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The Third Way: Korea's Approach to AI-driven Economic Transformation

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Korea's AI Strategy: The Third Way

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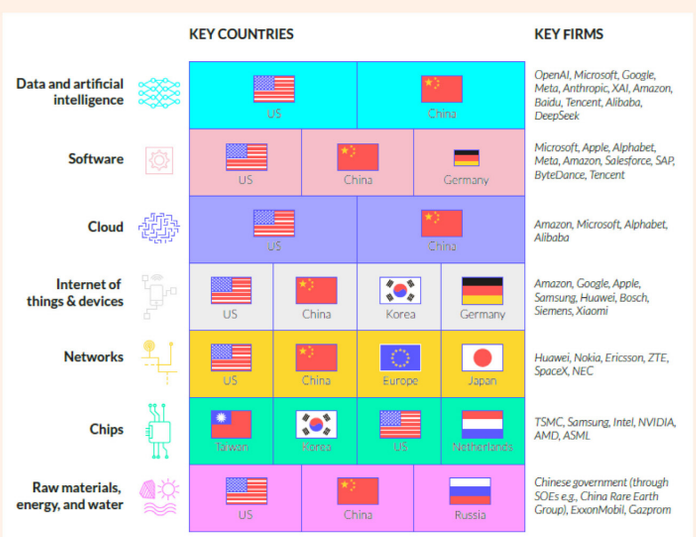
Global AI Landscape

- The global AI ecosystem is dominated by a small number of leading countries, each establishing competitive advantages across different layers of the technology stack
- Understanding these competitive dynamics is essential for positioning national AI strategies in an increasingly polarized technological landscape.

Key countries & leading firms in AI technology stack

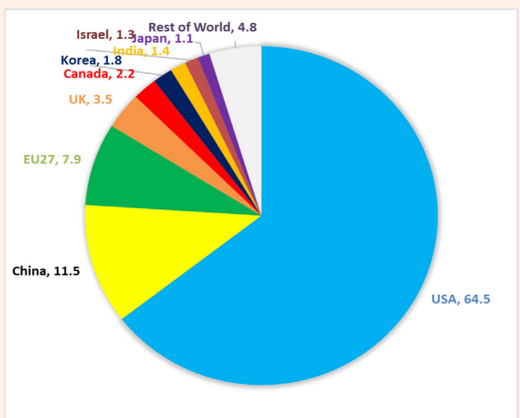


(Source: Bertelsmann Stiftung, Feb 13, 2025)

Concentration of AI Resources

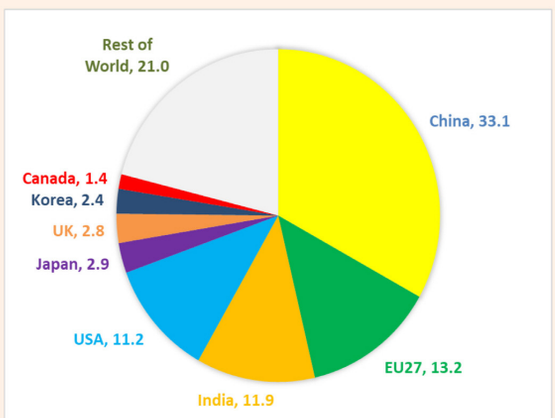
Venture Capital Investment, 2024

(total = 147.99 billion USD)



Research Publication, 2024

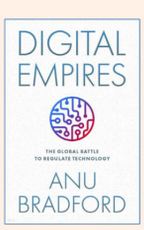
(total = 49,522)



(Data Source: OECD.AI)

Three Digital Empires (Bradford, 2023)

Bradford's influential analysis identifies three distinct approaches to digital governance, each reflecting different philosophical foundations and strategic priorities.



United States

Market-Driven

Core: Techno-libertarian principles, free market innovation

Approach: Light regulation, antitrust enforcement

Strength: Rapid innovation, global platform dominance

Challenge: Privacy erosion, market concentration

China

State-Driven

Core: Digital sovereignty, government control

Approach: Comprehensive state oversight, strategic planning

Strength: Coordinated infrastructure, rapid deployment

Challenge: Innovation constraints, rights concerns

European Union

Rights-Driven

Core: Fundamental rights protection, democratic values

Approach: Rules-based governance, comprehensive regulation

Strength: User protection, institutional trust

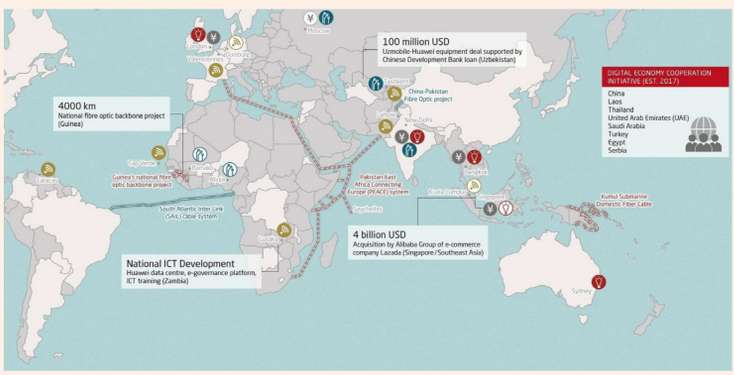
Challenge: Innovation pace, compliance burden

China's Digital Silk Road Expansion

- China's digital infrastructure initiatives demonstrate the global reach of state-driven technology strategies, extending influence through systematic overseas deployment.
- Strategic deployment of surveillance technology, 5G networks, and digital governance systems across partner nations.

➢ This expansion creates dependencies and extends China's digital governance model globally, challenging Western democratic norms.

Digital Silk Road (2019)



China's overseas digital infrastructure projects (2019-2023)

SOURCE	RECIPIENT	AMOUNT (USD MILLION)	DATE	DESCRIPTION
Exim Bank	Ministry of Finance and Economic Development, Sierra Leone	30	2019	Huawei contract for Phase II of National Fiber Optic Backbone Project, laying 690 km of cables
China International Development Cooperation Agency (CIDCA)	Kragujevac State Data Center, Serbia	13	2019	Huawei's AI platform for Serbian e-government services
China Development Bank (CDB)	Turkcell, Turkey	559.9	2019	8-year loan for hardware and equipment procurement from Chinese vendors
Exim Bank	Government of Ghana	177	2020	Huawei equipment for Ghana Rural Telephony and Digital Inclusion Project
Bank of China	Government of Côte d'Ivoire	125.6	2020	Modernization of national police and defense networks and emergency command center
Ministry of Commerce (MOFCOM)	Government of Senegal	Unknown	2021	Contract with StarTimes for Phase II of satellite television program, covering more than 300 villages
Exim Bank	Ministry of Security of Burkina Faso	86.9	2021	Installation of 800 km of fiber optic cables and 900 surveillance cameras by Huawei and China Communications Construction Company (CCCC)
Exim Bank	Government of Benin	40	2021	Phase II of National Broadband Network Project, implemented by Huawei
Unspecified	Egyptian Space Agency	92	2022	Assembly and testing of MisrSat 2 remote sensing satellite by China Aerospace Science and Technology Corporation (CASC)
Sinosure and Citibank	Xtrim TVCable, Ecuador	32	2023	Acquisition of fiber optic equipment manufactured by ZTE
Exim Bank	Government of Uganda	150	2023	Development of national internet infrastructure

(Source: MERICS, "Networking the 'Belt and Road' The future is digital," Aug 28, 2019; "The digital Silk Road: A growing priority for Beijing as its tech champions expand overseas," March 2024)

Intensifying Rivalries under Trump 2.0

The return of Trump administration sharpens existing digital empire rivalries, with significant implications for global technology governance.

US-China Tech Decoupling

Previous: Selective bans (e.g., TikTok, Huawei)

Trump 2.0: Expanded tariffs, national AI reserves counter DeepSeek advances

Impact: Market vs. state clash intensifies; US isolation potentially strengthens China's authoritarian technology exports

US-EU Regulatory Tensions

Previous: Big Tech fines, rights-based disputes

Trump 2.0: Challenges EU DSA as trade barriers; EU holds on AI Act from Draghi report pressure

Impact: Market vs. rights divide deepens, Brussels Effect regulatory model faces pressure but unlikely endures

EU-China Positioning

Previous: Indirect competition, FDI screening

Trump 2.0: EU benefits from US tariffs on Chinese green tech

Impact: EU positions as democratic alternative to both US deregulation and Chinese authoritarianism

Debunking the Innovation-Regulation Trade-off

The False Dichotomy between Innovation and Regulation

➢ Laissez-faire innovation can lead to harmful consequences (market failures), while excessive regulation can impose unnecessary costs that deter progress.
(Bryan and Teodoridis, Brookings, 2024)

Regulatory Impact Misconception

The technology gap between US and EU stems from institutional factors—market integration, capital markets, entrepreneurial culture—not regulatory stringency alone.

Innovation Ecosystem Complexity

US dominance reflects ecosystem advantages including talent attraction, venture capital availability, and risk tolerance culture rather than laissez-faire policy approaches.

➢ Strong regulatory frameworks like GDPR and the AI Act can coexist with robust innovation when properly designed and implemented. (Bradford, 2024)

- Kevin A. Bryan and Florenta Teodoridis, "Balancing market innovation incentives and regulation in AI: Challenges and opportunities," Brookings Institution, September 24, 2024
- Anu Bradford, "The false choice between digital regulation and innovation," *Northwestern University Law Review*, Vol 119 No 2, 2024

Korea's AI Vision

Korea's AI vision seeks to navigate between the three digital empire models while establishing distinct competitive advantages in key technology sectors.

Global AI Leadership

Target top-3 global powerhouse through domestic semiconductor champions, large language model development, and open-source Korean national LLM to compete with GPT-class systems.

Economic Revitalization

Drive GDP growth through AI integration across manufacturing, services, and automotive sectors, emphasizing humanoid robotics and inclusive SME support.

Inclusive Ethical Adoption

Ensure broad citizen access through comprehensive education, digital inclusion programs, and proactive bias and privacy risk mitigation across urban-rural divides.

National Security Infrastructure

Establish AI as national power foundation, integrating renewable energy for data centers and advancing 6G networks amid US-China technological competition.

Korea's Comprehensive Policy Toolkit

Korea's approach combines substantial investment, regulatory innovation, infrastructure development, and human capital strategies to achieve AI leadership while maintaining democratic values.

Investment & Funding

- **100 trillion KRW** strategic high-tech fund for AI R&D partnerships
- AX One-Stop Voucher for SME AI adoption
- **AI data centers** designated as national infrastructure priority

Regulatory Innovation

- **Negative regulation** system with Mega Sandbox for high-risk AI testing
- **AI Framework Act** balancing growth with privacy and bias safeguards
- Tax incentives for AI exports and startup development

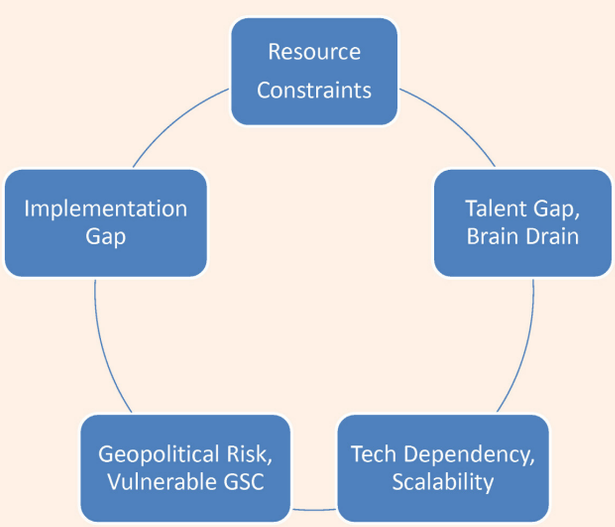
Infrastructure & R&D

- AI Highway: Nationwide GPU-equipped data center network
- Robotics projects merging AI with manufacturing
- 6G AI networks: Pilot by 2028, full deployment by 2030

Governance & Human Capital

- **Presidential Committee on AI** and Chief AI Officer leadership for policy coordination
- Comprehensive AI education from schools to lifelong learning
- Open public data ecosystem and high-quality training data clusters

Challenges to Korea's AI Vision



- 100 trillion won pledge faces uncertainty amid sluggish growth, and potential U.S. tariff impacts under Trump 2.0.
- Limited domestic AI specialists with top talent, emigrating to U.S./China. Building skilled workforce will take years despite education initiatives.
- Heavy reliance on U.S. tech giants for AI infrastructure limits sovereignty. Korean-language models lack global scalability compared to English/Chinese counterparts.
- U.S. export controls on AI chips and potential Chinese retaliation threaten semiconductor exports. Vulnerable global supply chains hinder innovation.
- Rapid rollout risks uneven adoption across sectors. Low AI literacy and ethical concerns about bias could create societal concerns.

Korea's AI Strategy: The Third Way

Strategic Positioning

- **Pragmatic "third way"** navigating digital empire constraints
- Synergic combination of innovation and regulation
- Maintaining democratic values while pursuing AI leadership

Success Factors & Strategies

- **Effective implementation**: Execute investment plans responsibly
- Domestic capabilities
- Geopolitical balance
- **Alliances** with middles powers

Critical Challenges

- Resource constraints
- Talent shortages and brain drain
- Foreign tech dependency & supply chain risks, **Scalability**
- **Geopolitical pressure** from intensifying US-China rivalry

Global Implications

- **Blueprint for middle powers** in global AI governance
- **Alternative** to binary US-China tech choices
- Exemplar for **democratic AI leadership** models

The "Third Way" navigates US deregulation, EU rights-focus, and Chinese state-control by balancing market incentives with ethical guardrails, ensuring sovereignty without isolation.