

# A Comparative Analysis of Digital Economy Policies in China and the European Union: Navigating Convergences and Regulatory Divergences

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This paper provides a comprehensive comparative analysis of the digital economy policies in China and the European Union (EU). While both global actors strategically converge on prioritizing robust digital infrastructure, accelerating the twin (green and digital) transition, and legally recognizing data as a core macroeconomic asset, their underlying regulatory philosophies diverge fundamentally. China employs a state-led, sovereign-centric approach that harnesses its vast market scale to achieve technological self-reliance and maximize data utility for national security. Conversely, the EU champions a human-centric, rights-based paradigm, actively establishing preemptive global standards for data privacy, platform accountability, and artificial intelligence (AI) governance to protect democratic values. Understanding these divergent trajectories is increasingly crucial for navigating the fragmented landscape of global digital governance, mitigating cross-border data frictions, and anticipating the broader geopolitical dynamics of Sino-EU relations.

*Keywords:* digital economy, digital governance, comparative policy analysis, European Union, China

## Introduction

The global economy is currently undergoing a profound and irreversible structural transformation driven by the rapid proliferation of digital technologies. This epochal shift has created urgent, highly complex governance challenges concerning national data security, the monopolization of digital markets by transnational tech conglomerates, and the systemic erosion of individual privacy. Consequently, governments worldwide are rapidly abandoning reactive, laissez-faire approaches in favor of constructing comprehensive, proactive regulatory architectures. In this emerging multipolar digital order, the People's Republic of China and the European Union (EU) stand out as two of the most consequential regulatory actors, each pioneering models that present alternatives to the market-driven approach of the United States.

China leverages its massive domestic consumer base and highly effective state-directed industrial policies to cultivate globally competitive technologies, explicitly aiming to transform itself from a large internet market into an impenetrable "cyber superpower." Simultaneously, the EU, despite lacking domestic technological behemoths of comparable scale, exercises unparalleled normative influence. It pioneers a robust, fundamentally

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rights-based regulatory framework that frequently externalizes its strict domestic standards across global supply chains—a powerful legal and economic phenomenon academically recognized as the “Brussels Effect” (Bradford, 2020).

Despite their immense global significance, existing literature often examines the technological rise of these actors in theoretical isolation. There remains a critical research gap regarding systematic, qualitative comparative analyses of their contemporary policy intersections. This gap is particularly evident concerning post-2020 legislative developments, such as the EU’s Digital Markets Act and Artificial Intelligence (AI) Act, juxtaposed directly against China’s Data Security Law and its sweeping algorithmic regulations. To bridge this scholarly gap, this paper employs a qualitative comparative policy analysis. The primary objective is to delineate their structural convergences in macroscopic strategic goals and their profound philosophical divergences in microscopic regulatory execution, thereby critically evaluating the implications for the future architecture of global digital governance.

### **Conceptual Framework and Policy Context**

Before engaging in a granular comparison of specific legislative tools, it is essential to establish how China and the EU ontologically conceptualize the very nature of the digital economy. China views digital development predominantly through an industrial, developmental, and deeply sovereign lens. Official Chinese macroeconomic frameworks heavily emphasize the dual pillars of “digital industrialization” (fostering the ICT sector itself) and “industrial digitalization” (upgrading traditional manufacturing), treating digital networks and data fundamentally as national economic assets. Historically characterized by a highly tolerant “development-first, regulate-later” approach that allowed domestic tech giants to achieve unprecedented scale, China’s digital policy has now deliberately evolved into a highly centralized, security-oriented national strategy. The absolute cornerstone of this modern paradigm is the 14th Five-Year Plan for Digital Economy Development (State Council of the People’s Republic of China, 2021). This authoritative blueprint mandates the deep integration of digital technologies with the real economy through massive, state-directed infrastructure initiatives, signaling a shift toward technological self-reliance to counter external geopolitical containment.

Conversely, the EU defines the digital economy almost exclusively through the prism of internal market integration, fair competition, and the staunch, constitutional protection of fundamental human rights. The EU insists on a strict “human-centric” paradigm, demanding that corporate profit motives and technological progress remain unequivocally subordinated to democratic values and individual agency. The EU’s policy trajectory has consequently transitioned from early, fragmented attempts at purely economic harmonization to a robust, defensive pursuit of strategic “digital sovereignty.” This shift is largely aimed at reducing critical infrastructural and software dependencies on foreign tech monopolies, predominantly from the US and China. This contemporary ambition is encapsulated in the “Digital Decade” policy program, which sets binding technological targets for Member States (European Commission, 2021). Crucially, the EU intrinsically links its digital strategy with its urgent environmental goals, seeking to establish a global normative standard for ethical, sustainable, and highly regulated technological deployment.

### **Convergences: Shared Objectives in Digital Governance**

Despite their profound philosophical and ideological differences, a macro-level analysis reveals that China and the EU share substantial, highly pragmatic strategic convergences. Both actors unequivocally recognize that

mastering the digital transition is not merely an economic opportunity, but an absolute existential imperative for sustaining long-term economic growth and maintaining global geopolitical relevance.

### **Strategic Promotion of Digital Infrastructure and Innovation**

A primary area of convergence is the rigorous prioritization of robust, next-generation digital infrastructure as the foundational backbone for 21st-century economic competitiveness. Both actors have mobilized massive institutional and financial resources to accelerate the deployment of advanced networks, localized cloud computing facilities, and foundational deep technologies. In China, this ambition is crystallized in the state-led “New Infrastructure” initiative, which systematically directs trillions of RMB in investment into 5G networks, hyper-scale data centers, and industrial internet platforms designed to upgrade the manufacturing base. Similarly, the EU addresses its historical infrastructure deficiencies through legally binding deployment targets that demand universal gigabit connectivity across the continent. Furthermore, acutely recognizing the immense geopolitical vulnerability of hardware supply chains exposed by recent global crises, both actors have introduced aggressive, interventionist industrial policies to actively bolster domestic semiconductor manufacturing capabilities, moving away from pure free-trade reliance.

### **The Intersection of Digital and Green Transitions (Twin Transition)**

Another highly significant structural convergence is the explicit, institutional linkage of the digital economy with urgent imperatives of environmental sustainability. The EU pioneered the conceptual framework of the “Twin Transition,” emphasizing that the digital transformation must be leveraged as a primary enabler to achieve the strict climate-neutrality goals of the European Green Deal. China, facing its own severe ecological challenges, has increasingly and forcefully aligned with this dual-track paradigm, driven heavily by its national “Dual Carbon” commitments (reaching peak emissions before 2030 and neutrality by 2060). Consequently, the Chinese government now strictly mandates that the rapid expansion of digital infrastructure must incorporate advanced energy-efficient practices. For both global actors, digital industrial policy is no longer developed in isolation. It is structurally and legally intertwined with aggressive climate action.

### **Recognition of Data as a Critical Factor of Production**

Finally, China and the EU converge strongly on the fundamental macroeconomic premise that data constitutes the most critical strategic resource of the modern era. Both view data not merely as a passive byproduct of online interaction, but as a core and extractable economic asset that must be actively harnessed, managed, and regulated to drive AI innovation and industrial efficiency. In a landmark ideological shift, the Chinese government has officially classified data as a new, distinct “factor of production,” formally placing it alongside traditional inputs like land, labor, and capital to actively cultivate a state-regulated national data trading market (CPC Central Committee & State Council, 2020). Concurrently, the EU seeks to legislate and create a genuine “single European data space” where high-quality industrial data can flow freely across sectors to benefit European businesses and researchers. Both regions are heavily investing in constructing the legal and technical frameworks necessary to safely unlock data’s immense economic utility.

## **Divergences: Regulatory Philosophies and Frameworks**

While China and the EU share parallel strategic objectives, the actual operationalization and legal execution of their digital policies reveal profound divergences. These differences are deeply rooted in their contrasting legal

traditions, differing socio-political systems, and fundamentally opposed views on the role of the state versus the individual.

### **Core Regulatory Philosophy: Human-Centric vs. State-Led Development**

The EU's regulatory paradigm is fundamentally normative and highly legalistic, treating digital governance as a direct extension of fundamental human rights protection. Consequently, the EU systematically adopts a precautionary principle, prioritizing the preemptive mitigation of societal, democratic, and individual harms over unfettered, disruptive technological deployment. In stark contrast, China's digital governance philosophy is deeply instrumental, pragmatic, and overwhelmingly state-centric. China strictly and actively balances domestic economic development with paramount, non-negotiable concerns for national security and socio-political stability. Where the EU seeks to aggressively empower the individual consumer against monopolistic corporate power through digital constitutionalism, the Chinese state acts simultaneously as the primary investor in digital innovation and its ultimate, unquestionable arbiter, forcefully aligning technological expansion with broader national strategic objectives.

### **Data Governance and Privacy: Individual Rights vs. National Sovereignty**

In the highly contested realm of data governance, the EU's General Data Protection Regulation (GDPR) exemplifies a globally influential, rights-based approach. It grants individuals extensive, legally enforceable control over their personal data and imposes exceptionally stringent global compliance obligations on data controllers (European Parliament and Council, 2016). Conversely, while China's domestic privacy frameworks ostensibly protect consumers from corporate data abuse, the underlying logic fundamentally diverges. China seamlessly integrates consumer privacy rules with its overarching Data Security Law, forming an impenetrable legal fortress that prioritizes national sovereignty and regime security above all else (Standing Committee of the National People's Congress, 2021). Thus, while the EU regulates data primarily to safeguard the inalienable rights of the individual, China regulates data primarily to safeguard the stability of the state, utilizing strict data localization and rigorous cross-border transfer reviews to maintain absolute jurisdictional control over its cyberspace.

### **Platform Regulation and Antitrust: Market Fairness vs. Strategic Capital Control**

Addressing the unprecedented market dominance of "Big Tech" conglomerates highlights another sharp point of philosophical divergence. Frustrated by slow, traditional litigation, the EU has aggressively shifted towards robust ex-ante regulation through its Digital Markets Act. The primary, explicit objective here is to preemptively ensure market contestability, prevent self-preferencing by "gatekeeper" platforms, and safeguard consumer choice against anti-competitive practices (European Parliament and Council, 2022). In direct contrast, China's recent, sweeping anti-monopoly enforcement campaigns serve distinctly different political economy objectives. While the EU aims purely to level the economic playing field for smaller competitors, China strategically utilizes antitrust measures to forcefully curb the "disorderly expansion of capital." By heavily penalizing monopolistic behavior in consumer internet sectors (like gaming and e-commerce), the Chinese state actively redirects tech conglomerates' immense capital investments toward strategically vital, heavily sanctioned "hard tech" sectors, such as advanced semiconductors and enterprise software.

### **AI Governance: Ex-Ante Ethics vs. Dynamic Information Control**

This regulatory divergence is perhaps most consequential and visible in the nascent, rapidly evolving field of AI. The EU has enacted the incredibly comprehensive AI Act, utilizing a rigid, horizontal classification system

that mandates rigorous conformity assessments, transparency requirements, and prioritizes ethical safety and fundamental rights before any high-risk AI system can enter the market (European Parliament, 2024). This overarching, precautionary framework contrasts sharply with China's highly agile, vertical, and iterative regulatory approach. Rather than drafting a single, monolithic AI law that might stifle an industry critical to national survival, China rapidly rolls out highly targeted, specific regulations addressing distinct applications—such as deep synthesis, algorithmic recommendations, or generative AI—precisely as they commercialize. While the EU prioritizes mitigating ethical and democratic risks, China's dynamic approach actively seeks to balance rapid AI industrialization with strict, uncompromising sovereign controls over information dissemination, ensuring that all AI-generated outputs strictly align with core socialist values and state ideology.

### **Challenges in Global Digital Governance and Possibilities for Sino-EU Cooperation**

The profoundly divergent regulatory trajectories of China and the EU do not exist in a vacuum. They exert significant external effects, primarily escalating severe friction in global cross-border data flows. Both jurisdictions have instituted highly stringent, philosophically opposed legal mechanisms governing data exports. For multinational corporations tasked with navigating both the European and Chinese markets simultaneously, these dense, contradictory requirements drastically increase operational compliance costs. This growing regulatory fragmentation severely threatens to bifurcate global digital supply chains, increasingly compelling multinational companies to adopt highly inefficient, entirely localized data architectures (such as building physically separated data centers in Europe and China) simply to mitigate crippling legal risks.

At a broader macro-geopolitical level, these divergent policies vividly reflect a mutual, structural pursuit of “digital sovereignty”. For the EU, this defensive posture entails reducing critical structural dependencies on foreign technology providers to protect democratic institutions and long-term economic competitiveness. Conversely, for China, it represents the absolute imperative to secure supply chain resilience against external geopolitical containment strategies and to maintain absolute jurisdictional control over its domestic internet. This mutual, intense drive for technological autonomy inevitably exacerbates global regulatory competition, contributing to the “splinternet” phenomenon and the fragmentation of universally accepted digital norms.

Despite these deep ideological clashes and structural frictions, the sheer economic scale and interdependence of the Sino-EU bilateral relationship necessitate sustained, highly pragmatic engagement. Complete, zero-sum technological decoupling is economically unviable and would be devastating to global innovation ecosystems. Therefore, both actors share a vested, mutual interest in advancing baseline, predictable digital trade rules at multilateral forums like the World Trade Organization (WTO). Furthermore, the intersection of the digital and green transitions presents a highly fertile, politically non-sensitive ground for vital collaboration. Joint, technical efforts in establishing international standards for sustainable digital infrastructure, or standardized methodologies for measuring the carbon footprint of ICT products, can serve as essential confidence-building measures, fostering critical technological interoperability while fully respecting each actor's core sovereign boundaries.

### **Conclusions**

In conclusion, this comprehensive comparative analysis reveals a defining, dualistic characteristic of contemporary Sino-EU digital relations: macro-scopic strategic convergence coupled inextricably with fundamental micro-scopic regulatory divergence. Both global actors unequivocally recognize the digital economy, underpinned by massive infrastructure investment and data capitalization, as the absolute paramount

engine for future economic and geopolitical competitiveness. However, their underlying philosophical approaches to executing digital governance clash profoundly. China employs a highly instrumental, state-led, and sovereign-centric model that deliberately harnesses its massive market scale to achieve rapid technological self-reliance and fortify national security. Conversely, the EU fiercely champions a normative, human-centric, and rights-based paradigm, effectively leveraging its unmatched regulatory market power to establish preemptive, risk-based global standards.

Given these deeply rooted, irreconcilable institutional differences, complete regulatory alignment between Beijing and Brussels is highly improbable. Consequently, global policymakers and multinational enterprises must abandon the unrealistic expectation of regulatory harmony, just as they must avoid the devastating zero-sum trap of total technological decoupling. Instead, diplomatic and economic engagement should strictly prioritize a strategy of pragmatic coexistence. This entails focusing intensively on establishing technical interoperability mechanisms and pursuing collaborative standard-setting in non-sensitive and global-commons domains. While this study provides a robust foundational comparative framework, it is inherently limited by the nascent implementation stage of major contemporary regulations, such as the AI Act. Future academic research must empirically assess the concrete, long-term market impacts of these disparate regimes and increasingly integrate the market-driven, common-law approach of the United States to construct a truly comprehensive trilateral analysis of the world's leading digital powers.

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