their amorphous workforce through algorithmic gaming, labor segmentation and a system of reward and punishment that keeps workers in line with the platform’s value maximization principle.

Not only are platform algorithms impregnable, they are also used to exacerbate information asymmetry

## 2.3 Algorithmic optimization

**Finding:** Platforms use algorithmic optimization to remediate existing socio-economic relations, expanding or constraining actor choices

In the dominant platform ecosystem, algorithmic and discursive control is wielded to entrench power through various means, affecting relational politics in particular ways. We find that actors situated in the platform ecosystem experience development outcomes based on their relative power and location.

**a) Unceasing optimization of member nodes through algorithms:** As “epistemic infrastructures” (Mann & Iazzolino, 2019), platforms rank and order actors in terms of their value to and position in the ecosystem (See Box 2). Using opaque algorithms, they game the system, effecting a state of complete control over how is distribution among the actors (see Table 6).

### Box 2. Epistemic infrastructures in fintech: an illustration

Safaricom, the leading mobile network operator in Kenya has refashioned M-Agri, an initiative previously under its CRS division, as Digifarm, a platform that links farmers with a range of agritech companies including an input provider, a data analytics company and an infomediary operator, integrating them and making them accessible through a simple USSD menu available on basic mobile phones. At its most superficial level, Safaricom’s business model pushes the company’s flagship product, the mobile money system, M-Pesa. Once registered, farmers can apply for a loan and, if approved, receive vouchers to purchase inputs. The loan is then repaid with interest through M-Pesa. By integrating different service providers into a single proprietary platform, Safaricom can render farmers legible and nudge them towards practices that the company considers indicative of ‘virtuous’ borrowers and farmers. The strategy is aimed at increasing predictability, rather than productivity, while the collection of vast data across the population minimizes the financial risk associated to farmers. Whether this is a win-win situation, for all the parties involved (Safaricom, partners, farmers) remains to be seen. A growing reliance on their own credit scoring system as the most important key to access credit may crystallize existing inequalities and conceal structural conditions (such as those affecting women, with limited access to credit because of lack of collateral). (Mann & Iazzolino, 2019, p.11)



As our research finds, while platforms keep increasing their powers, less powerful actors in the ecosystem (SMEs, consumers, workers) “remain liable for finding remedies in a network of decentralized resources, leaving them overall in a weaker situation” (Delronge et al., 2019).

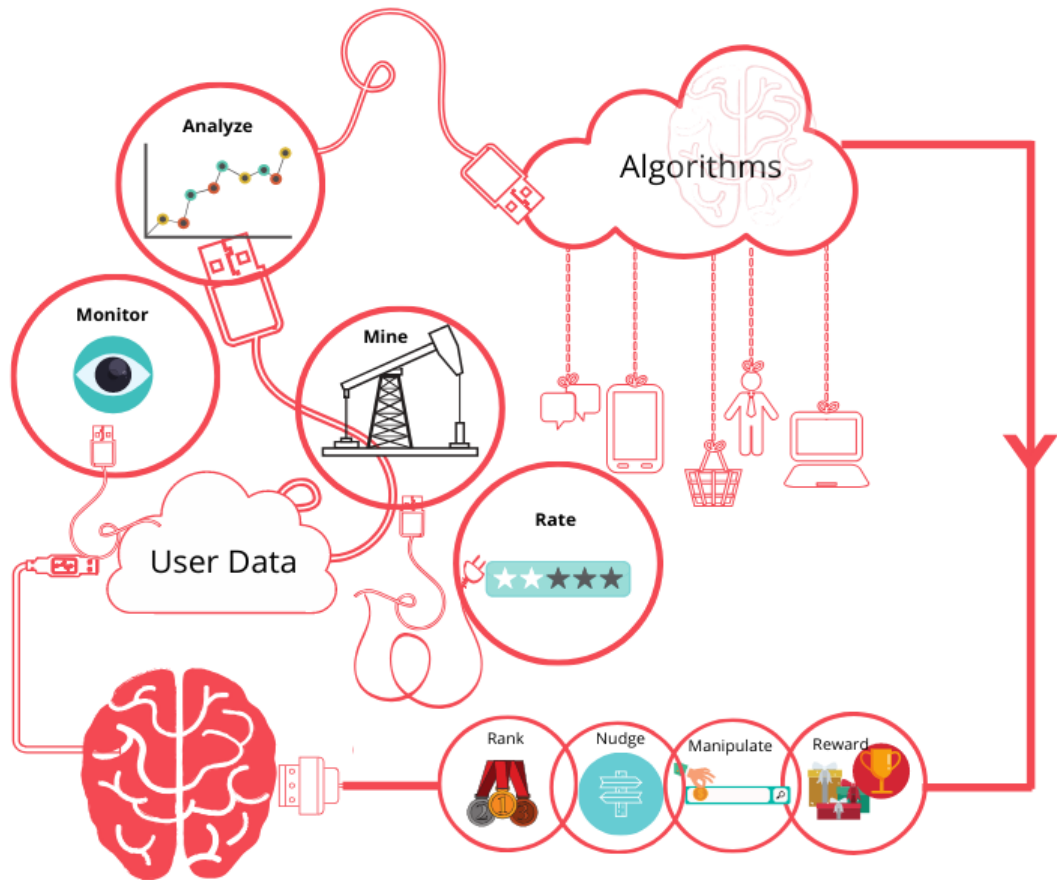


Table 6. How Algorithms Game Actors

Intended outcome	Use-case	How algorithmic gaming works
Structuring a market on the basis of social capital	P2P lending	Social transaction data is mined to establish lower interest rates and higher coverage
Panoptic labor management	Ride-hailing	Ride and customer interactions data are monitored and tracked to reward and punish drivers
	Food delivery	Algorithm-dictated time is used to ensure ‘on-time completion rate’  Rating and rewards systems are obfuscated to shift the benefits away from workers
Information manipulation	Travel	Search results are tampered by sponsored content  Reviews are scrubbed for unfavorable information on properties  Proprietary rating systems are not open to listed businesses
Nudging user behavior	VoD	Users’ content experiences are structured solely through hyper-personalization

Platforms reflect and reify pre-existing inequalities in give socio-economic contexts

**b) Riding on economic and social stratification:** Dominant platforms exploit global-to-local social and marketplace hierarchies, and through their agile and adaptive techno-economic architecture, exercise granular control over relationships to maximize and appropriate value.

**Platform mediation exploits existing social and economic inequalities:** Interventions for algorithmic optimization ride on preexisting inequalities in given socio-economic contexts. For instance, prima facie gender neutrality on a P2P lending platform may not help reduce lender bias against women, as historical bias might continue to prevail (Aguirre & Garcia-Rivadulla, 2019). Worse, women borrowers on these platforms can be acutely vulnerable to predatory lending practices. In China and many East-

Asian countries, P2P lending has acquired notoriously exploitative shades, with reports emerging of borrowers insisting on holding on to nude pictures of women as collateral (Vice, 2018).

The continuing lack of access and know-how in making optimal use of platforms hampers women's ability to fully participate in the platform economy. In countries such as the Philippines, relative high costs of connectivity create imperfect platform models in care work. The platformized care work market is not truly disintermediated in the sense of offering open and agentic access to job opportunities, resulting in a continuation of exploitative local contracting systems (Barrameda et al, Aneja & Sridhar, 2019).

Platforms also reflect and reify gender-based occupational segmentation; women workers are far more prevalent in on-demand service platforms such as care work (cleaning services) and beauty, whereas sectors such as ride-hailing and food delivery are heavily dominated by male workers (Barrameda et al, 2019; Aneja & Sridhar, 2019; Chen, et al., 2019; Mare et al, 2019). Even though platforms assume no liability for women's work place safety, they may still be perceived as a good option by women, given the flexible work hours women seek, the opportunity for some steady earnings and higher family status they offer.

In South Africa, platforms seem to widen fissures of racial identity, as is observed in the dynamics that play out in ride-hailing sector. Platform drivers are largely migrant workers from outside of the country and face enormous xenophobia from metered taxi drivers<sup>8</sup>, and are othered as 'job-stealing intruders'. This has inadvertently meant that despite the higher commission rates, Uber is their preferred platform. This is because Uber's consumer profile comprises middle class white customers who pay via credit cards, as opposed to Taxify's black working class consumers who use cash. In the context of frequent in-transit heists and attacks from metered taxi drivers, platform drivers feel they are ensured greater safety of their earnings working for Uber (Mare et al, 2019).

Through the  
value optimization  
principle, platforms  
make or break  
geographies

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<sup>8</sup> In South Africa, traditional meter taxi drivers have protested and reacted, in some cases violently, to the interference and disruptions by ride-hailing platforms such as Uber and Taxify to their business.

Travel platforms  
render invisible  
anything that  
cannot fit into the  
platform's gaze

Geographies become commodified, creating new dependencies, exclusions and expulsions: Platforms commodify geography in various ways, transferring value to and from spaces and places, creating new inclusions or exclusions in the process. Sites of platform activity can be understood in two ways; as the physical territories of innovation, and as the actor-network transactions through platform-based engagement. The two are not mutually exclusive and may and do overlap. But value concentration is more noticeable in the former, along with what appears to be a trickle down effect of the gains. For instance, geographies where the big platform companies are headquartered, such as Silicon Valley, see the highest volume of venture capital investments and are marked by higher levels of innovation, a higher skilled workforce, and also higher economic output and wages (City Lab, 2018a).

Through algorithmic gaming and the value optimization principle, platforms identify geographies as valuable or lacking a clear value proposition, creating extreme dependencies in the process. In 2016, a Bloomberg investigation showed how Amazon Prime's same day delivery service was not available in select area codes that corresponded with predominantly black neighborhoods. A data-based calculation had led Amazon to conclude that these areas did not justify the expense of same day deliveries and could therefore be cut out from the service altogether (Ganesh, 2019).

Using a GIS mapping of properties on the island of Yogyakarta, Bentley and Maharika (2019) found a 98.6 percent coverage by platforms. The region demonstrates an almost complete dependence on some kind of travel platform. The research further found that travel platforms, through their emphasis on visual marketing (beautiful views, beaches) and the availability of amenities (concentration of restaurants and resorts) accentuate existing cleavages that determine what areas are tourism worthy and what are not. For actors who reside in certain localities that enjoy these advantages, platforms become a key enabler of success. For those outside of these locations, prospects become bleaker, causing people to take measures to integrate themselves better in the platform economy, as one Lombok<sup>9</sup> driver did by moving out his hometown to a place where there were attractive

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<sup>9</sup> An island in Indonesia

sights. Travel platforms also render invisible anything that cannot fit into the platform's gaze. For instance, street vendors are not featured/cannot hope to feature their business on platforms as they do not have a permanent location to reference or could be outside of tourism thoroughfares. For such actors, platforms represent a meaningless economic avenue (Bentley & Maharika, 2019), even as they are the most hurt by platform activities.

In such optimization, there is a hollowing out of pockets of capital accumulation and skill loss from geographies, as skill-requirements and mental processes that once resided with labor become displaced by the digital process the platform has established. Consider how ride-hailing platforms optimize the transportation services network on a city scale, thereby creating a situation where "a driver in the ride-sharing app no longer needs to know the city because the algorithm leads her way" (Mann & Iazzolino, 2019, p.8). The all-knowing platform shares with the driver only the bare minimum she needs to know in order to perform her job satisfactorily.

Thus, as platforms value/devalue geographies through their techno-social apparatus, what we find is that for actors situated in the geography, there is an erosion of the right to market participation.

**Despite loss of autonomy, actors are locked-in into the platform ecosystem:** Smaller actors in the platform economy – whether they are workers, producers, sellers, SMEs or consumers – negotiate the ecosystem in various ways, engaging with platforms for opportunities, while constantly making trade-offs.

In the case of e-commerce, sellers seem to acknowledge the mixed-bag that platforms such as MercadoLibre offer, including the value they gain from access to new markets, financial services, logistics and payment methods, while being unable still to grasp the longer term development fallouts of the platformization process. Even while recognizing the costs that come from having MercadoLibre be the intermediary, SMEs end to view the new competition and barriers as an individual, and not a collective, problem (Artopoulos. 2019).

SMEs view  
e-commerce  
platforms like  
MercadoLibre as a  
mixed opportunity

When platforms pursue strategies of contextualization over that of hyper-optimization, there can be an expansion of choice for actors

Similarly, SMEs in the tourism sector in Indonesia find that they must use platforms to gain customers, even with price erosion in bookings and revenues being a drawback. Not only do they have to pay steep commissions which go upwards of 20 percent, but they also do not have the benefit of business coming in from walk-ins, patronage, or travel agents, something that they relied on prior to platforms. Platforms such as TripAdvisor allow accommodation facilities, restaurants and other businesses to be reviewed or tagged without consent of the owner, which means they have little choice but to be on the platform and exercise some control over the narrative. Businesses from the pre-platform era encounter a challenging business environment because even if they are not part of the platform (or make sub-optimal use of it), they are implicated all the same in the tariff wars, which are narrowing margins of revenue (Bentley & Maharika, 2019).

In Brazil, media market actors have pointed out the ways in which VoD platforms impact the idea of national content through new economic organization. Although they outsource production of Brazilian content to domestic studios, they retain control over the IP, thus firmly entrenching themselves in the country's cultural sphere, as the real producers of national content. For instance, Netflix Originals, recognized as a great creative production channel for artists and creators, is solely under the copyright of the platform. Such trends pose important concerns about diminishing cultural autonomy for creators in the Global South (Valente & Luciano, 2019) as platformization uses techno-architectures and dominant knowledge regimes for recarving audience markets.

Consumers, who often seem to be placed in the most advantageous position by the platform (often through actively disadvantaging other actors) are not impervious to making trade offs on these platforms. Their interaction with platforms is entirely governed through Terms of Service agreements that give platforms enormous power in the equation. The consumer can realistically never hope to enforce his/her rights without approaching court systems, a predicament that results in the denial of consumer rights. Yet, consumers feel largely unaffected by this power imbalance as they regard the costs of convenience that platforms afford to be more beneficial than the loss of right to

accountable consumer practices (Delronge et al, 2019).

**c) Alternatives that bring new choices:** Platforms can and do open up new opportunities and expand strategic choices for actors. The disproportionate value capture orchestrated by dominant platform models does not preclude alternative possibilities for actors, or even alternative models of platformization. Our research finds that when platforms pursue strategies of contextualization over that of hyper-optimization, there can be an expansion of choice for actors.

**By disrupting existing labor market conditions, platforms can bring in new actors:** There are instances where the very nature of platform activity ends up disrupting labor market conditions, allowing certain actors to leverage the opportunities that emerge. Travel platforms such as TripAdvisor, which allow people to list and advertise their services, have been beneficial to women entrepreneurs in Bali offering services in male-dominated professions (such as trekking guides). Women have been able to gain opportunities and also counter bad-mouthing by competing male guides, thanks to positive ratings and reviews (Bentley & Maharika, 2019). For others in Indonesia, travel platforms seem to present a chance to monetize an asset (starting a home-stay) or skill (offering cooking classes or mask-making workshops). However, without any assurance or guarantee, it is a daunting prospect for nascent businesses, who often need to take loans to finance investments for such initiatives to succeed. In the context of VoD in Brazil, there is a recognition that platforms have opened up prestigious avenues for content creation, which reach international markets and audiences and present new opportunities for creative professionals to advance better and faster (Valente & Luciano, 2019).

**Locally embedded platform relationships can result in positive platform outcomes:** In the Global South, where connectivity and access to /fluency with digital gadgets is not a given, platform models continue to depend on moderate to high levels of human intermediation at the last mile, even if they are algorithmically centralized in other stages of the operation. In certain sectors like agriculture or horticulture, where produce is perishable and market linkages are weak, supply-side aggregation presents unique challenges. Platform businesses therefore need to devise

Alternative  
platforms can  
potentially enable  
greater autonomy  
for all actors and  
redistribute profits  
more equitably

solutions that are locally appropriate in order to orchestrate the new value chain. Small horticultural farmers in peri-urban India who service Ninjacart, a market-linkage platform that supplies to super-markets in metros, view their relationship with the platform in terms of convenience and security. They value the presence of a collection point in the village and an assured buyer for the produce (both of which save them the cost of transportation to the market and the subsequent efforts to off-load their goods), even though prices are only negligibly more than market rates and despite the tight standards of grading of produce for 'retail-worthy' shape and size (Gurumurthy & Bharthur, 2019). In Bali, platform initiatives such as Bali Spirit work to promote local businesses, based on a sustainable tourism ethos. Targetting socially conscious tourists, their operational principles differ from mainstream travel platforms. The company also has a non-profit wing that engages in community development. While platform relationships embedded in local markets can present new choices, the real impacts depend on the longer term and how value accrues to the edges of the network over time.

**Platform organization principles can engineer greater social and public value creation:** Emphasizing non-profit motives centred on community development objectives, alternative platforms can potentially enable greater autonomy for all actors and redistribute profits more equitably (See Box 3). Ridygo, a French carpooling platform charges a 20 percent commission on rides, that partly finances the platform, and is partly freely distributed as credit to users unable to afford the service (Delronge et al, 2019). Similarly, Thingery, a Canadian goods sharing platform, runs local libraries on donated goods, providing digital inventory management and monitoring services to facilitate the sharing of goods (Reilly & Nieves, 2019). While Thingery is registered as a corporation, it runs cooperatively owned libraries located in local neighborhoods in Vancouver and is aspiring towards becoming a full cooperative (Reilly & Nieves, 2019). The Philippines based on-demand cleaning service platform LGCC (See Finding 1) plans to function as a cooperative, as well as partner with local government units in organizing individual women workers (Barrameda et al, 2019) to have more autonomy and see more gains from the enterprise. non-profit motives centred on community development objectives, alternative platforms can potentially enable greater



autonomy for all actors and redistribute profits more equitably (See Box 3). Ridygo, a French carpooling platform charges a 20 percent commission on rides, that partly finances the platform, and is partly freely distributed as credit to users unable to afford the service (Delonge et al, 2019). Similarly, Thingery, a Canadian goods sharing platform, runs local libraries on donated goods, providing digital inventory management and monitoring services to facilitate the sharing of goods (Reilly & Nieves, 2019). While Thingery is registered as a corporation, it runs cooperatively owned libraries located in local neighborhoods in Vancouver and is aspiring towards becoming a full cooperative (Reilly & Nieves, 2019). The Philippines based on-demand cleaning service platform LGCC (See Finding 1) plans to function as a cooperative, as well as partner with local government units in organizing individual women workers (Garcia & Pacis, 2019) to have more autonomy and see more gains from the enterprise.

### Box 3. Value maximization at the edges

Ekgaon, a social enterprise platform in India, works to redistribute value in an equitable manner across the supply chain and communitize gains from its platform model. This has a direct bearing on the profitability and sustainability of agriculture for the farmer producer companies at the edges of its network. All producer company shareholders in the Ekgaon network hold equal shares in the enterprise to counter elite capture. While Ekgaon pays traders above market rate, there is also a check on the commission for such intermediaries, which, traditionally have been steep. Value addition is also being experimented in various ways, and capacities of local producer companies for processing, grading, sorting, packaging etc. are being built. Surplus yield, which Ekgaon does not purchase from producer companies is also being rebranded and sold in the local market in the hope of cultivating the local rural consumer segment. The overall strategy has been to pass on/decentralize value downstream in the supply chain. Through their association with the Ekgaon platform, women farmers have been able to exercise greater decisional autonomy with regard to managing their farms, acquiring inputs, and taking on leadership roles in their farmer producer companies.

Another notable strategy of Ekgaon has been a cautious approach to tie-ups with bigger e-commerce platforms that tend to push down returns and avoidance of venture capital opportunities that could prioritize profits over local sustainability. Working within this context of small land holdings and tight finances, the platform has experimented with product and productivity gains commensurate with livelihoods guarantee for all network players, rather than a market-led profitability model that will maximize gains for some.

## Labor in the platform planet

One of the highly contested terrains of platformization is that of labor and work. Worker rights have seen a continuous erosion through platform models of gig-work that aggrandize value for the platform while evading liability and accountability towards workers. Our research points to several ways in which platforms work to squeeze labor.

### Temporal and spatial displacement:

There is today, a planetary-scale platformization of labor, where workers in highly bounded geographies compete with each other from in a global race to the bottom, while platforms can pick and choose from a trans-geographic labor reserve with high turnover and thus exercise disproportionate bargaining power (Graham, 2019). Workers on a platform constitute the nodes of a vast and valuable network for the platform, but are themselves dispersed and atomized spatially and temporally (Delronge et al, 2019). This is especially true for crowd work platforms such as Amazon Mechanical Turk since work can be done from anywhere in the world (Ganesh, 2019). For the worker on a platform, where every other worker is a competitor, the ability for collective organization/bargaining seldom obtains given that “spatial concentration and cultural solidarity” becomes dismantled (Lansiti & Lakhani, 2017, as cited in Aneja & Sridhar, 2019). Despite these odds, when workers do attempt to unionize, as drivers for Taxify and Uber in South Africa have tried, they find themselves summarily dismissed from the platform (Mare et al, 2019). Workers also experience “compressed temporality” on and beyond the platform, owing to the long, extended working hours they spend on gigs and the need to be constantly on-call (Chen, et al., 2019; Aneja & Sridhar, 2019). The so-called flexible gig thus devolves into an unending grind for the worker given that incentive systems reward those who work longer and harder.

### Wage-theft:

Our research finds that in multiple instances – in China, India, South Africa – a trend of promising early returns from gig-work (ride-hailing and food delivery in this case), bolstered by generous incentives and rewards, peter out over time. This has left workers struggling to make decent returns (Chen, et al., 2019; Aneja & Sridhar, 2019; Mare et al, 2019). All the while, workers must continue to pay steep commissions to the platforms and bear significant out-of-pocket costs for being able to perform their gigs including in the case of ride-hailing – gas, vehicle maintenance, smart-phone and data charges. In South Africa, drivers who work for Uber have to purchase road-worthy cars, which are no more than four years old. Given that many of them are unable to access credit, they end up going through a finance program designed by Uber with high repayment rates, trapping them into a vicious cycle of debt (Mare et al, 2019). The arrangement’s injustice is notable given that this contract is a lease and not a rent-to-own, with drivers being charged for kilometres travelled, excluding both the costs of gas and the platform commission. Workers also find that their wages are often subsidizing steep consumer discounts and perks (Chen, et al., 2019; Aneja & Sridhar). (Conti)

### **Precarity:**

That precarity is the hallmark of gig-work has been widely documented. The early gains made from capitalizing on an expanding market and limited competition that initially attracted workers are today nowhere in sight, as labor becomes cheap, plenty and entirely exploitable, and contracting and sub-contracting layers emerge within the ecosystem. Workers are often left without redress in a system where they are not recognized as employees and thus are stripped of protection against exploitative work practices and the right to collective bargaining (Delonge et al, 2019; Mare et al, 2019). For instance, on-demand cleaning workers in the Philippines cannot fall under the *Batas Kasambahay*, the domestic workers act, as it only extends to long-term domestic workers. In 2018, several riders for Meituan in Beijing faced unilateral terminations of their contracts and others were transferred into new employment contracts with different third-party labor agencies (Chen & Ping, 2019). A growing global trend of informalization of the labor market is thus exacerbated through platforms, with the destabilization of traditional employer-employee relationships, which leads to an individuation of risk, reduced job security and diminished collective agency, especially in Global South contexts (Aneja & Sridhar, 2019).

### **Precariat Rising**

Worker organizations and workers have come together from global to local levels, to resist the unfair terms of the platform economy. In China, workers use social media as a way of coping with the totalizing platform control, finding support and hacks to navigate the information asymmetry through peer groups (Chen & Ping, 2019). In South Africa, heightened xenophobic clashes between locals and African migrants has led migrant Uber and Taxify drivers using WhatsApp groups to discuss matters of concern about their work and safety and security (Mare et al, 2019).

Increasingly, across different contexts, workers are also able to organize to challenge the malpractices of platform companies. In April 2018, DiDi announced a new guarantee scheme that would provide drivers with a stable income if they met the conditionality of working at least ten hours a day. For those drivers who did not join the scheme because of their desire to preserve a more flexible working schedule, DiDi gradually reduced orders through the manipulation of its driver-client matching algorithms. Even those drivers with high customer ratings found it difficult to obtain rides if they were not part of the scheme. Anger against such unfair and arbitrary manipulation of the terms of participation in the ride-hailing market led to over 100 drivers gathering in front of the company office in Zhejiang to protest the scheme, forcing the company to negotiate with them (China Labour Bulletin, 2018).

In February 2019, drivers of the food delivery platform Deliveroo went on strike in London and other cities in UK protesting the arbitrary decrease of their wages, lack of transparency about wage structure, algorithmic matching processes and unexplained termination of drivers without evidence of wrongdoing. The protests came in the wake of drivers finding themselves increasingly travelling longer distances for the same amount of money and the lack of compensation for delays encountered at a restaurant or a customer's address (IWGB, 2019).

## 2.4 Data as an economic resource

**Finding:** Governance of data as an economic resource emerges as an important and contentious issue in the platform economy

Given the central place that data occupies in the platform economy, data governance becomes a crucial question, requiring attention at multiple interconnected levels—subnational, national, and global.

### a) Data governance as contingent on bargaining power:

Data is the basis of the insight or intelligence that powers growth in the digital paradigm. However, not all countries are equally well-placed to reap the benefits of such data and/ or pursue intelligence-driven pathways towards structural transformation. Canada is preparing to secure its comparative advantage in innovation through strategic investments that add platform layers to existing major industries (mining, forestry and healthcare). With digitalized data pools from these major sectors, Canada is able to move into a new economic stage of innovation, “reinserting” itself into the platform economy (Reilly & Nieves, 2019). Philippines, too, seeks to benefit from the digital economy, aiming to derive 25 percent of its GDP from e-commerce (Barrameda et al, 2019). However, given that the major e-commerce platforms in the country are transnational corporations, this vision and aspiration may simply mean integration into the global digital economy as a consumption market. The transactions data of consumers in this case will animate innovation that is exogenous to the Philippine economy, an instrument that becomes the basis of what has been referred to in the literature as digital colonization (Pinto, 2018).

The ability of different nations to further their data-based interests – capturing and distributing the value created through digitization, regulating the digital economy, and directing its development towards socially-determined goals – is predicated on the place they occupy in the global digital value chains. The global political economy of data hence defines the frame within which national governments can exercise policy action and build self-sufficiency in their data and intelligence infrastructures.

We also find that bargaining power with respect to data sharing

The global political economy of data defines the frame within which national governments exercise policy action

## African nations have become veritable data mines for large companies

depends on economic power to a large extent. Where a province/ state in a developed country – British Columbia in Canada for example – may yet be successful in retaining the right to data localization in the USMCA trade agreement despite the data-sharing clause (CIGI, 2019), it may be much harder for developing countries to strike such bargains in emerging multilateral and plurilateral trade agreements. Platform companies are also notorious for non-compliance of data-sharing stipulations – for instance, while Uber turns over data to public authorities in bigger cities in the US, smaller cities do not have the clout to enforce this (Wired, 2018).

Similarly, developing national platform models increases bargaining power. As China has developed its own mainstream platforms, Google's blacklisting of Huawei from Android is speculated to have minimal impact in China (Reuters, 2019).

For transnational platform companies, India's huge market base is too attractive a proposition to ignore. At close to 600 million (Kantar IMRB, 2019), India is home to the largest internet user-base in the world outside of China. This allows India more power at the negotiation table with respect to regulating platforms including, insisting on data localization (Inc 42, 2019). African nations on the other hand, lacking a similar capacity to negotiate, have become veritable data mines for large companies, as governments bring on board large platforms with a view to ushering in digitally aided development without any safeguards for the privacy rights of their populations. As Taylor (2018) observes, this trend indicates "a digital resource grab that may have implications as great as the original scramble amongst the colonial powers in the late 19th century."

### **b) Trade as a determinant:**

Agreements such as the EU-Mercosur Association Agreement, Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the almost-concluded Regional Comprehensive Economic Partnership (RCEP) Agreement, etc., contain rules that uniformly mandate free cross-border flows of data. They also prohibit governments from setting standards for e-payments and e-authentication and having policies requiring local presence and source code disclosure for transnational digital companies.

These rules that will govern the global digital economy cement

the preexisting power of countries from the Global North, while eliminating the policy space for developing countries. An e-commerce plurilateral being pushed in the WTO seeks to institutionalize these rules worldwide, compromising developing countries' ability to further their data-based interests through national data governance.

The inequality in market power between countries is also reflected in skewed certification power. For instance, Latin American countries have to comply with the EU's standards of data protection under the GDPR in order for their companies to expand into the EU, or do business with EU companies. Only two Latin American countries – Argentina and Uruguay – are certified by the EU as having an adequate level of data protection (Aguirre & Garcia-Rivadulla, 2019). Even though the US does not have an adequate level of data protection, post-GDPR, the US and EU entered into a Privacy Shield agreement that allows some US companies to work with EU companies. Thus, developed countries are able to maintain their regulatory power, while developing countries need to give up theirs in order to integrate into the digital value ecology.

### **c) Governance of data as a national economic resource:**

The possibilities to manage data as a public resource seem to be foreclosed with a planet-scale enclosure of the data commons (Rigi, 2014). From the Brazilian experience, we know how Netflix's competitive advantage in data, combined with its refusal to make viewership data public, has led to television networks and production companies in the country following suit (Valente & Luciano, 2019). This has rolled back industry practices of open data sharing between market and state on viewership data, box office collections etc., that had provided critical direction for policy development and regulation. The ability of data to generate profit thus implies a self-propelling cycle of enclosure; the instinct to preserve and grow the intelligence premium.

Governments seem to pursue policies around data that are solely about spurring on privately led innovation, rather than focussing on the public/community value of data (Reilly & Nieves, 2019) or exploring models of data ownership that enable citizen-led control. Also, while regulatory interventions have begun to understand, and even tackle, the inordinate power of privately-owned platforms, policies for enabling public and community based platform models are

Articulating data as  
a public/community  
resource could  
ensure greater  
public control

rare to come by.

Articulating data as a public/community resource would allow private platforms to exist, while also ensuring greater public control over them. Two approaches seem to emerge with regard to a community ownership framework of data. In developed countries, community data is analogous with concepts of 'de-growth' (Assadourian, 2012) and is argued in the context of data-based platforms being used at small scale to leverage data-based efficiencies for sustainability and a move away from over-consumption, as in the examples previously discussed of EU and Canada (Delronge et al, 2019; Reilly & Nieves, 2019). On the other hand, articulations of data commons and/or community-controlled platforms in developing countries may be seen to be linked directly to equitable growth. India's draft National e-commerce Policy (2019), for instance, underlines that a suitable framework for sharing of community data with starts-ups and firms will be necessary for the larger public interest. These ideas are not contradictory, but reflect visions for a greater social orientation of the digital economy, from the respective development standpoints of countries of the Global North and South.

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# CHAPTER 3



# Conclusions

## From ecosystems of value to ecologies of choice

To a large extent, scholarship has tended to see the phenomenon of platforms in terms of the small 'p', the platform as a business model. Scholars have done this by focussing on specific platform players i.e. big tech companies, and platform types (Srnicsek, 2017), and the significant firm and business level shifts they encapsulate and effect. This research has thrown the spotlight on the Platform model with a capital 'P' – that is, the steady reorganization of the global economy in the network-data context. Here, the distinction we make is akin to that between capitalist businesses and the larger idea of Capitalism. Our findings show that to capture the paradigm shift underway, research frameworks need to be able to unravel the platform phenomenon, moving between these two conceptual categories.

Proceeding from an analysis of production systems and value creation and distribution, we argued that the transformation from size-scale to intelligence-scale economies irrevocably changes economic organization, as data becomes the new resource over which a planetary struggle for power emerges. In our findings, we have traced how, emerging from the shadows of the still-dominant US and Chinese models, platformization has followed varied trajectories, rooted in the specific historical development contexts of nations. Discussing the interconnected contestations around data that emerge in the platform economy, we have also laid out the various strategies that platforms deploy to further their intelligence premium – pointing to how mainstream platforms corner value for themselves. We also identified that alternative and equitable models of value distribution and expanded choice can and do exist.

Hyper-optimizing the ecosystem for aggrandizing value, the dominant platform model thrives on and drives a state of 'data dispossession' on a planetary scale. Analogous to the idea put forth by Harvey (2005), "accumulation by dispossession", that is, "the distinct socialised dynamic of capital accumulation, whereby, society is dispossessed of what are publicly held realms by way of turning them into sites for private profit" (Wolfson & Funke, 2018 p.582), data dispossession may be described as the colonization and commodification of everyday life through infrastructures of intelligence. Thus, platforms do not

In the transformation from size-scale to intelligence scale economies, data becomes the site of a planetary struggle for power

attain their enviable and omniscient data-based power in a vacuum, but through an “asymmetric power relationship in which individuals are dispossessed of the data they generate in their day-to-day lives” (Thatcher et al, 2016.p.990).

While individuals are dispossessed of data that comprises their very identity, society is dispossessed of its relational data – both becoming sites of exploitation for the emerging economies of intelligence. The intelligence premium gained by the platform owners and elite becomes an instrument of economic and political control. Individuals and communities lose their decisional autonomy as society’s structures of choice are subsumed within the logic of ‘Platformization’.

Additionally, dispossession by data signifies a new dynamic of neoliberal capitalism – wherein digital intelligence is both the means of economic production and also the means of social governance. Platforms enclose consumers through “voluntary servitude” (Emmenegger et al, 2014, as cited in Romele et al, 2017)<sup>10</sup>, where instant gratification is offered for unconditional exchange of data, and to lock producers, enterprises, suppliers, service-providers and others into a continuously hyper-optimizing value proposition that for these actors increasingly becomes the only de facto choice. Platforms may also brutally expunge or strategically cannibalize, managing the value trajectory for maximizing economic power and social control.

### 3.1 Strategic choices framework for platform models

Against the backdrop of a new techno-economic model all set to engulf current production and market systems, societies need to think urgently about foundational questions of exclusion and equity. The political economy mapping of platformization attempted here shows that platforms are not only infrastructures of value but also ecologies of choice. Depending on their specific configurations, outcomes vary with regard to who participates, who controls who can participate, who gains, who loses, and how gains and losses are spread.

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<sup>10</sup> Voluntary servitude is a political term first coined in the 16th century by Étienne de La Boétie, and can be applied to any context where there is a power relation between a group of individuals on the one hand, and a political, economic or technical force on the other hand (Emmenegger et al., 2014, as cited in Romele et al, 2017).

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The language of ‘opportunity’ alone may be insufficient in this context, hiding the risks and threats of a global platform ecosystem in which some actors already have disproportionate control that extends all the way to micro-local socio-economic conditions. As ecologies of choice, platforms shape the resources, agency and achievements of member participants and their resultant ability to make decisions critical to their autonomy and well-being.

We identify three specific axes that co-determine the manner in which choices accrue to actors in the platform ecosystem – ownership, control of the algorithmic assemblage and value (distribution). We further explicate possible typologies that explain different characteristics of each of these three axes, below (See Table 7). Using these axes, we outline A Strategic Choices Framework for Platform Models. The framework defines possible characteristics or typologies that offer a variety of pathways for the platform marketplace. Depending on the pathway of choice, it is possible to understand how outcomes can vary with regard to who participates, who controls who can participate, who gains, who loses, and how gains and losses are spread.

Table 7. Platform Ecosystems Typology

Axis	Characteristics
Enterprise Ownership	<p><b>Private:</b> The platform is formally owned privately. This includes publicly traded platform companies with majority private ownership. Most dominant platforms are examples of private platforms.</p> <p><b>Community:</b> The platform is privately owned by community stakeholders. These may be geographic communities or those that arise out of shared interests and goals. For example, platforms owned by resident associations, trade unions, farmers’ collectives, etc.</p> <p><b>Public:</b> The platform is publicly owned. In most societies this would mean state-owned. Public ownership by itself does not imply democratic control of the algorithmic assemblage.</p> <p>(Conti)</p>

Table 7. Platform Ecosystems Typology

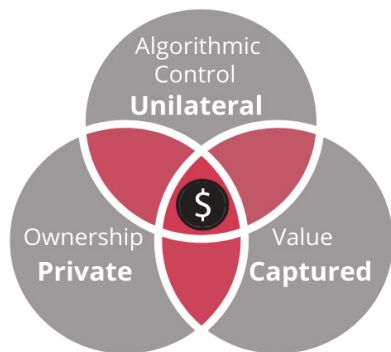
Axis	Characteristics
Control of Algorithmic Assemblage	<p><b>Unilateral:</b> The control of the algorithmic assemblage is held solely by platform proprietors, owners, and/or management. It is not open to platform participants, including consumers and workers.</p> <p><b>Group:</b> The control of the algorithmic assemblage is held by platform participants, including consumers and/or workers, producers, or service providers. It is not open to the wider public.</p> <p><b>Democratic:</b> The control of the algorithmic assemblage is held publicly and decisions are made through either direct or delegated democracy.</p>
Value	<p><b>Captured:</b> The value distribution is limited to a small set excluding most platform participants and the public. This usually means that the value (or net gains derived from the existence of the platform) is captured by the proprietors, owners, and/or management.</p> <p><b>Collective:</b> The value distribution is spread over a definite community or group of people, but does not necessarily promote the public interest. For example, a narcotics trade platform on the dark web that distributes value equally among all cartels might not result in net gains for society.</p> <p><b>Social:</b> The value is distributed across society, that is, the existence of the platform is a net gain for society. Social value can result from different ownership and control structures.</p>

Actor choices (social, economic, technological, political) in platform ecosystems depend on how varying combinations of these characteristics create specific platform models. (See Figure 2).

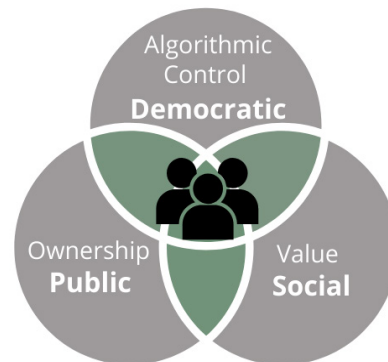
Mapping illustrations from our research back on the framework, we are able to identify many scenarios or platform pathways that depict how platforms shape differing ecologies of choice for constituent members.

Figure 2. A Strategic Choices Framework for Platform Models

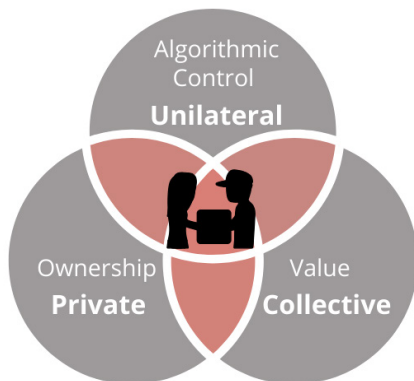
Enterprise Ownership	Private	Community	Public
Control of algorithmic assemblage	Unilateral	Group	Democratic
Value	Captured	Collective	Social



**Dominant platform model**



**Public goods platform model**



**Social enterprise platform**



**Solidarity economy platforms**

### Cases identified in this study

<p><b>Dominant Platforms</b></p> <p>TripAdvisor, DiDi, Uber, MercadoLibre, Netflix, Cleanzone, Konga, Prezta ivate</p>	<p><b>Public Goods Platforms</b></p> <p>Unified Payments Interface, e-NAM, Farmerzone</p>
<p><b>Social Enterprise Platforms</b></p> <p>Ekgaon, UrbanShare, LCGG, Rydygo</p>	<p><b>Solidarity Economy Platforms</b></p> <p>Thingery, Warmshowers</p>

The warp and weft of platformization on a planetary scale is represented in the diverse mix of models adopted by businesses, governments and communities. There can be no one model that is befitting of a just and equitable future society

### 3.2 An alternative imaginary for the platform economy

Through a number of instantiations in Chapter 2, we have been able to discuss various platform models. The economic restructuring that platforms have brought about seems to be at a point of no return, and yet the sustainability of this current paradigm is increasingly called into question. Over 2018, we have seen major platform companies including Facebook and Apple lose significant share value. More recently, Uber's under-performance at its IPO has led it to report a loss of \$ 1billion (Colley, 2019). China's tech industry too is witnessing a slow-down with production in industrial robots and microchips going down and companies like Alibaba, Tencent, and Baidu cutting jobs (BBC, 2019). Experts and industry actors have for some time now pointed to the possibility of a tech bubble - artificially propped up by large venture capital - bursting and taking down the global economy along with it (Bloomberg, 2018).

The real impacts of such a possibility need to be considered for the economic futures of millions of smaller actors across the globe who are today part of the platform economy. It needs to be evaluated for how it will undermine the resilience of communities and geographies in the Global South. While it was not addressed within the scope of this research, it is critical that we also not forget the ecological costs that unfettered planetary platformization will have – whether they be the vast swathes of land that are swallowed up in establishing server farms, the plundering of minerals and rare earth metals for building newer generations of smartphones and IoT devices, or the ever-growing energy needs of platform activity.

We are today in urgent need of a course-correction with respect to the platformization phenomenon and the global future implicated in its deeply pervasive influence. As discussed in this research, the warp and weft of platformization on a planetary scale is represented in the diverse mix of models adopted by businesses, governments and communities. There can be no one model that is befitting of a just and equitable future society. However, the society of the future is inextricably linked to the political choices that will spur platformization as the harbinger of equity or purveyor of injustice.

While we discuss these political choices in greater detail in the next

chapter, it must be underlined here that the very idea of the 'platform' as we know it today, owes its origins to the sharing economy and the rise of techno-enthusiast communities (although mainly in the Global North) who sought to actively move away from the excesses of capitalism. Also, as we have seen, communitized models of ownership and value distribution, whether trans-geographic or local, offer hope for a new economics of equity.

It is thus entirely possible for platforms to be designed around different (economic) value distribution principles and indeed different (socio-political) value systems, where they can allow for autonomous self-organization, strengthening of communities, equitable social relations, and the creation of a new social contract. Adept and agile policy can go a long way in translating this vision into reality.

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The sustainability  
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under question





# CHAPTER 4

# Platform governance: the way forward

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## Platformization demands a multi-scalar and cross-sectoral policy response

Platform governance is an overarching development policy challenge of our times, not just a narrow technology policy issue. A planet-wide restructuring of economic ecosystems by digital platforms has triggered new contestations over socio-structural relations and geopolitical power. This calls for a cohesive policy response that can adequately and appropriately reorient the platform mode of economic organization towards a more equitable distribution of the efficiencies of intelligence scale economies. Such a policy approach also needs to be multi-scalar (spanning interventions at global to national and local levels) as well as cross-sectoral (encompassing integrated actions in digital, economic and social policy domains). We summarize the challenges for policy development in this chapter, also discussing the key building blocks of a comprehensive policy framework.

### 4.1 Governance challenges in the platform economy

**a) Old laws don't work:** Most countries in the Global South lack legislative frameworks that address the rights and development implications of platformization trends. For example, as we found, individuals engaged in platform-mediated service work across different sectors – domestic work in the Philippines, tourism in Indonesia, and transportation in South Africa – are not covered under pre-existing labor laws (Barrameda et al, 2019; Bentley & Maharika, 2019; Mare et al, 2019). Similarly, the interests of small and medium enterprises and consumers are not adequately protected against unfair trade practices of platform companies in emerging digital commerce markets such as Nigeria (Nuruddeen et al, 2018). Even developed countries with legal-institutional frameworks for human rights enforcement and corporate accountability – such as EU member states – face difficulties in coping with the ongoing digital disruption. In France and Belgium, robust pre-digital labor laws are proving inadequate in providing social protection to platform workers with atypical employment contracts. Similarly, the application of pre-existing consumer protection frameworks to digital services in the EU has meant the use of blanket disclaimer clauses by platform firms, with no explanations about obligations arising in the online context (Delronge et al, 2019). When new legislation specific to the digital

context, such as the GDPR, has been introduced, the penalties for violation may often not be deterrent enough (Hintz & Brand, 2019). It has been found that companies such as Google, which have been repeatedly fined by the European Commission for non-compliance with prevailing legislation, nonchalantly continue their illegal market practices by treating fines as the costs of doing business.

**b) State responses are knee-jerk:** Platform regulation often times tends to be 'scandal-prompted'. For example, in China, it was public outrage over the rape and murder of two female passengers by DiDi Hitch drivers in 2018 that prompted the ministry of transport to set up a national supervision platform for systematic background verification of the drivers enrolled with ride-hailing companies (Chen & Ping, 2019). Similarly, in Uruguay, the central bank rushed in to hastily regulate the P2P lending sector without fully understanding its operational dynamics as a response to increasing negative national media coverage about the sector becoming a 'financial Uber' (Aguirre & Garcia-Rivadulla, 2019).

**c) Platforms become boundary objects, interpreted differently by different state agencies:** The conflicting imperatives to create an enabling environment for the growth of the domestic digital sector whilst guarding against the monopolistic and exclusionary tendencies of the platform economy seem to culminate in a Catch-22 scenario impeding effective policy development. For example, in Argentina, there was a bitter tug-of-war between the Ministry of Production and the Argentine revenue service (AFIP) about the application of tax laws to the regional e-commerce platform MercadoLibre. While the Ministry of Production called for exempting the platform from tax liability as part of its larger strategy of encouraging domestic digital industry, the AFIP was of the opinion that MercadoLibre ought to be treated as a commercial firm rather than as a technology company. The Ministry of Production had its way, but it is difficult to ascertain whether the decision to treat MercadoLibre as a technology company deserving of tax exemptions will fare better for the long term health of the Argentinian economy in comparison to the AFIP proposal (Artopoulos, 2019).

**d) Big platforms are mythified as the necessary route to success:** The myth-making that surrounds platforms also means that governments, especially in the Global South, adopt pro-platform policy approaches.

State responses  
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knee-jerk

## Transnational digital companies flout domestic legislation with impunity

The promise of innovation and opportunity has often led governments to valorize platforms as an enabling force in aiding national growth. There has existed in the tech industry, even before the platform era, an “alliance capitalism” between industries of innovation and policy (Higgins, 2015, as cited in Chen & Ping, 2019). Consider the 2018 bid by Amazon for its new headquarters, which had city and state governments in the US outdoing one another to offer sops, tax cuts, economic incentives and even political positions to the company, convinced by the potential for jobs and economic growth that Amazon could bring in for the economy (City Lab, 2018B). Or, as in China’s case, where the Internet Plus vision has catalyzed and championed the growth of private platforms in many ways (Chen & Ping, 2019).

### **e) Platform companies tend to usurp public policy spaces:**

By becoming a part of the multi-stakeholder processes that drive policy, platforms take on a direct role in norm and rule development. Such formal membership in governance spaces raises concerns about conflict of interest. In Argentina, when traditional banks raised concerns over MercadoLibre’s new offerings for fintech services, the company successfully negotiated with the government to set up a commission to liaison between the central bank and itself, also managing to get a seat on the commission (Artopoulos, 2019). In December 2018, Netflix’s director of regulation was appointed to Brazil’s film board, Conselho Superior de Cinema, a recognition that the platform is an increasingly important player in the country’s media regulation discussions (Valente & Luciano, 2019).

### **f) The lack of binding international law gives corporations runaway power:**

There is no binding global legal framework to check corporate abuse and violation of human rights. Transnational digital companies not only flout domestic legislation with impunity, but also exploit the lack of cross-jurisdictional rules. When faced with the risk of prosecution for unfair market practices in national courts, they evade responsibility by transferring liability to their parent company outside the jurisdiction (Mare et al, 2019; Van Eck & Nemusimbori, 2018). For example, in 2017, the South African Transport and Allied Workers Union brought a case to the national Commission for Conciliation, Mediation and Arbitration (CCMA) on how Uber’s arbitrary deactivation and termination of drivers enrolled on the platform constituted a violation of protections against unfair dismissal under the country’s existing labor laws. CCMA took up proceedings against

Uber SA, the South African subsidiary of the global platform company, and ruled in favour of the plaintiffs. A year later, the company managed to get the ruling overturned in the Labor Court on the technicality that Uber SA was a mere recruitment and training agency for Uber BV based in the Netherlands, which provided the app and made payments to partner-drivers.

## 4.2. Curbing digital monopolies

The platform economy displays monopolistic tendencies that curtail economic innovation and deepen inequality; but by no means is this an inevitability (Mann & Iazzolino, 2019). Traditional legal approaches to managing the rights, relations and conduct of persons and businesses engaged in commerce demand a major overhaul in the digital context. This pertains to both commercial laws and to new rules concerning techno-design.

### 4.2.1 Changes to commercial laws

**a) Competition law:** Current approaches in competition law tend to regard short term consumer pricing gains as an adequate indicator of vibrant market competition (Khan, 2019). Understandably, this signal becomes extremely misleading in emerging digital markets where dominant platform companies often pursue strategies of free/deep-discounted products and services with an eye on long term consolidation of the network-data advantage for market domination (Curbing Corporate Power Alliance, 2019). In this scenario, competition law must move away from a narrow, neoliberal consumer welfarist approach. Instead, it must adopt economic structuralism as a framework to address the undue advantage that digital platforms enjoy in their role as “unavoidable trading partners” in the multi-sided markets they control (Cremer et al, 2019). The unique vantage that platforms occupy enables them to engage in upstream and downstream price manipulation, which policy must be able to check.

The opacity that surrounds such data-supported gaming by platform companies makes it difficult to identify and establish proof of willful anti-competitive conduct. The EU has attempted to address this through its February 2019 regulation for platform businesses. It has mandated a duty of transparency (to be effective by 2020) with

Competition  
law must be  
overhauled to  
check price  
manipulation by  
platforms

## Merger scrutiny must guard against the concentration of big data power

regard to standard terms and conditions of service (including data practices and notice of changes in terms of services) on all platform intermediaries providing digital services. This covers search engines, e-commerce marketplaces, app stores, social media and even price comparison tools. In addition, it has provided user guarantees for a right to explanation pertaining to algorithmic ranking and prioritization of goods and services on platform marketplaces (European Commission Press Release, 2019).

Preventing the establishment of platform monopolies that can erect permanent barriers to new innovators in the platform economy is also a related challenge for competition law in the digital age. The introduction of Fair, Reasonable and Non-Discriminatory Access (FRAND) provisions in technology patenting is essential to prevent digital corporations from locking in essential building blocks of algorithmic innovation. Mandatory data sharing requirements<sup>11</sup> and data interoperability, as highlighted by the European Competition Commissioner, are more useful strategies to curb the market power of data monopolies when compared to unbundling/breaking them, as it enables us to retain the benefits of integration opened up by intelligence economies of scale while curbing abuse of market power

(Foo Yun Chee, 2019). Finally, in mergers and acquisitions where big data resources are involved, the decision of competition regulators ought to be guided by the precautionary principles of checking the concentration of big data power. The approach of Russian and EU regulators to Bayer's acquisition of Monsanto sets a useful precedent in this regard, although it is by no means the last word in regulating big data power (See Box 4).

**b) Foreign investment rules:** In the platform economy, industrial era rules for trade and investment need to be revisited to protect and promote domestic advantage. Countries like France and Germany have tightened scrutiny of non-EU bids for companies operating in the digital sector with the intent to safeguard their strategic IP, data and AI assets (Ciurak, 2018). The Committee on Foreign Investment in the United States has been vigilantly

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<sup>11</sup> Proposals for progressive data sharing regimes where companies whose market share reaches a defined level must compulsorily enable access to their data resources to competitors in the same market, particularly start-ups, are quite useful in this regard (Mayer-Schönberger & Ramge, 2019).

#### Box 4. Russian and EU regulators' responses to Bayer's acquisition of Monsanto

The acquisition of Monsanto by Bayer signals an imminent risk of concentration of agricultural data resources in a single entity, leading to increasing dominance over the world's seeds and pesticides markets.

In 2017-18, the Russian Federal Antimonopoly service (FAS) reviewed this acquisition for potential anti-competitive impacts. The deal was allowed to go through on the condition that Russian companies engaged in the development of agriculture software and applications would be provided access to the future data collected by the combined entity after it started the operations of its digital services in the domestic market. A technology transfer mechanism has also been established for ensuring that the new molecular breeding and germ plasm techniques developed by the combined entity, including advancements in data techniques and tools, are also accessible to Russian companies. The order of the FAS seeks to level the playing field in the domain of precision farming for Russian companies.

Similarly, in 2018, the European Commission permitted the acquisition on the condition that the combined entity would divest a portion of its seeds and pesticides business, including R&D lines, and license a copy of its worldwide current offering and pipeline on digital agriculture to BASF,<sup>12</sup> thus "maintaining competition by allowing BASF to replicate Bayer's position in digital agriculture in the European Economic Area (EEA)" (European Commission Press Release, 2018).

tracking attempts by foreign investors to buy stakes in AI startups, particularly bids from China, in order to move quickly to stop deals that are seen as contravening national security and global competitive advantage (Somerville, 2019).

Similarly, since 2015, the Chinese state has been attempting to crack down on Variable Interest Entity (VIE) structures through which Chinese technology companies have been circumventing foreign investment restrictions in the digital sector (Shen, 2019). A VIE is a domestic firm with 100 percent Chinese shareholding that enters into a contractual arrangement with an offshore Special Purpose Vehicle owned by foreign investors, in order to give them contractual control and economic benefits without violating the existing legal proscription on national ownership of equity stakes in companies operating in

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<sup>12</sup> A German chemical company that operates in more than 80 countries. See <https://en.wikipedia.org/wiki/BASF>



In the digital economy, the basis for taxation must shift from 'physical presence' to 'substantive economic presence'

strategic economic sectors.

**c) Corporate taxation:** Evolving an effective corporate tax regime in the platform economy is challenging for two main reasons. One, the virtualization of commercial transactions enables powerful transnational corporations to easily shift profits from higher tax jurisdictions to lower tax jurisdictions, thereby eroding the tax base of the former context. And two, traditional taxation regimes do not adequately account for the contribution of intangible data resources extracted from a jurisdiction for revenue generation in platform business models. This has led to calls for the basis of taxation to be shifted from 'national physical presence' to a 'substantive economic presence' as far as the new firms of the digital economy are concerned. As the OECD (2019) has highlighted, the substantive economic presence of digital-age business in a particular jurisdiction has to be determined through criteria such as:

1. the existence of a user base and associated data input,
2. the volume of digital content derived from the jurisdiction, and
3. sustained marketing and sales promotion activities.

The government of France introduced a draft regulation for a digital services tax in March 2019, to shift to a taxation regime based on the logic of substantive economic presence. Developing countries stand to gain from such changes to taxation systems for digital services considering that they currently receive no compensation from transnational platform companies for the data mined from their territories.

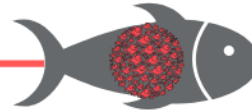
**d) Consumer protection:** Liabilities of platforms need to be situated in specific ways as platform models become mainstream. China's e-commerce law passed in August 2018 adopts this approach by holding platform intermediaries liable for failing to undertake background verification of merchants and for consumer health and safety violations (Chen & Ping, 2019). In addition to updating existing laws, new forms for digital enforcement of consumer protection rights are also useful to explore. For example, smart disclosure systems can enable platform users to obtain timely access to relevant pre-contractual information and personalized advice that enables them to effectively negotiate terms of service (Delronge et al, 2019).

**e) Upgrading pre-existing sectoral legislation:** Pre-existing commercial laws pertaining to specific business sectors need to be revamped for building a fair and inclusive platform economy (See Table 8).

## Competition Law

### What's wrong?

- Pricing is no longer an indicator of market competition as it does not account for the unique vantage that platforms have for upstream and downstream price manipulation.
- Data advantage as a factor in market dominance is not recognized.



### What policy needs to do

Move from consumer welfarism to economic structuralism:

- Adopt 'control over data' as a criterion in merger assessment.
- Introduce a structural separation not just between platforms and commerce but also between businesses providing digital intelligence services and businesses deploying such services in different economic sectors.
- Consider FRAND licensing for AI patents.

### What's wrong?

With virtualized commercial transactions, transnational digital corporations are able to shift profits from high to low tax jurisdictions.



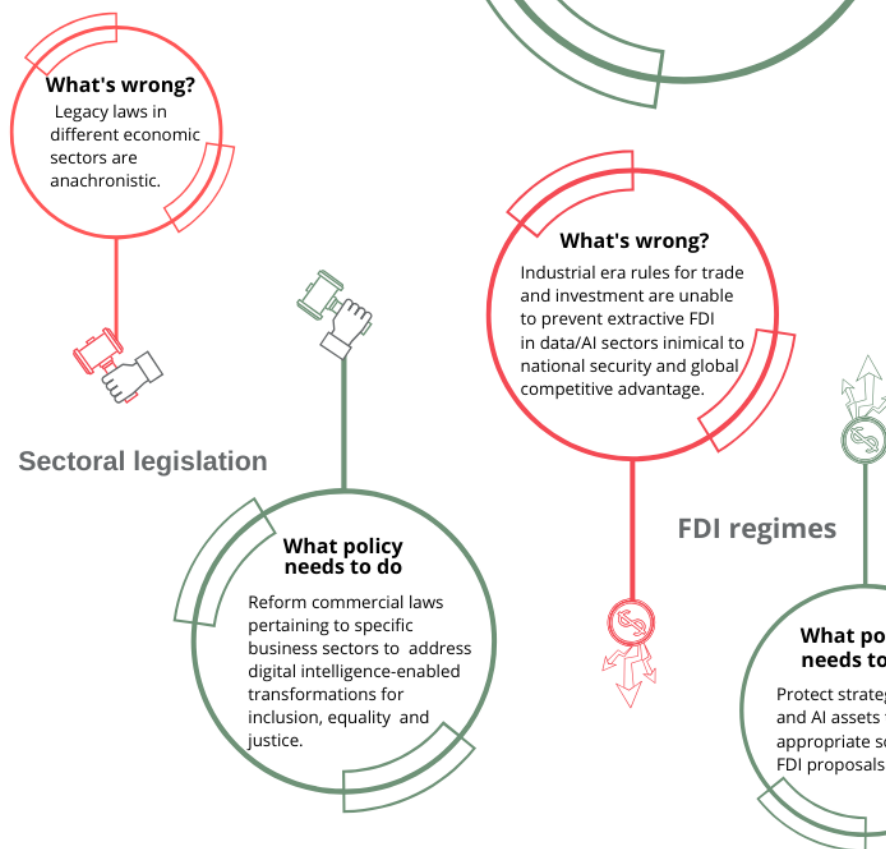
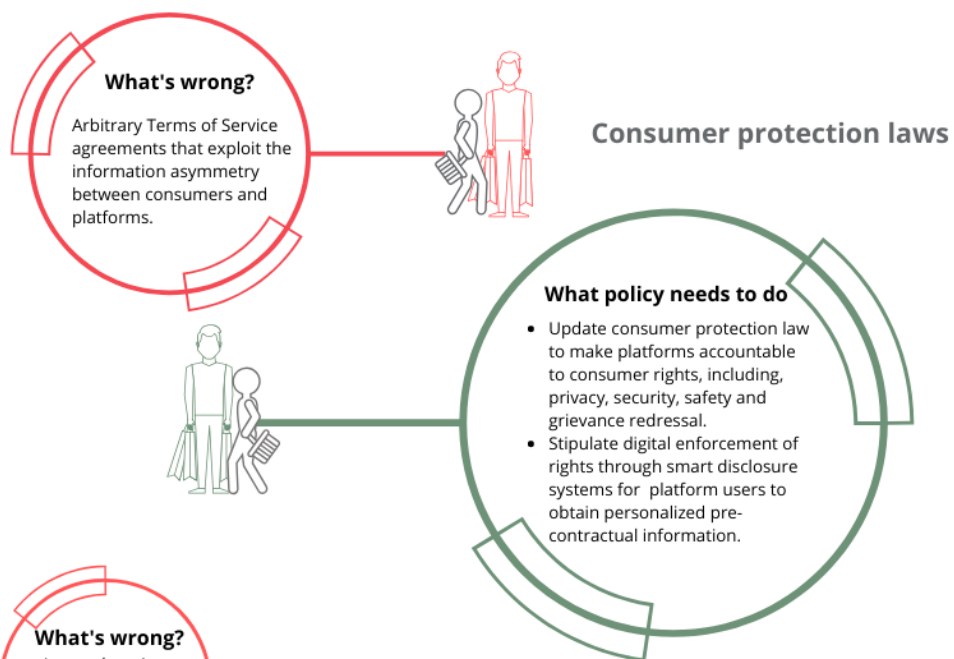
## Taxation

### What policy needs to do

Move taxation framework from national, physical presence to substantive economic presence through new criteria:

- Existence of a user base and associated data input.
- Volume of digital content derived from the jurisdiction.
- Sustained marketing and sales promotion activities.





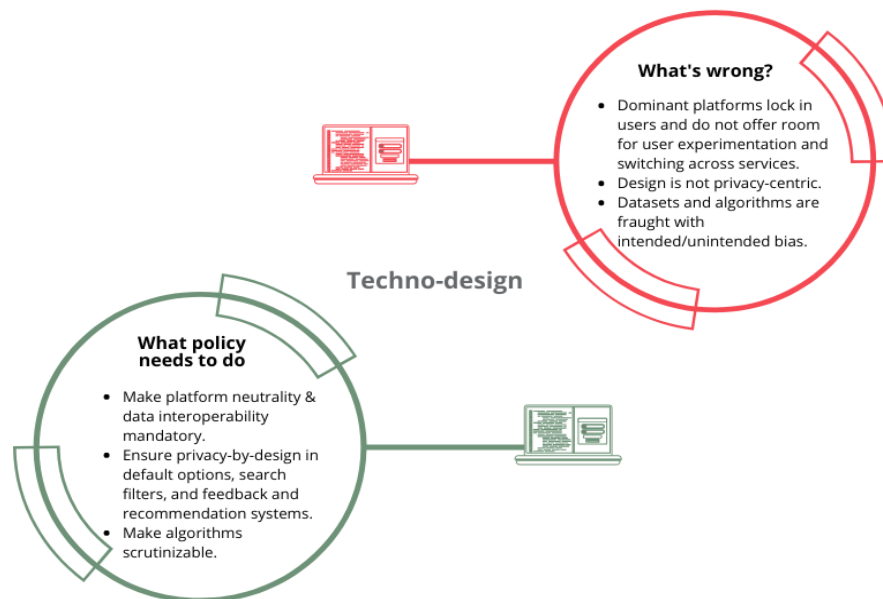
**Table 8. Upgrading Sectoral Legislation for the Platform Economy, a Snapshot**

Sector	Legislative Reform
Transportation	South Africa's National Land Transport Amendment Bill (2018) opened the door for the issue of regulatory stipulations on the design of Uber/Taxify apps to facilitate greater transparency about driver details, costs of the ride, and estimated time to destination in every user transaction (Mare et al, 2019)
Travel and Tourism	In 2014, the Italian Competition Authority held that online travel service platforms such as TripAdvisor can be charged with unfair commercial practice if they fail to verify user reviews (Biffaro, 2015)
P2P lending	In 2016-17, in response to emerging public outrage about fraud and malpractice in online P2P lending, the Chinese government came out with regulations that restricted P2P lending platforms to the information intermediation business of matching borrowers and lenders, disallowing them from providing direct credit services (Tech2Crunch, 2018). As enforcement continued to be a challenge because of the mushrooming number of small P2P platforms, in 2019, the government took the tough call of deliberately shrinking the size of the P2P lending market for greater stability by winding down medium and small scale operators with high default risks and transforming larger operators into licensed online micro-lenders/ financial intermediaries that help financial institutions issue loans (Caixinglobal, 2019)
E-commerce	In 2014, the Philippines enacted legislation that prohibits anti-competitive practices such as bid-rigging, predatory pricing, tying and bundling by dominant players, unfair exercise of monopsony power, and anti-competitive mergers and acquisitions. These provisions can be apply to e-commerce as well. (Barrameda et al, 2019)
Media	In 2017, Brazil enacted a law obliging VoD platforms to pay service taxes to municipalities in which they are operating. Further, Ancine, the government agency regulating the film and TV sector has proposed making changes to the content recommendation algorithms of platforms such as Netflix, as part of promoting local content to maintain media diversity (Valente & Luciano, 2019)

#### 4.2.2 Techno-design for platform neutrality

Platform neutrality, or the prevention of user lock-ins into dominant digital platforms, is a very important techno-design element for curbing monopolistic tendencies in the digital economy (CNN Numerique, 2014). This is possible only through mandatory technical compatibility/ interoperability design features that will enable users to seamlessly multi-home between emergent and incumbent platforms in the market. Interoperable design of platforms may be understood as pertaining to two main aspects: data interoperability and protocol interoperability. Data interoperability refers to portability of personal or machine user data across platforms with the possibility of continual, potentially real time access. Protocol interoperability is about facilitating two digital services or products to technically interconnect with one another (Cremer et al, 2019). The European Union has taken a concrete step in this direction through new guidelines mandating the development of codes of conduct for cloud services to facilitate switching between cloud service providers by the end of November 2019 (European Commission Press Release, May 2019). In the absence of these provisions, the room for user experimentation and switching across different platformized services will be restricted and this will result in a scenario where the market advantage of first mover firms is continually reinforced.

Countries in the global south need to build domestic capabilities to reap the platform economy's intelligence premium, putting it to the service of equitable development



In addition to interoperability, the following design choices are also critical to ensure fair and non-discriminatory platform-mediated markets: prevention of bias in ranking algorithms (criteria and weights used) and provision of transparency, accountability and privacy related safeguards in the design of default options, search filters, and feedback and recommendation systems in platform interfaces (Cremer et al, 2019).

#### 4.2.3 A global governance framework for Big Tech

The draft legally binding instrument on transnational corporations and other business enterprises with respect to human rights proposed by the UN Open-Ended Intergovernmental Working Group on Transnational Corporations and Other Business Enterprises must be adopted at the earliest. The draft underlines the extra-territorial obligations of states for human rights violations perpetrated by transnational corporations headquartered in their territories. The treaty should have specific provisions outlining the obligations of digital corporations, such as mandatory compliance with domestic regulation, respect for data sovereignty of countries and communities, algorithmic transparency and source code disclosure, to enable public scrutiny for privacy, fairness and non-discrimination (IT for Change, 2017).

### 4.3 Creating an enabling environment for inclusive innovation

In order to move out of their current position as mere data mines for transnational digital corporations, countries in the Global South need to build domestic capabilities to reap the platform economy's intelligence premium, putting it to the service of equitable development. This calls for concerted action on two fronts. One, developing countries must catalyze domestic digital innovation. And two, they must assume the responsibility of convening the transition to the platform economy in ways that facilitate the meaningful participation of smaller economic players without the risk of co-option by foreign/domestic platform behemoths.

#### 4.3.1 Catalyzing domestic digital innovation

Many developing countries have adopted strategic agendas/ roadmaps

Data and protocol interoperability are essential techno-design elements to overcome the dominance of 'first-mover' platforms

## FDI rules must be revisited to protect strategic IP, data and AI assets

for digitally-enabled economic transformation. These proposed policy frameworks can be successful only if they grasp the specific nature of the challenge of acquiring and consolidating the data and digital intelligence advantage that propels a country into the high value parts of the platformized global economic order. There is a lot more work to be done in this regard.

Oftentimes, developing countries tend to erroneously reduce the platform economy to a stand-alone economic sector of digital commerce instead of recognizing it for the paradigm-shifting mode of economic organization that it is. This often leads to policy misfires that fail to comprehend the real economy implications of expanding platformization. For example, Nigeria and many other African countries are simply jumping on to the global e-commerce bandwagon without examining the implications for their domestic economies in the larger context of Africa's premature de-industrialization. If this is to change, and if these countries have to unlock the inclusive growth potential of the platform economy, they must explore their strategic advantage, build a strong vision and create the conditions for structural transformation in the platform economy. It was only as late as 2017-18 that even a developed country like Canada started honing in on niche sectors for building digital bridges. As discussed in Chapter 2, the Trudeau administration promoted the establishment of digital technology super-clusters to drive innovation, including one focussed on creating digital intelligence advantage in traditionally strong sectors such as forestry and mining (Reilly & Nieves, 2019).

Further, the nuanced distinction between extractive Foreign Direct Investment (FDI) that cannibalizes domestic innovation and supportive FDI that enables the flourishing of domestic data and AI industry tends to be ignored in the formulation of digital innovation and startup promotion policies in capital-starved developing countries. For example, in February 2019, the Philippines Senate ratified the Innovative Startup Act that seeks to encourage data and AI innovation, particularly in the transport, finance and healthcare sectors, by instituting measures such as tax breaks and grants, relaxation of immigration procedures for tech workers, and promotion of networking opportunities with potential investors, mentors and national government agencies (Zhixin Tan, 2019). One of the central objectives of this proposed legislation is to facilitate ease of doing business for foreign investors in the tech sector (Porcalla, 2019).

### Box 5. Essential platform infrastructure: the Indian approach

India has interpreted the idea of ‘essential platform infrastructure’ as the digital building blocks that are essential for supporting domestic platform innovation. Over the past couple of years, the government has focused on public provisioning of a range of such layers. It has supported the development of a country-wide digital payments interface that enables cross-bank digital payments overcoming the interoperability issues of private mobile wallets (Unified Payments Interface). It has also come out with proposals to launch a specific blockchain infrastructure to support the development of social applications (India Chain), and set up a cloud platform that provides accessible intelligence analytics and knowledge assimilation services (AIRAWAT).

Therefore, the Act clearly prohibits government agencies from using nationality of startups as a criterion to determine the award of benefits (Philippines Senate Bill Number 1532, 2019). In a context where over 70 percent of local startups are bootstrapped (Barrameda et al, 2019), a distinction must be made between ‘national’ and ‘foreign’ startups on the basis of strategic control rather than source of funds. This will fulfill the short term objective of attracting capital flows along with guarding the long term interest of preventing big tech companies and VC funders of advanced AI economies from buying out domestic innovators.

#### 4.3.2. Convening inclusive platformization

Inclusive platformization is about opening up meaningful opportunities for participation in the platform economy for all actors concerned. At the first level, this involves ensuring universal access to the physical and digital infrastructure underpinning the platform economy: affordable connectivity, reliable and secure digital payments systems,

### 4.4 Redrafting worker rights in the gig economy

Platformization raises a whole new set of concerns about the enforcement of the right to decent work, especially its most critical constituent elements of access to opportunities for productive work with a fair income, social protection and workplace security guarantees, and freedom to organize and participate in workplace decision-making (ILO, 2019).

As discussed earlier, on-demand work platforms have consistently



## The platform economy breaks down the traditional binary between 'employment' and 'self-employment'

evaded employer liability by positioning themselves as technology companies that merely connect self-employed individuals providing services with those demanding such services. This negates the fact that in the gig economy, oftentimes workers have little or no access to information that platform owners control using their algorithmic apparatus. (Kaardal & Bjornson, 2018). Such information asymmetry and non-transparency enables the platform to retain the upper hand in the mediation of client-worker relations (Choudary, 2018). For instance, ride-hailing platforms may force individual drivers to keep their ride acceptance rates high or risk being deactivated, minimizing flexibility for drivers. Similarly, microwork platforms are known to extensively use dataveillance mechanisms to track work progress, details about which are not disclosed to the worker.

In a scenario of mounting worker discontent, an active policy debate has taken shape at the global and national levels on enforcement of worker rights in the platform economy. The ILO has highlighted how the traditional binary of 'employment' and 'self-employment' used by legal systems to determine the applicability of labor laws completely fails to account for the new context of platform-mediated service work. To squeeze labor and maximize profits, digital platforms position themselves as generators of flexible work opportunities for self-employed workers without meeting associated obligations of traditional employers. These include minimum wages, paid leave, limitation of working hours, underwriting of costs of wait/travel time on the job, and insurance and health benefits. Legal reform in the new economy must therefore follow ILO's prescriptions for terms of work participation in on-demand work, treating platform workers as 'dependent self-employed' workers, covered by a new employment protection framework (ILO, xxxx).

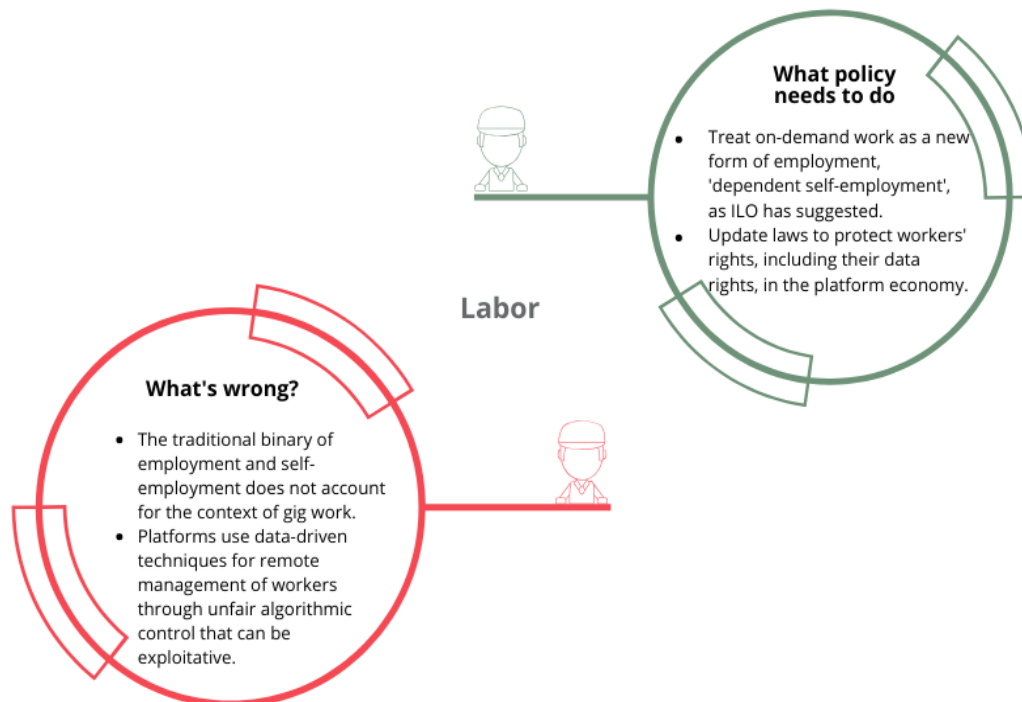
The Fairwork Foundation, a joint initiative of academics from the UK, Germany and South Africa to promote fair working conditions in the gig economy started an innovative experiment in March 2019. Through an exercise of annually ranking leading on-demand work platforms against five standards – fair work, fair conditions, fair contracts, fair management and fair representation – the Foundation hopes to move up the standards for fair gig work and prevent the race to the bottom characteristic of platform work (Oxford Human Rights Hub, 2019).

Unaccountable worker dataveillance by platform companies has also

come under the scanner. For instance, the international trade union UNIGLOBAL has come out with a set of principles for workers' data privacy and protection, contextualizing the interpretation of sensitive personal data, informed consent, and the right to explanation, in the employment relationship (UNIGLOBAL, 2019). Governments must work to ensure these rights in the employment relationship.

As far as actions at the national level are concerned, there have been some noteworthy developments in the EU and China in recent months. In April 2019, the European Parliament approved a new set of rules to protect gig economy workers. The new legislation targets workers in atypical, non-standard jobs of the gig economy by covering all individuals who meet the threshold of working three hours per week and 12 hours per four weeks on average. These rules provide protections such as transparency about the terms of the employment contract, minimum level of predictability about working hours, right to turn down an assignment without penalization and prohibition of exclusivity clauses (European Parliament, 2019). In February 2019, the Ministry of Human Resources and Social Security, China, announced its plans to introduce legislative guarantees for 'new economy' workers,

**Worker rights in the platform economy must be future-proofed through a renegotiated social contract**



The development  
injustice stemming  
from the culture of  
data extractivism  
must be urgently  
addressed

such as those in ride-hailing and food delivery sectors. It has also censured platform companies for failing to provide worker insurance (Technode, 2019).

As platformization unfolds, worker rights will need a back-to-the-basics policy imagination. Today, we are witness to emerging platform models in sectors like agriculture that traditionally in large parts of the Global South have been managed as family owned enterprises, providing livelihood subsistence. In the Asia-Pacific for instance, 80 percent of the food production in the region comes from 420 million small family farms mainly managed by women. Laws and policies will need to provide a future proof response to a steadily platformizing economy, one that will allow for a renegotiated social contract empowering for workers.

#### 4.5 Building a data constitutionalism for the platform economy

Key among the policy measures to regulate the platform economy is the governance of data. Curbing monopolies and creating a level playing field whereby smaller actors can capitalize on the intelligence premium requires much more than actions in traditional policy domains. Given the fact that platform behemoths have enclosed the data commons, the imperative is to address head on the inequitable distribution of data resources. Economic rights in data become an important sphere for policy development in the platform age, as the precursor to the strategic choices for platformization based on local economic priorities and interests.

Data governance in the platform economy currently gets reduced to the single point agenda of setting acceptable limits for the commercial exploitation of personal data. The policy ask is not only with respect to protecting individuals and groups from privacy violations, but also in addressing the development injustice stemming from rampant data extractivism. The platform economy needs a new value framework at the global and national levels for governing data, moving beyond its capture by the market towards generating value for society. The failure to address the governance of data as an economic resource has enabled the private capture and enclosure of data resources by a handful of powerful transnational companies, akin to how in the absence of federal institutional intervention, power

politics determined the de facto assertion of mining rights during the California Gold Rush (Purtova, 2016). Assigning ownership, use and control rights in data is therefore essential to counter a digital Wild West. Emerging policy proposals in this regard often tend to take one of two approaches: either focusing on giving individuals property rights in data so that they can trade the same in the data marketplace, or arguing for a public goods approach to data through opening up government-held data resources and mandating private companies to pool their data resources into an open access commons.

Both these approaches misfire, albeit for slightly different reasons.

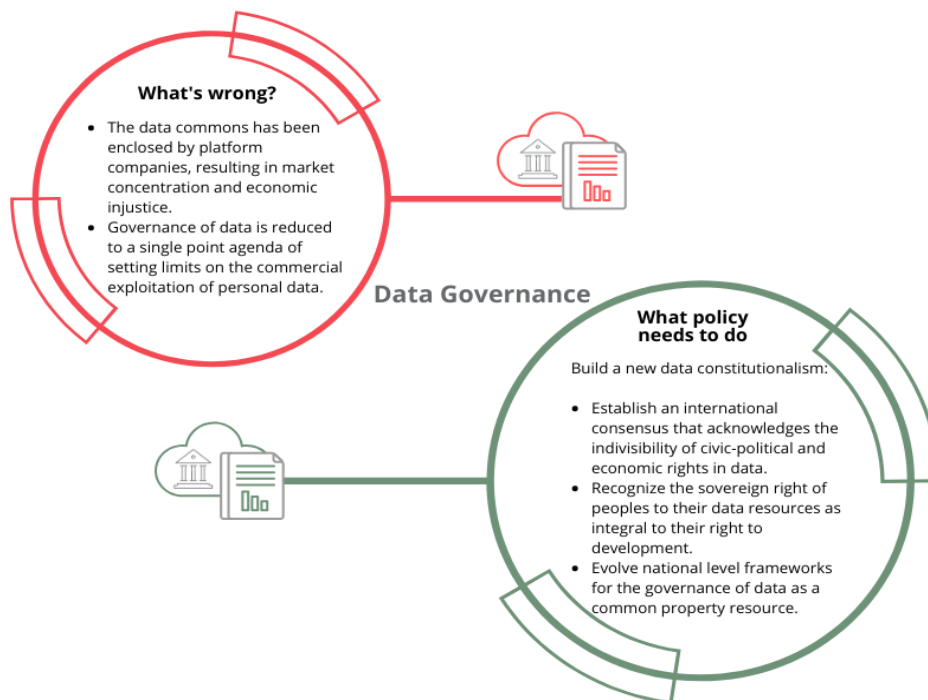
Proposals recommending the monetization of personal data are now understood to be unsatisfactory owing to the asymmetries of power between (individual) data subjects and (corporate) data collectors. In fact, proponents of individual property rights in data incorrectly view trade in data resources as the exchange of individual pieces of information in an open market, akin to commodity exchange. However, ownership rights in data cannot be reduced to private property. Data is a shared, systemic resource that comprises “a complex resource ecosystem that includes individuals and groups, in relationships with each other and digital infrastructures [mainly platforms] and institutions in a society, all of whom generate data and are affected by it” (Taylor and Purtova, 2019).

Proposals that argue for a public goods approach to data, on the other hand, fail to account for the rivalrousness of data. In the platform economy, dominant firms are able to reap their intelligence premium only because they enclose their data-network. This is why proposals for voluntary data sharing may not go very far given the low incentive for Big Tech to share their data pool. Additionally, sharing of governmental data sets as an open access resource (without conditionalities) runs the risk that the bigger players will capture the same for consolidating their market dominance (Kodali, 2019). A rivalrous, systemic resource like data needs to be governed through a commons framework that has a lot to offer for sustainable resource management. In the case of data resources, sustainability should be understood as the imperative to avoid the pervasive political manipulation through large-scale profiling with due cognizance to social values of fairness, due process and non-discrimination (Taylor and Purtova, 2019). A commons framework for data governance not

A clear framework for ownership rights in data is needed to prevent the de facto conversion of the data commons into a club or private good held by a few powerful platform monopolies

only holds the potential to check the monopolistic tendencies of the platform economy, but also enables privatized-corporatized value to be redirected towards socialized-communitized value.

Just as in the case of other common property resources, determining the boundaries of access and appropriation rights is vital for the data commons as well. This is best evolved in case-specific ways and through a variety of institutional design choices – from mandatory data sharing through a public fiat to data pools that are held by community or member driven initiatives. Determining the rules for appropriation and exclusion in the data commons of a Smart City project is a completely different ball game from a health programme, as competing interests and value considerations that need to be balanced are very different. It is possible that in the cases of certain data commons, the bar for exclusion may be set very low – such as for weather data, and in others, it may be fairly high – as in the case of epidemiological data. Similarly, licensing conditionalities could vary. Also, privacy norms for a sustainable data commons will need to be institutionalized through a case/sector specific analyses of informational processing and use and implications not only for confidentiality, but also autonomy and group privacy.



A people-centered framework for the governance of data as a common property resource for individuals and communities must build on democratically deliberated and legally articulated values and norms. This may well include no-go areas that a society decides will be out of the purview of datafication as also specific techno-design choices in relation to connectivity, software and AI, to further platform models that decentralize value.

An institutional framework for robust governance of data as an economic resource, thus demands a polycentric response – multiple centres of semi-autonomous decisionmaking cohering around different data commons but, of course, subsidiary to the nation-state in a multilateral world order (Singh, 2019). In the current scenario, e-commerce proposals in the WTO and in plurilateral agreements place a lot of pressure on developing countries to acquiesce to unrestricted cross-border flows of data. This constrains the policy space that developing countries need to govern their data commons towards furthering their right to development. A new international consensus is needed to recognize the sovereign right of states to evolve national policy frameworks for the governance of their data resources, working within the larger rubric of a data constitutionalism that respects, protects, and promotes the indivisibility of civic-political and economic rights of individuals and communities in data resources.

## Future research agendas

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Weaving in case studies, legal and policy reviews, and analysis of contestations and trends from around the world, this report has been able to demonstrate how platformization represents a paradigm shift impacting and reshaping the global economic order. Today, as concerns about the unfettered march of platform capitalism coalesce on the global stage, our study makes a timely, even if, small, contribution that offers a nuanced big-picture view of platformization.

In the process of attempting to unpack and address the knowledge and policy gaps in the domain, we find that the scope for future enquiry is only widening. Going forward, a political economy analysis of platformization will continue to be necessary as new research agendas emerge around cross-sectoral policy aspects concerning platforms. Deep dives into two primary areas – the global governance of

transnational platform companies and of data as an economic resource – assume critical importance. Knowledge-based interventions in this area are key to refurbishing international human rights law, and could potentially feed into efforts underway to develop a legally binding instrument on the right to development<sup>14</sup>.

What this research points to is that current trends for equity and justice in the platform society are worrying. A perverse convergence between racial, gender, ethnic and other social antecedents and geopolitical dynamics of digital technology is deepening global divides. It is also endangering the planet and our sustainable futures.

Policy research therefore needs to focus on the multiple locations of social actors, examining how the planetary scale impacts of platformization raise new concerns for distributive, representational and ecological justice. Changes to commercial law, labour and social protection legislation, taxation policy, data ownership regimes, social inclusion frameworks and environmental regulation become significant as economic and social relations are irrevocably transformed by platformization.

In a platform planet, policy needs a steady ethical-normative compass. The task of research therefore is as theoretical as it is empirical; to surface human aspiration as if the last woman mattered.

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<sup>14</sup> A/HRC/RES/39/9, <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G18/296/49/PDF/G1829649.pdf?OpenElement>

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