

Smartphones and the Political Economy of Global Capitalism: Labor, Financialisation, and Surveillance in the Digital Age

Word count: 2618 words

Smartphones are not mere communication devices but are inherently part of global capitalism, embodying corporate dominance, exploitative labor relations, and debt finance systems. This essay critiques the manner in which smartphones bear economic inequalities both within production and consumption but also within the broader finance and technology systems underpinning them. The theory of financialisation, which explains consumerism through debt, and algorithmic governance, which represents control through data, will be explored.

This argument holds that smartphones are components of exploitative global supply chains, consumer debt dependence, and corporate data commodification. As facilitators of economic engagement, smartphones also reinforce structural injustices through the concentration of MNE power that prioritizes profit over labor rights, consumer autonomy, and data protection.

The argument begins by examining labor exploitation along supply chains, highlighting the disconnect between CSR discourse and reality. It then moves to the issue of credit-based purchasing and how this makes consumers economically dependent. The argument then moves to data commodification and corporate surveillance through the lens of Zuboff's surveillance capitalism. The argument then assesses the broader implications for labor rights, sustainability, and economic self-determination, situating smartphones within the structural inequalities of contemporary capitalism.

Production of smartphones best illustrates the exploitative dynamics of global supply chains through which the global corporations such as Apple, Samsung, and Huawei arrange sort of intricate networks to maximize profits by transferring social and environmental costs to vulnerable laborers and the environment. The networks reinforce economic dependencies between the Global South and the Global North, a structural feature of global capitalism that devalues developing economies to low-value production and causes high-income markets to benefit disproportionately. This trend follows both the world-systems and dependency theories that emphasize the unequal exchanges between the core and the peripheral nations that render the latter dependent economic actors (Helbling & Meierrieks, 2020).

The production of smartphones begins with the extraction of cobalt, lithium, and rare earth metals from economically disadvantaged Global South nations such as the Democratic Republic of Congo (DRC) and Bolivia. The extraction is tainted by exploitative labor, deplorable working conditions, and environmental degradation made possible by weak labor laws and lax regulatory control (Frymer & Grumbach, 2020). The DRC alone produces over

70% of the world's cobalt supply, a situation where the use of child labor, coercion, and wage suppression are the norm (Frymer & Grumbach, 2020).

This is a neocolonial pattern of global supply chain where multinational corporations and richer nations benefit but resource-rich communities are left with depletion, environmental degradation, and underdevelopment. Wallerstein's world-system theory illustrates this dependence where peripheral states export cheap raw materials to core economies to the detriment of the latter's industrialization. Trade policy also consolidates this dependence by preventing industrialization to maintain the latter's economies extractive rather than productive (Feierherd, 2020).

Additionally, the environmental consequences of raw material extraction exacerbate this disparity. For example, the extraction processes involved in mining can pollute water resources, destroy habitats, and lead to deforestation. Such operations highlight a contradiction in the advancement of technology because whereas the devices are presented as symbols of innovation and sustainability, the process used to produce them is neither sustainable nor moral. Thus, the contradiction depicts an overarching problem within the global supply chain where the advancement of technology has a high price to pay by vulnerable groups and the environment (Frymer & Grumbach, 2020).

Assembly based primarily in China relies upon subcontractors like Foxconn that manage supply chains for Samsung and Apple. Businesses exploit weak labor protection to minimize costs and maximize profits and perpetuate poor working conditions (Bulfone & Tassinari, 2020). Workers are exposed to excessive working hours, low wages, and hazardous environments with evidence of forced overtime, poor safety practices, and extreme mental health crises like suicides (Osuna, 2020). In the 2012 Foxconn conflict, worker protests regarding wage inequalities led to wage increases and improved working conditions but some critics assert that the changes did not address systemic exploitation (Barboza, 2012). The gender division of labor is also employed to perpetuate this exploitation where women are disproportionately provided with low-paid repetitive work that is reflective of further economic marginalization and limited career mobility (Bulfone & Tassinari, 2020).

Furthermore, the gig economy fueled by smartphones perpetuates labour precariousness. For instance, ride-hailing and food delivery services operate under a gray area where the labour force does not receive protection but rather faces uncertainty regarding wages and exploitative working conditions (Hierro & Queralt, 2020). The shift from factory to gig work does not end economic insecurity but transforms it through the use of algorithmically managed platforms that avoid the conventional labour protection mechanisms and leave the labour force without the protection that factory employment used to offer (Osuna, 2020).

The organisational strategies of TNCs in the production of smartphones and the gig economy are a continued prioritizing of profit over labour rights. These strategies indicate that the

progression of technology does not necessarily lead to improved working conditions but instead widens the existing economic disparities. The structural reliance on cheap labor in manufacturing sectors and the gig economy raises moral issues about corporate responsibility, regulatory enforcement, and labor rights in an increasingly digitized global economy (Bulfone & Tassinari, 2020). The issues are therefore an indication of the urgent need for reform within labor rights and international trade policy that perpetuates exploitation.

Besides this, the market for smartphones embodies the broader dynamics of consumption via debt and financialisation. Financialisation that defines the increased salience of finance markets, institutions, and tools within industries, injecting finance-related motivations into industries that are less reliant upon them (Davis & Kim, 2015). This is manifested in the case of smartphones via consumer availability facilitated through installment plans, leasing models, and credit-enabled purchasing, though it makes the product more convenient to acquire, it also makes consumers more financially reliant in the longer term and ensnares them within debt traps (Lai et al., 2020).

Financialisation has made smartphones accessible to marginalized communities through reducing upfront payments and integrating finance options within digital transactions (Trehan & Sharma, 2020). In the developed economies, telecommunication companies offer subscription models that eliminate high upfront payments to democratise digital access (Zhang et al., 2022). In the emerging economies, micro-credit and BNPL initiatives promote credit-building through basic services (Lapavitsas, Trehan & Sharma, 2020). Safaricom's Lipa Mdogo Mdogo programme is an example where smartphone acquisition is made possible through micro-installments linked to M-Pesa wallets (Safaricom, n.d.). These mechanisms allow for higher participation in education, employment, and e-commerce where smartphones are portals to the digital economy.

However, these models hide the actual cost of ownership, supporting repeated cycles of debt. Installment buying hides interest rates, hidden fees, and extended payment periods that end up exceeding the device's actual value (Bhandari, 2021). The manufacturers and telecommunication industries produce leasing models that promote upgrading every now and then, keeping the customers under repeated cycles of continuous payments (Hopkins & Gorton, 2024). Even though the systems enhance availability, particularly for low-income consumers, the customers are exposed to economic vulnerability by introducing financialisation into everyday use. Where consumer protection is poor, high interest rates and ambiguous terms exacerbate economic vulnerability.

The integration of financial services within digital environments further accelerates dependence on proprietary finance frameworks. Direct funding comes from corporations such as Samsung and Apple through the link between purchases to digital wallets, app subscriptions, and cloud services. For instance, the iPhone Upgrade Program by Apple allows

customers to fund an iPhone using Apple Card Monthly Installments with payments automatically taken care of through Apple Pay (Apple, n.d.). The model supports deeper engagement within Apple's ecosystem through the bundling of services such as AppleCare+, iCloud storage, and Apple One subscriptions to ensure that customers are locked in the long term. This offers an economic loop that has customers indebted to corporations but also ensnared within their ecosystems, reducing market competition and limiting the liberty of users (Sindermann et al., 2020).

Thus, the financialisation of mobile phone consumption is a contradiction: it makes the product more accessible but perpetuates economic precarity. Financial mechanisms democratise technology but ensnare consumers into long-term finance dependence. The issue is not to put an end to the financialisation but to control it to ensure that vulnerable consumers are not exploited through models of lending and leasing.

Strengthened consumer protection laws, transparency in loan agreements, and interest rate limits are essential to prevent exploitative behavior. Standardised pricing structures that require open disclosure of repayment amounts, hidden charges, and contract conditions need to be introduced by policymakers. Better financial education programs should also allow consumers to make more informed decisions about consumption financed through debt to prevent risks associated with long-term obligations (Lai et al., 2020).

Thus, the smartphone sector illustrates more generalized trends towards financialisation that reflect the necessity for systemic measures to safeguard consumers from exploitation through finance but ensure that essential technology remains accessible to them.

Smartphones are the pivot point for digital capitalism where information is commodified under surveillance capitalism (Zhou, 2024). Shoshana Zuboff's surveillance capitalism theory signifies a shift from making profits through the selling of goods to commodifying individual data (Wang et al., 2021). As always-connected devices, smartphones produce behavioral data—location tracking, app usage, and browsing habits—translating consumer behavior into an asset to be monetized (Hoang et al., 2021). This shift further consolidates corporate control of users' data, establishing asymmetrical control within digital economies.

Following growing concern regarding data privacy, tech companies have attempted to reinvent themselves as privacy-centered through stronger app permissions, opt-out mechanisms, and encryption (Park & Park, 2021). The App Tracking Transparency (ATT) policy by Apple released in 2021 is a case in point by asking users for permission to third-party tracking. However, research has shown that Apple employs different consent models for its advertising services that could be nudging users to opt-in to Apple's personalized ads but away from third-party tracking (Baviskar et al., 2024). Regulations such as the EU's General Data Protection Regulation (GDPR) have attempted to encourage stronger corporate

responsibility but how much these undermine the dominance of data-driven models remains controversial (Chai et al., 2023).

However, these privacy measures are used strategically rather than being genuine reforms. Even though GDPR has made data more open to view, its enforcement has continued to be uneven, allowing companies to adapt to comply superficially but to continue monetizing consumer data. One such adaptation is the shift towards the collection of first-party data where companies block third parties from accessing individual information but use consumer data within their own domains (Kim et al., 2023). Companies like Apple that market themselves as privacy-focused continue to profit from personalized advertising and tracking users within their own domains with the concern that such measures are more about presenting a positive image than actual privacy protection (Park & Park, 2021).

Smartphones are the prime examples of the digital capitalism contradictions that enable economic inclusion but ensure surveillance-driven exploitation. The gig economy shows how algorithmic control redistributes power from labor to capital, undermines labor protection mechanisms, and sustains asymmetric employment relations (Park et al., 2019). Unless there is systemic reform, digital capitalism will continue to prioritize corporate profit over consumer rights, labor protection, and social well-being.

The environmental impact of smartphone production extends beyond the dumping of e-waste to represent deeper structural issues within industrial operations and regulatory frameworks. E-waste is not only the byproduct of consumer culture but instead a direct byproduct of deliberate obsolescence that is an organisational strategy to lower the lifespan of devices to sustain constant consumption (Sandhu, 2025). Global e-waste was 62 million tonnes in 2022 with harmful substances like lead, mercury, and cadmium contaminating the ecosystem (Rudolph et al., 2022). This shows how consumerist business models externalised the environmental burden to disproportionately harm developing nations while keeping corporations free from responsibility.

Global e-waste distribution also displays exploitative economic systems. Rich countries export old devices to developing countries where weak regulations and informal recycling expose the labor force to poisonous environments (Hendrix & Wong, 2012). Recycling and refurbishment are viable options but are constrained by weak enforcement and corporate complacency. The absence of circular economy principles that promote longevity, repairability, and recovery of materials leaves a glaring policy gap for sustainability (Bergquist et al., 2022).

Phone production exacerbates environmental degradation, particularly through the extraction of rare earth elements to be used to create batteries and components. The process depletes resources, emits carbon, and carries geopolitical risks, with China's dominance of rare earth extraction giving them the ability to strategically manipulate global markets (Rudolph et al.,

2022). The e-waste issue is thus an environmental but also political and economic one that must be solved through regulatory action, corporate accountability, and consumer demand for sustainable alternatives.

In addition to this, the global smartphone market is also a battlefield for global rivalries where control of the supply chain and digital infrastructure shape geopolitical alliances. The U.S.-China rivalry between Huawei and Apple illustrates how smartphone manufacturing has turned into an international political resource (Li, 2022). Intellectual property disputes and trade barriers are a sign of the broader trend towards technological nationalism where economic independence is represented through self-reliance and control of digital networks (Bodea & Ye, 2018).

The politicization of digital infrastructure worsens these tensions. American limits on Chinese tech businesses under the guise of national security mirror the apprehension regarding foreign control of data, surveillance, and communications (Bodea & Ye, 2018). In response to that, China has raised domestic chip production to lower Western dependence and rebalance the global tech equilibrium (Hamdani & Belfencha, 2024). This tech fragmentation raises pertinent issues regarding globalization, with nations balancing protectionism with economic interdependence.

Phone production relies on intricate global supply networks that are subject to various labor laws, trade policy, and environmental regulations. Such interdependencies are vulnerability sources that enable disruptions like semiconductor shortages, plant shutdowns, or trade bans to spread through global markets to destabilize supply networks and also the economic stability (Bodea & Ye, 2018). This shows how economic nationalism and strategic competition for control of technology undermine labor rights and environmental policy. As governments prioritize economic sovereignty, the likelihood of backsliding on global action for fair labor practices and ecological responsibility increases. The challenge lies in balancing national interests and sustainability obligations to ensure control of technology does not come at the cost of social and environmental justice (Rudolph et al., 2022).

This essay has examined the role played by the smartphone within the global political economy to depict how it concentrates corporate power, intensifies labour exploitation, and advances the process of financialization. Multinational corporations organize production through global supply networks that perpetuate economic asymmetries between the Global South and the Global North, while consumption that has been financialized perpetuates dependence on debt. Meanwhile, digital capitalism has created smartphones as corporate means of surveillance and algorithmic control that raise issues about the control of data, consumer agency, and labour.

Such evidence underscores the underlying structural challenges to labour rights, sustainability, and economic sovereignty. Technological progress is typically seen to be a

good thing but is tied to exploitative labour, unsustainable supply chains, and economic manipulation. To address these systemic issues, there is a necessity for greater protection for labour, regulatory oversight of financialized consumption, and greater corporate accountability to manage the data. In addition to this, the move toward sustainable forms of production and circular economies is needed to ensure that the environment is not harmed.

But this analysis has mostly focused on structural inequalities rather than consumer agency or other economic frameworks. Future research must investigate the possibility of ethical consumerism, fair-trade technology, and policy interventions balancing digital accessibility with economic responsibility and environmental sustainability.

Hencewhy, the smartphone represents the contradictions of late capitalism promoting global connection but perpetuating economic insecurity and corporate dominance. Without systemic transformation to production, finance capitalization, and control of data, it will further reflect and reinforce the inequalities that define the digital era.

Reference List

Apple (n.d.) *iPhone Upgrade Program*. Available at: <https://www.apple.com/shop/iphone/iphone-upgrade-program> (Accessed: 4 March 2025).

Baviskar, S., Chowdhury, I., Deisenroth, D., Li, B. and Sokol, D.D. (2024) ATT vs. Personalized Ads: User's data sharing choices under Apple's divergent consent strategies, *USC CLASS Research Paper No. 24-26*. Available at: <https://ssrn.com/abstract=4887872> or <http://dx.doi.org/10.2139/ssrn.4887872> (Accessed: 4 March 2025).

Bhandari, A. (2021) Political determinants of economic exchange: evidence from a business experiment in Senegal, *American Journal of Political Science*, 66(4), pp. 835-852. <https://doi.org/10.1111/ajps.12593>

Barboza, D. (2012) Foxconn Resolves a Dispute With Some Workers in China, *The New York Times*, January 12th. Available at: <https://www.nytimes.com/2012/01/13/technology/foxconn-resolves-pay-dispute-with-workers.html>(Accessed 28 February 2025).

Bergquist, P., Roche, G., Lachapelle, É., Mildemberger, M., & Harrison, K. (2022) The politics of intersecting crises: the effect of the covid-19 pandemic on climate policy

preferences. *British Journal of Political Science*, 53(2), pp. 707-716. <https://doi.org/10.1017/s0007123422000266>

Bodea, C., & Ye, F. (2018) Investor rights versus human rights: do bilateral investment treaties tilt the scale? *British Journal of Political Science*, 50(3), pp. 955-977. <https://doi.org/10.1017/s0007123418000042>

Bulfone, F., & Tassinari, A. (2020) Under pressure. economic constraints, electoral politics and labour market reforms in southern Europe in the decade of the great recession. *European Journal of Political Research*, 60(3), pp.509-538. <https://doi.org/10.1111/1475-6765.12414>

Chai, S., Nicholson, B., Scapens, R., & Yang, C. (2023) Digital platforms, surveillance and processes of demoralization. *Journal of Information Technology*, 39(3), pp. 568-586. <https://doi.org/10.1177/02683962231208215>

Davis, G. F., & Kim, S. (2015) Financialization of the economy, *Annual Review of Sociology*, 41(1), 11.1–11.19. <https://doi.org/10.1146/annurev-soc-073014-112402>

Feierherd, G. (2020) Courting informal workers: exclusion, forbearance, and the left. *American Journal of Political Science*, 66(2), pp. 418-433. <https://doi.org/10.1111/ajps.12576>

Frymer, P., & Grumbach, J. (2020) Labor unions and white racial politics. *American Journal of Political Science*, 65(1), pp. 225-240. <https://doi.org/10.1111/ajps.12537>

Gartzke, E., & Rohner, D. (2011) The political economy of imperialism, decolonization and development. *British Journal of Political Science*, 41(3), pp. 525-556. <https://doi.org/10.1017/s0007123410000232>

Geys, B., Heggedal, T., & Sørensen, R. (2020) Popular support for environmental protection: a life-cycle perspective. *British Journal of Political Science*, 51(3), pp. 1348-1355. <https://doi.org/10.1017/s0007123419000607>

Hamdani, M. and Belfencha, I. (2024) Strategic implications of the US-China semiconductor rivalry, *Discover Global Society*, 2(67). Available at: <https://doi.org/10.1007/s44282-024-00081-5>.

Helbling, M., & Meierrieks, D. (2020) Terrorism and migration: an overview. *British Journal of Political Science*, 52(2), pp. 977-996. <https://doi.org/10.1017/s0007123420000587>

Hendrix, C., & Wong, W. (2012) When is the pen truly mighty? regime type and the efficacy of naming and shaming in curbing human rights abuses. *British Journal of Political Science*, 43(3), pp. 651-672. <https://doi.org/10.1017/s0007123412000488>

Hierro, M., & Queralt, D. (2020) The divide over independence: explaining preferences for secession in an advanced open economy. *American Journal of Political Science*, 65(2), pp. 422-442. <https://doi.org/10.1111/ajps.12549>

Hopkins, D. J. and Gorton, T. (2024) Unsubscribed and undemanding: partisanship and the minimal effects of a field experiment encouraging local news consumption, *American Journal of Political Science*, 68(4), pp. 1217-1233. <https://doi.org/10.1111/ajps.12845>

Li, Z. (2022) Connections as liabilities: the cost of the politics–business revolving door in China. *British Journal of Political Science*, 53(4), pp. 1252-1272. <https://doi.org/10.1017/s0007123422000473>

Osuna, J. (2020) From chasing populists to deconstructing populism: a new multidimensional approach to understanding and comparing populism. *European Journal of Political Research*, 60(4), pp. 829-853. <https://doi.org/10.1111/1475-6765.12428>

Rudolph, L., Kolcava, D., & Bernauer, T. (2022) Public demand for extraterritorial environmental and social public goods provision. *British Journal of Political Science*, 53(2), pp. 516-535. <https://doi.org/10.1017/s0007123422000175>

Sandhu, A. (2025) Humans generate 62 million tonnes of e-waste each year: here's what happens when it's recycled, *The Conversation*, February 19th. Available at: <https://theconversation.com/humans-generate-62-million-tonnes-of-e-waste-each-year-heres-what-happens-when-its-recycled-249842> (Accessed 28 February 2025).

Safaricom (n.d.) *Lipa Mdogo Mdogo*. Available at: <https://www.safaricom.co.ke/personal/value-added-services/other-services/lipa-mdogo-mdogo> (Accessed: 4 March 2025).

Trehan, D., & Sharma, R. (2020) What motivates members to transact on social C2C communities? A theoretical explanation. *Journal of Consumer Marketing*, 37(4), pp. 399-411. <https://doi.org/10.1108/jcm-04-2019-3174>

Ward, G. (2019) Happiness and voting: evidence from four decades of elections in Europe, *American Journal of Political Science*, 64(3), pp. 504-518. <https://doi.org/10.1111/ajps.12492>

Zhou, Z. (2024) Data extraction in dockless bikeshare: an analysis from users' perspective. *Big Data & Society*, 11(4). <https://doi.org/10.1177/20539517241299724>