

第二次トランプ政権において想定される 米中ハイテク戦争の展開

王 綉 雯

(台湾・国防安全研究院中共政軍與作戰概念研究所助理研究員)

【概要】

米中ハイテク戦争は、今後のグローバル覇権をどちらが握るかを決定づけるもので、二大国が全面的に対立する主要なフィールドとなっている。5G や AI といった先進技術は、米中それぞれのデジタルトランスフォーメーションに関わるだけでなく、世界の政治、経済、社会、軍事の現状を大きく覆す可能性があるため、ハイテク戦争は貿易戦争とは異なり、生死をかけた「ゼロサムゲーム」として争わなければならない。一方、トランプ氏が 2024 年に米国大統領に再選されたことを受け、第一次トランプ政権中に様々な政策転換に苦しんだ各国は、第二次トランプ政権においても同様に慎重な対応が求められ、特に長年にわたって米国から主要な競争相手と見なされてきた中国はいうまでもない。本論では、米中ハイテク戦争の経緯を踏まえ、ハイテクをめぐる米中両国の長期的な対立の主軸と分野を明らかにし、考察の結果と現在の発展情勢に基づいて、米中ハイテク戦争の今後の展開を検討する。

キーワード：米中ハイテク戦争、第二次トランプ政権、5G、AI

美中科技戰在川普 2.0 時期之可能發展

王 綉 雯

（國防安全研究院中共政軍與作戰概念研究所助理研究員）

【摘要】

美中科技戰將決定未來全球霸權誰屬，是兩強全面對抗的主要戰場。5G 和 AI 等先進技術不僅攸關兩國各自的數位轉型，更可能大幅翻轉全球政治、經濟、社會、軍事之現況。因此，科技戰不同於貿易戰，是必須爭出你死我活的「零和戰」。另一方面，川普於 2024 年再次當選美國總統，對於承受過渠上屆任期內種種翻轉現況政策之苦的各國而言，川普 2.0 時期同樣必須謹慎應對，特別是長期被美國視為主要競爭對手的中國。本文主要從美中科技戰迄今為止之發展，釐清兩國科技長期對抗之主軸和領域，並依據觀察結果配合當前的發展情勢，嘗試指出美中科技戰未來可能的發展方向。

關鍵字：美中科技戰、川普 2.0、5G、人工智慧

The Possible Development of the U.S.-China Tech War in Trump 2.0 Era

Shiow-Wen Wang

Assistant Research Fellow, Division of Chinese Politics,
Military and Warfighting Concepts,
Institute for National Defense and Security Research

【Abstract】

The U.S.-China tech war will determine who is the global great power, and will be a major battlefield for the two powers to confront each other. 5G, AI, and other advanced technologies are not only crucial to the two countries' domestic digital transformations, but may also drastically change the current state of the global political, economic, social, and military affairs. Unlike a trade war, a tech war is a “zero-sum war” that must be fought to the death. On the other hand, Donald Trump was re-elected as President of the United States in 2024. For those countries that have suffered from the reversal of the status quo during his last term, the Trump 2.0 era must be handled with caution, especially China, which has long been regarded by the U.S. as a major competitor. This article focuses on the development of the U.S.-China tech war, clarifies the main axes and areas of the long-term technological confrontation between the two countries, and tries to point out the possible direction of the U.S.-China tech war in the future based on the results of the research and the current development situation.

Keywords: US-China Tech War, Trump 2.0, 5G, AI

〈参考文献〉

- 王健全、2024「美中科技戰對臺商的影響及因應」『兩岸經貿網』6月3日、<https://www.seftb.org/cp-4-2284-e0079-1.html>（査閲時間：2024/12/25）。
- Wang, Jiann-chyuan. 2024. “Meizhong kejizhan dui taishang de yinxiang ji yinying” [The Impact of The U.S.-China Tech War on Taiwan Businessmen and Their Responses]. *Web of Straits Business*. June 3 (Accessed on December 25, 2024).
- 王聖閔、2024「美中科技戰與強化供應鏈韌性」『台灣經濟研究月刊』47(12)：20-25。
- Wang, Shen-min. 2024. “Meizhong kejizhan yu qianghua gongyinglian renxing” [The U.S.-China Tech War and Strengthening the Resilience of Supply Chain]. *Taiwan Economic Research Monthly*. 47(12): 20-25.
- 王綉雯、杜貞儀、2019「第三章 科技安全」蘇紫雲、吳俊德主編『2019 國防科技趨勢評估報告』：31-49、財團法人國防安全研究院。
- Wang, Shiow-wen, and Zhen-yin Tu. 2019. “Disanzhan keji anquan” [Chapter 3: Technological Security]. Zi-yun Su, and Jun-de Wu, eds., *2019 Defense Technology Trend Assessment Report*. pp. 31-49, Institute for National Defense and Security Research.
- 朱敬一、2025「美中科技戰、老共最有創意的招式來了」『天下雜誌』815期、1月7日、<https://www.cw.com.tw/article/5133573>（査閲時間：2025/3/14）。
- Zhu, Jing-yi. 2025. “Meizhong kejizhan: laogong zui you chuanyang de zhaoshi laile” [U.S.-China tech war: here comes CCP’s most creative moves]. *Common Wealth Magazine*. No. 815, January 7 (Accessed on March 14, 2025).
- 沈榮欽、2025「沈榮欽專欄：晶片戰爭的起源與造成的效果」『上報』1月1日、https://www.upmedia.mg/news_info.php?Type=2&SerialNo=220604（査閲時間：2025/2/1）。
- Sheen, James C. 2025. “Shenronqin zhuanlan: jingpian zhanzheng de qiyan yu zaocheng de xiaoguo” [Shen Rongqin’s Column: The Origins and Effects of the Chip War]. *Up Media*. January 1 (Accessed on February 1, 2025).
- 吳碧娥、2022「『2022 年全球 5G 專利報告』Top10 專利權人揭曉」『北美智權報』第 311 期、6 月 22 日、https://www.naipo.com/Portals/1/web_tw/Knowledge_Center/Industry_Economy/IPNC_220622_0702.htm（査閲時間：2025/2/3）。
- Wu, Bi-er. 2022. “‘2022 nian quanqiu 5G zhuanli baogao’ Top 10 zhuanliquanren jiejiao” [“Global 5G Patent Report 2022” Top 10 Patent Owners Revealed]. *Patent and Trademark News from NAIP*. No. 311, June 22 (Accessed on February 3, 2025).
- 林佩蓉、2025「科技民族主義：引領美國半導體產業政經趨勢的看不見的手」『科技整合月刊』10(1)：28-45。
- Lin, Patricia. 2025. “Keji minzu zhuyi: yinling meiguo bandaoti chanye zhengjing qushi de kanbujian de shou” [Techno-nationalism and Its Impact on the Political and Economic Trends of the U.S. Semiconductor Industry]. *Interdisciplinary Research Monthly*. 10(1): 28-45.

- 林宸誼、2024「華為 5G 專利數量 稱霸全球」『經濟日報』10 月 2 日、<https://money.udn.com/money/story/5604/8264761> (查閱時間：2024/11/3)。
- Lin, Chen-yi. 2024. “Huawei 5G zhuanli shuliang chengba quanqiu” [Huawei’s 5G Patents Dominate World]. *Economic Daily News*. October 2 (Accessed on November 3, 2024)
- 香港貿易發展局經貿研究、2020「中國發布不可靠實體清單規定」『HKTDC』9 月 21 日、<https://research.hktdc.com/tc/article/NTQzNTI5MjY1> (查閱時間：2025/1/15)。
- Hong Kong Trade Development Council Research. 2022. “Zhongguo fabu bukekao shiti qindan guiding” [China Releases List of Unreliable Entities]. *HKTDC*. September 21 (Accessed on January 15, 2025).
- 侯慶辰、2019「中美貿易戰中的智財權爭議」『DIGITIMES』6 月 21 日、<https://www.digitimes.com.tw/col/article.asp?id=1049> (查閱時間：2024/12/16)。
- Ho, Qin-chen. 2019. “Zhongmei maoyizhan zhong de zhicaiquan zhenyi” [Intellectual Property Disputes in the US-China Trade War]. *DIGITIMES*. June 21 (Accessed on December 16, 2024).
- 華為「公司財務摘要：五年財務概要」、<https://www.huawei.com/cn/bond-investor-relations/financial-highlights> (查閱時間：2025/2/1)。
- Huawei. “Gongsi caiwu zhaiyao: wunian caiwu gaiyao” [Company Financial Highlights: Five-Year Financial Summary] (Accessed on February 1, 2025).
- 國家實驗研究院科技政策研究與資訊中心、2023「諾貝爾獎誰最強」『PRIDE 政策研究指標資料庫』7 月 31 日、<https://pride.stpi.niar.org.tw/index/graph-world/detail/4b1141ad88b5118901899a5335cc6a4f> (查閱時間：2025/1/1)。
- NARLabs. 2023. “Nobeier jiang shei zuizhiqiang” [Who’s the best at the Nobel Prize?]. *PRIDE (Policy Research Indicators Database)*. July 31 (Accessed on January 1, 2025).
- 國家實驗研究院科技政策研究與資訊中心、2024「中美研發投入比一比」『PRIDE 政策研究指標資料庫』2 月 7 日、<https://pride.stpi.narl.org.tw/index/graph-world/detail/4b1141ad8d3b2c07018d5e81bcc57874> (查閱時間：2025/1/12)。
- NARLabs. 2024. “Zhongmei yanfa touru biyibi” [Comparison of R&D Inputs between China and the United States]. *PRIDE (Policy Research Indicators Database)*. February 7 (Accessed on January 12, 2025).
- 陳宗儀、2022「OECD 公布全球外人直接投資統計專題報告」『經濟部國際貿易署』5 月 2 日、<https://www.trade.gov.tw/Pages/Detail.aspx?nodeid=45&pid=741955> (查閱時間：2025/2/1)。
- Chen, Zong-yi. 2022. “OECD gongbu quanqiu wairen zhijie touzi tongji zhuanli baoago” [OECD Releases Special Report on Global Foreign Direct Investment Statistics]. *International Trade Administration, Ministry of Economic Affairs*. May 2 (Accessed on February 1, 2025).
- 陳信宏、2021「美中新局對兩岸高科技產業未來布局可能的影響」『兩岸經貿』351：4-7。
- Chen, Sin-hong. 2021. “Meizhong xinju dui liangan gaokeji chanye weilai buju keneng de

- yingxiang” [The Possible Impact of the New U.S.-China Situation on the Future Layout of Cross-Strait High-Tech Industries]. *Straits Business Monthly*. 351: 4-7.
- 曹博凱、2024「AI 版曼哈頓計畫解析」『商業週刊』1935：86-90。
- Tsao, Bo-kai. 2024. “AI ban manhadun jihua jixi” [Analysis on the Manhattan Project of AI]. *Business Weekly*. 1935: 86-90.
- 劉佩真、2024「中國第三期集成電路大基金的政策效應有待觀察」『STPI 科技政策研究與資訊中心』6 月 12 日、<https://iknow.stpi.narl.org.tw/Post/Read.aspx?PostID=20776> (查閱時間：2024/12/10)。
- Liu, Pei-jhen. 2024. “Zhongguo disanqi jichengdianlu dajijin de zhengce xiaoying youdai guancha” [Policy Effect of China’s Third IC Fund Needs to Wait and See]. *STPI*. June 12 (Accessed on December 10, 2024).
- 葉長城、2021「近期美國對中科技政策的形成、轉變及其主要可能影響研析：以半導體產業為例」『全球政治評論』76：55-84。
- Ye, Chang-chen. 2021. “Jinqi meiguo dui zhong keji zhence de xingcheng, zhuanbian ji qi zhuyao keneng yingxiang yanxi: yi bandaoti chanye wei li” [The Formation, Evolution and Major Possible Influence of the US’s Technology Policy toward China: A Case Study of the Semiconductor Industry]. *Review of Global Politics*. 76: 55-84.
- 廖宏祥、2025「廖宏祥專欄：從華為手機、DeepSeek 談起... 美國高科技封鎖下、中國 AI 真能殺出一條血路？」『今週刊』2 月 3 日、<https://www.bustoday.com.tw/article/category/183015/post/202502030040/> (查閱時間：2025/2/4)
- Liao, Hong-xiang. 2025. “Liaohonxiang zhuanlan: cong huawei shouji, DeepSeek tanqi... meiguo gaokeji fengsuo xia, zhongguo AI zhen neng shachu yitiao xielu” [Hongxiang Liao’s Column: From Huawei Mobile Phone, DeepSeek... Can China’s AI really kill its way out of the U.S. high-tech blockade?]. *Business Today Weekly*. February 3 (Accessed on February 4, 2025).
- 羅慶生、2023「美中經濟競爭—半導體產業發展的可能推演」『台灣國際研究季刊』19 (1)：73-92。
- Lo, Ching-shing. 2023. “Meizhong jingji jingzhen: bandaoti chanye fazhan de keneng tuiyan” [U.S.-China Economic Rivalry: The Semiconductor Industry Possible Deduction of Development]. *Taiwan International Studies Quarterly*. 19(1): 73-92.
- Cheng, Judith. 2022「中國半導體業『大基金』掀肅貪風暴」『EETIMES Taiwan』8 月 11 日、<https://www.eettaiwan.com/20220811nt11-china-big-fund/> (查閱時間：2024/12/10)。
- Cheng, Judith. 2022. “Zhongguo bandaotiye ‘dajijin’ xian sutan fengbao” [China’s semiconductor industry’s ‘big fund’ kicks off a corruption crackdown]. *EETIMES Taiwan*. August 11 (Accessed on December 10, 2024).
- DIGITIMES. 2021「TOP500 中美超級電腦數量」7 月 9 日、https://www.digitimes.com.tw/tech/showimg.asp?source=0000614216_Y483XR1O08GKHY73D33WL&filename=614216-3-D33WL.jpg&sourcetype=1 (查閱時間：2025/1/31)。

- DIGITIMES. 2021. “Top500 zhongmei chaoji diannao shuliang” [Number of Supercomputers in Top500: China vs.US]. July 9 (Accessed on January 31, 2025).
- Money DJ 「1 分鐘看懂華為禁令風暴」 、<https://store.moneydj.com/focus/Article/1%E5%88%86%E9%90%98%20%20%E7%9C%8B%E6%87%82%E8%8F%AF%E7%82%BA%E7%A6%81%E4%BB%A4%E9%A2%A8%E6%9A%B4-636958708524030246> (査閱時間 : 2025/1/26) 。
- Money DJ. “Yi fenzhong kandong huawei jinlin fengbao” [A 1-minute look at the Huawei ban storm] (Accessed on January 26, 2025).
- BCG and SIA (Boston Consulting Group and Semiconductor Industry Association). 2021. “Strengthening The Global Semiconductor Supply Chain In An Uncertain Era.” April. p.5. https://www.semiconductors.org/wp-content/uploads/2021/05/BCG-x-SIA-Strengthening-the-Global-Semiconductor-Value-Chain-April-2021_1.pdf (Accessed on 2024/12/25).
- Berman, Noah, Lindsay Maizland, and Andrew Chatzky. 2023. “Is China’s Huawei a Threat to U.S. National Security?” *Council on the Foreign Relations*. February 8. <https://www.cfr.org/backgrounder/chinas-huawei-threat-us-national-security> (Accessed on February 2, 2023).
- Chorzempa, Martin, Mary E. Lovely, and Christine Wan. 2024. “The Rise of US Economic Sanctions on China: Analysis of a New PIIE Dataset.” *PIIE*. December 2024.
- Kerbaj, Richard. 2022. “5G wars: the US plot to make Britain ditch Huawei.” *The Sunday Times*. August 21. <https://archive.ph/AlrgU#selection-911.7-911.21> (Accessed on December 16, 2024).
- Kroet, Cynthia. 2024. “Eleven EU countries took 5G security measures to ban Huawei, ZTE.” *EURONEWS*. August 12. <https://www.euronews.com/next/2024/08/12/eleven-eu-countries-took-5g-security-measures-to-ban-huawei-zte> (Accessed on December 12, 2024).
- NSCAI (National Security Commission on Artificial Intelligence). 2021. “Final Report.” March 1. <https://www.nscai.gov/2021-final-report/> (Accessed on 2024/12/01).
- Tongele, Tongele N. 2022. “Emerging & Fundamental Technology Controls: A General Overview.” PPT presented at BIS 2022 Update Conference on Export Controls & Policy, Washington, D.C.
- Tortoise. 2024. “Ranking Table.” September 19. <https://www.tortoisemedia.com/intelligence/global-ai#rankings> (Accessed on December 10, 2024).
- Yan, Xuetong. 2024. “Why China Isn’t Scared of Trump.” *Foreign Affairs*. December 20. <https://www.foreignaffairs.com/united-states/why-china-isnt-scared-trump> (Accessed on December 27, 2024).
- Ye, Josh, David Kirton, and Chen Lin. 2023. “Focus: Inside China’s underground market for high-end Nvidia AI chips.” *Reuters*. June 21. <https://www.reuters.com/technology/inside-chinas-underground-market-high-end-nvidia-ai-chips-2023-06-19/> (Accessed on June 21, 2023).