The Political Economy of Data Ownership: Legal Design of Digital Property Rights in Platform-Based Capitalism

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Abstract

This article investigates the transformation of data into the core asset of contemporary capitalism and examines the legal, economic, and political consequences of this shift within platform-based economies. The study argues that existing legal frameworks governing data ownership remain structurally misaligned with the realities of data-driven accumulation, allowing digital platforms to consolidate unprecedented control over markets, labor relations, and informational infrastructures. Through a narrative review and descriptive–analytical methodology, the article synthesizes interdisciplinary scholarship from political economy, law, and digital governance to expose the limitations of current legal classifications that treat data as personal right, intellectual property, or contractual asset without articulating a coherent ownership architecture. The analysis demonstrates how these fragmented approaches legitimize asymmetric power relations, reinforce monopolistic market structures, and undermine democratic accountability in the digital economy. The article further explores alternative models of digital property design, including collective governance frameworks, public-interest data infrastructures, and hybrid ownership regimes, and evaluates their capacity to rebalance economic power, protect individual autonomy, and preserve social welfare. By situating data ownership within broader struggles over sovereignty, market regulation, and social justice, the study highlights the political economy consequences of legal design choices and their impact on innovation, competition, and institutional legitimacy. The article concludes that reconstructing data ownership is not merely a technical regulatory task but a foundational project for shaping the future trajectory of platform capitalism and for ensuring that digital transformation advances collective prosperity, democratic governance, and long-term economic sustainability.

Keywords: Data ownership; platform capitalism; digital property rights; political economy; digital governance; data governance; information economy; market power; legal design

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1. Introduction

The transformation of capitalism in the digital age represents one of the most consequential structural shifts in modern economic history. Whereas industrial capitalism was fundamentally organized around physical capital, labor, and territorial markets, contemporary informational capitalism is structured around data flows, algorithmic coordination, and platform-

mediated exchanges. The emergence of digital platforms as dominant economic actors has reorganized production, consumption, labor relations, and governance through technologically mediated infrastructures that convert everyday social activity into quantifiable, monetizable information. This structural reorientation is not merely technological but institutional and political, as digital platforms now function as market-makers, regulatory spaces, and quasi-sovereign actors whose control over data underpins their economic power. The rise of AI-driven platform innovation has accelerated this transformation by embedding data extraction into every layer of digital interaction, enabling platforms to scale economic activity while internalizing network effects and externalizing social costs (Yablonsky, 2020). The global expansion of platform capitalism has simultaneously intensified market concentration and reconfigured labor relations, producing new asymmetries between platform firms, workers, and consumers (Shevchuk, 2023). In this emerging regime, data increasingly replaces traditional capital as the primary input of value creation, with platform firms accumulating vast datasets that fuel predictive analytics, algorithmic pricing, behavioral modeling, and market dominance (Huang, 2023). As Kim observes, platform capitalism is not simply a new business model but a structural mutation of capitalism itself, demanding renewed legal and regulatory control mechanisms (Kim, 2023). The economic logic of platform accumulation thus rests on the systematic transformation of human behavior, communication, and social relations into proprietary informational assets, marking a historical transition from industrial production to informational extraction as the core engine of capitalist growth.

Within this new configuration, data functions as a novel factor of production whose legal status remains profoundly unsettled. Traditional economic theory recognizes land, labor, and capital as primary productive inputs, yet data increasingly fulfills all functional criteria of capital: it is accumulated, invested, leveraged, and yields returns over time. However, unlike conventional capital, data is non-rivalrous, infinitely replicable, and relational, creating unique challenges for legal classification and ownership. The emergence of platform-based accumulation has thus produced a conceptual tension between economic practice and legal doctrine. Platforms routinely assert de facto ownership over data through contractual mechanisms and technological control, even as legal systems struggle to articulate whether data constitutes property, personal rights, intellectual assets, or contractual entitlements (Yang, 2023). The ambiguity surrounding data ownership is compounded by the multiplicity of interests embedded in any dataset, including individual contributors, collective communities, corporate processors, and public authorities (Schäfer, 2023). While intellectual property regimes have been partially extended to digital assets, including non-fungible tokens and platform-generated content (Chrisnando et al., 2023; Ulfanora & Almaududi, 2023), such extensions fail to capture the complex socio-economic functions of data in platform ecosystems. Legal uncertainty is further amplified by jurisdictional fragmentation and the absence of harmonized global standards, allowing platforms to engage in regulatory arbitrage while consolidating economic control (Bassan, 2021). Consequently, data exists in a paradoxical condition: economically indispensable yet legally indeterminate, privately appropriated yet socially generated, globally mobile yet territorially regulated.

This unresolved tension between economic exploitation and legal classification forms the central conceptual problem of data ownership in platform capitalism. On one hand, data is increasingly commodified, traded, and priced within digital markets, forming the backbone of platform profitability through targeted advertising, algorithmic discrimination, and personalized pricing strategies (Mou et al., 2023). On the other hand, data simultaneously operates as a form of social infrastructure, enabling public communication, collective knowledge production, and democratic participation. This dual character of data as both commodity and infrastructure exposes fundamental contradictions within existing legal frameworks, which are structurally ill-equipped to govern resources that are simultaneously private, collective, personal, and public. The commodification of data exacerbates power asymmetries between platforms and users, as individuals generate value through everyday digital participation while possessing minimal control over downstream data exploitation (Shadmy, 2023). Legal instruments such as consent-based data protection regimes often create an illusion of autonomy while failing to address structural dependencies and information asymmetries embedded in platform environments (Дуравкін & Hafych, 2023). Meanwhile, regulatory interventions aimed at market competition and antitrust struggle to constrain data monopolies that derive their dominance from scale, network effects, and informational control rather than conventional price mechanisms (Larsson, 2021). As Pan demonstrates, digital monopolies thrive precisely because data accumulation reinforces market concentration

and locks competitors out of essential informational resources (Pan et al., 2022). These contradictions render data governance one of the most urgent unresolved questions of contemporary political economy.

A political economy lens reveals that data ownership is inseparable from broader struggles over power, governance, and economic justice in the digital age. Platforms operate as private governors of digital markets, establishing proprietary rules through contracts, algorithms, and technological architectures that shape user behavior and economic outcomes (Xu & Wang, 2022). The resulting power asymmetries between platforms, users, and states are not incidental but constitutive of platform capitalism's institutional design. Users provide continuous streams of behavioral data yet retain minimal bargaining power over its use, while states often lack the regulatory capacity or political leverage to effectively discipline global platform firms (Wang et al., 2023). This configuration enables data extraction to function as a form of rent-seeking, whereby platforms monetize informational advantages without corresponding productive investment, extracting value from pre-existing social activity (Huang, 2023). The political economy of data thus mirrors classical patterns of enclosure and accumulation, substituting digital infrastructures for physical commons and transforming informational resources into private assets. Shevchuk's analysis of platform labor illustrates how data extraction reorganizes labor relations by converting worker activity into algorithmically managed inputs subject to corporate control (Shevchuk, 2023). Similarly, Schwartz demonstrates that platform labor policies are intentionally asymmetric, institutionalizing precarity while preserving corporate flexibility (Schwartz & Weber, 2023). These dynamics illustrate how data ownership is not merely a technical legal question but a structural determinant of economic power in the digital economy.

Monopoly formation and informational dominance emerge as systemic outcomes of data-driven accumulation. Network effects reinforce platform centralization by increasing the value of participation as user bases grow, thereby amplifying the advantages of early market leaders and entrenching competitive barriers (Yablonsky, 2020). The accumulation of massive datasets enables platforms to refine predictive algorithms, optimize market strategies, and engage in discriminatory pricing practices that further consolidate market power (Mou et al., 2023). These practices not only distort market competition but also undermine consumer autonomy and social trust. Regulatory efforts to address these challenges remain fragmented and reactive, often constrained by outdated legal categories that fail to recognize data as a foundational economic asset (Schäfer, 2023). As Larsson argues, competition policy must evolve beyond traditional price-based analysis to confront data-driven dominance and informational asymmetries (Larsson, 2021). Without a coherent legal architecture for data ownership, platform capitalism continues to reproduce structural inequalities, reinforcing corporate sovereignty while weakening democratic oversight.

Against this background, the present study adopts a narrative review and descriptive–analytical methodology to examine how data ownership is conceptualized, contested, and regulated within platform-based capitalism. By synthesizing interdisciplinary scholarship from law, political economy, and digital governance, this research seeks to clarify the structural contradictions underlying current legal frameworks and to identify normative principles for the design of digital property rights. The central research questions guiding this analysis are: how has data become the core asset of contemporary capitalism; why existing legal systems fail to provide coherent ownership regimes for data; and how alternative models of data property could rebalance power relations within digital markets. Through this inquiry, the study contributes to ongoing debates concerning digital sovereignty, market regulation, and the future of capitalism in the information age by proposing a conceptual framework that integrates economic realities with legal design.

2. Theoretical Foundations: Political Economy of Data and Digital Property

The intellectual foundations of contemporary debates over data ownership are deeply rooted in the historical evolution of property regimes within classical political economy. Early political economy developed its conceptual architecture around land, labor, and capital as the primary objects of ownership and control, each grounded in material scarcity, territorial boundaries, and enforceable exclusion. Property emerged as a legal institution designed to stabilize economic expectations, coordinate investment, and structure social relations of production. As economies industrialized, capital gradually eclipsed land as the dominant productive asset, while labor became commodified through wage relations and contractual exchange. Yet the rise of

the digital economy has fundamentally unsettled these categories by introducing information as a distinct and increasingly dominant factor of production. Information differs from traditional assets in that it is non-rivalrous, infinitely replicable, and socially generated through networked interaction, complicating conventional notions of exclusion and control (Schäfer, 2023). Institutional arrangements that once governed material assets now struggle to accommodate informational resources whose value arises from connectivity, scale, and computational processing rather than physical possession. The legal infrastructure of ownership, historically anchored in scarcity and rivalry, thus confronts a profound conceptual crisis as data becomes central to economic coordination (Bassan, 2021). The institutional foundations of ownership, including property law, contract law, and intellectual property regimes, are being incrementally extended to cover digital assets, yet these extensions often operate through legal fictions that obscure the unique ontological status of data as both economic input and social relation (Yang, 2023). This historical mismatch between inherited legal forms and emerging economic realities constitutes the theoretical starting point for understanding contemporary conflicts over digital property.

Within this transformed landscape, data increasingly functions as capital and as a primary instrument of accumulation under platform capitalism. Unlike industrial capital, which is invested in machinery and physical infrastructure, data capital is accumulated through continuous surveillance of social activity, user behavior, and transactional flows across digital ecosystems (Yablonsky, 2020). Platforms extract value by converting everyday human interaction into datasets that feed predictive algorithms, optimize market coordination, and generate informational asymmetries that can be monetized at scale (Huang, 2023). This form of accumulation operates through value extraction rather than value creation in the traditional productive sense, as platforms appropriate pre-existing social cooperation and transform it into proprietary informational assets (Kim, 2023). Data labor emerges within this context as a new category of economic activity in which users, workers, and consumers continuously generate data as an unintended byproduct of participation in digital life (Shevchuk, 2023). This labor is largely uncompensated, invisible, and structurally coerced by platform dependency, reflecting a deeper transformation of labor relations under digital capitalism. Schwartz demonstrates how platform governance frameworks institutionalize asymmetric power relations by imposing labor conditions that maximize data extraction while minimizing corporate responsibility (Schwartz & Weber, 2023). Simultaneously, algorithmic systems enable the extraction of algorithmic rent, a form of surplus derived from control over informational infrastructures and predictive capacities rather than from productive investment (Mou et al., 2023). Through these mechanisms, platform capitalism commodifies social life itself, enclosing digital commons that once operated as shared informational resources into proprietary systems governed by private contractual regimes (Pan et al., 2022). This enclosure process mirrors historical enclosures of land and labor, substituting digital infrastructure for physical territory while reproducing classical patterns of accumulation and dispossession.

Competing theoretical frameworks attempt to conceptualize data ownership within this new political economy, yet none provide a fully satisfactory solution. Liberal property theory seeks to extend individual ownership rights to data by treating information as a form of personal property or intellectual asset, thereby granting individuals transferable rights over their personal data (Hamza & Pradana, 2022). However, this approach struggles to accommodate the collective, relational, and networked nature of data generation, in which value emerges from aggregated interactions rather than isolated contributions (Schäfer, 2023). Moreover, liberal models risk intensifying commodification by reinforcing market logics that enable corporate acquisition of individual data rights through contractual bargaining under conditions of profound informational asymmetry (Дуравкін & Hafych, 2023). In contrast, commons-based and collective governance models conceptualize data as a shared resource requiring institutional stewardship rather than exclusive ownership. These models emphasize data trusts, cooperative governance structures, and public interest frameworks designed to balance innovation with social protection (Xu & Wang, 2022). Such approaches recognize information as a non-rival and relational resource whose value depends on open access, interoperability, and collaborative governance. Yet commons-based regimes face formidable challenges of enforcement, coordination, and scalability within global platform markets dominated by private actors with vast economic and technological resources (Larsson, 2021). The theoretical tension between individualistic property models and collective governance

paradigms reflects deeper contradictions in the political economy of data, where informational abundance collides with legal systems designed around scarcity and exclusivity.

Understanding data as a relational and non-rival resource further complicates conventional ownership doctrines. Data derives its economic value not from exclusive possession but from its integration into complex computational systems, predictive models, and network effects (Yablonsky, 2020). Information acquires significance only through aggregation, correlation, and algorithmic interpretation, making it inherently dependent on social and technical infrastructures beyond any single owner's control (Huang, 2023). This relational character undermines attempts to treat data as an object of simple private property while exposing the inadequacy of existing intellectual property frameworks that rely on originality, fixation, and authorial intent (Chrisnando et al., 2023). Even in emerging legal experiments surrounding non-fungible tokens and digital assets, the assignment of ownership remains largely symbolic, detached from the broader informational ecosystems in which value is generated (Ulfanora & Almaududi, 2023). Consequently, theoretical approaches to data ownership must grapple with the fundamental mismatch between the ontology of information and the institutional architecture of property law.

These conceptual struggles unfold within broader dynamics of power, sovereignty, and digital enclosure that define the political economy of platform capitalism. Platforms increasingly exercise corporate sovereignty by establishing private regulatory regimes that govern market access, labor relations, content moderation, and data flows across global jurisdictions (Bassan, 2021). Through proprietary algorithms and contractual infrastructures, platforms effectively legislate economic behavior while evading traditional forms of democratic accountability. This private governance structure enables data colonialism, whereby global technology firms extract informational resources from peripheral regions and populations, concentrating economic benefits in core markets while externalizing social and regulatory costs (Shevchuk, 2023). Regulatory capture further entrenches platform dominance, as corporate influence shapes policy frameworks that prioritize innovation and growth over competition and social protection (Larsson, 2021). In many jurisdictions, states lack the technical expertise and institutional capacity to effectively regulate complex data ecosystems, allowing platforms to dictate the terms of digital development (He et al., 2022). The resulting global inequality in data governance reproduces historical patterns of economic dependency and technological asymmetry, positioning data as a new terrain of geopolitical competition (Wang et al., 2023).

Monopoly formation under digital enclosure represents the structural outcome of these power dynamics. Platforms consolidate market dominance by leveraging network effects, data accumulation, and algorithmic optimization to erect insurmountable barriers to entry (Pan et al., 2022). Data monopolies do not merely control markets; they shape knowledge production, consumer behavior, and political discourse by governing informational flows at planetary scale (Neumann, 2023). The fusion of corporate sovereignty, informational dominance, and regulatory weakness creates a self-reinforcing cycle in which economic power translates into political influence, which in turn stabilizes market concentration. As Schäfer argues, effective governance of the digital economy requires a fundamental rethinking of property, competition, and regulatory frameworks to address the unique characteristics of data-driven markets (Schäfer, 2023). Without such transformation, platform capitalism risks institutionalizing a new form of digital feudalism in which informational resources are enclosed by corporate actors, while individuals and societies remain structurally dependent on private infrastructures they do not control.

Together, these theoretical foundations illuminate why data ownership cannot be reduced to technical legal adjustments but must be understood as a central battleground of contemporary political economy. The evolution of property regimes, the emergence of data as capital, the contradictions of competing ownership theories, and the consolidation of power through digital enclosure reveal the systemic nature of the problem. Data ownership is not merely about allocating rights over information but about determining who governs the economic and social infrastructures of the digital age.

3. Existing Legal Models of Data Ownership and Their Limits

Contemporary legal systems approach data ownership through a fragmented assemblage of doctrinal categories that reflect the historical evolution of property law rather than the structural realities of the digital economy. At present, data is variously classified as a personal right, an intellectual property interest, and a contractual asset, with each classification capturing only partial dimensions of its economic and social function. In data protection regimes, particularly within European legal

frameworks, data is treated primarily as an extension of personal autonomy, grounded in fundamental rights of privacy and informational self-determination (*Дуравкін & Hafych, 2023*). This approach conceptualizes personal data as intrinsically linked to individual dignity and identity, requiring consent and proportionality in its processing. However, such frameworks struggle to address non-personal data, derivative data, and aggregated datasets that drive platform economies (Schäfer, 2023). Intellectual property regimes, meanwhile, attempt to assimilate data into copyright, database rights, and trade secret protections, yet these doctrines depend on originality, creativity, and secrecy, criteria that rarely align with the automated and mass-produced character of platform data (Hamza & Pradana, 2022). Contract law further complicates the picture by enabling platforms to assert extensive control over data through private agreements embedded in terms-of-service regimes (Bassan, 2021). These contracts operate as de facto property instruments, allocating data rights through adhesion contracts under conditions of profound information asymmetry (Yang, 2023). The result is a deeply fragmented legal landscape in which data's classification depends more on institutional convenience than conceptual coherence, producing regulatory gaps that platforms strategically exploit.

Comparative analysis reveals significant divergence in regulatory approaches to data ownership and governance across jurisdictions, reflecting distinct political and economic priorities. European models emphasize rights-based data protection and regulatory oversight, seeking to constrain corporate power through consent requirements, data minimization, and accountability mechanisms (Schäfer, 2023). This regulatory philosophy frames data as a matter of public interest and individual autonomy, embedding data governance within constitutional and human rights traditions (Mast & Ollig, 2023). Yet even within Europe, the absence of explicit ownership constructs leaves unresolved questions about control over non-personal and industrial data generated within platform ecosystems (Xu & Wang, 2022). By contrast, the United States adopts a predominantly market-driven approach that treats data as a commercial asset governed by contract and competition law, prioritizing innovation and corporate flexibility over individual rights protection (Larsson, 2021). This regime permits extensive commodification of data while relying on post hoc regulatory interventions to address market failures, often too late to prevent monopolistic entrenchment (Pan et al., 2022). Emerging regulatory experiments attempt to bridge these paradigms through innovative institutional designs such as data trusts, data cooperatives, and shared data governance frameworks intended to rebalance power between platforms, users, and states (Xu & Wang, 2022). However, these models remain largely experimental and face substantial obstacles in scaling within global platform markets dominated by entrenched corporate actors (Huang, 2023). Together, these comparative approaches illustrate the absence of a unified international framework capable of governing data ownership in accordance with its economic centrality.

The structural deficiencies of existing legal frameworks become increasingly apparent when examined against the economic realities of platform capitalism. No current regime provides a coherent architecture of data ownership that aligns legal rights with the mechanisms of data-driven accumulation (Kim, 2023). Legal doctrines continue to operate on assumptions of scarcity, rivalry, and discrete ownership, while digital markets function through abundance, replication, and network dependency (Yablonsky, 2020). This mismatch produces regulatory incoherence in which economic control is exercised through technological architecture and market dominance rather than formal legal entitlement (Shevchuk, 2023). The absence of clear ownership structures allows platforms to consolidate de facto control over data while externalizing legal responsibility for its social and economic consequences (Wang et al., 2023). User dependency intensifies this imbalance, as participation in digital life becomes structurally inseparable from acceptance of platform governance regimes (Schwartz & Weber, 2023). Consent-based frameworks further exacerbate inequality by creating the illusion of voluntary participation while obscuring systemic coercion embedded in market dominance and network effects (*Дуравкін & Hafych, 2023*). Asymmetrical bargaining conditions transform consent into a procedural formality rather than a substantive safeguard, enabling the continued extraction and commodification of user data at unprecedented scale (Shadmy, 2023). These deficiencies reveal that existing legal tools function more as instruments of legitimation than as effective mechanisms of governance.

Platform governance further destabilizes traditional legal boundaries through extensive reliance on private ordering and contractual self-regulation. Terms-of-service agreements operate as comprehensive regulatory codes that determine data rights,

content governance, dispute resolution, and market participation across transnational digital spaces (Bassan, 2021). These private legal regimes displace public law by embedding normative rules within proprietary infrastructures, effectively privatizing governance functions historically reserved for the state (Neumann, 2023). Platforms engage in legal arbitrage by exploiting jurisdictional fragmentation, structuring operations across multiple legal systems to minimize regulatory constraints and maximize strategic flexibility (He et al., 2022). This jurisdictional competition weakens national regulatory capacity and enables platforms to evade enforcement through complex corporate structures and cross-border data flows (Wang et al., 2023). Enforcement challenges in transnational data markets further undermine legal accountability, as regulatory agencies confront technical complexity, resource limitations, and asymmetries of information in their efforts to monitor platform practices (Huang, 2023). The result is a regulatory vacuum in which platforms effectively govern themselves while shaping the economic and social conditions of digital life.

The cumulative effect of these dynamics is the institutionalization of data governance regimes that privilege corporate accumulation over social welfare, innovation, and democratic accountability. Existing legal models remain structurally incapable of confronting the concentration of power generated by data-driven markets, as they operate within conceptual frameworks inherited from pre-digital economies (Schäfer, 2023). Without a coherent reconfiguration of property law, competition policy, and data governance, the legal system continues to lag behind economic transformation, legitimizing inequalities rather than correcting them (Larsson, 2021). The limits of current legal models thus underscore the necessity of rethinking data ownership not as a peripheral regulatory concern but as a foundational question of economic order in platform-based capitalism.

4. Designing Digital Property Rights for Platform-Based Capitalism

The design of digital property rights for platform-based capitalism must begin from a normative framework that recognizes data as both an economic resource and a foundational element of social life. Unlike traditional commodities, data is generated through collective participation in digital environments, embedding individual contributions within networked processes of social cooperation and technological mediation. Consequently, the distribution of data-generated value raises fundamental questions of economic justice and political legitimacy. Current regimes permit platforms to appropriate the overwhelming majority of this value while externalizing social costs onto users, workers, and communities (Shadmy, 2023). This asymmetry undermines both market fairness and democratic accountability, reinforcing structural inequalities within digital markets (Shevchuk, 2023). Normative design principles for data property must therefore prioritize fair value distribution, ensuring that the economic benefits derived from data are not monopolized by platform owners but shared among those who generate and sustain digital ecosystems (Huang, 2023). Protecting individual autonomy requires moving beyond procedural consent toward substantive control over how data is collected, processed, and monetized, a shift increasingly recognized within data governance scholarship (Дуравкін & Hafych, 2023). At the same time, collective interests demand institutional arrangements that safeguard public goods such as privacy, market openness, and informational pluralism against the corrosive effects of unchecked commodification (Schäfer, 2023). Balancing market efficiency with democratic accountability thus emerges as a central normative challenge, as legal systems must reconcile the innovative potential of data-driven markets with the preservation of social trust and political legitimacy (Larsson, 2021).

Alternative ownership architectures offer distinct pathways for operationalizing these normative commitments within legal and institutional frameworks. Individual data rights frameworks extend personal property and personality rights to informational assets, granting individuals formal entitlements over data produced through their digital activities (Hamza & Pradana, 2022). While such models enhance personal autonomy and transparency, they risk entrenching commodification by facilitating market transactions in personal data under conditions of extreme information asymmetry (Yang, 2023). Collective data governance models, by contrast, conceptualize data as a shared resource requiring stewardship rather than exclusive ownership, promoting cooperative decision-making and long-term public interest considerations (Xu & Wang, 2022). These models reflect the relational and non-rival nature of data, acknowledging that its value emerges through aggregation and social

interaction rather than isolated individual contribution (Yablonsky, 2020). Public-interest data infrastructures further institutionalize this approach by establishing legally protected domains for data sharing, innovation, and public service delivery that are insulated from purely commercial exploitation (He et al., 2022). Hybrid property models attempt to synthesize individual and collective interests through layered rights structures that differentiate between access, control, use, and revenue entitlements, enabling more flexible and context-sensitive governance (Schäfer, 2023). Such architectures recognize that data governance must operate across multiple levels of social organization, from individual agency to societal coordination.

Translating these ownership architectures into functional governance requires robust institutional and regulatory instruments capable of confronting the structural power of platform capitalism. Data trusts have emerged as one such mechanism, establishing fiduciary entities tasked with managing data in accordance with predefined public and private interests, thereby insulating data governance from direct corporate control (Xu & Wang, 2022). Data unions and cooperative organizations seek to collectivize bargaining power by enabling individuals to negotiate data usage terms collectively, counterbalancing platform dominance through coordinated representation (Shadmy, 2023). Data commons initiatives promote open access and shared governance models that prioritize innovation, transparency, and social benefit over proprietary enclosure (Pan et al., 2022). These institutional innovations complement traditional regulatory tools such as competition law, which must evolve to address data-driven market concentration and algorithmic dominance (Larsson, 2021). Structural separation between data collection, processing, and commercial exploitation may further mitigate conflicts of interest and reduce incentives for monopolistic behavior (Kim, 2023). Interoperability mandates and data portability rights empower users and smaller firms by reducing switching costs and enabling competitive entry, weakening the lock-in effects that entrench platform power (Schäfer, 2023). Together, these instruments constitute a multi-layered regulatory architecture aimed at redistributing economic power and restoring competitive balance within digital markets.

The political economy consequences of these legal design choices are profound, as data governance frameworks directly shape the distribution of power, resources, and opportunities in the digital economy. By reallocating control over data from platforms to users, communities, and public institutions, alternative property regimes can disrupt entrenched hierarchies and democratize access to informational resources (Shevchuk, 2023). Such redistribution has significant implications for innovation, as more open and competitive data environments foster experimentation, knowledge diffusion, and technological diversity (Yablonsky, 2020). At the same time, robust data governance enhances social welfare by mitigating privacy harms, reducing discriminatory practices, and strengthening public trust in digital systems (Wang et al., 2023). These transformations require reconfiguring relationships between the state, market, and citizen, redefining governance roles in ways that transcend traditional regulatory paradigms (Bassan, 2021). States must shift from reactive oversight toward proactive institutional design, embedding democratic values within the technical architecture of digital markets (He et al., 2022). Markets must internalize social responsibilities that reflect the collective origins and consequences of data-driven value creation (Huang, 2023). Citizens, in turn, must be empowered not merely as consumers but as co-governors of digital infrastructures that increasingly shape economic and political life (Shadmy, 2023). The legal design of digital property rights thus becomes a central mechanism for steering the future trajectory of platform-based capitalism toward greater equity, resilience, and democratic legitimacy.

5. Conclusion

The preceding analysis has demonstrated that data ownership has emerged as one of the most consequential institutional questions of the digital age, standing at the intersection of law, political economy, technology, and democratic governance. Platform-based capitalism has reorganized economic activity around the extraction, processing, and monetization of data, transforming information into the primary asset of accumulation and power. Yet the legal frameworks governing this transformation remain deeply misaligned with its economic realities. Traditional property regimes, designed for material scarcity and physical exclusion, are structurally incapable of governing resources that are non-rival, relational, and socially generated. This misalignment has allowed digital platforms to consolidate unprecedented control over markets, labor relations,

and informational infrastructures, producing a new configuration of economic dominance that existing legal doctrines can neither fully conceptualize nor effectively regulate.

At the core of this crisis lies the unresolved contradiction between data as commodity and data as social infrastructure. Data is simultaneously a source of immense private profit and a foundational resource for social coordination, democratic participation, and public welfare. Current legal systems have responded to this contradiction with fragmented and inconsistent classifications, oscillating between personal rights, intellectual property, and contractual entitlements without articulating a coherent ownership architecture. The result has been the institutionalization of private control through platform governance regimes that rely on technological design and contractual power rather than transparent legal accountability. Consent-based models have proven insufficient, as they obscure structural coercion behind formal procedural compliance, while competition law has struggled to address informational monopolies whose power derives from scale, network effects, and algorithmic dominance rather than conventional pricing strategies.

The political economy of data reveals that these legal failures are not merely technical shortcomings but reflections of deeper power asymmetries embedded in digital markets. Platforms operate as private governors of global economic spaces, exercising corporate sovereignty over data flows, labor conditions, and market access. This corporate power is reinforced by regulatory fragmentation, jurisdictional competition, and enforcement deficits that allow platforms to engage in legal arbitrage while entrenching their dominance. The resulting concentration of informational control reproduces patterns of inequality both within and across societies, giving rise to new forms of dependency and exclusion that mirror earlier historical processes of enclosure and accumulation.

Reconstructing data ownership for the digital political economy therefore requires more than incremental legal reform. It demands a fundamental rethinking of how property, governance, and economic value are conceptualized in an information-driven society. Normative principles must shift from narrow notions of efficiency and innovation toward a broader commitment to fairness, autonomy, collective welfare, and democratic accountability. Legal design must recognize that data is not simply an asset to be owned but a social resource that structures the conditions of economic participation and political agency. Ownership regimes must therefore be designed to distribute value more equitably, protect individual dignity, and preserve the integrity of shared digital environments.

Alternative ownership architectures provide promising pathways for this transformation. Collective governance models, public-interest data infrastructures, and hybrid property frameworks acknowledge the relational nature of data and the collective processes through which its value is created. Institutional innovations such as data trusts, data unions, and data commons offer mechanisms for translating these principles into operational governance structures capable of counterbalancing platform power. Complementary regulatory instruments, including strengthened competition law, structural separation, interoperability requirements, and data portability rights, can further dismantle the structural advantages that currently entrench monopolistic dominance. Together, these reforms offer the possibility of reconfiguring digital markets in ways that foster competition, innovation, and social trust while limiting the excesses of data-driven accumulation.

The political economy consequences of these design choices are far-reaching. Redistributing control over data reshapes the distribution of power in digital markets, opening space for new forms of economic participation and institutional experimentation. More open and competitive data environments encourage technological diversity and knowledge diffusion, supporting long-term innovation and resilience. Stronger governance frameworks enhance social welfare by reducing privacy harms, mitigating discriminatory practices, and restoring public confidence in digital systems. Perhaps most importantly, a reimagined data ownership regime transforms the relationship between state, market, and citizen. The state evolves from a reactive regulator into an architect of institutional design; markets internalize social responsibilities rooted in the collective origins of data; and citizens emerge not merely as consumers but as co-governors of the infrastructures that increasingly define modern life.

Ultimately, the future of platform-based capitalism will be shaped by how societies choose to govern data. If current trajectories persist, digital economies risk solidifying into systems of informational feudalism in which a small number of corporate actors exercise enduring control over the resources that structure social existence. If, however, data ownership is reconstructed as a foundational component of democratic political economy, it can become a lever for building more just, inclusive, and accountable digital societies. The legal design of digital property rights thus stands not at the margins of

contemporary governance, but at its very center, determining whether the digital age deepens existing inequalities or opens new possibilities for collective prosperity and democratic renewal.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

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