

# Competition in the Digital Economy from the Perspective of Technonationalism: A Power Structure Model

Yunjie Cui<sup>1</sup>

<sup>1</sup> Wuhan University Institute for International Studies, Wuhan University, Wuhan, China  
Correspondence: Yunjie Cui, Wuhan University Institute for International Studies, Wuhan University, Wuhan, China.

doi:10.56397/JRSSH.2025.03.09

## Abstract

As one of the most important technological sectors in the new wave of industrial revolution, the digital economy is fundamentally reshaping strategic competition between nations. Specifically, the digital economy plays a dual role in shaping national security, economic development, and social stability. On one hand, the digital economy has become the most dynamic and influential engine of global economic growth. On the other hand, the dual-use nature of digital technologies poses serious national security risks in the absence of effective regulatory oversight. As a new economic paradigm, competition in the digital economy not only relies on technological innovation but also involves competition for market dominance and rule-making authority. To gain an advantageous position in global digital economic competition, countries must master core digital technologies, expand global market reach, and build robust digital infrastructures. Moreover, actively participating in the formulation of international digital rules — particularly in data governance and privacy protection — is essential. Only countries that achieve a balance between technology, market, and regulatory power can secure leadership in the global digital economy. The competition in the digital economy, as a key battleground of the new industrial revolution, has driven the rise of technonationalism, which profoundly influences the strategic orientation of national digital economic policies. Digital technology issues are increasingly securitized. With the ongoing development of digital technologies and the rising importance of the digital economy in global economic processes, interactions and competition among nations in the digital domain are becoming a new feature of great power rivalry.

**Keywords:** digital economy, technological competition, technonationalism

---

## 1. Research Background and Problem Statement

With the advent of a new wave of industrial revolution, digital technologies are fundamentally reshaping the operational logic of international relations. On the one hand, the

digital economy has become a key engine for

economic growth in major countries.<sup>1</sup> On the other hand, digital technologies are closely linked to national security and social stability, emerging as a new arena for great power competition. The rapid advancement of digital technology is transforming the patterns of global power competition, shifting focus from traditional geopolitics to cyberspace.<sup>2</sup> In this context, cybersecurity, data sovereignty, and the dual-use nature of digital technologies have become core concerns for major powers.

In the digital era, cyberattacks allow countries to acquire adversaries' sensitive data and intelligence, potentially destabilizing their economies and societies. Furthermore, innovation in critical digital technologies may trigger a "winner-takes-all" effect, creating substantial economic and strategic benefits for first-movers. The dual-use nature of digital technologies has further intensified mistrust between nations, impeding cross-border data flows and technological cooperation, thereby hindering the further development of the global digital economy.

Due to the dual impact of digital technologies on national security, economic growth, and social stability, great power competition in the digital era is increasingly exhibiting the characteristics of **technonationalism**. Countries now place greater emphasis on safeguarding critical strategic resources, such as data and technology, while ensuring technological and data security.<sup>3</sup> This trend is driving major powers to reassess their competitive strategies to secure advantages in the new industrial revolution.

### 1.1 The Rise of a New Wave of Technonationalism

The profound impact of the digital economy on the international system has led to the rapid rise of technonationalism globally. The essence of the digital economy lies in the transformation driven by digital technology through technological innovation. The emergence and development of new technologies not only

trigger changes in technological applications within related industries but also drive the coordinated evolution of regulatory frameworks, thereby significantly enhancing industrial productivity, transforming production methods, and even giving rise to entirely new industries.

In this process, due to differences in the speed and direction of digital technology transformation across different countries and industries, inevitable competition arises over the right to set international norms for emerging industries and to gain access to overseas markets. At the same time, some countries, in order to protect the development of their domestic digital industries and safeguard data security, have increasingly framed their digital economic policies through a securitization lens, contributing to the rise of technonationalism.

Technonationalism is both a concept and an ideological trend that attributes a country's development to technological progress and innovation. Specifically, it is manifested in the securitization of technological issues. Econometric studies have shown that 60% to 85% of economic growth in developed countries can be attributed to technological innovation.<sup>4</sup>

Based on this understanding, technonationalists believe that nations should protect their domestic technological development opportunities and technological interests. Governments should formulate technology policies from the perspectives of national interest and national security, and they should prevent and intervene in the provision of technological products and services from other countries and non-state actors, leveraging technological advantages to pursue geopolitical gains.

At a time when the structure of the international system is under strain and the global center of power is shifting, and as the new industrial revolution unfolds across various technological sectors, technonationalism is rising rapidly. It has become deeply embedded within the broader strategic competition among major powers.

### 1.2 Digital Economy Competition Driven by Technonationalism

<sup>1</sup> China Academy of Information and Communications Technology (CAICT). (2022, July 29). Global Digital Economy White Paper (2022). Retrieved December 9, 2023, from [http://www.caict.ac.cn/kxyj/qwfb/bps/202212/t20221207\\_412453.htm](http://www.caict.ac.cn/kxyj/qwfb/bps/202212/t20221207_412453.htm)

<sup>2</sup> Miao, Z., Chen, J., & Nie, Z. (2023). Artificial Intelligence, Digital Power, and Great Power Competition. *Information Security and Communication Privacy*, (08), 2-9.

<sup>3</sup> Campbell K M, Sullivan J. (2019). Competition without catastrophe: How American Can both challenge and coexist with China. *Foreign Aff.*, 98, 96.

<sup>4</sup> Drezner D W. (2019). Technological change and international relations. *International Relations*, 33(2), 286-303.

Western powers, represented by the United States, are the primary promoters of this current wave of technonationalism. This ideological trend has profoundly shaped the U.S. government's strategic choices in the digital economy. In the digital economy domain, the United States has already established a comprehensive competitive policy system targeting China and other competitors.

Domestically, the United States relies on government policy support to promote the reshoring of digital economy-related manufacturing industries, foster the development of key technology industries, and reform its innovation system. Additionally, through export controls, investment restrictions, technology transfer limitations, and other measures, the U.S. actively disrupts the digital economic development of other nations to maintain its own technological advantage.

At the international level, the United States ignores the legitimate demands of emerging economies to independently develop their digital industries and safeguard their data security. Instead, the U.S. actively promotes an American-style digital trade rules template that aligns with its own interests. At the same time, it uses ideological narratives to pressure its allies, aiming to isolate its competitors.

As the world's leading digital economy, the United States' technonationalist policy orientation has exacerbated distrust and insecurity among nations. In response to their own national interests, many countries have also introduced technonationalist digital economic policies, further intensifying malicious competition in this field.

In the digital economy, technonationalism-driven competition revolves around two core elements — data and technology. This competition can be categorized into the following two primary forms:

#### 1.2.1 Technology-Driven Competition

Technology-driven technonationalism adheres to the technological determinism perspective, which holds that the level of development in digital technology determines the rise or fall of a nation's digital industry.

Specifically, this approach manifests in governments using industrial policies to support the development of critical domestic digital technologies, while simultaneously employing

export controls, investment screening, technology transfer restrictions, and intellectual property transfer restrictions to disrupt the normal economic and technological cooperation between domestic enterprises and foreign counterparts. This approach reflects a policy orientation aimed at keeping technological knowledge within national borders.

#### 1.2.2 Institution-Driven Competition

Institution-driven technonationalists focus on the guiding role of digital economy rules in shaping the development of digital industries. They believe that the establishment of technical standards often determines the future developmental trajectory of digital industries and related technologies. Mastering these standardized technologies can provide substantial economic benefits to the standard-setting entities.

Therefore, this form of competition emphasizes leveraging political and diplomatic channels to build a global digital economic regulatory framework favorable to the home country, using structural advantages to continuously capture long-term economic benefits in the digital economy.<sup>1</sup>

Of course, in practice, these two forms of competition rarely appear in isolation. Actors participating in international digital economic competition often adopt a mix of policies in both technological and institutional competition tracks, seeking to consolidate or even surpass their existing advantages in the digital economy.

## 2. Construction and Explanation of the Power Structure Model of Digital Economy Competition

The essence of global digital economy competition is the extension of great power strategic competition into digital space. Within this system, based on the internal policy intentions and the external strategic choices of various countries, technological power, market power, and institutional power constitute the primary sources of power for countries participating in global digital economy competition.

On this basis, this paper constructs a power structure model, which categorizes countries

<sup>1</sup> Yang Hui. (2021). Dominance, Institutional Negative Externalities, and Economic Institutional Competition in the Asia-Pacific Region: A Case Study of TPP and RCEP. *Foreign Affairs Review (Journal of China Foreign Affairs University)*, 38(02), 125-154+8.

into leading nations, catching-up nations, and emerging nations. This model analyzes the relative power of different countries in terms of technology, market, and institutions, and determines the strategic combinations adopted by different countries in the international digital economy competition system from the perspective of technonationalism.

## 2.1 Technological Power

### 2.1.1 The Concept of Technological Power

Competition in the digital economy is essentially an extension of great power strategic competition into digital space. From the perspective of interstate competition, technology has always been regarded as an exogenous variable, meaning that a nation can significantly enhance its political, economic, and military power through technological strength, thereby altering the power distribution within the international system.

In early international relations research, a country's technological level was often considered part of its military power. For example, Hans Morgenthau, in his analysis of the components of national power, identified technological innovation and industrial capacity as critical factors in a nation's overall power.<sup>1</sup>

Similarly, the Klein equation, used to evaluate comprehensive national power, highlights industrial manufacturing capacity and military technological capability as fundamental elements of a nation's comprehensive strength.<sup>2</sup> Chinese scholar Huang Shuofeng also emphasized that technological power is one of the key indicators for maintaining and enhancing national power.<sup>3</sup>

The importance of technological power became even more pronounced after World War II, when the advent of nuclear weapons created a balance of terror through the doctrine of mutually assured destruction. Additionally, international norms prohibiting territorial annexation reduced the intensity of traditional geopolitical competition. As a result, major powers within the international system increasingly relied on

technological innovation to gain competitive advantages, becoming winners in the realms of economics, military, and technology.

The basic logic behind how technological power influences international digital economy competition can be summarized as follows:

First, from a macro perspective, many digital technologies possess dual-use properties, serving both civilian and military purposes. This dual-use nature provides a force-multiplier effect for a nation's military capabilities. Therefore, under the guidance of technonationalism, nations with technological advantages not only dominate the digital economy but also enhance their military capabilities through digital technology, allowing them to stand out in military competition.

Second, nations with technological advantages have the ability to act as pioneers driving global technological progress. Their technological leadership grants them greater influence and discourse power in the formulation of international digital rules, attracting followers and earning international prestige.<sup>4</sup>

Third, technonationalists tend to leverage strong technological power to control and monopolize key technologies. The goal is to lock competitors in the digital economy into low-end positions within the global value chain, maintaining a constant and as large as possible technological gap. This creates sticky power in which technologically disadvantaged nations develop a one-way dependence on technologically advanced nations.<sup>5</sup>

It is worth noting that in some specific digital sectors, technological monopolies may directly lead to a winner-takes-all scenario in terms of industrial benefits.

Finally, technological innovation exhibits a self-reinforcing learning effect, granting first-mover advantages to technologically advanced nations. These nations, through technological accumulation, can lead innovation cycles, achieving technological dominance in subsequent rounds of competition. This positive feedback loop further consolidates their

<sup>1</sup> Morgenthau, Hans Joachim. (2005). *Politics Among Nations: The Struggle for Power and Peace*. Complete Edition. Beijing: Peking University Press.

<sup>2</sup> Wang Fan. (2013). *International Relations Theory: Thoughts, Paradigms, and Hypotheses*. Beijing: World Knowledge Press, pp. 89-90.

<sup>3</sup> Huang Shuofeng. (1992). Comprehensive National Power and National Conditions Research. *China's National Conditions and National Power*, (01), 13-19.

<sup>4</sup> Liu Su. (2017). *Ten Thousand Years of Competition: A New History of World Science and Technology Culture*. Beijing: Science Press, p. 275.

<sup>5</sup> Liu Hongzhong. (2023). Hegemonic Maintenance and Transcendence: The Political Economy of Global Value Chain Competition in High-Tech Industries. *World Economics and Politics*, (02), 128-154+159-160.



advantage. Conversely, latecomers face significant obstacles in achieving technological catch-up, particularly due to technological blockades and containment imposed by technologically advanced countries.

### 2.1.2 Strategic Choices Under the Logic of Technological Power

In the technonationalism-driven system of international digital economy competition, technological power serves as the foundation and prerequisite for a nation to secure dominance in the competition. The differences in technological power directly influence the strategic choices made by countries at different stages of development. Generally speaking, technologically advanced countries tend to suppress the technological advancement of competitors; technological catch-up countries must rely on independent research and development (R&D) to achieve technological breakthroughs; while technological beginners accumulate basic digital technology resources by hosting low-end digital industries.

As the incumbent beneficiaries of the global digital economy competition system, technologically advanced countries tend to adopt competition strategies driven by the hegemonic logic of technonationalism. Their strategic approach includes strengthening domestic innovation capabilities through industrial policies, while also suppressing competitors to consolidate and expand their technological lead over technological catch-up countries.

Specifically, due to the distribution of global value chains and the mobility of high-tech talent, technologically advanced countries tend to contain the knowledge externalities and R&D spillovers of digital technologies within their own national borders or within a trusted alliance system. Simultaneously, they employ targeted suppression strategies to block and restrict the development of specific competitive technologies in other nations.<sup>1</sup>

Their primary methods include adopting restrictive policies to limit technological spillovers, keeping them confined within controllable boundaries to ensure long-term advantages for domestic technology-intensive

industries,<sup>2</sup> and accelerating technological decoupling from targeted nations.<sup>3</sup>

Due to the blockade and restrictions imposed by technologically advanced countries, technological catch-up countries are often isolated within the international digital economy system. As a result, targeted breakthroughs in key high-end technologies within the digital economy value chain through independent R&D become not only a necessity, but also an urgent task for these countries to reposition themselves in the global digital value chain.

During the window of opportunity provided by the new industrial revolution, technological catch-up countries pursue technological followership while simultaneously leveraging market demand and industrial policies to gradually accumulate technological advantages in specific fields. By fully capitalizing on the cumulative benefits of digital technologies, they seek to achieve disruptive technological innovation with the ultimate goal of transforming themselves into new technological leaders.<sup>4</sup>

In this process, technological catch-up countries are also cautious about opening up their domestic digital economy markets and accepting investments from technologically advanced countries in key digital economy sectors. This caution reflects the deep influence of technonationalism on their competition policies.

Although technological beginners are not major players in international digital economy competition, they can still maneuver strategically in the intense rivalry between technologically advanced and catch-up countries, leveraging opportunities to extract digital economy benefits while accumulating technological resources for future advancement. This reflects how technological beginners' competition policies are primarily guided by the market-driven logic of technonationalism.

<sup>1</sup> Shi Dan, Nie Xinwei, Qi Fei. (2023). Globalization of the Digital Economy: Technology Competition, Rule Games, and China's Options. *Management World*, 39(09), 1-15.

<sup>2</sup> Costinot A, Donaldson D, Komunjer I. (2012). What goods do countries trade? A quantitative exploration of Ricardo's ideas. *The Review of Economic Studies*, 79(2), 581-608.

<sup>3</sup> Sun Xuefeng. (2023). Digital Technology Innovation and International Strategic Competition. *Foreign Affairs Review (Journal of China Foreign Affairs University)*, 40(01), 54-77+166+6.

<sup>4</sup> Shi Dan, Nie Xinwei, Qi Fei. (2023). Globalization of the Digital Economy: Technology Competition, Rule Games, and China's Options. *Management World*, 39(09), 1-15.

In the context of digital economy competition, technologically advanced countries often restrict their domestic digital firms from investing, producing, and operating in technological catch-up countries through non-tariff barriers and other policy tools. Against this backdrop, the profit-seeking nature of capital drives companies to explore alternative markets, and technological beginners can step in to fill the gaps left by the technological rivalry.

In terms of digital technology development, technological beginners primarily host low-end digital industries in the digital economy value chain, following technological trends while gradually building up their domestic technological capacity—moving from basic adoption to gradual accumulation and innovation.

## 2.2 Institutional Power

### 2.2.1 The Concept of Institutional Power

Institutional power originates from the functional attributes of international institutions. Under the neoliberal institutionalist world order, international institutions have become the most prominent feature of the international system. These institutions possess both public and private attributes: they provide public goods for actors within the system, while simultaneously exerting non-neutral influence over the distribution of benefits and power. This non-neutrality allows institutionally powerful states to shape and control institutional frameworks to serve their own interests, effectively privatizing and weaponizing international institutions, and in some cases, transforming them into tools for achieving institutional hegemony.<sup>1</sup>

In the context of the digital economy, international institutions play a crucial role in promoting cross-border digital economic activities, facilitating the development of the digital economy, sharing digital dividends, coordinating national digital policies, and expanding cross-border digital trade openness. As the primary engine driving global economic development, the digital economy requires unified and rational regulatory frameworks to guide its further growth.

However, due to significant disparities in the

level of digital economic development among countries, there are stark differences between digitally advanced economies and digitally lagging economies in terms of their ability to reap economic benefits and manage security risks. These divergent policy preferences and interests have directly led to the absence of a unified set of global digital economy rules under the WTO framework, resulting in a fragmented international regulatory landscape and intensified institutional competition among key actors in the digital economy system.

Under the influence of technonationalism, digitally advanced countries have increasingly sought to build regional-level digital economic regulatory frameworks to expand their institutional power, which has become a dominant trend in international institutional competition within the digital economy.

The basic logic by which institutional power influences digital economy competition can be summarized as follows:

First, institutional power influences agenda-setting in digital economy rule negotiations, thereby shaping the future trajectory of digital economic development. Since major powers differ in their core concerns within the digital economy regulatory system, agenda-setting becomes a critical step in the negotiation process. The more topics one side places on the agenda, the fewer opportunities there are for competing parties to introduce their own issues.<sup>2</sup>

Second, by establishing international digital economy rules and technology standards, a country can enshrine its own technological advantages into industry standards, thereby locking rival nations' technological development paths into tracks designed by the rule-setting country, maintaining and expanding its technological lead.

Third, institutional power facilitates the expansion of digital markets. For instance, institutionally powerful countries can attract, compete for, or even coerce countries with large digital markets into joining their regulatory frameworks. Through rule design, they can also require participating countries to open their domestic digital markets to a certain extent, thereby reaping economic benefits. Conversely,

<sup>1</sup> Moe, Terry M. (1990). Political Institutions: The Neglected Side of the Story. *Journal of Law, Economics, & Organization*, 6, pp. 213–53.

<sup>2</sup> Wei Zongyou. (2011). International Agenda Setting: A Preliminary Analytical Framework. *World Economics and Politics*, (10), 38-52+156.

institutionally powerful countries can punish or coerce countries by expelling them from existing digital economy regulatory frameworks.<sup>1</sup>

Finally, institutional power helps shape a country's authority in the digital economy realm, ensuring that members within the system comply not only out of rational calculations of power and interest, but also based on normative expectations of appropriateness and legitimacy.<sup>2</sup>

### 2.2.2 Strategic Choices Under the Logic of Institutional Power

The struggle for institutional power is a core feature of the technonationalism-driven international digital economy competition system. The key reason is that, compared to technological competition, institutional competition is inherently zero-sum in nature. The winner of institutional competition can secure long-term structural benefits in the digital economy by controlling and shaping the rules framework. As a result, major digital economy powers and small and medium-sized countries within the system are extremely cautious when it comes to participating in regional digital economy rule-making frameworks, and they all seek to embed provisions favorable to their own digital industries into these frameworks.

In the digital economy system, institutional powers are often the leading architects of regional digital trade rules. In institutional competition, these countries pursue the hegemonic logic of technonationalism, using institutional expansion to both protect their own advantageous technology sectors and expand their digital markets — this is the core of their interest calculus. Therefore, during the rule-design process, institutional powers pre-embed their own digital economic interests and policy demands into their preferred regulatory templates.

On this foundation, institutional powers work to recruit rule-followers, win over neutral states, and pressure digital economy beginners to join their regulatory frameworks. In the process, they also seek to isolate competing powers,

continuously enhancing their international institutional influence. Ultimately, through institutional expansion, they aim to establish a global digital economic regulatory order that excludes their rivals while aligning closely with their own digital economic interests and development objectives.

Institutional catch-up countries within the system also seek to promote regulatory templates that favor their domestic digital industries. However, these countries tend to lack well-developed domestic digital laws and regulations. In some cases, their digital technology governance frameworks remain underdeveloped or even nonexistent, leaving them unable to design comprehensive rules that can balance the digital interests of most countries in their region.

As a result, institutional catch-up countries often adopt a strategy of institutional substitution when engaging in international digital economy competition. This involves either embedding provisions that address their own digital development needs into existing rule templates, or building new multilateral frameworks for digital economy governance. In both approaches, they often rely on alliances with small countries and international organizations to amplify their demands, thereby raising their profile in regional and global digital economy rule-making processes. By attracting and aligning with swing states, these countries aim to ultimately achieve institutional substitution—replacing or significantly altering the dominant digital regulatory frameworks to better serve their interests.

Within the digital economy competition system, institutional beginner countries are the primary targets of competition between existing regulatory templates. However, influenced by technonationalism, these beginner countries still seek to maintain their security and autonomy in the digital economy development process. This cautious approach is reflected in their selective alignment during international and regional digital economy rule negotiations.

For example, some small and medium-sized economies—although broadly aligning with the United States on digital economy rule issues—nonetheless emphasize the inclusion of exceptions, aiming to preserve a certain degree of policy flexibility for their own governments when formulating digital economic policies. At

<sup>1</sup> Li Wei. (2016). Transformation of International Order and the Emergence of Realist Institutionalism Theory. *Foreign Affairs Review (Journal of China Foreign Affairs University)*, 33(01), 31-59.

<sup>2</sup> Krisch, Nico. (2005). International Law in Times of Hegemony: Unequal Power and the Shaping of the International Legal Order. *European Journal of International Law*, 16(3), p. 374.

the same time, they prefer gradual and orderly digital market opening, ensuring that their domestic digital industries do not lose development opportunities due to intense competition from multinational digital corporations.<sup>1</sup>

However, it is important to note that in some cases, once institutional beginner countries receive security assurances from leading digital economy powers, they may fully align their digital development strategies with the market-driven logic of technonationalism—ultimately becoming fully dependent on the leading digital economy powers in institutional competition over digital economy rules.

### 2.3 Market Power

#### 2.3.1 The Concept of Market Power

As the most dynamic economic sector in the new industrial revolution and a key engine of global economic development, the scale of market power plays a critical role in shaping a nation's digital economic development.

On the one hand, markets are the primary arenas where nations create wealth.<sup>2</sup> With the increasing share of digital economy output in global GDP and the rapid development of digital technologies, demand-side forces in the digital economy sector have become the main drivers of economic growth in the new industrial revolution, further highlighting the importance of market power.

On the other hand, technological projects typically originate from domestic markets. The larger the domestic digital market, the greater the expected returns for a given technological project, which in turn stimulates further digital technology innovation. In the digital economy, the effects of economies of scale and economies of scope are further amplified, making market expansion and technological innovation mutually reinforcing drivers of corporate development.<sup>3</sup>

Therefore, market power is a crucial condition

for digital technology innovation and business growth. Whoever controls core markets also holds the power to influence technological innovation and the future development trajectories of key enterprises.

A country's market power in the digital economy is shaped by multiple factors, including the size of its digital economy market, labor force quality, digital infrastructure development, and the degree of market internationalization, among others.

Market power influences international digital economy competition strategies in several ways:

First, as a major consumer market, demand-side companies can leverage bargaining power at the point of sale to secure digital economic benefits for their home country. Through control over standards and product preferences, they can even influence or determine the technical standards for digital products and technologies.<sup>4</sup>

Additionally, market power nations can employ non-tariff barriers and similar tools to restrict the entry of foreign digital products and services into their domestic markets. Such measures can be used to retaliate against, punish, or coerce competitors, helping the home country achieve its digital economic goals.

Second, market power nations typically enjoy large-scale digital markets, relatively advanced digital infrastructure, and vast data resources—all of which create favorable environments for continuous digital technology innovation and iteration. These factors not only generate significant demand for new digital technologies but also provide testing grounds for new technology development and deployment.

Finally, market power nations possess substantial influence in international digital economy rule negotiations. Since global negotiations on digital economy rules are still in their early stages, institutional competition often hinges on the combined digital market size of member states under competing regulatory frameworks. By controlling access to their domestic digital markets, market power nations become prized targets for competing digital economy rule-making coalitions, granting them considerable leverage and bargaining power in

<sup>1</sup> Pan Xiaoming. (2023). Formulation of International Digital Trade Rules: Disputes, Strategies, and Games. *International Relations Studies*, (05), 88-108+158.

<sup>2</sup> Grieco, Joseph M. (2008). *State Power and World Markets: The International Political Economy*. Beijing: Peking University Press, p. 107.

<sup>3</sup> Li Wei, Li Yu. (2021). Analyzing the U.S. "War" Against Huawei: The Political Economy of Global Supply Chains. *Contemporary Asia-Pacific Studies*, (01), 4-45+159.

<sup>4</sup> Mark Dallas, Stefano Ponte, and Timothy Sturgeon. (2019). "Power in Global Value Chains". *Review of International Political Economy*, 26(4), pp. 666-694.



the rule-setting process.

### 2.3.2 Strategic Choices Under the Logic of Market Power

Market power serves as a crucial pillar supporting a nation's participation in international digital economy competition. It profoundly shapes the pathways a country can adopt when engaging with the global digital economy. Countries with significant market power can use it as a leverage point to expand their technological power or institutional power. Meanwhile, countries with moderate market power seek to expand their market influence by forming market coalitions with other nations. In contrast, countries with the weakest market power often attach themselves to the large markets of major powers, seeking to find a suitable position in the digital value chain.

Countries with dominant market power leverage their domestic markets to further expand their digital economic influence, while simultaneously excluding internal competitors within the system, thereby securing excessive technological and institutional power advantages. As noted earlier, leading market power countries hold significant bargaining power in digital trade, and they use this advantage as a core mechanism to expand their market reach.

For example, leading market powers can exchange access to their large domestic demand for greater access to the digital markets of other countries. Conversely, they can also adjust domestic trade policies to penalize competitors, effectively excluding rivals from their domestic digital markets. This type of reward-punishment mechanism allows leading market powers to continuously enhance their market power, while simultaneously reinforcing domestic digital technology innovation through protectionist and incentive policies.

Countries within the system that lack large-scale markets and complete digital infrastructure must rely on open-market policies and globalization strategies to enhance their competitiveness.<sup>1</sup>

However, in the international digital economy competition system, the process of market opening is heavily influenced by technonationalism. To reduce dependence on

transnational digital giants and achieve security and autonomy in their digital economies, some countries have initiated market coalitions to counterbalance the pressures imposed by dominant market powers.

These market coalitions consist of like-minded nations that align their policies on certain market issues, aiming to jointly enhance their collective market power and counteract the dominance of external market powers in digital economic competition. Within these coalitions, countries work together to create unified digital markets, thereby boosting the digital economy development of all member countries within the coalition.

At the bottom of the hierarchy, countries with the weakest market power — often due to technological backwardness, historical factors, or geopolitical constraints — find it difficult to participate in market coalitions. As a result, they often have no choice but to attach themselves to larger digital economies, seeking to carve out a niche within the dominant nation's digital economy ecosystem. By aligning themselves with major powers, these weaker nations gradually accumulate technological resources and secure limited digital economic benefits by participating in lower segments of the digital value chain.

### 2.4 Power Structure Model of Digital Economy Competition

This paper constructs a comprehensive theoretical framework to explain how technonationalism shapes digital economy competition, and identifies three key variables: technological power, institutional power, and market power. These variables determine a country's relative position in the global digital economy competition system and its strategic choices.

In this framework, countries are categorized into three types:

Leading countries, which hold advantages in technology, market influence, and rule-making.

Catch-up countries, which strive to close technological and institutional gaps through policy innovation and market expansion.

Emerging countries, which are still accumulating technological and institutional capabilities, often relying on external partnerships.

At the technological power level, leading

<sup>1</sup> Porter, Michael E. (2002). *The Competitive Advantage of Nations*. Beijing: Huaxia Publishing House, p. 667.

countries maintain their advantage by controlling key technologies and limiting technology transfer to competitors. Catch-up countries focus on independent innovation and targeted breakthroughs to reposition themselves in global digital value chains. Emerging countries absorb low-end digital industries to build a foundation for future innovation.

At the market power level, leading countries leverage their large consumer bases to extract economic benefits and set global standards. Catch-up countries build market alliances to expand influence, while emerging countries depend on access to larger markets for technology and investment inflows.

At the institutional power level, leading countries promote global rules that protect their own digital economic interests. Catch-up countries seek institutional substitution, using regional cooperation and multilateral platforms to embed rules that reflect their needs. Emerging countries adopt selective alignment strategies, balancing between protecting digital sovereignty and integrating into global frameworks.

These three powers — technology, institution, and market — are interconnected. Technological power enhances market competitiveness and strengthens bargaining positions in rule-making. Market power supports domestic innovation and boosts institutional influence in rule negotiations. Institutional power shapes future technological trends and controls the conditions for market access.

The model can be visualized as a three-dimensional coordinate system, with each axis representing one of the powers. A country's position within this space reflects its overall competitive posture and the combination of strategies it employs. For example, a country with strong technological power but limited market and institutional power may prioritize technology self-sufficiency, domestic market development, and participation in regional rule-setting.

This power structure model provides a flexible analytical tool to assess how different countries position themselves and adjust strategies in response to shifts in global digital competition driven by technonationalism.

### 3. Case Analysis — Digital Economy Competition Strategies of China, the United States, and India

#### 3.1 The Roles of China, the United States, and India in the Digital Economy System

Overall, the global digital economy system has formed a “one superpower, one strong power” structure centered around the United States and China, while the European Union, Japan, South Korea, India, and other countries are also actively advancing their digital economy development strategies.

Among them, the United States is the undisputed leader in the digital economy. In 2021, the size of the U.S. digital economy ranked first globally, reaching \$15.3 trillion, far exceeding China's \$7.06 trillion and Germany's \$2.87 trillion, accounting for 40.1% of the total digital economy output of 47 major countries globally.<sup>1</sup>

In terms of penetration, the digital economy accounted for 65% of U.S. GDP.<sup>2</sup> Additionally, the United States firmly dominates the underlying infrastructure of the digital economy, including computing power, hardware, and software.

However, due to the global division of labor driven by globalization, the U.S. has gradually shifted much of its digital economy-related manufacturing overseas, making its digital manufacturing sector relatively weak. Additionally, the U.S. domestic market is relatively limited, so Washington actively promotes U.S.-style digital trade rules globally to lock in its advantages.

On the one hand, the U.S. uses industrial policies to support key technology sectors, strengthen supply chain security, and restrict technological development in competing countries. On the other hand, it promotes U.S.-preferred digital trade agreements in the Indo-Pacific region and leverages ideological alliances to isolate rivals such as China, consolidating its leading position in digital competition.

Unlike the U.S.'s comprehensive dominance, China, as the second-largest digital economy,

<sup>1</sup> Source: Global Digital Economy White Paper. (2022). China Academy of Information and Communications Technology, July 29, 2022. Retrieved on December 9, 2023, from [http://www.caict.ac.cn/kxyj/qwfb/bps/202212/t20221207\\_412453.htm](http://www.caict.ac.cn/kxyj/qwfb/bps/202212/t20221207_412453.htm)

<sup>2</sup> Source: Song Siyuan, Xia Lin, Wang Yuqing. (2023). Comparative Analysis and Outlook on the Digital Economies of China and the United States. *China Foreign Investment*, (11), 76-80.

has its own unique advantages.

First, China's vast domestic market supports one of the largest digital economies and digital trade volumes globally, with tremendous growth potential.

Second, in applied technologies, China holds competitive advantages in areas such as 5G infrastructure, IoT, robotics, and AI, which provide continuous momentum for digital development.

However, China still lags behind the U.S. in many core technologies and faces growing risks of technological decoupling, supply chain disruptions, and external pressure from U.S. policies and tech isolation strategies.

Therefore, leveraging its large market to drive technological innovation, while actively engaging in global cooperation to promote inclusive digital rules that serve both China and other emerging economies, is central to China's digital strategy.

Compared to China and the U.S., India's digital economy, valued at \$679.9 billion, ranks only 8th globally.<sup>1</sup>

Despite its current ranking, India, as a purely market-driven player, possesses immense growth potential. Forecasts indicate that by 2030, India's digital economy could surpass \$1 trillion, making it a key player in the global digital economy.

However, this promising future is counterbalanced by weak infrastructure, limited domestic manufacturing, an immature innovation system, and a wide digital divide across regions.

This combination makes India a unique case in the digital economy:

Its large market and strategic location make India a critical partner for the U.S. in shaping Indo-Pacific digital trade rules and countering China's influence.

At the same time, India seeks to develop its digital economy independently, rarely exchanging domestic market access for short-term gains and taking a cautious approach to regional digital trade agreements, further enhancing its weight in rule-making negotiations.

### *3.2 Analysis of Digital Economy Strategies in China, the U.S., and India*

Based on the above data, we can roughly determine the relative positions of China, the U.S., and India within the Power Structure Model of Digital Economy Competition.

First, the U.S. holds absolute dominance in digital technology, economic scale, and rule-making, positioning it as a technological leader, institutional leader, and market leader in the model.

Second, China ranks a distant second in digital economy scale, with some leading-edge technologies and active efforts to build digital trade rules that align with the interests of emerging economies. Therefore, China plays the role of a catch-up country across all three dimensions: technology, institutions, and markets.

Finally, India's digital economy remains at an early stage and it has yet to join any major international digital agreements. Despite its huge market potential, weak infrastructure and a significant digital divide constrain its current market power, leaving India in the role of an emerging country in this framework.

In summary, these distinct roles across the three dimensions—technology, institutions, and markets—make China, the U.S., and India ideal cases for analyzing digital economy competition strategies, which is why this paper selects them for focused analysis.

#### *3.2.1 The Digital Economy Competition Strategy of the United States*

At the technological level, the United States identifies China as its primary strategic rival and has adopted restrictive policies to hinder China's technological progress. In 2019, the U.S. Senate Committee on Commerce, Science, and Transportation issued a report emphasizing the "Small Yard, High Fence" strategy, which imposes strict controls and reviews in technology areas critical to U.S. national security.<sup>2</sup>

This approach has since become a hallmark of U.S. digital competition strategy toward China. Scholars also describe the core of U.S. technological competition as "selective

<sup>1</sup> Source: Google, Temasek, Bain & Company, India 2023 Economy Report.

<sup>2</sup> Sam Sacks, "China: Challenges to U.S. Commerce," 2019, retrieved on December 26, 2023, from <https://www.commerce.senate.gov/services/files/7109ED0E-7D00-4DDC-998E-B99B2D19449A>

decoupling,” aimed at slowing or even freezing China’s technological development in key fields to maintain a substantial technology gap between the two nations.<sup>1</sup>

At the market level, the U.S. promotes its digital companies’ global expansion through bilateral and multilateral digital trade agreements and digital infrastructure investment initiatives. These efforts are designed to secure a dominant position in emerging digital markets. Simultaneously, the U.S. enforces export controls on digital technologies and restricts foreign investment in domestic digital sectors to safeguard its competitive advantage in key technologies.<sup>2</sup>

Coordinating actions with allies is also a critical element of the U.S. strategy in the regulatory domain. U.S. policymakers recognize that unilateral actions risk escalating destructive competition with China while alienating allies. Therefore, the U.S. government seeks to partner with leading technology powers among its democratic allies to establish a coalition based on shared interests. In a 2020 article published in *Foreign Affairs*, President Joe Biden highlighted the importance of forming and leading a future-oriented technology alliance to counter strategic competitors.<sup>3</sup>

To this end, the U.S. has focused on building digital alliances in Europe and the Indo-Pacific, actively advancing a U.S.-centric template for digital trade rules.<sup>4</sup> Currently, the U.S. has developed several such frameworks, including the value chain-oriented CHIP4, the supply chain-oriented Indo-Pacific Economic Framework (IPEF), the QUAD security alliance, the Minerals Security Partnership (MSP), and the more comprehensive U.S.-EU Trade and Technology Council (TTC).

### 3.2.2 China’s Digital Economy Competition Strategy

China’s digital economy development started relatively late, relying heavily on industrial policies to foster innovation in key digital technology sectors. Since 2015, the Chinese government has introduced a series of initiatives, including Made in China 2025 and the 13th Five-Year National Informatization Plan, to systematically develop the digital economy.

The 14th Five-Year Plan for Digital Economy Development highlights that enhancing core digital technologies through independent innovation is a strategic priority. It outlines objectives such as improving digital infrastructure, advancing digital transformation across industries, and strengthening innovation capacity in areas like sensors, quantum computing, artificial intelligence (AI), and blockchain.

In addition to policy guidance, both central and local governments have established specialized funds to support R&D in critical digital technologies. For example, to advance its domestic semiconductor industry and counter U.S. technology restrictions, China established the National Integrated Circuit Industry Investment Fund in 2014, with a total capital of RMB 138.7 billion.

This fund was further expanded in 2019 and 2024, supporting all stages of the semiconductor value chain, from design and manufacturing to packaging, testing, and materials development.<sup>5</sup>

At the international level, China actively promotes digital infrastructure cooperation and digital economy governance partnerships with the EU, ASEAN, African nations, and Belt and Road Initiative (BRI) countries.<sup>6</sup>

Recognizing its relatively weak position in global digital rule-setting due to the late start of its regulatory framework, China seeks to offset these disadvantages by joining regional digital

<sup>1</sup> Yan Xuetong & Xu Zhou. (2021). Sino-U.S. Competition in the Early Digital Era. *Political Science Quarterly*, 6(1), pp. 24-55.

<sup>2</sup> Pan Xiaoming. (2020). New Trends in Global Digital Economy Competition and China’s Response. *International Studies*, (2), pp. 93-106.

<sup>3</sup> Joseph R. Biden. (2020, October 22). “Why America Must Lead Again — Rescuing U.S. Foreign Policy after Trump.” *Foreign Affairs*, retrieved on December 21, 2023, from <https://www.asiascot.com/news/2020/10/22/why-america-must-lead-again-rescuing-u-s-foreign-policy-after-trump/>

<sup>4</sup> Wang Xiaowen & Ma Mengjuan. (2022). U.S. Digital Competition Strategy Toward China: Drivers, Pathways, and Limitations. *International Forum*, 24(1), pp. 78-97, 158-159.

<sup>5</sup> Laura He, (2024, May 28). “China is Pumping Another \$47.5 Billion into its Chip Industry,” CNN, retrieved on September 23, 2024, from <https://edition.cnn.com/2024/05/27/tech/china-semiconductor-investment-fund-intl-hnk/index.html>

<sup>6</sup> National Development and Reform Commission of China, “14th Five-Year Plan for Digital Economy Development,” March 25, 2022, retrieved on March 25, 2022, from [https://www.ndrc.gov.cn/fggz/fzzlgh/gjjzxgh/202203/t20220325\\_1320207.html](https://www.ndrc.gov.cn/fggz/fzzlgh/gjjzxgh/202203/t20220325_1320207.html)



trade agreements such as DEPA, RCEP, and CPTPP. Through these platforms, China aims to embed rules favorable to emerging digital economies into the existing global governance system.

In the digital market domain, China leverages the BRI to promote digital infrastructure projects and technology exports, expanding its digital footprint through localized policies and cooperative frameworks with neighboring countries.

Confronted with U.S. technological restrictions and broader strategic containment, China's core strategy, as a "catch-up" nation, emphasizes technological self-sufficiency, combining defensive measures with targeted counter-actions against specific U.S. policies.<sup>1</sup> Chinese scholars describe this approach as "defensive technonationalism," focused on securing technological independence through industrial policy.<sup>2</sup>

China's strategy remains largely reactive, relying on domestic policy to build technological capabilities while seeking to expand international cooperation. It aims to break out of technological containment by improving digital trade networks, fostering digital technology collaboration, and aligning with high-standard global digital economic rules to move up the global data value chain.<sup>3</sup>

### 3.2.3 India's Digital Economy Competition Strategy

Amid escalating U.S.-China competition in digital technology, India has actively positioned itself as a destination for the relocation of Chinese industries. In 2014, the Modi administration launched the Make in India initiative, identifying 25 priority sectors, including information technology and electronics, highlighting India's ambition to develop its digital economy manufacturing

capabilities.<sup>4</sup>

With rising global concerns over supply chain decoupling, India's industrial substitution policies have become a key driver of its digital manufacturing sector. The Modi government actively aligns with U.S. "decoupling" strategies, lobbying Western governments to replace China's role in global supply chains.<sup>5</sup>

In high-tech digital sectors, India restricts Chinese companies under national security grounds, gradually replacing Chinese capital with investments from U.S. digital giants.<sup>6</sup>

In 2015, India launched the Digital India initiative, formally accelerating its digital transformation. The program aims to develop secure and stable digital infrastructure, deliver government services digitally, and promote digital literacy across society.<sup>7</sup> By positioning technology as a core driver of development, the program has significantly advanced India's economic digitalization.<sup>8</sup>

Internationally, securing U.S. digital investments and advanced technologies is central to India's external digital strategy. Deeper U.S.-India digital cooperation also enhances India's global profile and attractiveness for further investments.<sup>9</sup>

The Modi government has also actively promoted a "Democratic Technology Alliance" narrative, engaging with the EU, Japan, and others to develop cooperative frameworks in

<sup>1</sup> Yan Xuetong & Xu Zhou. (2021). Sino-U.S. Competition in the Early Digital Era. *Political Science Quarterly*, 6(1), pp. 24-55. DOI: 10.16513/j.cnki.qjip.2021.0003

<sup>2</sup> Sun Haiyong. (2020). Offensive Technonationalism and the U.S. Tech War Against China. *International Vision*, 12(5), pp. 46-64, 158-159. DOI: 10.13851/j.cnki.gjzw.202005003

<sup>3</sup> Qiu Jing. (2023). The Value Competition Between China and the U.S. in the Digital Age. *International Political Studies*, 44(1), pp. 89-113. DOI: 10.16407/j.cnki.1000-6052.2023.02.002

<sup>4</sup> "Modi Launches 'Make in India' Campaign, Portal and Logo," The New India Press, 2014, retrieved on December 12, 2023, from <http://www.newindianexpress.com/business/news/Modi-LaunchesMake-in-India-Campaign-Portal-and-Logo/2014/09/25/article2448917.ece>

<sup>5</sup> Xie Chao. (2023). The Evolution, Characteristics, and Constraints of India's Indo-Pacific Vision. *South Asian Studies*, 4, pp. 25-57, 153-155, DOI: 10.16608/j.cnki.nyj.2023.04.02

<sup>6</sup> Wang Chunyan & Guo Jianwei. (2021). Analysis of India's Economic Decoupling Behavior Against China Under the Indo-Pacific Strategy. *South Asian Studies Quarterly*, 3, pp. 32-47, 156.

<sup>7</sup> Common Service Centre (CSC), "Digital India," retrieved on December 22, 2023, from <https://csc.gov.in/digitalIndia>

<sup>8</sup> N. Chandransekaran. (2023). Digitalizing India: A Force to Reckon With. EY India, retrieved on December 25, 2023, from [https://www.ey.com/en\\_in/india-at-100/digitalizing-india-a-force-to-reckon-with](https://www.ey.com/en_in/india-at-100/digitalizing-india-a-force-to-reckon-with)

<sup>9</sup> Chen Ran & Wang Yiwei. (2022). The Demands and Contradictions of U.S.-India Digital Cooperation under the Indo-Pacific Strategy Framework. *South Asian Studies*, 4, pp. 68-87, 156-157.

emerging digital technologies.<sup>1</sup>

However, India's strong stance on data localization, cross-border data flows, digital taxation, and digital sovereignty has led to regulatory conflicts with the U.S., which advocates for open digital trade rules. These regulatory divergences have become a major obstacle in U.S.-India digital cooperation.<sup>2</sup>

#### 4. Conclusion

The new wave of global industrial revolution, characterized by informatization, intelligence, digitization, and networking, is unfolding rapidly.<sup>3</sup> However, this process is accompanied by the "backlash" of globalization driven by technological advancements, triggering strategic competition centered on technology among major powers.

In this context, most nations have come to recognize technology as a critical strategic resource, deeply intertwined with national security, economic prosperity, and social stability. Consequently, technonationalism is gaining traction globally. The specific drivers behind technonationalism vary across countries depending on their technological development stages and economic conditions. In the digital economy domain, states may adopt technonationalist policies based on economic benefits, national security concerns, or aspirations for technological hegemony — in many cases, these motivations are intertwined. This divergence in motivations directly shapes different digital economy policy choices across countries.

Under the influence of this new wave of technonationalism, competition in the digital economy has taken center stage in global affairs. This paper identifies three core variables that shape a country's competitiveness in the digital economy: technological power, institutional

power, and market power. These variables not only influence a country's digital competitiveness individually but also interact with each other to create complex power dynamics. In a digital economy competition system comprising multiple states, differences in relative technological, institutional, and market strengths determine each country's strategic choices.

By comparing and positioning the relative strengths of different countries across these three dimensions, it becomes possible to anticipate their likely policy combinations in digital competition. The analysis of China, the United States, and India confirms that countries occupying different positions in the power structure tend to adopt distinct strategic approaches. This validates the general applicability of the theoretical framework proposed in this paper.

This framework offers a systematic method for assessing a country's relative position in global digital competition and predicting its likely policy mix. Such analysis helps reduce uncertainty in policymaking and provides deeper insights into the digital strategies of different nations. Furthermore, understanding the interactions between technological, institutional, and market power allows China to leverage its digital strengths more effectively and develop a competitive policy system that supports technological catch-up and long-term competitiveness.

#### References

- Atkinson R D. (2021). A US grand strategy for the global digital economy. *Policy Report, Information Technology and Innovation Foundation (ITIF)*.
- Burwell F G. (2020). Engaging Europe: A Transatlantic Digital Agenda for the Biden Administration.
- Campbell K M, Sullivan J. (2019). Competition without catastrophe: How American Can both challenge and coexist with China. *Foreign Aff.*, 98, 96.
- Cheney C. (2019). China's Digital Silk Road: strategic technological competition and exporting political illiberalism. *Issues & Insights*, 19.
- Cohen J, Fontaine R. (2020). Uniting the Techno-Democracies: How to Build Digital Cooperation. *Foreign Aff.*, 99, 112.
- <sup>1</sup> Hu Shisheng & Wang Jue. (2022). India's Industrial Substitution Policy Towards China Under the Modi Administration. *Modern International Relations*, 11, pp. 42-50, 60.
- <sup>2</sup> Jeff Smith. (2019). Modi 2.0: Navigating Differences and Consolidating Gains in India-U.S. Relations. The Heritage Foundation Report, No. 3425, August 2019, p. 16, retrieved from [https://www.heritage.org/sites/default/files/2019-08/BG3425\\_NEW.pdf](https://www.heritage.org/sites/default/files/2019-08/BG3425_NEW.pdf)
- <sup>3</sup> Wei, Jigang. (2023). The New Industrial Revolution and Global Industrial Changes, China International Development Knowledge Center. Accessed December 3, 2023. <https://www.rmzxb.com.cn/c/2023-05-04/3338677.shtml> (in Chinese).

- Deibert, Ronald. (2019, January). The Road to Digital Unfreedom: Three Painful Truths About Social Media. *Journal of Democracy*, 30(1), pp. 25-39.
- Drezner D W. (2019). Technological change and international relations. *International Relations*, 33(2), 286-303.
- Gateway House. (2020, AUGUST 20). China's global push: Is a backlash building? Overseas Press Club of America, [2020-08-20].  
<https://www.gatewayhouse.in/global-discussion-china-influence/>.
- Gokilavani D R, Durgarani D R. (2017). Evolution of digital economy in India. *International Journal of Marketing and Human Resource Management*, 9(1), 31-39.
- Gorman L. (2021). China's Data Ambitions: Strategy, Emerging Technologies, and Implications for Democracies. *The National Bureau of Asian Research (NBR)*, 14.
- Howell, Sam. (2023). Technology Competition: A Battle for Brains. Center for a New American Security, [2023-12-22].  
<https://www.cnas.org/publications/reports/technology-competition-a-battle-for-brains>
- Hugo van Manen, Tobias Gehrke, Jack Thompson and Tim Sweijs. (2023). An Overview of Techno-Nationalism. [2023-12-14] Hague Centre for Strategic Studies.  
<https://hcss.nl/wp-content/uploads/2021/09/Taming-Techno-Nationalism-Sept.-2021.pdf>
- HUNT W. (2022). Sustaining U.S. competitiveness in semiconductor manufacturing: Priorities for CHIPS act incentives.  
<https://cset.georgetown.edu/publication/sustaining-u-s-competitiveness-in-semiconductor-manufacturing/>
- Jon Bateman. (2022, April 25). U.S.-China Technological "Decoupling": A Strategy and Policy Framework, Carnegie Endowment for International Peace, [2023-11-27].  
<https://carnegieendowment.org/2022/04/25/u.s.-china-technological-decoupling-strategy-and-policy-framework-pub-86897>
- Li Wei. (2016). Transformation of International Order and the Emergence of Realist Institutionalism Theory. *Foreign Affairs Review (Journal of China Foreign Affairs University)*, 33(01), 31-59.
- MA D. (2020). The Digital Silk Road and China's grand strategic ambition. *Adelphi Series*, 60(487/488/489), 89-106.
- Manning R A. (2019). Techno-nationalism vs. the fourth industrial revolution. *Global Asia*, 14(1), 14-21.
- MILLER C, JORDAN S, DANNY C. (2021, March 15). Labs over Fabs: How the U.S. should invest in the future of semiconductors-foreign policy research institute, [2023-12-17].  
<https://www.fpri.org/article/2021/03/labs-over-fabs-how-the-u-s-should-invest-in-the-future-of-semiconductors/>
- Nathan A J. (2021). Biden's China Policy: Old Wine in New Bottles? *China Report*, 57(4), 387-397.
- Pan Xiaoming. (2023). Formulation of International Digital Trade Rules: Disputes, Strategies, and Games. *International Relations Studies*, (05), 88-108+158.
- Rasser M. (2021, January). Networked: Techno-Democratic Statecraft for Australia and the Quad. *Center for a New American Security*, 19.
- Schmidt E. (2022). AI, great power competition & national security. *Daedalus*, 151(2), 288-298.
- Semiconductor Industry Association (SIA)/Boston Consulting Group (BCG). (2019). STRENGTHENING THE GLOBAL SEMICONDUCTOR SUPPLY CHAIN IN AN UNCERTAIN ERA, [2023-12-01].  
<https://www.semiconductors.org/strengthening-the-global-semiconductor-supply-chain-in-an-uncertain-era/>
- Shi Dan, Nie Xinwei, Qi Fei. (2023). Globalization of the Digital Economy: Technology Competition, Rule Games, and China's Options. *Management World*, 39(09), 1-15.
- Steinmueller W E. (2001). ICTs and the possibilities for leapfrogging by developing countries. *Int'l Lab. Rev.*, 140, 193.
- Sun Xuefeng. (2023). Digital Technology Innovation and International Strategic Competition. *Foreign Affairs Review (Journal of China Foreign Affairs University)*, 40(01), 54-77+166+6.
- Tushman, M., Rosenkopf, L. (1992). Organizational Determinants of

- Technological Change: towards a Sociology of Technological Evolution. *Research in Organizational Behavior*, (14), 311-347.
- Wang Fan. (2013). *International Relations Theory: Thoughts, Paradigms, and Hypotheses*. Beijing: World Knowledge Press, pp. 89-90.
- Wei Zongyou. (2011). International Agenda Setting: A Preliminary Analytical Framework. *World Economics and Politics*, (10), 38-52+156.
- Yang Hui. (2021). Dominance, Institutional Negative Externalities, and Economic Institutional Competition in the Asia-Pacific Region: A Case Study of TPP and RCEP. *Foreign Affairs Review (Journal of China Foreign Affairs University)*, 38(02), 125-154+8.
- Zhang Y. (2023). Industrial policy for strategic industry: The case of China's 5G and supercomputing industries. Google, Temask, Bain & Company. (2023, June 06). India 2023 economy report, [2023-12-02]. <https://www.bain.com/insights/e-economy-in-dia-2023/>