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For the full report, other outputs from this project, as well as details of research teams that undertook specific studies as part of this project, please visit www.ITforChange.net/platformpolitick

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Platform Planet: Development in the Intelligence Economy

Research Summary

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Among the key global debates today, the governance of digital platforms has garnered widespread policy attention. As buoyant discourses celebrating innovation, opportunity and disruption jostle in equal measure with concerns about the rise and rise of digital monopolies, lawmakers and citizens are taking note of the escalating consequences of a no-holds barred 'platformization'. As network-data architectures, platforms orchestrate the production and exchange of products and services by optimizing relationships among a network of actors, thereby transforming economic activity.

Concerns about the platform economy extend to the adverse terms of market engagement for smaller players – workers, small producers and enterprises, developing nations – and the real world outcomes for local development. Regulatory deficits present an equally important challenge, as institutions struggle to respond to the public policy-making imperative in relation to the platform economy.

IT for Change's research project, 'Policy Frameworks for Digital Platforms – Moving from Openness to Inclusion' (2017 to 2019), unpacked the platformization phenomenon, focusing on the necessary institutional-legal arrangements for a future economy that furthers development justice. The project addressed two key questions:

What are the social-relational architectures of the platform economy?

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

As part of this project, 12 research studies – case studies of different economic sectors and legal reviews in the domains of e-commerce, agriculture, video-on-demand, food delivery, fintech, ride-hailing and travel – were undertaken in various sites in the global north and south. In addition, a series of think-pieces were commissioned to inform the analysis.

Key Findings

1. Platforms emerge from varying historical contexts, economic motivations and development choices

While the Silicon Valley model of digital disruption is widely evangelized as *the* winning formula for digital innovation, there is really no one-size-fits-all when it comes to platform-led economic pathways.

In the digital economy, the socio-economic context, digital infrastructure capacity, traditional competitive advantage and platform ownership choices give rise to different platform models.

Dominant models

Dominant models from the US and China have a large global footprint. From the US, platforms such as Google, Facebook and Amazon, have rapidly grown into monopolies by riding on network effects and amassing data on a global scale. Subsequently, the Big Tech lobby has strived to protect this first mover advantage. Through trade negotiations that advocate for free flows of data and prohibit governments from

having policies requiring source code disclosure, they also attempt to create barriers to entry.

China's digital economy model with its focus on 'techno-nationalism' has afforded impetus for domestic platforms through a strong state-capital alliance. For instance, Sesame Credit, Alibaba's social credit service has been successful because, in addition to data from its 400 million users, the e-commerce giant has been able to integrate data from critical state agencies into its system.

Developing country models

In developing countries, where transnational platform players shy away from entering a challenging business environment, endogenous models led by local entrepreneurship find the room to grow and innovate.

In Argentina, e-commerce platform, MercadoLibre, has invested in the development of roads to sustain its distribution networks and created private logistics solutions to piggy-back on the national mail system. Similarly, in the Philippines, prohibitive costs of broadband, coupled with poor connectivity, have led home service platforms to adopt an 'amphibian' characteristic and manually intermediate some aspects of gig work.

In the case of Africa, e-commerce platforms – which have been the prevalent route to platformization – 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. While platforms such as Jumia and Konga are hailed as success stories that work despite these unfavorable factors, their potential for growth is predicated on a taken-for-granted dependence on Chinese imports.

Alternative models

The dominance of transnational platforms notwithstanding, alternatives based on solidarity economy and social enterprise models do exist. UrbanShare is a Vancouver based for-profit platform for collaborative consumption that mediates goods sharing in local urban neighborhoods. While such alternatives thrive in small pockets, they do face challenges including higher costs of business, limited funding and regulatory burdens.

2. Platforms work to recursively create and consolidate the 'intelligence premium'

The move from traditional size-scale economies to intelligence-scale economies where platforms become the new interlocutor driving economic activity, allows them to reap an 'intelligence premium'. Akin to the 'innovation' or 'knowledge premium' firms realized in the pre-platform context through the adoption of technology, today, platforms who are first-movers combine network effects and data-based intelligence. They are thus able to continually harness a totalizing control over the network-data layers (See Figure 1). This trend not only applies to digital businesses, but increasingly also to large transnational corporations in other sectors, such as Walmart in retail or ChemChina in agriculture. Platforms use their intelligence premium to grow their ecosystems in multiple ways. This includes:

Figure 1. Platformization and the New Epoch of Economic Organization





SELF-PROPELLING ALGORITHMIC INTELLIGENCE





SUPER-PLATFORM

Establishes de facto ownership over 'interactions data' generated from the member nodes in the platform, cornering raw material for digital intelligence and securing first level competitive advantage

Works to optimize the platform's operations and transfer value upstream by gaming and nudging interactions

Enhances the platform's value for the member nodes, entrenching them into the ecosystem and increasing opportunity costs of exit

Expands the platform's repertoire of services as a critical infrastructure layer

- Entrenching themselves in the digital economy by becoming multi-functional and 'sticky', thus encompassing innumerable applications and extending operations across different market segments. Eg., Travel platform TripAdvisor combines listings, ratings and reviews of attractions, hotels and restaurants, message boards for peer to peer discussions, and a gateway for other travel booking platforms such as Booking.com, Traveloka and Expedia.
- **Privatizing the economic sphere with redefined terms and rules of engagement.** This can be illustrated best in the near unilateral price setting power platforms exhibit dynamically pushing prices up or down on the basis of algorithmic intelligence to an extent where price signaling, a fundamental tenet of the market system, fails entirely. Other actors are never quite aware of the terms of the transaction, except in real time. Platforms can also exploit information asymmetry in other ways, including misrepresenting supply and demand of goods and services, hyper-segmenting consumers and constantly nudging them towards particular behavior.
- Cannibalizing the competition. The unholy marriage between venture capital and tech giants has ensured that global capital flows today remain concentrated among a small group of actors. Giant technology companies and enterprises thus grow bigger and bigger through the integration of digital layers, services and platforms in traditional sectors.
- **Exercising totalizing control.** Platforms can also use big data and digital intelligence to expand and optimize a 'totalizing control' over the economy.

Gatekeeping market participation. The ever-expanding possibilities for market connections and exchanges enables new ways to plug the absence of trust and information that earlier resulted in a 'missing market'. This could potentially create a basis for community sharing, as in the case of social platform Warmshowers, which allows hikers and bicyclists to connect with people who are willing to offer up their homes for a shower. But it could also give rise to exploitative business models, as in the case of Fintech platforms.

Gaming information asymmetry. Big data and algorithmic capacities are also used by platforms to micro-surveil and micro-manage different member nodes or constituent actors in the network. 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.

Trends towards product-service hybrids. Through systematic datafication and algorithmic intervention, platforms commodify the human experience, moving products into the emerging zone of product-service hybrids. The tireless strive to improve upon the consumption experience means that 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 level of satisfaction.

3. Platforms use algorithmic optimization to re-mediate 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. Actors situated in the platform ecosystem experience development outcomes based on their relative power and location. Using algorithms, platforms game the actors in their ecosystem (See Figure 2).

Figure 2. How Algorithms Game Actors



Through algorithms, platforms:

Optimize value and game the relationship between actors in the system. Data extraction and the expansion of algorithmic prowess mainly benefits the platform, while other actors derive a minuscule part of the value in the ecosystem.

Exploit global-to-local social and marketplace hierarchies. 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.

Commodify geography and transfer value to and from spaces and places, creating new inclusions or exclusions in the process. Eg., 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.

Hollow out pockets of local capital and skill accumulation, as skill-requirements and mental processes that once resided with labor become displaced by the digital process the platform has established. This can result in a gradual erosion of the right to market participation for marginal actors (See Box 1).

Box 1. Labor in the platform planet

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. The early gains made from capitalizing on an expanding market and limited competition 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. On-demand cleaning workers in the Philippines, for instance, cannot fall under the Batas Kasambahay, the Domestic Workers Act, as it only extends to full time domestic workers. In 2018, several riders for Meituan in Beijing faced unilateral termination of their contract and others were transferred into new employment contracts with different third-party labor agencies. A growing global trend of informalization of the labor market is thus exacerbated through platforms, with the destabilization of traditional employer-employee relationships. This leads to an individuation of risk, reduced job security and diminished collective agency, especially in global south contexts. Ultimately, the so-called flexible gig devolves into an unending grind for the worker given that incentive systems reward only those who work longer and harder.

Even so, 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. The disproportionate value capture orchestrated by dominant platform models does not preclude alternative possibilities for actors, or even alternative models of platformization. When platforms pursue strategies of contextualization over that of hyperoptimization, there can be an expansion of choice for actors (See Box 2).

Box 2. 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 the gains from its platform model. Working within the 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. Some of its strategies include:

- Countering elite capture by ensuring all producer company shareholders in the *Ekgaon* network hold equal shares in the enterprise.
- Retaining traditional intermediaries in the value chain by paying traders above market rate, but eliminating steep commission burdens for farmers.
- Decentralizing value downstream by building capacities of local producer companies for processing, grading, sorting, packaging and product innovation.
- Cultivating local market demand by encouraging producer companies to brand and market surplus yield.

4. Governance of data as an economic resource emerges as an important and contentious issue in the platform economy

The political economy of data flows defines the frame within which national governments can exercise policy action and build self-sufficiency in their data and intelligence infrastructures. Consider Canada, which with digitalized data pools in all its major industries is poised to move into a new economic stage of innovation. Meanwhile, the Philippines seeks to benefit from the digital economy by aiming to derive 25 percent of its GDP from e-commerce, an aspiration that in effect means integration into the global digital economy as a consumption market.

- Bargaining power with respect to data sharing depends on economic power. India's huge market base of 600 million the world's largest internet user-base outside of China for instance, gives the country more power to design its data flows regime to protect its domestic economic advantage. African nations on the other hand, have become veritable data mines for large companies, as governments bring on board dominant platforms with a view to ushering in digitally aided development.
- The terms of global trade impede the ability of developing countries to build their data infrastructure. 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, and 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.
- Lack of focus on public/community value of data. Governments seem to pursue policies around data that are mostly about spurring on privately led innovation. Articulating data as a community resource would allow private platforms to exist, while also ensuring greater democratic control over them. 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.

Conclusions

Platforms do not attain their enviable and omniscient data-based power in a vacuum. Hyperoptimizing the ecosystem for aggrandizing value, the dominant platform model thrives on and drives a state of *data dispossession* on a planetary scale. Analogous to David Harvey's idea of "accumulation by dispossession", data dispossession may be described as the colonization and commodification of everyday life through infrastructures of intelligence.

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. Therefore, what the research identifies is that platforms are not only infrastructures of value, but also ecologies of choice - shaping 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 data and algorithmic assemblage and value distribution (See Table 1). 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.

Axis	Characteristics
Ownership	 Private: The platform is formally owned privately. This includes publicly traded platform companies with majority private ownership. Most dominant platforms are examples of private platforms. Community: 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. Public: 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.
Control of Data & Algorithmic Assemblage	 Unilateral: The control of the data and algorithmic assemblage is held solely by platform proprietors, owners, and/or management. It is not open to platform participants, including consumers and workers. Group: The control of the data and algorithmic assemblage is held by platform participants, including consumers and/or workers, producers, or service providers. It is not open to the wider public. Democratic: The control of the data and algorithmic assemblage is held publicly and decisions are made through either direct or delegated democracy.
Value	Captured: 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. Collective: 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. Social: 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.

Table 1. Characteristics of Ownership, Algorithmic Control and Value Distribution in Platform Ecosystems





Actor choices (social, economic, technological, political) in platform ecosystems depend on how varying combinations of these characteristics create specific platform models (See Figure 3).

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 Silicon Valley platforms including Facebook, Apple and Uber lose their share value. China's tech industry led by Alibaba, Tencent, and Baidu is also witnessing a slow-down. Experts and industry actors have pointed to the possibility of a tech bubble – artificially propped up by large venture capital – that is likely to burst, taking down the global economy along with it. 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 part of the platform economy.

Policy Directions

The platform mode of economic organization with its governance deficits thus urgently needs to be reoriented towards a more equitable distribution of the efficiencies of intelligence scale economies. This is possible through a multi-scalar policy approach (spanning interventions at global to national and local levels) that is also cross-sectoral (encompassing integrated actions in digital, economic and social policy domains) (See Figure 4).

1. 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.

- Catalyzing domestic digital innovation. Developing countries tend to erroneously reduce the platform economy to a stand-alone economic sector of digital commerce. This leads to policy misfires indiscriminate ease of business provisions, inflow of foreign capital without safeguards, bargaining away of citizens' rights to attract big tech that generate short-term gains but fail to comprehend the real economy implications of expanding platformization. If developing 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.
- Convening inclusive platformization. As platforms become the essential infrastructure of our times, policies need to perform the transversal function of connecting different segments of economic activity. Essential platform infrastructure has a big role to play in leapfrogging development. For geographies not relevant to the circuits of private capital, the state's role in provisioning digital public goods public e-marketplaces, APIs that support platform innovation assumes significance. The state also needs to ensure universal access to the physical and digital infrastructure underpinning the platform economy: affordable connectivity, reliable and secure digital payments systems, a robust banking network, and a postal and logistics backbone.

2. 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.

- The traditional binary of 'employment' and 'self-employment' fails to account for the new context of platform-mediated service work. Legal systems, as a result, are struggling to determine the applicability of current labor laws. Therefore, the mediation of work participation, payment and conditions of work by digital platforms in emerging on-demand labor markets must be treated as a new form of employment – 'dependent self-employment' – with specific protections.
- Unaccountable worker dataveillance by platform companies has come under the scanner. UNIGLOBAL has come up with a set of principles for workers' data rights. Governments must work to ensure these rights, including, workers' data privacy and protection, contextualizing the interpretation of sensitive personal data, informed consent, and the right to explanation, in the employment relationship.

Figure 4. Governing the Platform Economy





3. Curbing digital monopolies

The platform economy displays monopolistic tendencies that curtail economic innovation and deepen inequality. Traditional legal approaches to managing the rights, relations and conduct of persons and businesses engaged in commerce require a major overhaul in the digital context. This pertains to both commercial laws and to new rules concerning techno-design (See Figure 4). Towards this:

Competition laws must prevent the establishment of data monopolies that can erect permanent barriers to new innovators in the platform economy.

Foreign investment rules must be revisited to protect strategic IP, data and AI assets and maximize public interest.

New taxation systems for digital services must be developed to compensate developing countries for the data mined by transnational platform companies from their territories.

Techno-design principles must be evolved to prevent dominant platforms from locking-in users and entrenching a permanent network effect by ensuring platform and data interoperability, privacy by design and meaningful algorithmic transparency for users.

4. Building a data constitutionalism for the platform economy

Data governance currently gets reduced to the single point agenda of setting acceptable limits for the commercial exploitation of personal data. This approach leaves unaddressed the development injustice stemming from the culture of rampant data extractivism in the platform economy. We need a new framework – a data constitutionalism – at the global and national levels for governing data as a shared systemic resource. A commons framework for data governance not 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.

We are in urgent need of a course correction today with respect to the platformization phenomenon and the global future implicated in its pervasive influence. 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.