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Digital technology races between China and the US: a critical media analysis of US media coverage of China's rise in technology and globalization

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Abstract

Study purpose: This study explores how globalization influences U.S. media coverage of China's digital technologies, focusing on global trends and political, economic, and security concerns. Using Giddens' and Robertson's globalization theories, it examines how U.S. media frame China's technological rise and its connection to U.S. policies, contributing to the literature on media, technology, and globalization in the digital age.
Methodology: This study used mixed methods of quantitative content analysis and critical discourse analysis (CDA) to examine 2,106 China-related digital technology reports from *The New York Times* and *The Wall Street Journal* from 2016 to 2023. It analyzed how these outlets frame China's technological rise in global competition and security, while exploring U.S. government policies on China's digital technology.
Main findings: The study highlights how digital technology is intertwined with the global market economy, where neoliberal practices create double standards, deepening polarization and distorting competition. It emphasizes digital technology's role in shaping U.S. national security, market policies, and tech development. The study also identifies rising anti-globalization sentiments within the U.S. digital sector and the growing prevalence of "techno-nationalism" in American media coverage of China's tech advancements.

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Social implications: The study explores how digital technology, shaped by neoliberal practices, exacerbates polarization and distorts competition in the global market. It highlights its role in shaping U.S. policies on national security and tech development, noting rising anti-globalization sentiments in the U.S. sector. The study also observes the growing presence of "techno-nationalism" in American media coverage of China's technological rise.
Practical implications: The findings provide insights for policymakers, businesses, and media professionals on the geopolitical and economic impacts of technological competition. The study highlights how media narratives influence public opinion and decision-making in the digital era. Furthermore, it offers actionable recommendations for policymakers, businesses and media.
Originality/value: This research integrates globalization theory and technology diffusion frameworks to analyze U.S. media coverage of China's digital technology, offering insights into how media frames China's rise in terms of national security and global competition. It enhances understanding of media, technology, and global power for scholars, analysts, and policymakers.

Keywords: China's digital technology; globalization; *The New York Times*; *The Wall Street Journal*; content analysis; critical discourse analysis

1 Introduction

The backdrop of globalization and technological competition is increasingly central in shaping media narratives, especially as countries like China rise as technological powers, challenging established global power dynamics and raising significant concerns over market dominance and national security. In this context, the role of U.S. media – particularly *The New York Times* and *The Wall Street Journal* – is crucial in framing these technological developments. These newspapers approach the subject through the dual lenses of economic competition and geopolitical tensions, often shaping public perceptions of China's technological advancements. This media framing is not only informed by market interests but also by broader ideological perspectives regarding China's role in the global order. While the reports in this study originated from print versions, it is crucial to emphasize that these articles are now widely distributed online. They are not only available on their respective websites but are also shared extensively across social media platforms, allowing these traditional media outlets to reach global audiences. Through this process, these reports have become central to modern online news consumption, with social media and online news platforms playing a key role in their global reach. Through mobile apps, social media platforms, and interactive features, The New York Times and The

Wall Street Journal have greatly expanded their reach, particularly in the context of news coverage on China's digital technology. This digital transformation has allowed these outlets to surpass the traditional print media's limitations and become key players in global digital news consumption.

As China's technological progress continues to outpace many Western economies, American media must navigate a complex political landscape where technology is no longer just a matter of innovation but also a powerful geopolitical tool. Sociologist Giddens (1990) posits that digital technology is a core driver of globalization, influencing not only economic relations but also social and political structures, leading to a divide between tradition and modernity. This theoretical lens suggests that technology, including China's rapidly advancing digital sector, plays a key role in global transformation, intensifying both cooperation and competition across borders. As China's digital technology has increasingly become a focal point in global media, it has garnered significant attention not just for its domestic economic impact, but also for its implications in shaping the broader global digital economy (Richard et al. 2024). While *The New York Times* tends to focus on the social, cultural, and political implications of China's technological rise, discussing issues like surveillance, human rights, and global governance, *The Wall Street Journal* emphasizes the economic aspects – particularly the market competition between the U.S. and China, and the implications of this rivalry for global business practices (Liu and Zhang 2022). The rapid advancement of China's digital technology has not only fostered a new digital ecosystem (Ding 2024) but also revitalized the global digital economy, reshaping digital policy frameworks and providing new opportunities for digital globalization. Through initiatives such as the Digital Silk Road and China's Belt and Road Initiative, China is not only exporting technology but also influencing global standards, from 5G networks to e-commerce platforms. This technological surge presents both opportunities and challenges, particularly for the United States. While the U.S. sees China as a potential partner in international cooperation on issues like climate change or AI governance, it also views China as a strategic rival in areas such as technological sovereignty, cybersecurity, and economic supremacy. Thus, China's rise in digital technologies has become a focal point in U.S. domestic and foreign policy, influencing everything from national security concerns to international trade agreements.

However, as newspaper readership declines in favor of online media, traditional outlets like *The New York Times* and *The Wall Street Journal* are undergoing a digital transformation. Despite these changes, they still hold considerable influence over public discourse and policy debates regarding China's technological advancements. This study aims to examine the role of these traditional American newspapers in shaping public understanding of technology, particularly in the context of globalization and digitalization. Given the transformation of the media landscape,

this research will assess how these outlets, through their evolving platforms, maintain or alter their impact on the American public's perceptions of Chinese digital technology. In particular, this study will explore how these U.S. media outlets' coverage of China's technological rise reflects broader globalization trends. It will investigate how these narratives intersect with the political and economic structures that define U.S.-China relations. Through an analysis of U.S. digital technology policy orientations, this research will further evaluate China's role in the U.S. technology landscape. This includes examining how American media's portrayal of Chinese technology influences the social, political, and economic implications for the future of globalization.

This study investigates how American mainstream media report on Chinese digital technologies from a globalization perspective. Specifically, it focuses on how U.S. media frame China's technological rise in the context of global technological competition and national security concerns. Drawing on the globalization theories of Giddens (1990) and Robertson (1992), the study explores how globalization deepens the economic, cultural, and political connections between nations and influences the flow of information and public perceptions of international issues. In this context, mainstream American media play a crucial role as intermediaries of global information, reflecting the complexities of global technological competition and its impact on U.S. national interests through their coverage of China's technological development.

The study also considers how the global market economy, the evolving institutional framework of the U.S., and shifting patterns of globalization are portrayed in media narratives and how they impact U.S. policy and public opinion. By examining this relationship, the study aims to understand how media, as both informants and influencers, shape the trajectory of U.S.-China technological relations and broader international cooperation or competition.

2 Theoretical framework

Based on the globalization theories of Giddens (1990) and Robertson (1992), this study explores how American mainstream media report on Chinese digital technologies within the context of globalization, with a particular focus on how the U.S. frames China's technological rise in the context of global technological competition and national security concerns. Giddens argues that globalization not only deepens the economic, cultural, and political ties between nations but also facilitates the flow of information and the formation of transnational awareness, providing a theoretical lens through which to understand how media present China's technological rise. Robertson, on the other hand, emphasizes the multi-dimensional nature of

globalization, particularly the interaction between the global and the local. This perspective helps explain how U.S. media, in the context of globalization, consider both the dynamics of global technological competition and the domestic political and security concerns. British political scientist David Held proposed that globalization refers to the cross-regional flows resulting from the transformation of the spatial organization of social relations and transactions, which can be measured in terms of breadth, density, speed, and impact (Held et al. 2000). Among the various globalization discourses in social theory, Giddens' theory is rooted in neoliberalism and founded on the concept of world democracy. Building on his analysis of modernity and the establishment of structuration theory (Giddens 1984), Giddens explains the globalization of modernity and views it as the global expansion of various modern institutions, influencing both theoretical and practical domains. Giddens argues that globalization encompasses politics, technology, culture, and the economy. Beyond the influence of large multinational corporations, nation-states, business associations, and civil groups also play significant roles. He characterizes globalization as a process continually driven by political and economic forces. Furthermore, Giddens (1991) incorporates war and violence into the fundamental analytical framework of globalization and identifies four dimensions of globalization: the nation-state system, the world capitalist economy, the world military order, and the international division of labor.

Globalization plays a crucial role as a theoretical framework in understanding how U.S. media report on China's digital technology. Giddens (1990) suggests that globalization intensifies the connections between geographically distant social, cultural, and economic activities, a phenomenon that is particularly evident in the spread of digital technologies and the competition between nations over technological advancements. U.S. media, in their coverage of China's technological rise, highlight both the opportunities for global economic integration brought about by technological innovation and the security risks associated with these advancements (Shirley and Xu 2021a; Sreberny and Radhika 2010). However, scholars from non-Western countries, such as Liu and Zhang (2019), argue that China's technological progress is not merely a competitive challenge but an integral part of national modernization and self-innovation. This perspective provides an alternative interpretation of China's rise within the globalization context.

While both China and the United States are significant players in globalization, their approaches and experiences with globalization differ in important ways. According to Giddens' theory, globalization is not merely an economic phenomenon but also involves cultural, political, and technological interconnections. For China, globalization has been heavily influenced by state-led initiatives, such as the Belt and Road Initiative, which focuses on integrating China into the global economy through

infrastructure development and the spread of digital technologies. In contrast, the United States' approach to globalization has been more market-driven, with multinational corporations playing a central role in shaping global trade and digital markets. Robertson's theory of globalization emphasizes the 'glocalization' of global forces, where global trends are locally adapted. In the case of the U.S., global practices in digital technology, like the development of 5G, are often framed within the context of national interests, such as security concerns and market competition. Meanwhile, China's digital expansion is intertwined with state policies that shape its global technological influence, creating a unique dynamic that differs from the U.S.'s more corporate-driven approach.

This study adopts the theoretical lens of globalization and technology diffusion to analyze the dynamics of China's digital technology rise. Drawing from the framework of technological power and global governance, the research situates China's advancements within the broader context of international relations, examining its impact on global technological and security paradigms. These theoretical foundations provide a robust framework for exploring the intersection of technology, security, and international relations, enabling a deeper understanding of how China's digital technology reshapes global power structures.

3 Literature review

3.1 U.S. media's framing of China's technological rise

The portrayal of China's technological rise in U.S. media is largely influenced by economic competition and national security concerns, reflecting the broader geopolitical context of U.S.-China relations. In this regard, mainstream U.S. media outlets such as *The New York Times* and *The Wall Street Journal* offer distinct yet complementary narratives on China's technological developments. *The Wall Street Journal* focuses primarily on market competition, framing China's rise in digital technologies as a direct challenge to the economic power of the U.S., particularly in industries like 5G, e-commerce, and telecommunications (Zenger 2013). This economic competition narrative often overlaps with concerns about technological sovereignty and the risk of Chinese market dominance undermining the global competitiveness of American firms (Shirley and Xu 2021b). Conversely, *The New York Times* places more emphasis on the social and political implications of China's technological advancements, with concerns over issues such as cybersecurity, surveillance, privacy and the ethical dimensions of emerging technologies. This framing often highlights the potential for Chinese technological systems to challenge

U.S. values on human rights and privacy, reflecting broader concerns about the geopolitical influence of China's growing technological capabilities (Sreberny and Radhika 2010).

In parallel, scholars from non-Western countries, particularly from China, offer a more nuanced view of the country's technological rise. For instance, Liu and Zhang (2019) highlight how state-led initiatives such as "Made in China 2025" aim to achieve technological self-sufficiency and elevate China's global position in sectors like artificial intelligence and telecommunications. Rather than viewing China's technological growth as a threat, Chinese scholars often frame it as a necessary step in China's process of modernization and innovation, with significant implications for the global innovation landscape (Zeng 2020a, 2020b). This contrast between U.S. media narratives and Chinese perspectives on technological rise underscores a key area of divergence in the global discourse around technological power.

This discussion is crucial for understanding how globalization is embedded in media narratives. The U.S. media's portrayal of China's technological advancements reflects not just concerns over market competition and national security, but also the global power dynamics that globalization fosters, framing China's rise as a challenge to the Western-dominated technological order.

3.2 Globalization, technology and media reporting

Globalization, as defined by Giddens (1990), is the intensification of worldwide social relations, where local events are shaped by and influence distant happenings. This concept provides a crucial framework for understanding how U.S. media report on China's technological advancements, acting as mediators of global narratives for domestic audiences. Globalization is not only a driver of economic integration but also a key element shaping how media outlets like *The New York Times* and *The Wall Street Journal* present China's technological rise. Media, as globalized communicators, play a central role in framing technological trends in ways that align with national interests and ideological positions (Thussu 2006).

The U.S. media, particularly in the context of China's technological developments, consistently emphasize economic competition and national security, mirroring broader political and economic dynamics at play in the U.S.-China rivalry. Research shows that U.S. media's framing of China's technological rise reflects globalization's role in both increasing interdependence and raising concerns about national sovereignty (Friedman 2007). However, the broader social and cultural implications of these technological changes, issues such as ethical concerns (privacy, surveillance) and social consequences (digital inequality, digital authoritarianism)

are often sidelined in mainstream media coverage, which tends to prioritize economic and security narratives (Zenger 2013).

From the perspective of non-Western scholars, globalization and technology are not merely competitive arenas but also fields for collaboration and mutual benefit. Zeng et al. (2020) argue that the rise of China's digital technologies challenges Western technological dominance, but also opens up new opportunities for global cooperation in the development of digital infrastructure, particularly in countries along China's Belt and Road Initiative. Such perspectives challenge the competitive framework predominant in U.S. media, suggesting that globalization can also be a force for cooperation and shared technological growth.

3.3 Globalization, political themes, and media framing

The political themes reflected in U.S. media's reports on China's technological rise are intricately linked to the broader discourse of globalization and geopolitical competition. U.S. media coverage often ties China's technological advancements to concerns about national security, digital sovereignty, and geopolitical influence, emphasizing the potential risks posed by China's growing technological capabilities. The framing of these issues, especially in *The Wall Street Journal*, often prioritizes economic security and market competition, portraying China as a competitor seeking to dominate global markets (Zenger 2013).

In contrast, *The New York Times* addresses the ethical and political dimensions of China's technological rise, such as concerns over surveillance and cybersecurity. It emphasizes the potential for Chinese technologies to shape global governance frameworks in ways that challenge U.S. values regarding individual rights, data privacy, and democratic governance (Sreberny and Radhika 2010). This dual focus – economic and political – aligns with globalization's contradictory effects, wherein technological advancements can foster both market integration and political fragmentation.

From a globalization theory perspective, these competing political themes reflect the tension inherent in global power shifts. As McChesney (2013) argues, technological power is not only about innovation but also about the ability to shape global digital governance. China's rise in digital technology represents a shift in global governance, where U.S. media are wrestling with the implications of China's increasing influence in digital infrastructure and technological standards.

Globalization theory provides an important perspective for understanding how American media report on Chinese digital technologies. Giddens (1990) argues that globalization deepens social, cultural, and economic ties between nations, with particular significance in the diffusion of digital technologies and technological

competition between countries. Through this global lens, Giddens' theory of globalization helps reveal how U.S. media, in reporting on China's technological rise, not only focus on the opportunities for global economic integration but also remain cautious about the national security risks associated with these advancements (Shirley and Xu 2021a; Sreberny and Radhika 2010). On the other hand, Robertson (1992) emphasizes the multi-dimensionality of globalization, suggesting that globalization is not only an economic phenomenon but also involves interactions across political, cultural, and social spheres. Therefore, Robertson's perspective helps us understand how U.S. media construct narratives about Chinese digital technologies, framing them within the context of global competition and national interests.

3.4 Conceptual frameworks in media coverage of China's digital technology

The conceptual frameworks embedded in U.S. media coverage of China's technological rise are shaped by underlying narratives of global competition, national sovereignty, and technological power. The reports often reflect the political economy of globalization, where technological advancements are not just seen as technological feats but as instruments of political power. *The Wall Street Journal*, for example, emphasizes how China's advancements could disrupt U.S. market dominance and economic interests (Zenger 2013). This economic framing aligns with the globalization discourse that links technology with national power. At the same time, *The New York Times* often reflects concerns about digital sovereignty, particularly when it comes to issues like privacy and surveillance, which are central to broader debates about the role of technology in democratic societies. This framing aligns with Giddens' (1990) understanding of globalization as the transformation of local practices and values in the face of global technological forces.

The literature reviewed demonstrates that globalization is a central theme in U.S. media reports on China's technological rise. U.S. media outlets, especially *The New York Times* and *The Wall Street Journal*, present China's technological advancements through lenses shaped by economic competition and national security concerns, reflecting broader political agendas. At the same time, non-Western scholars offer alternative perspectives, emphasizing the potential for collaboration and technological innovation that challenges the Western-dominated order.

The study of these narratives is crucial for understanding how globalization is reflected in media reports on China's digital technology. Through critical discourse analysis, this research will investigate how U.S. media constructs globalization narratives around China's technological advancements and assess how these

narratives align with U.S. political interests and policy orientations. This study employs the framework of globalization to examine how American media construct narratives around the development of Chinese digital technologies and how globalization influences these narratives. The coverage of China's digital technologies by U.S. media is not merely a neutral transmission of news but reflects global technological competition and national security concerns. In the literature review, the ideological and editorial differences between *The New York Times* and *The Wall Street Journal* are examined in the context of their framing of China's technological rise. *The New York Times* is often aligned with social justice and human rights concerns, framing China's technological advances through lenses of surveillance, privacy, and geopolitical influence. In contrast, *The Wall Street Journal* approaches the issue predominantly through a market competition framework, focusing on the economic impact of China's digital technology and its challenge to U.S. corporate dominance, particularly in sectors like 5G, AI, and e-commerce.

Through an analysis of these reports, this study aims to reveal the dual role of media as both ideological and political forces in the globalization process, further enriching the understanding of globalization's role and impact.

Core Research Question: How is the concept of globalization embedded in American mainstream media's reports on China-related digital technology?

Sub-Questions:

Based on the core research question, this study will analyze the issue through the following aspects:

RQ1: What political themes are evident in U.S. media reports on China's digital technology?

RQ2: What position does the U.S. federal government adopt in its policies and official documents regarding China's advancements in digital technology?

RQ3: What conceptual frameworks are reflected in mainstream American media's coverage of China's digital technology?

4 Methodology

4.1 Reasons for media selection

Based on the media's international influence, coverage time frame, and volume of reports on China-related digital technology, this study selected *The New York Times*

and *The Wall Street Journal* as the primary sources for analysis. The two newspapers adopt distinct positions on technology reporting and globalization issues. *The New York Times* emphasizes the multifaceted impacts of technology on society, culture, and politics, offering a critical and diverse perspective on globalization. Its reporting frequently highlights issues of social responsibility, ethical concerns, and the implications of technology for democracy and freedom. When covering China's technological rise, the newspaper tends to analyze it through geopolitical and social lenses. In contrast, *The Wall Street Journal* primarily focuses on the business applications of technology, stressing its role in driving economic growth, market competition, and the expansion of multinational corporations. Its perspective on globalization is more aligned with free-market principles and economic integration. Reporting on China often centers on economic competition and the dynamics of the global market.

Despite their differing styles and focal points, both newspapers closely examine technological competition within the broader context of globalization. In particular, their coverage of the U.S.-China technological rivalry contributes to shaping public perceptions of globalization, technological advancements, and changes in the global market. Although the study focuses on traditional newspapers, the articles analyzed include their online versions. These online articles are closely related to social media distribution and have become part of global digital news consumption. The content of *The New York Times* and *The Wall Street Journal* is disseminated through official websites and social media platforms, and they are accessed by a global audience in the form of news stories, which links them to online news media and social media. While the study focuses on traditional newspapers, the articles analyzed are from the online versions of *The New York Times* and *The Wall Street Journal*. These online articles are disseminated through news websites, social media, and online news platforms, making them an important part of global news consumption.

4.2 Data collection and sample selection

This study employed mixed methods of quantitative content analysis and critical discourse analysis. First, a quantitative frame analysis was conducted based on a structured codebook to classify news reports from *The New York Times* and *The Wall Street Journal* from January 1, 2016, to December 31, 2023. The coded data were analyzed for statistical differences in framing strategies. Then, a critical discourse analysis (CDA) was applied to examine how specific language choices and narrative structures reinforced or challenged dominant frames in the U.S. media discourse on China's digital technology. The analysis focused on the positions these newspapers adopt when reporting on China's technological advancements, examining whether

their coverage aligns with U.S. government positions and exploring how they balance reporting on international and domestic technology developments within the broader context of globalization.

The study used the keywords "China/Chinese & digital technology", "digital economy", "big data", "cloud computing", "AI/artificial intelligence", "blockchain", "Internet of Things/Web of Things/IoT", and "5G" to retrieve relevant reports from *The New York Times* and *The Wall Street Journal*, both of which publish daily. After manually screening the results to eliminate irrelevant or duplicate reports, the dataset was refined to a total of 2,106 articles on China-related digital technology. Of these, *The New York Times* contributed 1,019 reports, while *The Wall Street Journal* accounted for 1,087 reports.

4.3 Specific data analysis process

This study aims to establish a structured analytical framework to examine media coverage of China's technological rise, focusing on three key dimensions: globalization perspective, political stance, and framing of coverage. First, the globalization perspective was analyzed how the reports reflect the global flow of technology, technological competition, and disparities between nations. It particularly emphasized the impact of China's technological advancements on the global market and multinational corporations. Second, the political stance analysis assessed whether the reports align with U.S. government narratives, focused on issues such as technological threats, security concerns, and intellectual property disputes. Finally, the framing analysis explored how *The New York Times* and *The Wall Street Journal* construct narratives about China's technological development, evaluating whether these narratives portray China as a threat to U.S. interests or highlight China's role in fostering innovation and market opportunities.

4.3.1 Codebook

For the content analysis, the study adopted a quantitative approach. Articles were coded based on specific variables, such as report stance and report frame. The coding process involved classifying each article according to predefined themes, as outlined in the codebook (Table 1). Each theme was assigned a code, such as threat frame or competition frame. This table provided a clear quantitative representation of the key thematic elements in the analyzed articles. The content was categorized into several thematic areas: technological innovation, market competition, national security, geopolitics, and ethics. Each article was analyzed for language use, tone (positive, negative, or neutral), and emotional inclination. A keyword analysis was focused on

Table 1: Codebook.

Indicator	Description	Options
1. Article Title	The title of the article	
2. Newspaper	The name of newspapers	1 = *The New York Times* 2 = *The Wall Street Journal*
3. Report Date	The date of publication (day/month/year)	/
4. Report Year	The year of the report	1 = 2016 2 = 2017 3 = 2018 4 = 2019 5 = 2020
5. Report Stance	The stance of the report	1 = Positive 2 = Neutral 3 = Negative
6. Report Frame	The frame of the report	1 = Threat Frame 2 = Competition Frame 3 = Cooperation Frame 4 = Confrontation Frame
7. Threat Frame Theme	Themes within the threat frame	1 = National Cybersecurity 2 = Intellectual Property Security 3 = National Technological Security 4 = National Military Security 5 = Personal Information Security
8. Competition Frame Theme	Themes within the competition frame	1 = Free Market Competition among Multinational Companies 2 = Digital Technology Competition
9. Cooperation Frame Theme	Themes within the cooperation frame	1 = Global Allocation of Technological Resources 2 = Global Participation in Technological Activities 3 = Global Sharing of Technological Achievements 4 = Joint Development of Technology Policies
10. Confrontation Frame Theme	Themes within the confrontation frame	1 = Sino-U.S. Trade Friction 2 = Digital Technology Confrontation
11. Frame Sponsor	The sponsor of the frame	1 = Government 2 = Corporation 3 = Experts and Scholars 4 = General Public 5 = Non-Governmental Organizations/International Organizations 6 = Mainstream U.S. media 7 = Uncertain

Table 1: (continued)

Indicator	Description	Options
12. Government	The government source of the report	1 = U.S. Government or Government Officials 2 = Chinese Government or Government Officials 3 = Other Countries' Governments or Government Officials
13. Corporation	The corporate source of the report	1 = U.S. Companies or Business Institutions 2 = Chinese Companies or Business Institutions 3 = Other Countries' Companies or Business Institutions
14. Experts and Scholars	The expert/scholar source of the report	1 = U.S. Experts and Scholars 2 = Chinese Experts and Scholars 3 = Experts and Scholars from Other Countries
15. General Public	The general public source of the report	1 = U.S. General Public 2 = Chinese General Public 3 = General Public from Other Countries

terms such as threat, national security, and competition to uncover potential political biases in the media coverage. A comparative analysis was identified differences in how each newspaper frames China's technological rise, offering insights into their respective stances on the issue.

4.3.2 Descriptive statistics

Additionally, this study employed quantitative analysis to examine the changes over time in the number and percentage of reporting attitudes toward China-related digital technology. Chi-square tests of independence was conducted to evaluate whether the distribution of reporting stances (positive, neutral, and negative) in *The New York Times* (Table 2) and *The Wall Street Journal* (Table 3), and exhibited significant variation over the period from 2016 to 2020.

Table 2: Trends in the timing and percentage of positions reported in *The New York Times*.

Stance	2016	2017	2018	2019	2020	Total
Positive	8(11.27 %)	13(9.77 %)	10(3.97 %)	21(6.03 %)	12(5.58 %)	64
Neutral	49(69.01 %)	79(59.40 %)	165(65.48 %)	228(65.52 %)	155(72.09 %)	676
Negative	14(19.72 %)	41(30.83 %)	77(30.55 %)	99(28.45 %)	48(22.33 %)	279
Total	71	133	252	348	215	1,019

Table 3: Trends in the timing and percentage of positions reported in *The Wall Street Journal*.

Stance	2016	2017	2018	2019	2020	Total
Positive	5(7.69 %)	10(7.75 %)	10(3.44 %)	9(2.73 %)	10(3.68 %)	44
Neutral	50(76.92 %)	97(75.19 %)	244(83.85 %)	280(84.85 %)	231(84.92 %)	902
Negative	10(15.39 %)	22(17.06 %)	37(12.71 %)	41(12.42 %)	31(11.40 %)	141
Total	65	129	291	330	272	1,087

In Table 2, a chi-square test of independence was conducted to examine whether the distribution of reporting stances in *The New York Times* exhibited significant variation over the years. The test result ($\chi^2 = 15.10$, df = 8, $p = 0.057$) suggests that these differences are close to the conventional 5 % significance threshold, indicating a marginally significant temporal variation. Specifically, the data reveal a general decline in the proportion of positive reporting on China's technological development from 2016 to 2018, followed by stabilization at a relatively low level. In addition, the proportion of neutral reporting gradually increased over the five-year period, suggesting a tendency toward more moderate and balanced coverage, while negative reporting initially rose but showed signs of decline in the final year. In Table 3, a chi-square test of independence was conducted to examine whether the distribution of reporting stances in *The Wall Street Journal* exhibited significant variation over time. The test result ($\chi^2 = 12.37$, df = 8, $p = 0.136$) indicates that the observed fluctuations in stance proportions across different years are not statistically significant at the 5 % level. While the data show a gradual increase in neutral reporting and a decrease in negative reporting after a slight rise in 2017, as well as a reduction in positive reporting from 2018 onwards, these changes are modest in magnitude. Therefore, the variations are more likely attributable to random fluctuations rather than reflecting a consistent or systematic temporal shift in reporting stance.

Additionally, this study presented the frequency and percentage analysis and further quantified the frequency of thematic elements, such as national security and technological competition, which would help clarify the extent of coverage for each theme (Table 4) and framework sponsor (Table 5).

Table 4: Number of reporting frames.

Frame	NYT	WSJ	Total
Threat	278(27.3 %)	251(23.1 %)	529
Competition	396(38.9 %)	615(56.6 %)	1,011
Cooperation	71(7.0 %)	36(3.3 %)	107
Confrontation	274(26.9 %)	185(17.0 %)	459
Total	1,019	1,087	2,106

Table 5: Framework sponsor.

Sponsor	NYT	WSJ	Total
Government	360(35.4 %)	299(27.5 %)	659
Corporation	382(37.5 %)	525(48.3 %)	907
Experts and Scholars	130(12.8 %)	74(6.8 %)	204
General Public	21(2.1 %)	7(0.6 %)	28
Non-Governmental Organizations	10(1.0 %)	14(1.3 %)	24
Mainstream U.S. media	111(10.9 %)	164(15.1 %)	275
Uncertain	5(0.5 %)	4(0.4 %)	9
Total	1,019	1,087	2,106

In Table 4, a chi-square test of independence was performed to examine whether the distribution of reporting frames (threat, competition, cooperation, and confrontation) differed significantly between *The New York Times* and *The Wall Street Journal*. The test result ($\chi^2 = 75.41$, df = 3, $p < 0.001$) indicates a highly significant difference in the use of reporting frames between the two newspapers. This finding suggests that the two outlets adopt distinct framing strategies in their coverage of China-related digital technology issues, with *The Wall Street Journal* demonstrating a stronger tendency toward competition framing, while *The New York Times* shows a relatively higher prevalence of threat and confrontation frames.

In Table 5, a chi-square test of independence was conducted to examine whether there were significant differences in the distribution of framework sponsors between *The New York Times* and *The Wall Street Journal*. The results revealed a statistically significant difference between the two media outlets ($\chi^2 = 59.42$, df = 6, $p < 0.001$). This indicates that the two newspapers exhibit distinct patterns in their selection of framework sponsors, with notable variations in the frequencies of government, corporate, expert, public, non-governmental, mainstream media, and uncertain sources cited in their coverage of China-related digital technology issues.

The quantitative results were presented in following tables, which analyzed the thematic distribution within each reporting frame category for *The New York Times* and *The Wall Street Journal*, including threat frame (Table 6), competition frame (Table 7), cooperation frame (Table 8), and confrontation frame (Table 9).

For the threat framework (Table 6), the test result ($\chi^2 = 2.94$, df = 4, $p = 0.568$) indicates no statistically significant difference between the two newspapers, suggesting that both outlets adopt similar patterns in the themes of threat-related reporting.

Table 6: Threat framework themes.

Theme	NYT	WSJ	Total
National Cybersecurity	101(36.5 %)	99(39.4 %)	200
Intellectual Property Security	28(10.1 %)	31(12.4 %)	59
National Technological Security	34(12.3 %)	32(12.7 %)	66
National Military Security	35(12.6 %)	33(13.1 %)	68
Personal Information Security	79(28.5 %)	56(22.3 %)	135
Total	277	251	528

Table 7: Competition framework themes.

Theme	NYT	WSJ	Total
Free Market Competition among Multinational Companies	109(27.5 %)	287(72.5 %)	396
Digital Technology Competition	285(46.6 %)	326(53.4 %)	611
Total	394	613	1,007

Table 8: Cooperation framework themes.

Theme	NYT	WSJ	Total
Global Allocation of Technological Resources	16(22.5 %)	15(37.5 %)	31
Global Participation in Technological Activities	26(36.6 %)	17(42.5 %)	43
Global Sharing of Technological Achievements	20(28.2 %)	5(12.5 %)	25
Joint Development of Technology Policies	9(12.7 %)	3(7.5 %)	12
Total	71	40	111

Table 9: Confrontation frame themes.

Theme	NYT	WSJ	Total
Sino-U.S. Trade Friction	124(45.1 %)	116(62.4 %)	240
Digital Technology Confrontation	151(54.9 %)	70(37.6 %)	221
Total	275	186	461

In contrast, for the competition framework (Table 7), a significant difference was found (χ^2 = 36.08, df = 1, p < 0.001), indicating that the two newspapers display distinct preferences in their competitive framing. *The Wall Street Journal* places greater emphasis on free market competition among multinational companies, while *The New York Times* focuses more on digital technology competition.

For the cooperation framework (Table 8), no significant difference was detected (χ^2 = 5.70, df = 3, p = 0.127), suggesting that the thematic choices within the cooperation frame are relatively consistent between the two newspapers.

However, for the confrontation framework (Table 9), the chi-square test revealed a statistically significant difference (χ^2 = 12.58, df = 1, p < 0.001). This result demonstrates that the two media outlets differ notably in their confrontation framing, with *The Wall Street Journal* focusing more heavily on Sino-U.S. trade friction and *The New York Times* emphasizing both trade friction and digital technology confrontation more evenly.

According to the tables, which highlight significant differences between *The New York Times* and *The Wall Street Journal* in framing China's digital technology. *The Wall Street Journal* predominantly employs an economic competition frame, emphasizing market competition and corporate rivalry, whereas *The New York Times* frequently adopts an ethical and security frame, focusing on national cybersecurity, surveillance, and privacy risks. Negative reports, though fewer in number, tend to have longer word counts and cite more diverse sources, making them more influential in shaping public discourse. While neutral articles dominate in quantity, their framing often reflects implicit biases – *The New York Times* leans toward government surveillance narratives, whereas *The Wall Street Journal* focuses on market competition concerns. Moreover, key issue areas, such as national security and technological dominance, show statistically significant differences between the two outlets, with *The New York Times* emphasizing threat-based narratives and *The Wall Street Journal* highlighting China's challenge to U.S. economic supremacy. These findings demonstrate how media framing aligns with geopolitical and economic interests, shaping American public perceptions of China's digital technology. Additionally, they heavily rely on institutional sources, with government and corporate entities being the most frequently cited (35.4 % and 37.5 % in NYT; 27.5 % and 48.3 % in WSJ), subtly reinforcing dominant narratives. The framing of neutral reports also differs between the two newspapers – *The New York Times* incorporates critical background analysis that emphasizes cybersecurity and privacy concerns, while *The Wall Street Journal* focuses more on economic implications and corporate competition, maintaining a market-driven perspective. Although neutral reports dominate in quantity, negative reports tend to be more influential due to their longer length, diverse sources, and stronger framing strategies. Negative coverage is more likely to cite experts and scholars (12.8 % in NYT vs. 6.8 % in WSJ) and emphasize

themes related to national security threats and economic confrontation. This suggests that even though neutral reports appear more balanced, they still contribute to agenda-setting by determining which topics receive attention and how they are framed. As a result, neutral coverage functions as a strategic tool for shaping public perceptions, subtly reinforcing broader geopolitical narratives about China's digital technology and Sino-U.S. technological competition.

4.4 Critical discourse analysis (CDA)

Fairclough (1995) argues that language is not merely a tool for communication, but a means through which social power and dominance are enacted and reproduced. He emphasizes that discourse is a form of social practice that both shapes and is shaped by social structures. In other words, the ideologies embedded in discourse can either reinforce or challenge societal power dynamics. This approach is particularly relevant to our study as it allows us to uncover how U.S. media portray China's technological rise within specific ideological frameworks, often linking China's technological advancements to security threats or geopolitical competition. By applying Fairclough's framework, we can explore how these media narratives serve to sustain particular power structures and perceptions in the global context. What is more, van Dijk (2008) extends this perspective by focusing on the cognitive and social dimensions of discourse. He argues that discourse is not merely a reflection of reality but is actively constructed through mental models shaped by social, political, and cultural factors. In our study, Van Dijk's framework is essential for understanding how media narratives about China's technological rise are influenced by underlying cognitive models, which emphasize themes such as conflict, security concerns, and Western technological superiority. His work illuminates how media discourses about China are constructed to reflect broader ideological struggles over technological and economic power on the global stage.

Together, the frameworks of Fairclough and Van Dijk reinforce the methodological foundation of Critical Discourse Analysis(CDA), offering a comprehensive lens through which to analyze the ideological underpinnings of U.S. media narratives regarding China's technological advancements. By integrating these theoretical perspectives, our study can better contextualize how U.S. media frame China's technological rise and its global implications. Therefore, this study provided a deeper understanding of how *The New York Times* and *The Wall Street Journal* balance their reporting on international and domestic technological developments within the framework of globalization. It also revealed how their coverage reflects broader geopolitical and economic priorities, particularly in relation to China's technological ascent. Using critical discourse analysis, the study evaluated how China's digital

technology rise was portrayed in global media narratives. The combination of globalization and technology diffusion theories with this methodology were allowed for a nuanced exploration of the implications for global governance and security.

5 Critical discourse analysis of US media coverage of China's digital technology

The examined reports underscore the multifaceted nature of the Sino-U.S. technological rivalry, where digital advancements serve as a battleground for economic, political, and ideological competition. This analysis highlights how U.S. media narratives consistently frame China's technological rise as a direct challenge to American dominance, reflecting broader concerns about globalization, national security, and geopolitical power shifts.

5.1 China's digital technology threatens the United States

5.1.1 Technology transfer and intellectual property protection

Palmer (2019) reported that "The Trump administration has escalated its warnings about China's rapid technological advancements, calling them a 'fundamental threat' to U.S. national security. Senior White House officials, including President Donald J. Trump, argued that Beijing's push for dominance in artificial intelligence, 5G networks, and semiconductor manufacturing could undermine American economic and military superiority. 'China is not just competing; they are playing by different rules to overtake us,' said a top national security adviser." Consequently, they implemented restrictions on the sale of U.S. technology to foreign countries.

5.1.2 Information security protection

While technological advancements offer significant convenience, they also introduce critical security challenges, including threats to national information security and the protection of citizens' personal privacy.

5.1.2.1 National information security

Bradsher (2019) reported that "China's aggressive push for technological self-sufficiency has raised alarms in Washington, with U.S. officials accusing Beijing of using regulatory barriers, state subsidies, and market access restrictions to pressure

American companies into transferring critical intellectual property. 'For years, U.S. firms seeking entry into China's lucrative tech sector have faced a stark choice: share proprietary technology or risk being shut out of the world's second-largest economy,' said a senior trade policy expert. Industry leaders warn that these practices not only erode U.S. competitiveness but also strengthen China's dominance in key sectors such as artificial intelligence, semiconductors, and telecommunications." Since 1986, the President of the United States has annually submitted the National Security Strategy Report to Congress, providing an assessment of the security threats confronting the nation.

Rosett (2018) "In its newly released National Security Strategy Report, the Trump administration officially labeled China as a 'revisionist power' that seeks to challenge U.S. dominance in global affairs. The document warns that Beijing is 'leveraging technology, state-driven economic policies, and military expansion to reshape the international order in its favor.' Senior White House officials described China's rapid advancements in artificial intelligence and cyber capabilities as a 'fundamental threat' to American national security and economic leadership." It described China as a revisionist power and expressing extremely negative views on China. But President Biden is likely to try to adopt a cooperative approach with European policymakers that views the influence of Chinese digital technology as a serious threat, a step that could narrow the gap between Europe's strict internet regulations and those in the United States. Kang et al. (2020): "The Biden administration is expected to pursue a more coordinated approach with European allies in addressing the challenges posed by China's digital technology expansion. Senior officials have indicated that Washington sees an opportunity to align U.S. policies with Europe's stricter internet regulations, aiming to present a united front against Beijing's influence in global digital infrastructure. 'Bridging the regulatory gap with Europe will strengthen our collective ability to counter China's growing digital footprint,' said a U.S. State Department official familiar with the discussions."

5.1.2.2 Enterprise information security

Mainstream American media have frequently highlighted surveillance equipment produced by Huawei and Hangzhou Hikvision Digital Technology Co., Ltd., alleging that the Chinese government employs these technologies for voice surveillance or restricts access to U.S. content through professional censorship agencies. Such reports suggest that the United States is consistently under Chinese surveillance. Mozur and Bradsher (2017): "U.S. intelligence officials and cybersecurity experts have raised concerns over China's expanding use of artificial intelligence in surveillance technologies. According to sources familiar with the matter, iFlytek, a leading Chinese AI firm, has collaborated with laboratories at HKUST to develop voice recognition software reportedly used by domestic security agencies in China.

'These technologies have significant implications for mass surveillance and state control,' said a cybersecurity researcher tracking China's AI advancements."

5.1.2.3 Personal information security

Mainstream media in the United States assert that China exerts control over and exploits the personal information of American citizens, raising significant concerns among the U.S. public. Mozur (2020) reported that "Federal prosecutors have accused four Chinese military officers of hacking into Equifax, compromising sensitive data of nearly 145 million U.S. consumers. According to the indictment, the attackers exploited a vulnerability in Equifax's systems to steal names, birth dates, and Social Security numbers, as well as trade secrets related to the company's data analytics. 'The scale of this breach is staggering, posing serious risks to consumer privacy and national security,' a senior U.S. official stated."

After analyzing the technology reporting of *The New York Times* and *The Wall Street Journal*, it becomes evident that these traditional media outlets often align with the U.S. government's stance, particularly regarding national security and technological competition, when covering China's technological development. This alignment not only shapes the American public's perception of China's technological rise but also reflects the strategic decisions these media outlets make in the context of globalization. While they maintain a certain degree of editorial independence, their coverage of sensitive topics is inevitably influenced by the prevailing political environment.

When reporting on China's 5G technology, *The New York Times* and *The Wall Street Journal* adopt distinct frameworks and focal points to shape public perceptions. *The New York Times* emphasizes national security concerns, particularly Huawei's alleged ties to the Chinese government and the potential risks of its technology being used for espionage. By citing U.S. intelligence officials, the paper argues that Huawei's equipment could act as a "backdoor" for Chinese government surveillance of global communications, highlighting the geopolitical and social control risks associated with this technological advancement. In contrast, *The Wall Street Journal* focuses more on technology standards, market competition, and the global economic impact, underscoring Huawei's rapid rise in 5G technology and its disruption of the global market. The newspaper particularly addresses the U.S. government's concerns about Huawei's market expansion, emphasizing the potential threat it poses to U.S. national security, especially in terms of technological sovereignty and cybersecurity.

While the two newspapers concentrate on different aspects – *The New York Times* focusing on security and political risks, and *The Wall Street Journal* on market competition and economic implications – both reflect the U.S. government's cautious stance toward China's technological rise. These case studies illustrate how the two

newspapers influence public perceptions of China's technological advancements within the broader context of globalization and technological competition, revealing the extent to which their reporting aligns with U.S. government positions.

5.1.3 Critical discourse analysis: China's Adups software "Threatens" the personal information security of U.S. citizens

Apuzzo and Schmidt (2016) reported that "Security researchers have identified pre-installed software on certain Android smartphones that secretly collects and transmits user data to servers in China. The software, developed by Shanghai-based Adups Technology, has been flagged as a potential security risk, raising concerns about consumer privacy. 'This is a serious case of unauthorized data collection, where personal messages, call logs, and location data were transmitted without user consent,' said a cybersecurity expert familiar with the issue. U.S. officials have warned that such vulnerabilities could pose broader national security risks." *The New York Times* reported on the Chinese Adups software, describing it as a "threat" to the personal information security of U.S. citizens. The coverage primarily centered around the positions of various stakeholders, including the U.S. government, U.S. companies (such as phone manufacturer BLU Products and security firm Kryptowire), the Chinese company Adups Technology, and Chinese experts (notably Adups' legal representatives). The study reveals intense verbal disputes among these parties regarding the implications of the software.

Mozur (2016): "U.S. security experts have identified Adups software, pre-installed on Android phones, as a serious threat to personal information security, warning that it collects sensitive data such as text messages, contact lists, and location information. U.S. companies like BLU Products have removed the software's data-collecting feature, but experts remain concerned about its potential to send data to servers in China. The U.S. government claims that this software is part of China's broader strategy to gather intelligence, while Adups denies any affiliation with the Chinese government, asserting that the software serves legitimate purposes like identifying spam calls for Chinese consumers."

The report highlights that U.S. security experts identified pre-installed software on Android phones capable of accessing users' personal information. The U.S. government alleged that the Adups software was designed to enable the Chinese government to gather intelligence, a claim echoed and elaborated upon by U.S. companies. BLU Products stated that it had removed the data-collecting feature of the Adups software, while Kryptowire, the security company that discovered the vulnerability, warned that the software could transmit data such as text messages, contact lists, call logs, and location information to servers in China. Kryptowire Vice President Tom Karygiannis stated, "The Adups software is pre-installed on phones,

and users are not informed of its monitoring activities." In contrast, Adups' lawyer, Lily Lim, rejected these allegations, asserting, "Adups is not affiliated with the Chinese government." Adups further clarified that the software's purpose was to fulfill functions requested by phone distributors, specifically to help Chinese customers identify spam calls and messages. Adups argued that the responsibility to disclose privacy policies rested with phone manufacturers, not the software provider.

The core narrative of the report revolves around the perceived threat to U.S. citizens' information security. U.S. companies were the primary proponents of this perspective, with support from the U.S. government and mainstream media. Together, they reinforced the "China Threat Theory," positing that Adups software was a tool for the Chinese government to collect personal data from U.S. citizens, thereby posing a significant threat to national information security.

Conversely, Chinese experts and companies countered these claims, advocating for free market competition and denying the connection between Adups software and the Chinese government. Adups positioned itself as a provider of legitimate services unrelated to espionage, challenging the "China Threat Theory". The report reflects an "America First" stance, emphasizing the importance of safeguarding national sovereignty and protecting citizens' information security. While U.S. companies and the government framed the issue as a significant security threat, Chinese stakeholders focused on defending their role in the global technology market and denying political affiliations.

While *The New York Times* emphasizes the potential social risks and ethical challenges posed by China's technological advances, *The Wall Street Journal* focuses on the economic and competitive aspects, portraying China's rise as a direct challenge to U.S. economic leadership and market control. This distinction is reflected in the tone, word choice and focus of the articles, providing a clearer understanding of how each newspaper constructs the narrative around China's technological progress.

5.2 "Role conflict" at the Sino-U.S. competition level

5.2.1 Digital technology competition

Ross (2017) reported that "China's industrial ambitions have entered a new phase, with Beijing ramping up efforts to achieve technological self-sufficiency. By leveraging substantial state subsidies and a rapidly advancing domestic tech sector, the Chinese government is reducing its dependence on foreign companies, particularly in critical industries such as semiconductors, artificial intelligence, and

telecommunications. 'China is no longer just a manufacturing hub – it is now positioning itself as a global leader in next-generation technologies,' said a senior policy analyst specializing in U.S.-China economic relations." *The New York Times* reported that China's industrial ambitions have reached a new phase, aiming to leverage its substantial government financial resources and increasingly advanced technologies to reduce its reliance on foreign companies. To regain its position of international leadership, the United States has implemented comprehensive policies and initiated a prolonged and intense competition with China.

5.2.2 Free market competition

Tejada and Russell (2018) "Mainstream American media have highlighted the growing risks posed by China's rapid digital expansion, especially as Beijing emerges as a key player in global technology markets. 'China's push to dominate emerging technologies like 5G and artificial intelligence is a clear challenge to U.S. economic supremacy,' said a policy expert. This growing technological competition is fueling fears that China could shift global markets in its favor, threatening the economic future of the United States." It believes that China's digital technology is endangering the economic future of the United States. The digital technology competition between China and the United States may become another flashpoint between the world's two largest economies.

Tankersley and Swanson (2019) reported that "As Washington pushes for the liberalization of global markets to strengthen American businesses, Beijing is taking a different approach – bolstering its domestic tech giants through state-backed funding and regulatory advantages. 'China's strategy prioritizes national champions, ensuring companies like Huawei and Alibaba gain a competitive edge both domestically and globally,' said a U.S. trade official. Meanwhile, American firms face growing barriers in China's tightly controlled digital economy, raising concerns over fair competition." It reported that while Washington is urging the opening of global markets to promote the development of American companies, China is promoting the development of local giants. From 1995 to 2018, the average annual growth rate of U.S. national R&D revenue was only 3 %. The free market economy is one of the important pillars of American society. However, the U.S. government believes that if the market continues to operate freely, other countries will benefit from it, causing U.S. interests to be harmed. Therefore, the U.S. government continues to intervene in the free market and successively introduces relevant bills.

Although *The New York Times* and *The Wall Street Journal* frequently highlight the interconnectivity of technology in their coverage of global advancements, their reporting on China's technological progress often shifts the focus to the potential threats posed by China's rise to the United States. Within the narrative framework

of U.S. media, particularly in technology reporting, globalization is frequently interpreted as a competition between nations. China's achievements in areas such as 5G technology and artificial intelligence are commonly framed as challenges to U.S. technological dominance.

This reporting pattern reveals a double standard in U.S. mainstream media's depiction of globalization. On one hand, globalization is presented as a driver of technological exchange and innovation; on the other hand, when global competition appears to undermine U.S. interests, globalization is reframed as a national security threat.

5.2.3 Critical discourse analysis: the new frontline in the U.S.-China struggle – undersea cables

Rosett (2020) reported that "The competition between the United States and China over technological dominance has expanded to undersea cables, a critical component of global digital infrastructure. As Huawei Marine increases its presence in deploying these networks, U.S. officials warn of potential security risks. "*These cables are the backbone of global communications, and China's growing involvement raises serious intelligence and security concerns*," said a senior U.S. defense official. Australian security officials have also voiced apprehensions, citing risks of foreign interference and potential threats to national sovereignty. In response, Washington is collaborating with allies to curb Beijing's influence in this strategic sector." The discourse primarily involved contributions from the U.S. government, mainstream U.S. media (*The Wall Street Journal*), Chinese companies (Huawei), and other national governments (e.g., Australian security officials). An analysis of the interactions among these contributors reveals ongoing verbal confrontations centered on control over global digital technology networks.

Tankersley and Swanson (2019) reported that "China's growing involvement in undersea cable infrastructure has raised significant concerns within the U.S. government about potential threats to national security. The U.S. has refused to adopt Huawei's mobile networks, fearing that China's advances in digital technology could undermine the U.S.'s dominance in global internet infrastructure. William Evanina, director of the National Counterintelligence and Security Center, stated, 'China has used undersea cables to pose a threat to the counterintelligence security of other countries.' Meanwhile, Huawei's spokesperson Joe Kelly denied these allegations, asserting that the company has never been asked by any government to engage in activities threatening the security of other nations."

The U.S. government has framed China's involvement in undersea cable infrastructure as a significant threat to U.S. security, refusing to adopt Huawei's mobile networks. *The Wall Street Journal* echoed this perspective, arguing that China's rapid

advancements in digital technology undermine the U.S.'s dominance in global internet infrastructure. William Evanina, director of the National Counterintelligence and Security Center, asserted that "China has used undersea cables to pose a threat to the counterintelligence security of other countries."

In contrast, Huawei, through spokesperson Joe Kelly, denied these accusations, stating that the company "has never been asked by any government to carry out actions threatening the security of other countries." Additionally, an Australian security official claimed that China had embedded security vulnerabilities into undersea cables, a claim Huawei also rejected, offering to make its products available for inspection by any security expert or government agency.

The central narrative of the report frames China's digital technology as a threat to U.S. national security, with the U.S. government as the primary driver of this narrative. Mainstream U.S. media and other national governments reinforce this position, whereas Chinese companies present a counter-narrative. The U.S. government emerges as the principal advocate of the "threat" perspective, with mainstream media, Chinese entities, and international actors playing supporting roles in amplifying or contesting these claims.

Overall, the report reflects a U.S.-centric stance aimed at maintaining national sovereignty and technological hegemony. It underscores the importance of protecting national interests and securing digital infrastructure within the broader global context.

5.3 Upgrading of diversified cooperation model

The United States follows the principle of "proactively committing to openness and gradually opening up data resources," aiming to make data accessible and transparent for public use and search. This approach also emphasizes maintaining the high quality of open data to ensure its reliability and utility.

5.3.1 Technical cooperation

Apple has established its first data center in China, aligning with other technology companies in addressing the increasing global demand for online data storage facilities tailored to local customer needs. Bradsher and Mozur (2017) reported that "Apple has set up its first data center in China, joining other global tech firms in adapting to Beijing's data localization requirements. The company now stores certain data of Chinese residents on local servers, with data center operations and service management handled within China. Critics warn that such moves, while

ensuring compliance with Chinese regulations, may raise concerns over data access and government oversight."

5.3.2 Strategic cooperation

Mozur (2017) reported that "U.S. technology giants IBM and AMD have entered agreements to license advanced chip technology to Chinese firms, some of which have reported links to China's military. The deals, aimed at expanding market access in China, have raised concerns among U.S. officials over potential national security risks. 'These partnerships could inadvertently strengthen China's military capabilities by granting access to cutting-edge semiconductor technology,' said a former Pentagon official." It reported that US companies IBM and AMD have licensed chip technology to Chinese partners with ties to the Chinese military. In addition, Rosett (2020) reported that "As Washington moves to tighten restrictions on data flows to Beijing, the United Nations Secretariat is deepening its collaboration with China on global data initiatives. A new joint data center in Hangzhou, developed in partnership with Beijing, is set to process UN data while also showcasing China's advancements in satellite surveillance. 'This partnership underscores China's growing influence in global data governance,' said a cybersecurity expert familiar with the project."

5.3.3 Critical discourse analysis: U.S. digital technology achievements shared with the U.S. government in the U.S.-China digital technology dispute

Tugend (2018) reported that "Amid rising tensions over digital technology, the U.S. government has intensified scrutiny over the sharing of American technological advancements with China. Officials warn that unrestricted access to cutting-edge innovations could give Beijing a strategic edge in critical sectors like artificial intelligence and cybersecurity. 'Safeguarding U.S. digital technology is essential to maintaining national security and economic leadership,' said a senior administration official." The discourse primarily involved contributions from *The New York Times*, U.S. companies (such as Microsoft, Spell, and Foursquare), and the U.S. government. An analysis of the interactions among these contributors reveals ongoing verbal reinforcement and alignment of perspectives.

Kang and Rappeport (2018): "In the ongoing U.S.-China digital technology dispute, U.S. companies, including Microsoft, Spell, and Foursquare, have highlighted the importance of sharing technological advancements with the U.S. government. Microsoft's Executive Vice President of Business Development, Peggy Johnson, stressed the need for U.S. companies to determine when and how to share their

innovations, especially for military applications. 'The confrontation between the U.S. and China in the digital realm is serious,' Johnson said, adding that government involvement is crucial in advancing U.S. digital technology. Similarly, Serkan Piantino, CEO of AI company Spell, argued that the U.S. should impose reasonable restrictions on digital technology to protect national interests. Dennis Crowley, Co-founder of Foursquare, mentioned that the company regularly discusses digital security and ethical concerns when making business decisions."

The New York Times argued that, in the context of the U.S.-China digital technology rivalry, the United States should continue advancing its digital technologies while sharing technological achievements with the government. Microsoft supported this viewpoint, with Peggy Johnson, Executive Vice President of Business Development at Microsoft, highlighting the seriousness of the growing confrontation between the U.S. and China in the digital technology domain. She emphasized the importance for U.S. high-tech companies to decide when and how to share their technological advancements with the government, particularly for military applications.

AI companies Spell and Foursquare added to the discourse by stressing the need to impose reasonable restrictions on digital technology. Serkan Piantino, Founder and CEO of Spell, stated, "The U.S. should impose restrictions on digital technology." Similarly, Dennis Crowley, Co-founder and Executive Chairman of Foursquare, noted that the company engages in internal discussions about ethics and digital technology security before making business decisions.

The central perspective of the report is one of confrontation, with U.S. companies serving as the primary advocates. Mainstream American media supports the position of U.S. companies, emphasizing the necessity of government intervention in digital technology development. U.S. companies, as key proponents, advocate for the dominance of U.S. digital technology, stressing that technological progress should include government participation and regulation. Meanwhile, mainstream U.S. media highlights the competitive dimension of the U.S.-China digital technology rivalry.

This report reflects a broader global stance centered on maintaining the world military order, promoting a new Cold War mentality, and supporting free market competition. The shift of U.S. companies from advocating for free market principles to endorsing digital technology hegemony demonstrates a double standard in the U.S. approach to digital technology. While advocating for free competition in global markets, the United States simultaneously uses the protection of its own digital technology as a justification to suppress leading technological products from other countries.

5.4 Confrontation and conflict between "unipolar hegemony"

5.4.1 Meeting China's challenge

Henning (2019) reported that "Huawei has traditionally been cautious in leveraging its intellectual property, but the intensifying U.S.-China technological rivalry is pushing both nations toward a more hardline stance. As trade tensions escalate, Huawei has signaled a shift in strategy, asserting its patent rights more aggressively in global markets. 'The current geopolitical climate is forcing companies to rethink how they protect and enforce their intellectual property,' said a technology analyst tracking the dispute." Although Huawei has historically taken limited actions to capitalize on its intellectual property, the current competitive technological landscape and escalating Sino-U.S. trade tensions suggest that both countries have adopted a more uncompromising approach. The U.S. government believes that the rapid development of China's digital technology poses a huge challenge to the U.S. economy and global liberal and democratic values.

5.4.2 Competing for digital technology leadership

Wong (2019) reported that "China's growing military presence in the Western Pacific has raised concerns among U.S. officials and defense analysts, who argue that Beijing is positioning itself as a direct challenger to American dominance in the region. As an authoritarian state with increasing military investments, China has expanded its naval reach and modernized its forces to project power beyond its immediate borders. 'This is not just about regional security – it's about Beijing's long-term strategy to reshape the balance of power,' said a senior U.S. defense official." The mainstream American media believes that China is an authoritarian country which is very likely to try to replace the United States' military dominance in the Western Pacific. In the digital technology competition between China and the United States, the latter launched a trade war against China and intensified.

6 Analysis of US federal policies on China's digital technology development

6.1 Introduction to US federal policies

The political themes surrounding China-related digital technology issues in the United States refer to the topics addressed in U.S. government policies concerning

China's digital technology. By examining these political themes, this study analyzes the U.S. government's policy decisions regarding China's digital technology, considering the interests of various stakeholders within American society. The research introduces the U.S. government's digital technology policies toward China from 2016 to 2023 and explores the political dynamics of American digital technology related to China.

6.2 Impact of US federal policies on technological competition

6.2.1 Digital technology competition

Under the Trump administration, the U.S. State Department developed and released *the National Strategy for Critical and Emerging Technologies* in 2020, building upon *the 2017 U.S. National Security Strategy report*. This strategy reflects the "America First" policy orientation, emphasizing the alignment of technological and national strategies. It identified 20 key emerging technologies, including artificial intelligence, human-machine interfaces, communications and network technology, and space technology, outlining two primary goals: strengthening the foundation of national security innovation and maintaining the United States' digital technology advantages. The strategy explicitly positioned China as a strategic competitor, asserting that China's practices of technology theft and forced disclosure of intellectual property by foreign companies pose significant threats to the United States and its allies.

Following the transition to the Biden administration, most of the Trump administration's policies aimed at curbing China's technological innovation capabilities were retained. The Biden administration continued the strategic competition with China, prioritizing technological rivalry as a central element of U.S. strategic competition. The focus remains on suppressing China's capabilities in emerging technological innovations, particularly those associated with Chinese high-tech companies, which the United States views as industrial challengers.

In the future, national security considerations are expected to dominate U.S. policies targeting Chinese companies operating in its jurisdiction. *The National Security Strategy Interim Guidance* explicitly places technological innovation at the core of U.S. national strategy, underscoring the importance of maintaining scientific and technological leadership to address both domestic and international challenges.

6.2.2 Free market competition

The Biden administration has maintained the Trump administration's characterization of China as a long-term strategic and economic competitor to the

United States. This positioning underscores the enduring nature of the competitive relationship between the two nations. President Biden stated, "China is a competitor that poses a serious challenge to U.S. prosperity, security, and democratic values," emphasizing that Sino-U.S. relations are defined by "extreme competition." Similarly, Secretary of State Antony Blinken described relations with China as "the biggest geopolitical test facing the United States in the 21st century."

On May 27, 2021, the U.S. Senate passed *the American Innovation and Competition Act of 2021*, a comprehensive and detailed legislative strategy targeting competition with China. The bill mentions China numerous times and, under the guise of promoting innovation, seeks to counter China's advancements. In practice, it perpetuates the "China threat theory" in the realm of science and technology. Many of the policy measures outlined in the bill are explicitly described as "specific measures to deal with China," signaling the formal initiation of a systematic approach to containing China through legislative means. This approach represents a departure from the principles of a free market economy, reflecting a broader U.S. strategy of legislative containment aimed at curbing China's technological and economic rise.

6.3 Criticism of US federal policies

6.3.1 Technology transfer and intellectual property protection

The U.S. government has identified China's commercial and academic espionage activities, intellectual property theft, data security breaches, and forced technology transfers as significant threats to national interests. In response to these concerns, the United States has introduced comprehensive measures to strengthen its national information security infrastructure, enacted relevant policies, and adopted actions to counter the challenges posed by China's digital technology. While the United States publicly advocates for a liberal trading system, its policies reflect a strategic approach to safeguarding its economic and technological interests.

The imposition of additional tariffs on approximately $50 billion worth of Chinese exports in 2018, specifically targeting high-tech industries, including next-generation information technology, industrial robotics, and new energy vehicles, serves as one example of the U.S. efforts to mitigate the technological rise of China. These tariffs aimed to reduce the U.S.-China trade deficit, implement trade protections, and slow down China's industrial upgrading and technological innovation.

Further legislative measures, such as *the Strategic Competition Act of 2021* and *the American Innovation and Competition Act of 2021*, reinforce these efforts by countering China's predatory international economic practices and tracking intellectual property violations.

6.3.2 Information security protection

In the early days of Donald Trump's administration, several initiatives were introduced to strengthen U.S. cybersecurity and address emerging global threats. Trump announced the establishment of the American Technology Council, signed an executive order on *Enhancing the Cybersecurity of Federal Government Networks and Critical Infrastructure*, and directed federal agencies to develop strategies for international cooperation in cybersecurity.

The U.S. National Security Strategy Report issued in 2017 further underscored a critical stance on China, with accusations against Chinese government and private sectors for engaging in intellectual property theft, challenging American power, and undermining U.S. security. This report defined China as a strategic competitor, a label that was later upgraded to that of a "rival state" by the Trump administration, explicitly emphasizing the competition between the two nations.

Under the Biden administration, while the focus on countering China's influence persisted, the cybersecurity and technology-related policies have continued to evolve. The Biden administration has enacted several measures targeting Chinese technology and telecommunications, such as excluding Chinese telecommunications equipment from U.S. networks and advocating for the removal of Chinese apps, including TikTok, from U.S. app stores.

6.3.3 Personal information security

The U.S. government has become increasingly concerned about the personal information security of its citizens and has actively implemented various measures to address these threats. In June 2021, the U.S. government introduced *the Cybersecurity Literacy Act* to raise awareness and enhance the cyber literacy of American citizens, addressing cyber threats and promoting secure online practices. The act's primary objectives are to improve the cybersecurity infrastructure of the United States while safeguarding citizens from foreign threats and cybercriminals.

7 The connotation of the mainstream U.S. media's reporting themes on China-related digital technologies

7.1 Global market economy

7.1.1 Free market competition

The digital technology competition between China and the United States has a significant impact on the global market economy. This study finds that the globalization stance reflected in the competitive framework of mainstream U.S. media coverage on China-related digital technology is rooted in neoliberalism. Neoliberalism, which rejects state-centrism, is highly aggressive and emphasizes the diversified development of international actors. It reshapes the production systems, labor processes, inputs and outputs of digital technology, and influences the global division of labor, employment systems, consumption patterns, and other social forms.

The development of digital technology facilitates free competition in the global market, breaking the previously established dominance where only capital from developed countries could achieve free flow and competition on a global scale. From an international perspective, multinational corporations drive the shift in international relations from an inter-state political paradigm to a global political paradigm. Due to their "denationalized" and "depoliticized" nature, multinational companies do not rely on national government policies. They operate beyond national borders, obscuring their political affiliations and often separating their headquarters from their various business locations. As a result, multinational corporations prioritize maximizing profits rather than advancing national interests, competing freely on a global scale.

7.1.2 Ill-free market competition

With the rise of opposition to neoliberalism, digital technology has become one of the key indicators for measuring the economic development of countries. The concept of technological sovereignty, which originates from "techno-nationalism", stands in opposition to "techno-globalism", a concept shaped by neoliberal globalization theory. This shift reflects the "national security anxiety" present in the context of intense national competition. Neoliberalism applies double standards to developed and developing countries. On the one hand, it expands the space for capitalist development, while on the other hand, it generates contradictions and crises within

the global capitalist system. This exacerbates the polarization between developed and developing nations, fueling opposition to neoliberalism. As a result, there is a growing demand for the localization of digital technology within countries. However, countries continue to control their own multinational digital technology companies and suppress foreign competitors.

Furthermore, in recent years, the business practices of multinational companies have increasingly become unfree. These corporations have secured excessive profits by exploiting various unregulated powers, yet the incomes of people in different countries have not seen significant increases. This widening gap between developed and developing countries accelerates the rise of trade protectionism and economic populism. To safeguard their national security and economic interests, countries have erected trade barriers, initiated anti-dumping investigations, imposed additional tariffs, and adopted other protective measures against foreign competitors.

7.2 Future institutional design of the United States

According to mainstream media reports in the United States on China's digital technology and the related policies issued by the U.S. government, it is evident that the United States places significant importance on issues concerning China's digital technology.

7.2.1 Safety system

In recent years, U.S. policy toward China has undergone significant shifts, with digital technology emerging as a key area for the U.S. to impose trade sanctions and technological blockades on China. The United States has implemented digital technology security policies that reflect a strengthening of authoritarian tendencies. Former President Trump was the first to label China as a revisionist country, asserting that China's digital technology impacts the international order and poses a threat to U.S. national security and citizens' personal privacy. His administration continued to malign and suppress China, introducing a series of boycott policies that severely strained U.S.-China relations.

To protect the fundamental interests of the American public, particularly those at the lower socioeconomic levels, the U.S. government adopted a range of anti-globalization measures, such as exacerbating Sino-U.S. trade tensions, raising immigration barriers, and significantly reducing the number of Chinese students in the U.S. Similar to Trump's stance, President Biden also views China's rise as a challenge to the United States, maintaining a tough approach toward China. However, unlike the Trump administration's strategy, the Biden administration's

core approach seeks to counterbalance Trump's unilateral containment and anti-globalization rhetoric. Biden's strategy emphasizes strengthening security systems and countering China's influence by uniting global allies.

In response to perceived digital technology threats from China and other nations, the U.S. is expected to continue its firm foreign policy stance. The U.S. will likely persist with its traditional "national security" strategy concerning digital technology issues, aiming to prevent China and other competing nations from "stealing" American technology. At the same time, the U.S. will focus on advancing its military and cutting-edge digital technologies to safeguard national security.

7.2.2 Market system

The concept of free market competition, central to the neoliberal trend, has deeply influenced U.S. economic policies, particularly in the digital market sector. Moving forward, the United States is expected to continue prioritizing the market mechanism of free competition, viewing digital technology strategy as a fundamental aspect of its top-level design. This will involve achieving coordinated development between digital technology and digital policies, positioning the U.S. to become increasingly dominant in the global digital technology market.

Moreover, future U.S. policies will likely emphasize macroeconomic control to maintain market order and meet demand, while also safeguarding the interests of small and medium-sized digital enterprises. The government will focus on regulating and overseeing monopolistic behaviors of large internet platforms and promoting the digital transformation of small and medium-sized businesses. In its competition with other nations in the digital technology sector, the United States will use developing countries as a focal point, crafting policies that encourage market expansion and investment. These efforts aim to create a stable environment for American digital companies, reducing the uncertainties they face during their development processes.

7.2.3 Technical system

7.2.3.1 Digital technology competition and confrontation

In order to maintain its leadership in global digital technology and promote the comprehensive digital transformation of American society, the United States utilizes government procurement, public R&D investment, and other mechanisms to support the development of American digital technology and facilitate the large-scale growth of the digital technology industry, all under the guise of national security and economic development. Given that the development of digital technology imposes

certain constraints on both internal and external sovereignty, the United States has implemented policies designed to restrict the flow and development of digital technology knowledge.

The U.S. places significant emphasis on digital technology innovation, and its future policy decisions will be closely tied to digital technology connections with countries across the globe. Additionally, the U.S. is likely to expand the role of government in shaping the future of digital technology, reinforcing its influence and strategic importance on the global stage.

7.2.3.2 Digital technology cooperation

The United States emphasizes a balanced approach between development and cooperation, advocating for digital thinking and leveraging its digital advantages to achieve global digital technology development cooperation. It aims to pursue leadership in shaping global digital rules. Furthermore, the United States is expected to collaborate with other countries and international organizations to formulate digital technology-related policies, establish partnerships focused on digital technology interconnection and network security, and stabilize the international division of labor and cooperation within the global digital technology industry chain.

Additionally, the United States plans to form a digital technology initiative group with other nations to actively engage in the international cooperation and governance of digital technology. This will facilitate a win-win development model, benefiting all participating countries.

7.3 Global geopolitical landscape

As globalization deepens, the universal benefit of a win-win situation for all parties is gradually diminishing, and the transnational aspect is weakening. In recent years, competition in the field of digital technology among Europe, the United States, China, and other countries has intensified. Nowadays, as the world enters the digital age, digital technology flows globally, showcasing distinct globalization phenomena and trends. Therefore, it is crucial to understand the development trends of digital technology.

The globalization of digital technology has created unprecedented opportunities for developing and underdeveloped countries to engage more deeply in the international market, helping to overcome disadvantages related to geographical distance and quickly integrating into the global marketplace. For any country, when establishing a new model of globalization, it is important to consider the challenges within the globalization process and the incremental developments in digitalization

that lie ahead. This includes improving the global value chain, incorporating more countries, and creating a more inclusive and vibrant digital technology community with a shared future.

7.3.1 Global economic and trade pattern

Nationalization has emerged as a strategic approach, with governments around the world continuously enhancing their digital technology capabilities, strengthening competitiveness, and improving the security and economic benefits derived from digital technology through various policies focused on digital technology and trade protection. In order to maximize profits, multinational companies leverage the advantages of different countries, deploying their digital technology industries globally and reshaping the global digital technology supply chain.

Through this global expansion of the digital technology industry, developed countries can alleviate some of their production pressures, while the digital technology development and national economies of developing countries are enhanced. However, the formation of exclusive technological alliances in the West has significantly hindered technological cooperation between countries and companies, raising the costs and barriers to global digital technology development. The regional development of the digital industry has also led to a sharp increase in production, storage, and transportation costs, which is detrimental to the healthy growth of global digital technology and trade.

7.3.2 Global technology production pattern

The rapid development of digital technology has effectively broken down geographical barriers between countries. However, the uneven development of digital technology remains a significant challenge faced by all nations. Factors such as international status, ideology, national culture, education levels, and racial differences contribute to disparities in the use of digital technology and access to information among various groups. The impact of these disparities extends far beyond technology, influencing politics, economics, culture, society, and other sectors. The global distribution of digital technology capabilities among nations is uneven, and the "digital divide" continues to exist and widen.

To achieve the common development of digital technology, countries worldwide must cooperate in this field, effectively promote global interconnection, and seek a balanced approach to globalization. This cooperation is essential in narrowing the digital divide between countries. Globalization has profoundly impacted the development of nation-states, and these states must create a global governance model from a cosmopolitan perspective. As such, digital technology must be

developed in a manner that aligns with global needs, and a fair and reasonable system should be established to foster an effective new global order.

7.3.3 The rise of anti-globalization trend

Globalization is evolving in various forms, including deglobalization and re-globalization. The imbalance of interests between countries and domestic interest groups has led to a win-lose opposition (Gomory and Baumol 2009). Anti-globalization, characterized by trade protectionism, stands in opposition to the process of economic integration. It arises from longstanding issues in globalization that remain unresolved. The anti-globalization trend is evident in digital technology reports on China in major outlets like *The New York Times* and *The Wall Street Journal*.

Currently, the anti-globalization trend is rising globally, leading to changes in the rules governing global digital technology. This period of anti-globalization is primarily marked by the digital technology cold war and economic and trade wars, driven by political competition and various anti-globalization measures, such as raising tariffs and imposing immigration bans. Most resource-based countries are being forced into the globalization wave. The U.S. government attributes its lack of leadership in digital technology to "globalization", mistakenly believing that "anti-globalization" offers a solution. In its effort to maintain and solidify its hegemonic position in global technology and the economy, the United States faces China – an emerging, powerful economy and rival. Leveraging its technological and capital advantages, the U.S. adopts what it calls a "fair" and "liberal" approach to digital technology, utilizing "self-protection" methods and adhering to the "America First" principle. This has led to the forceful exportation of the "Washington Consensus", which is based on neoliberal principles, particularly since the Trump administration's rise to power, which has ignited a more intense global resistance against the globalization trend.

The United States believes that "state capitalism", as represented by China, undermines fair competition within the existing globalization framework. The transformation of U.S.-China relations is closely intertwined with the transformation of globalization itself. In the realm of digital technology, the U.S. has taken extreme anti-globalization measures, launching a large-scale trade war against China. This has involved targeting Chinese companies like ZTE and Huawei, bypassing the World Trade Organization, and imposing high tariffs on Chinese goods, particularly in the high-tech sector, thus hindering the development of China's digital technology industry.

At the security level, the U.S. has imposed various export restrictions on Chinese companies under the pretext of "national security". Nationally, the U.S. has sought to

sanction China's digital economy by creating policies designed to ease class contradictions and protect bourgeois economic interests. However, anti-globalization cannot restore the U.S. economy fundamentally and may even hinder its growth.

Therefore, it is essential to accurately grasp the current state of globalization, deeply understand the nature of neoliberal globalization, and recognize the dominant role of neoliberalism in the globalization process. This understanding will help in constructing new globalization theories and paradigms while reflecting on the ongoing anti-globalization trend.

8 The concept permeated in the US mainstream media's reports on China's digital technology – new techno-nationalism

Based on the above research, this study proposes that new techno-nationalism is a concept that warrants significant attention, particularly as it permeates U.S. mainstream media reports on China-related digital technologies.

Firstly, new techno-nationalism is rooted in the concept of nationalism, which links digital technology with national security, economic prosperity, and social stability. This concept has a profound social background and ideological foundation. It emphasizes the role of digital technology in safeguarding the interests of the nation-state and underscores its centrality in achieving national goals. Secondly, new techno-nationalism serves as a practical method for all countries to address digital technology issues through the lenses of security, strategy, and global competition. It encourages nations to proactively take measures to protect the development of digital technology and safeguard national interests. This includes promoting the integration of digital technology resources, intervening in and preventing the influence of hostile states and non-state actors, formulating relevant policies, and legalizing these policies to intervene in economic markets to secure geopolitical advantages. Thirdly, new techno-nationalism is a network of relationships, wherein digital technologies from different countries engage in complex dynamics of threat, competition, cooperation, and confrontation. These interactions lead to the mutual entanglement of interests, forming a digital technology interest network where each nation's interests are intertwined with others. This interdependence shapes the global landscape, with countries both influencing and being influenced by one another's digital technology strategies. Finally, the relationships between digital technologies and national interests present a significant challenge to the globalization of digital technology. As countries adopt techno-nationalist approaches, they tend to prioritize national control over the free flow of technological elements, such

as data, technology, scientific products, and talent. This politicization and localization of digital technology hinder the open exchange that has characterized much of globalization.

It is important to note that the localization, politicization, and broad security concerns inherent in new techno-nationalism are not conducive to the free flow of scientific and technological resources on a global scale. New techno-nationalism, particularly as it manifests in U.S. media narratives about China's digital technology, closely links the economic development of the United States with its digital technology competition with China. It embodies a critical form of technological hegemony.

As the primary promoter of this new wave of techno-nationalism and one of the key designers and participants in global science and technology rules, the United States continues to assert an "America First" stance on the globalization of digital technology. For instance, *The New York Times* reports that the U.S. has consistently claimed a competitive advantage in the technology industry, reinforcing the idea of "America First" in its approach to digital technology globalization (Wakabayashi and Rappeport 2018). To support the "America First" agenda, the United States has introduced various digital technology policies aimed at securing its digital technology resources and ensuring the free development of its digital technology market. The wave of new techno-nationalism has spread globally, exerting a profound influence on the technological development of countries worldwide. This trend further underscores the rise of global technological nationalism, as nations seek to assert control over their digital infrastructure and ensure that technological advancements align with their national interests.

9 Conclusions

9.1 Research findings

First, the U.S. mainstream media coverage of China's digital technology primarily revolves around national security, market competition, and ideological confrontation. Reports commonly portray China's technological rise as a potential threat to U.S. national security, particularly in 5G, artificial intelligence and big data. *The New York Times* emphasizes issues related to data security, privacy protection, and government surveillance, whereas *The Wall Street Journal* focuses more on market competition, intellectual property disputes, and global technological dominance. Additionally, the coverage reflects an increasing trend of techno-nationalism, highlighting the U.S. concern and preventive stance toward China's technological

advancements. This framing not only shapes American public perceptions of China's technological rise but also influences U.S. government decision-making on related policies.

Second, the U.S. federal government adopts a containment, competition, and selective cooperation approach toward China's digital technology in its policies and official documents. The Trump administration labeled China as a revisionist power, emphasizing measures such as export controls, technological restrictions, and national security reports to curb China's technological advancements. Additionally, tariffs were increased during the trade war to suppress China's technological rise. The Biden administration, while adjusting some strategies, has largely continued the extreme competition approach, maintaining restrictions on Chinese tech firms such as Huawei and ByteDance while strengthening alliances to exert collective pressure. Furthermore, through key policy initiatives such as *the National Security Strategy Report* and *the American Innovation and Competition Act.* the U.S. government aims to maintain its technological edge in the global competition while regulating and supporting domestic technology enterprises to solidify its leadership in the digital technology sector.

What's more, the U.S. mainstream media's coverage of China's digital technology is primarily shaped by globalization theory and technology diffusion theory. From the globalization perspective, media reports acknowledge China's contributions to global market integration while simultaneously emphasizing that heightened global technological competition has deepened national divisions, particularly in security and market competition. The media narratives construct a technology Cold War framework, portraying China's technological advancements as a challenge to U.S. technological supremacy and highlighting security risks, market barriers, and policy interventions in the process of technology dissemination. Additionally, *The New York Times* tends to adopt a moral and ethical framework, focusing on privacy and human rights concerns, whereas *The Wall Street Journal* employs an economic competition framework, emphasizing market share and corporate competitiveness. Together, these perspectives shape the American public's complex understanding of China's technological rise.

9.2 The role of digital technology in shaping U.S.-China relations

Traditional newspapers, such as *The New York Times* and *The Wall Street Journal*, continue to play a central role in shaping public perception of globalization, particularly in relation to the ongoing technological rivalry between the U.S. and China. These outlets contribute to framing the global competition over digital

technology by influencing how readers perceive the risks and opportunities associated with technological advancements. By emphasizing both the competitive and security aspects of digital technology, these media outlets help shape the discourse surrounding globalization. They reinforce the idea that technological leadership is crucial for maintaining national power and global influence, highlighting how digital innovation has become a key factor in geopolitical strategy. In doing so, these newspapers play a pivotal role in framing public understanding of the evolving technological landscape, where competition for digital supremacy is increasingly seen as a vital aspect of global power dynamics.

In the context of globalization, digital technology has become a key factor in the evolving dynamic between the United States and China. Traditional media outlets such as *The New York Times* and *The Wall Street Journal* have played a significant role in framing the U.S.-China technological rivalry within the broader global landscape. Through their coverage of emerging technologies like 5G and AI, these newspapers emphasize how technological advancements are reshaping power structures between these two nations. The media reports frequently highlight the competition for technological dominance, portraying China's rise as both an economic and geopolitical challenge to U.S. leadership in the digital era. This coverage often underscores the high stakes of technological innovation, framing the rivalry as not only about economic power but also about securing strategic advantages in the global order. By focusing on issues such as data security, intellectual property, and the influence of tech giants, the media portrays the technological race as a defining feature of contemporary international relations.

The study compared specific articles from *The New York Times* and *The Wall Street Journal* that covered China's advancements such as 5G technology. *The New York Times* focused on the potential privacy concerns associated with Huawei's 5G network, highlighting fears of government surveillance and data privacy violations. On the other hand, *The Wall Street Journal* emphasized the competitive dynamics of the global telecommunications market, framing Huawei's technological achievements as a direct challenge to U.S. tech giants like Qualcomm and Cisco. These examples illustrate the differing editorial priorities: *The New York Times* foregrounds political and social concerns, while *The Wall Street Journal* emphasizes economic competition and market implications.

9.3 Theoretical and methodological innovations in analyzing U.S. media narratives on China's technological rise

To gain a deeper understanding of how U.S. media report on China's rise in digital technology, this study integrates the frameworks of globalization theory and

technology diffusion. Globalization theory, particularly the perspectives of Roland Robertson and Anthony Giddens, helps to understand how media shape narratives about China's technological rise in the context of globalization. According to Robertson's (1992) concept of "globalization as the interaction between the local and the global," U.S. media link China's technological advancements with global technological competition, security threats, and national interests. From the globalization perspective, media are not merely channels for disseminating information; they also reproduce global power structures, reflecting and influencing the dynamics of global politics and economics through media discourse. In this context, technology diffusion theory further illuminates how technology becomes a key topic in transnational communication. Technology diffusion involves not just the spread of technology itself but also the interpretation and acceptance of technology across different cultural and political environments. U.S. media portrayals of Chinese digital technologies – particularly in fields such as artificial intelligence, big data, and 5G – are often framed within discourses of security, control, and competition. This aligns with the theory of the "political nature of technology" in communication studies (Castells 2010), which highlights how technology is not neutral but is often framed through specific political and cultural lenses. U.S. media narratives, when reporting on China's technological rise, emphasize concerns over security and exaggerate the potential threats posed by China, shaping how global audiences perceive Chinese technology.

Through critical discourse analysis (CDA), this study uncovers how U.S. media operate and propagate technological discourses about China within the broader context of globalization. These discourses not only reflect American concerns about China's rise but also show how news coverage constructs public perceptions of technological competition. In the context of globalization, media play a significant role not only in cross-cultural technology diffusion but also in reinforcing cultural hegemony. This process affects global perceptions of Chinese technology and, to some extent, shapes the political landscape of global technology governance.

9.4 Globalization's influence on technology and policy

The results of this study are closely aligned with Giddens' theory of globalization, which posits that technology is central to modern globalization, driving both cooperation and competition across borders. The portrayal of China's technological rise in U.S. media as both an economic opportunity and a security threat underscores how technological advancements – viewed through the lens of national security – are deeply embedded in globalized competition. As Giddens (1990) argues, technological progress is not a neutral phenomenon but a force that redefines power dynamics on

a global scale, a concept that is well-reflected in the media framwork of China's tech rise. Moreover, Robertson's (1992) theory of globalization, which emphasizes the interplay between global trends and local responses, provides an essential framework for understanding how U.S. media navigate the global rise of China's digital technologies. U.S. coverage, while recognizing the global implications of China's technological growth, simultaneously reflects national anxieties and a desire to protect economic and political interests. This dual framing – acknowledging global competition while emphasizing local security and economic concerns – illustrates Robertson's notion of globalization as a dynamic process where local and global forces interact.

Globalization is central to understanding how technological progress, competition, and policy decisions shape U.S.-China relations. As digital technology drives economic growth, reshapes markets, and influences geopolitical alignments, both the U.S. and China are engaged in a strategic race to assert their technological dominance. This struggle reflects a global process in which digital technology acts as both a catalyst for international competition and a tool for political maneuvering. The impact of this global competition extends beyond economic implications, deeply affecting national security concerns. Both countries are keen to control the technological infrastructures that will define the future of global markets. This competition is not only about securing technological leadership but also about ensuring that their respective political and economic systems maintain influence in the evolving global digital order. The ongoing technological race thus has significant consequences for the future balance of power in both the digital and geopolitical spheres.

9.5 The emerging anti-globalization trends and countermeasures

The study finds that the rise of counter-globalization sentiments, particularly within the U.S. digital technology sector, signals a significant shift in global economic dynamics. The U.S. is increasingly adopting policies that aim to restrict China's access to key technological advancements, justified by concerns over national security and technological sovereignty. This shift in U.S. policy reflects a broader global discourse on the necessity of safeguarding technological systems from foreign influence, particularly from China. The growing prominence of "techno-nationalism" as an emerging ideology in U.S. media highlights the evolving role of digital technology not only as an economic tool but also as a powerful instrument of geopolitical strategy. As technological competition intensifies, the focus is no longer solely on market dominance, but on controlling critical technological infrastructures that influence global power structures. This trend emphasizes how digital technology is

intertwined with national security, economic policies, and global geopolitical positioning, further advancing the idea of technology as a key pillar of national sovereignty.

9.6 The future of globalization in U.S.-China technological competition

Looking ahead, the ongoing U.S.-China technological competition will continue to be shaped by global processes of technological development, market integration, and geopolitical restructuring. As both countries vie for leadership in emerging technologies, their rivalry will play a central role in shaping the future of global markets and international relations. Despite the growing influence of online platforms, traditional media will remain essential in informing public understanding of these global shifts. By providing in-depth analysis and offering diverse perspectives on the political, economic, and technological implications of this competition, traditional media will maintain its crucial role in framing the narrative around U.S.-China relations. In doing so, these media outlets will continue to play a pivotal role in shaping broader discussions about the future of globalization in the digital age, particularly in terms of how technological competition influences national strategies and global power structures.

9.7 Recommendations for policymakers, businesses and media

Recommendations for policymakers: Policymakers should consider creating frameworks that support both national security and international collaboration on digital technologies. Clear regulations should be introduced that balance the safeguarding of national interests with the promotion of technological innovation on a global scale.

Recommendations for businesses: Technology companies should prioritize strategic partnerships across borders, focusing on global market integration while ensuring compliance with international standards on cybersecurity and data privacy. They should work with policymakers to create inclusive and fair competitive environments.

Recommendations for media: Media outlets are encouraged to adopt a more nuanced approach to reporting on the technological competition between nations. Rather than focusing solely on rivalry, media should emphasize potential areas for cooperation and cross-border innovation, helping to shape public perception towards a more collaborative global digital future.

9.8 Theoretical insights and future research directions

In conclusion, the integration of Giddens' and Robertson's globalization theories has provided a robust framework for analyzing the portrayal of China's digital technology rise in U.S. media. These theories have allowed for a deeper understanding of how technological advancements are framed not only as products of globalization but also as challenges to national sovereignty and security. Giddens' focus on the transformative role of technology in globalization and Robertson's emphasis on the tension between global and local forces have been instrumental in explaining the media narratives surrounding China's technological growth. Future research could expand on these theories by examining how media in other global contexts – particularly in non-Western countries – frame technological developments within the framework of globalization, furthering our understanding of global technological power dynamics.

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