Global Essay Competition 2026

Title: The Bretton Woods of Bits: The International Data Fund as a New Fiscal Contract for the AI Era

Essay:

Introduction

Two centuries ago, Thomas Malthus warned that population growth would inevitably lead to impoverishment. The Industrial Revolution enabled many countries to break out this trap, decoupling production from the constraints of land (Thomas, 1985). To this day, the entanglement of technology and demography has grown profoundly complex. *We all* are witnessing a stark K-shaped demographic divergence: the Global North and East Asian economies (such as China) are trapped in the dilemmas of aging populations and shrinking birth rates (Nakatani, 2023), while the Global South confronts a *youth bulge*—a swelling tide of young people trapped in low-income work with bleak prospects (Cuervo & Miranda, 2019).

The new wave of technological revolution, epitomized by artificial intelligence (AI), is acting as an accelerator, deepening this divergence. AI is rapidly penetrating various industries, simultaneously enhancing workforce productivity while displacing vast numbers of jobs. A substantial labor force within the Global South finds itself excluded from global supply chains, leaving individuals either unemployed or confined to precarious, insecure work such as gig-based employment (Wang et al., 2025). Whether for the unemployed, newborns, the elderly, couples hesitant about childbearing, or partners uncertain about marriage, improving their circumstances demands robust fiscal support and a stable, comprehensive safety-net. Without such measures, the space for human development will be severely constrained. This will hinder the prospects of nations across the global divide, exacerbate crime rates, and deplete citizens' safety, health, and spiritual fulfillment.

Addressing these challenges is beyond the capacity of any single nation. Compared to closed economies, trade liberalization and the free movement of factors of production have afforded participating countries greater developmental opportunities over the past several decades. More importantly, the current wave of technological advancement inherently transcends geographical and national boundaries. The training data for large language models (LLMs) draws from global sources, not merely the US or the UK (Li et al., 2024; Touvron et al., 2023). Addressing the intertwined challenges of technology and demographics necessitates a concerted global effort.

This essay advocates for the establishment of an *International Data Fund (IDF)*. We must recognize data as a core factor of production, subjecting it to pricing, taxation, and redistribution through global institutional arrangements. By treating data as a form of capital, establishing a Data Drawing Right akin to the IMF's Special Drawing Right, and implementing data taxation, we can effectively bolster national finances and foster shared development among nations worldwide.

Why International Data Fund (IDF)?

The Collapse of Traditional Fiscal Ontology

The current global tax regime is built on an obsolete industrial logic. It classifies production factors into land, labor, and capital, taxing labor heavily while offering incentives for capital (OECD, 2025). This structure is collapsing under the new wave of technological revolution.

The first failure is the fiscal asymmetry between human and machine labor. While capital and labor were historically complements, Acemoglu and Restrepo (2019) demonstrate that modern automation increasingly exerts a substitution effect, where machines directly substitute for human tasks. An AI

agent may replace ten human workers, yet it pays no payroll tax and often benefits from tax credits. As labor's share of national income falls, the tax base required to fund social security for an aging population erodes.

The second failure is the non-recognition of data as a basic component of the production function. The development of AI is built upon an insatiable demand for materials created by human hands and relies on a continuous loop of learning from human interaction. These systems harvest data from humanity and use our input to generate yet more data. However, this growth has offered no nourishment in return (Arrieta-Ibarra et al., 2018). It neither provides just compensation for the labor it displaces nor contributes to the broader human community, failing to flow into the tax revenues that sustain our social security systems. In essence, this is nothing short of *AI bullying or stealing*.

The third failure is the inability of individual nation-states to tax data effectively. If a single country attempts to impose a data tax, it risks capital flight and a loss of competitiveness in the global AI race. This race to the bottom paralysis ensures that the surplus value generated by AI remains untaxed, exacerbating inequality both within and between nations. While Daron Acemoglu et al. (2020) suggest that eliminating capital subsidies and reducing the tax burden on labor could curb excessive automation without new taxes, this only regulates the pace of deployment of automation rather than resolving the objective fiscal trap we face.

Just for fiscal reason? NO!

Although the legal recognition of data as the fifth factor of production has gained traction in policy practice, as seen in China (Mark & Chang, 2024), no nation has yet implemented a tax on it.

Is taxing data merely a political expedient to patch fiscal holes? Absolutely not. Data is not an innocent bystander; as mentioned above, it represents uncompensated labor. We feed the AI systems that displace us. Taxing data is therefore not extraction, but restitution—compensating users for their digital labor while mitigating predatory corporate surveillance.

Crucially, this revenue cannot belong to a single nation. The digital economy currently operates on a colonial logic: tech giants in Silicon Valley and Shenzhen are harvesting raw data from the Global South, refining it into high-value models in the metropole, and selling it back in the form of, for example, costly APIs. This extractive cycle is mirrored in the exploitation of RLHF workers in places like Kenya, who ensure AI safety for meager wages while sharing none of the model's long-term value (Perrigo, 2023). This is *new colonialism* (Couldry & Mejias, 2019).

Current trends of *data nationalism* only exacerbate this, locking high-quality data behind sovereign walls to the detriment of global innovation (Jones & Tonetti, 2020).

To address these issues, I propose the International Data Fund (IDF). Far from a charity, the IDF acts as the Bretton Woods pillar of the digital age. With mandates for regulation, reserves, and redistribution, it corrects North-South and labor-capital imbalances. Unlike a blunt robot tax that might stifle efficiency, the IDF harmonizes global prosperity by ensuring that the wealth derived from human data flows back to humanity itself.

Institutional Design

Basic Function

The IDF should operate under a tripartite mandate. Due to word count limitations, I have summarized it into three key points.

1. Surveillance and Valuation: The IDF will monitor global data flows and establish standardized pricing and auditing protocols. By defining universal data taxonomies and calculating the national Data Balance

of Payments, it will enable transparent oversight of corporate data extraction and facilitate cross-border comparisons.

2. Reserves and Liquidity: The IDF will manage a new digital reserve asset, channeling non-sensitive data to data-deficit nations. This ensures all countries can participate in the AI economy, preventing the emergence of *digital slums* caused by data or compute poverty.

3. Redistribution and Development: Serving as a global transfer pipeline, the IDF will redirect data tax revenues and compute resources to data-contributing nations. These funds will be strictly earmarked for social welfare, such as pension solvency, education, and vocational training.

Cornerstone: Data Drawing Rights (DDR)

The cornerstone of the IDF is the *Data Drawing Right (DDR)*, a digital reserve asset modeled on the IMF's SDR. Yet, unlike SDRs which favor wealthy nations by tracking GDP, DDR allocation is based on a *Data Contribution Index (DCI)*, fundamentally redefining global wealth.

The DCI should consist of three weighted metrics: (1) Data Volume, defined as the total of verified, unique data. This metric benefits the populous youth demographic and is safeguarded against fraud through Proof of Location protocols; (2) Data Diversity, which provides a premium for data that mitigates AI bias or addresses cognitive blind spots, such as rare languages or tropical climates. This incentivizes the Global South to digitize indigenous knowledge rather than merely replicating datasets from the Global North; (3) Data Annotation, representing Human-in-the-loop Value. Nations that offer essential reinforcement learning from human feedback and data cleaning services should earn DDRs, thereby recognizing the contributions of the often-invisible workforce within the AI supply chain.

DDRs serve as the hard currency of the AI era. Member nations can exchange them for: (1) hard currency to support pensions and education; (2) cloud computing resources (like GPU hours) to disrupt big-tech monopolies; and (3) subsidized access to frontier models (like ChatGPT) for public services.

More We CAN Do...

The economic potential of the IDF will be undermined if it remains restricted by data monopolies. The current digital economy resembles a landscape of walled gardens, where data is confined within corporate strongholds, resulting in significant economic deadweight loss. To dismantle these barriers and foster genuine data liquidity, the IDF must champion a legal framework for Standard Essential Data.

Drawing a parallel to Standard Essential Patents in the telecommunications sector, the IDF will identify datasets with infrastructural utility—such as real-time traffic flows, epidemiological vectors, and anonymized credit behaviors—as essential to the public interest. The IDF will classify these as SEDs, requiring data holders to license them under FRAND principles (Fair, Reasonable, and Non-Discriminatory). This approach enables startups and research institutions to legally access anonymized data by compensating with DDRs. In doing so, we significantly reduce barriers to innovation, stop the wasteful reinventing of the wheel, and ensure that data monopolies do not strangle the inclusive development of AI.

Furthermore, the IDF unlocks human potential. Presently, a skilled entrepreneur in Nigeria faces challenges in accessing capital that is readily available in Silicon Valley. The IDF can utilize Decentralized Identity to restore credit ownership to individuals. By establishing global mutual-recognition standards, the IDF enables financial institutions in London or New York to trust encrypted credit data from the Global South at minimal cost. This globalizes reputational capital, allowing young talent to access financial services regardless of geography.

Funding Mechanism

Funding should be sourced through data taxation worldwide, where nations impose data taxes uniformly and ensure secure oversight using blockchain technology. Tax proceeds from each nation must be managed via a standardized encryption system endorsed by the IDF. A significant portion stays in the country of origin (source tax principle) to tackle local social security deficiencies. Another portion of the international share is allocated to the IDF for redistribution and the advancement of global public goods. The remaining share is retained by firms as a reward for technological advancements and capital input.

Conclusion

Adam Smith linked the wealth of nations to the *division of labor* in the 18th century; however, in the 21st century, it is imperative to oversee the *division of data* to promote fair development in all sectors and regions.

Is the IDF incentive-compatible? Indeed, it embodies a Pareto improvement for all stakeholders. A global compact under the IDF alleviates concerns about capital flight for governments, ensuring stable fiscal resources for social welfare. Entrepreneurs benefit from standardized regulations that mitigate uncertainty and corruption, fostering a competitive environment where startups can challenge dominant tech companies with reduced data costs. Citizens experience restored trust through supranational support and decentralized encryption, leading to the elimination of predatory lending practices and promoting financial inclusion with transparent and transferable credit histories. Geopolitically, the DDR mechanism safeguards against the IDF's exploitation by any single dominant power, thereby empowering the Global South to stand on equal footing with the North.

By acknowledging data as a production factor, the IDF rectifies a crucial flaw of the AI era: the separation of value creation from distribution. It establishes a pathway for the prosperity produced by algorithms to return to the society that supports it, ensuring financial stability for the elderly and opportunities for skill development for the youth. This initiative goes beyond a structural adjustment; it presents a perspective for a future where the shift from silicon to carbon promotes the liberty and fairness of all individuals.

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