

## THE COMMAND ECONOMY IN THE DIGITAL AGE OF 2026: HOW AUTHORITARIAN STATES ADAPT TO AI AND GLOBAL SANCTIONS

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### Abstract

This article analyses the evolution of the command economy system in the digital era of 2026, focusing on the adaptation of authoritarian states to artificial intelligence (AI) and global sanctions. Through a qualitative-descriptive approach based on library research, the study identifies how AI transforms traditional centralised planning into an adaptive model that utilises real-time data, algorithmic predictions, and digital sovereignty to overcome the limitations of classical information systems. Case studies of China (*dual circulation*, e-CNY) and Russia (alternative payment systems) demonstrate the application of AI in logistics optimisation, CBDCs for sanctions evasion, and microeconomic surveillance that strengthens resilience against Western pressure. Findings from this research reveal the paradox of techno-authoritarianism: whilst technically efficient, these models face risks of brain drain, fragmentation of global innovation, and cyber vulnerabilities that could undermine long-term sustainability. Geopolitically, AI-driven command economies contribute to a digital multi-polar world, eroding the effectiveness of traditional sanctions and challenging liberal economic hegemony. The article concludes that this adaptation is not merely a matter of survival, but an offensive strategy demanding a global response in the form of AI regulation and international technology governance dialogue to maintain a balance between economic efficiency and democratic values.

**Keywords:** command economy, artificial intelligence, digital sovereignty, global sanctions, techno-authoritarianism, CBDC, dual circulation, economic resilience.

### Introduction

Over the past two decades, digital transformation has given rise to a new paradigm in national economic management, particularly in countries with authoritarian political systems. Advances in artificial intelligence (AI) technology offer far more sophisticated tools for economic surveillance and planning than the manual mechanisms of the 20<sup>th</sup> century (McAfee & Brynjolfsson, 2017). The integration of AI into economic systems enables states to process macroeconomic data and consumer behaviour in real time, making centralised control more efficient and adaptive.

Meanwhile, the resurgence of command economy models in some countries reflects an ideological shift from economic liberalisation towards strategic *autonomy*. This aligns with rising geopolitical tensions and economic sanctions, which are driving

authoritarian states to build more closed and self-reliant systems (Naughton, 2021) . In this context, AI emerges as a key enabler linking political ambitions with precise economic control.

Traditional command economies, such as those implemented by the Soviet Union in the 20<sup>th</sup> century, are generally characterised by centralised planning and state control over the distribution of resources (Limonta-Volkova, 2000). However, such systems are often considered inefficient due to information constraints and slow responses to market dynamics. The digital age is challenging this assumption by providing *big data* infrastructure that enables states to plan based on algorithms, rather than merely bureaucratic intuition (Acemoglu & Restrepo, 2020) .

Amid the accelerating globalisation of data, authoritarian states are seeking to combine the power of AI with the principle of ‘digital sovereignty’ to build an economic system resilient to external pressures. This concept of digital sovereignty emphasises full ownership of technological infrastructure, algorithms, and national communication networks (Pierucci, 2025) . Through this approach, states can control the flow of economic information whilst blocking foreign influence that could potentially undermine national stability.

The application of AI also strengthens a state’s capacity to manage the distribution of strategic resources, particularly in the context of economic warfare or international sanctions. For instance, through predictive analytics, governments can prioritise vital sectors and optimise logistical resilience (Park & Shin, 2025a) . Thus, AI is no longer merely a technological tool, but has become a political instrument for safeguarding economic sovereignty. Global economic dependence on Western technology has led many authoritarian states to pursue alternative paths through the development of domestic technology and regional digital alliances. For instance, the technological partnership between Russia and China reflects a strategic move to build a digital ecosystem independent of the dollar-based international financial system (Hallinan et al., 2021) . This digital-based command economy is not merely a form of adaptation, but also a structural resistance to liberal economic dominance.

Beyond its economic functions, AI also expands the dimensions of social control within authoritarian systems. Algorithms are used to monitor citizens’ activities, determine priorities for economic distribution, and even detect potential political instability (Zuboff, 2023) . This dual impact demonstrates how digital technology reinforces the symbiosis between political power and an integrated economic system. However, the effectiveness of AI-based command economies is not always positive. Reliance on highly centralised digital infrastructure creates new vulnerabilities, such as the risk of data manipulation, cyberattacks, and algorithmic bias (Eubanks, 2018) . In a geopolitical context, nations that isolate themselves technologically also risk missing out on innovations stemming from international collaboration (Porter, 2014) .

The emergence of central bank digital currencies (CBDCs) is a concrete example of AI-driven command economy policies. CBDCs enable states to regulate the circulation of money, monitor public transactions, and control cross-border capital flows in real time (Auer et al., 2023). Some countries, such as China, have utilised the e-CNY to test a hybrid economic model combining strict control with digital efficiency. Conversely, liberal nations face moral and strategic dilemmas in responding to the *AI-driven command-economy* model. On the one hand, such innovations demonstrate technological efficiency, yet on the other, they threaten the principles of economic democracy rooted in openness and market competition (Park & Shin, 2025b). A shift in the balance between market freedom and state oversight could shape an increasingly fragmented global economic order.

This phenomenon is also driving changes in the theory of international political economy. Whereas the global economy was previously dominated by the neoliberal paradigm, a trend towards *'techno-authoritarian capitalism'* is now emerging, in which political and technological control operate simultaneously to shape the economic system (Kaplan, 2009). Under the influence of AI, the boundary between economic efficiency and ideological hegemony is becoming increasingly blurred.

Therefore, research or discussion on command economies in the digital era of 2026 is relevant for understanding the new direction of global political economy. By analysing how authoritarian states adapt to AI and global sanctions, we can see how technology is becoming a new arena for competition over power and economic sovereignty. This issue concerns not only technology and the economy, but also the future of international relations and a new global balance based on data and algorithms.

## **Research Method**

This study employs a qualitative-descriptive approach using literature analysis (library research) to examine the adaptation of the command economy system in the digital era through the lens of global political economy. Data was obtained from various secondary sources such as academic journals, reports from international organisations, economic policy documents, and academic publications focusing on the relationship between artificial intelligence (AI), digital sovereignty, and the economic resilience of authoritarian states against global sanctions. Analysis was conducted using interpretative methods to identify patterns of relationship between state policies, technological innovation, and economic digitalisation strategies. This approach aims to produce a comprehensive conceptual understanding of the transformation of the command economy system amidst the development of AI and changes in the global economic architecture (Eliyah & Aslan, 2025); (Hiebl, 2023).

## Results and Discussion

### The Evolution of the Command Economy System in the Digital Age

The classical command economy of the 20th century, as practised by the Soviet Union and other socialist states, is commonly understood as a model characterised by centralised planning, heavy bureaucracy, and severe information constraints (Kornai, 2000) . These limitations led to structural inefficiencies, shortages of goods, and an inability to respond quickly to changes in demand. In the digital age, some of the old assumptions regarding information constraints are being challenged due to the drastic increase in data processing and computational capabilities through artificial intelligence (AI) and *machine learning*, which theoretically can reduce the information asymmetry issues that were once inherent in command economies (Acemoglu & Restrepo, 2020) .

Digital transformation enables the state to collect, integrate and analyse economic data in real time, covering industrial production, household consumption and even cross-regional logistics movements (McAfee & Brynjolfsson, 2017) . In this context, AI functions as a “prediction engine” that helps the state formulate production and distribution plans that are far more adaptive than traditional command models. Whereas in previous eras five-year plans were often inaccurate due to outdated data, predictive algorithms can now periodically update projections based on electronic transaction data, digital payment networks, and industrial sensors (Plan, 2016) .

A number of studies on AI-based economic planning indicate that integrating algorithms into planning institutions can improve the precision of sectoral prioritisation, growth projections, and policy simulations prior to implementation (Plan, 2016) . By utilising historical data and a wide range of macroeconomic indicators, AI can estimate the impact of fiscal policies, subsidies, or import restrictions on the output of specific sectors. This means that planning is no longer merely a political decision, but a process claimed to be based on digital evidence, although it remains under centralised political control (Acemoglu & Restrepo, 2020) .

China is often cited as a prominent example of the evolution towards an economic model that remains centralised yet highly digitised (Naughton, 2021) . *The ‘dual circulation’* strategy, which emphasises strengthening the domestic market whilst continuing to utilise the global market, runs alongside an agenda of technological self-reliance and increased research spending, including in the field of AI. Through a combination of industrial planning and major investment in innovation, the state is steering the development of strategic sectors such as semiconductors, telecommunications and financial technology, so that the characteristics of a command economy are emerging in a new form: centralised macro-planning implemented through digital instruments and incentives (Herrero, 2021) .

The concept of *digital sovereignty* has become a key pillar in this transformation (Pierucci, 2025) . Authoritarian states are seeking to control data infrastructure, computing centres, 5G networks, and domestic digital platforms to ensure that

economic and social information remains under political control. Within this framework, the command economy is evolving not merely as a system for regulating production, but as a comprehensive architecture for controlling data as a strategic factor of production (Larsen, 2022).

Changes are also evident in the relationship between the state and large corporations (Kaplan, 2009). In some countries, governments have taken a direct role in the ownership structure of technology firms through state-owned investment funds or minority shareholding schemes that still exert influence over the firm's strategic direction. In this way, the boundary between 'market' firms and command economy units becomes blurred: private entities formally operate in the market, but substantively follow national policy lines and development plans.

On the other hand, global sanctions against countries such as Russia have also accelerated the shift towards a more centralised economic system reliant on digitalisation (Ashford, 2016). Restrictions on access to Western technology and international payment systems have driven the development of domestic solutions in the fields of digital finance, e-commerce, and logistics. Although analysis suggests that sanctions place significant pressure on the economy and trigger a *digital brain drain*, the country continues to strive to build alternative networks to acquire technology and maintain basic economic operations (Park & Shin, 2025b).

The evolution of command economies in the digital age is also closely linked to advances in payment systems and central bank digital currencies (CBDCs) (Auer et al., 2023). CBDC issuance policies—such as the e-CNY in China—enable states to monitor money flows, control cross-border transactions, and design highly targeted subsidy schemes and consumption restrictions. The combination of CBDCs with AI analytics opens up opportunities for the state to design “micro-fiscal planning” that directs citizens' economic behaviour through digital incentives and disincentives.

The theoretical debate over whether AI can “overcome” the classic problems of centralised planning—as criticised by Mises and Hayek—also accompanies this evolution (Porter, 2014). Several recent studies conclude that whilst AI mitigates some issues of information scarcity and bounded rationality, it has not resolved the problem of dispersed and subjective knowledge within the economy (Journal of Institutional Economics, 2024). This implies that an AI-based command economy may be more efficient than its analogue counterpart, but still faces structural limitations in replacing price mechanisms and market signals.

At the institutional level, the use of AI in economic planning has led to the emergence of new technocratic units within the state bureaucracy, such as national data centres, AI councils, and digital transformation coordination agencies (Plan, 2016). These institutions serve to consolidate data from various ministries and sectors, then operationalise algorithmic outputs into production targets, quotas, or investment priorities. The evolution of the command economy thus also signifies an evolution of

the bureaucracy: from traditional administrative hierarchies towards data-driven technocratic networks that continue to operate within an authoritarian framework.

Another aspect of this evolution is the increasingly close link between national security and economic planning (Pavel et al., 2023) . As data and AI are viewed as strategic resources akin to energy or rare metals, digital industry policies are often placed under the umbrella of national security. States are devising strategies ranging from technology import substitution and data export restrictions to the development of domestic hardware ecosystems in order to reduce dependence on foreign suppliers who might be subject to sanctions or geopolitical pressure.

Nevertheless, the evolution towards a digital command economy is not entirely free from the ‘ paradox . Efforts to build digital sovereignty through restrictions on access to foreign platforms and technologies may slow the pace of innovation, weaken cross-border research collaboration, and trigger the exodus of tech talent to other, more open jurisdictions. On the other hand, countries that rely too heavily on specific domestic technology firms to underpin national AI projects risk creating a new form of “digital oligarchy” that actually reduces long-term policy flexibility.

From a geopolitical perspective, this evolution contributes to the fragmentation of the international economic order into several competing digital blocs. The data and AI sovereignty models developed by China, the United States, and the European Union reflect fundamental differences in how markets, regulation, and state control are integrated (Pavel et al., 2023) . Authoritarian states tend to emulate or adapt models that prioritise regime stability and national security over individual freedoms, giving rise to what is often termed “digital authoritarianism”.

Thus, the evolution of the command economy system in the digital age is not merely a continuation of the classical socialist model, but a structural transformation that combines state planning, directed capitalism, and big data-based AI technology. Under the pressure of global sanctions and technological competition, authoritarian states are utilising AI to strengthen planning capabilities, reduce external dependence, and build a more robust digital sovereignty. However, the epistemic limitations of AI, cyber risks, and the innovation paradox indicate that the digital command economy retains fundamental vulnerabilities that will determine the long-term sustainability of this model.

### **AI, Digital Sovereignty, and Resilience to Global Sanctions**

Digital sovereignty is a central concept in authoritarian states’ strategies to secure control over technological infrastructure and economic data amidst the pressure of global sanctions (Pierucci, 2025) . Countries such as China and Russia view control over digital platforms, 5G networks, and AI systems as prerequisites for economic and political self-reliance. Through this approach, they are building ecosystems that enable

centralised economic planning to operate without reliance on foreign infrastructure vulnerable to export restrictions or sanctions (Larsen, 2022).

AI strengthens digital sovereignty by providing in-depth data monitoring and analysis capabilities, covering the monitoring of economic transactions, consumer behaviour, and even potential social instability (Dragu & Lupu, 2021). In China, facial recognition systems and big data processing are used to detect economic anomalies in real time, enabling a rapid response to supply disruptions or fluctuations in demand. This feature makes AI a dual-purpose tool: strengthening economic control whilst maintaining regime stability (Ahmed et al., 2018).

The development of CBDCs (Central Bank Digital Currencies) is a concrete manifestation of digital sovereignty in the face of sanctions. China's e-CNY and the potential for a digital Russian rouble enable states to control capital flows, monitor transactions in granular detail, and limit capital flight even whilst isolated from SWIFT (Auer et al., 2023). With programmability features, CBDCs can be designed to prioritise strategic sectors or restrict purchases of sanctioned imported goods, thereby enhancing resilience against external financial pressures (Park & Shin, 2025b).

China's *dual circulation* strategy demonstrates how digital sovereignty is integrated into national economic planning to reduce export dependency (Naughton, 2021). In 2026, the government emphasised the application of AI to upgrade traditional industries and build future sectors such as quantum technology and embodied AI, with a target for the AI economy to reach 10 trillion yuan by 2030 (State Council of China, 2026). This approach creates a robust domestic economic cycle, supported by self-reliant digital infrastructure (Stern & Xie, 2020).

Russia, under Western sanctions, is utilising AI to build alternative payment systems and domestic e-commerce platforms to sustain trade activity (Ashford, 2016). Although digital sanctions restrict access to advanced chips, the country is developing a parallel financial network and using cryptocurrency for cross-border transactions with partners such as China and India. AI helps to optimise domestic supply chains and predict the impact of sanctions on industrial output (Park & Shin, 2025b).

The use of AI in propaganda and the manipulation of public opinion also serves as an indirect instrument of economic resilience. In China, large language models (LLMs) that are visually and textually censored shape domestic narratives that support the government's economic policies, reducing resistance to sacrifices in consumption in the name of strategic self-reliance (Stern & Xie, 2020). A similar system in Russia helps maintain social cohesion amidst an economic contraction caused by sanctions, ensuring public support for national priorities (Zeng, 2020). However, AI-based digital sovereignty faces the challenges of global fragmentation and *tech decoupling*. US chip export restrictions on China have forced the country to develop domestic semiconductors, whilst sanctions against Russia have accelerated the *brain drain* of AI talent (Acemoglu & Restrepo, 2020). Nevertheless, China-Russia collaboration in

technology and data sharing strengthens both nations' positions as an alternative bloc to Western dominance.

Resilience to sanctions is also achieved through AI in logistics and supply chain optimisation. In China, “intelligent fishing” systems and logistics AI provide a competitive edge in the natural resources sector, whilst Russia uses predictive analytics to redirect energy exports to Asian partners (Plan, 2016) . This technology enables the country to compensate for the loss of Western markets through higher operational efficiency (Palu et al., 2025) .

From a policy perspective, CBDCs and AI create a parallel financial architecture that erodes the effectiveness of long-term sanctions. States can design digital currencies with programmed controls to prevent capital flight and ensure compliance with national priorities, whilst facilitating trade with non-sanctioned nations (Park & Shin, 2025b) .. This transforms sanctions from a tool of isolation into a catalyst for a more self-reliant command economy.

The use of AI for economic *predictive policing* also strengthens internal stability. The system detects potential disruptions such as labour strikes in critical sectors or black market speculation, enabling preventive interventions that maintain the smooth operation of centralised planning. In the context of sanctions, this feature is crucial for preventing domestic collapse due to external pressure (Zeng, 2020) .

The main challenges to digital sovereignty are the risk of dependence on imported technology and the potential for cyberattacks. Sanctions targeting data centres and AI chips force authoritarian states to invest heavily in domestic R&D, but at high cost and with a time lag. Regional collaborations such as the digital BRICS could be a solution, although they are still in their early stages (Stern & Xie, 2020) .

Overall, AI and digital sovereignty are transforming sanctions resilience from a defensive strategy into a strategic offensive. Authoritarian states are not merely surviving, but building alternative economic models that challenge Western financial hegemony through parallel infrastructure and total data control. By 2026, this marks a geopolitical shift towards a digital multi-polar world, where sanctions lose their bite in the face of autonomous technology.

## **Conclusion**

Command economies have evolved significantly in the digital era of 2026, with authoritarian states such as China and Russia utilising artificial intelligence (AI) to overcome the classic limitations of centralised planning, such as information asymmetry and bureaucratic inefficiency. Through digital sovereignty, AI enables real-time data collection, precise economic forecasting, and resource optimisation, transforming traditional command models into algorithm-based adaptive systems. This adaptation not only strengthens state control over production and distribution but also builds

resilience against global sanctions through CBDCs, autonomous logistics, and targeted digital propaganda.

However, this transformation presents a fundamental paradox: whilst AI enhances efficiency, it undermines long-term innovation due to technological isolation and brain drain, whilst creating new vulnerabilities such as algorithmic bias and cyberattacks. Amidst the fragmentation of the global economy, authoritarian states have succeeded in building alternative digital blocs that challenge Western hegemony, yet this model remains dependent on regime stability and regional collaboration such as BRICS. Overall, the AI-driven command economy marks a shift from an analogue planned economy towards an efficient yet repressive techno-authoritarianism.

In geopolitical terms, the world is entering a multi-polar digital era where sanctions are losing their effectiveness, forcing liberal states to devise new responses such as global AI regulation and technological alliances. This research confirms that authoritarian states' adaptation to AI is not merely a matter of survival, but a structural threat to the open economic order, demanding international dialogue to balance innovation with democratic values.

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