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Balancing Optimism With Anxiety: How Think Tanks View Technology, Trade, and Geopolitics

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A survey among 32 think tank members of the Global Trade and Innovation Policy Alliance (GTIPA) across 25 countries finds strong optimism about technological progress, but much less confidence in the global policy environment. Respondents are bullish on emerging technologies and skeptical of recent trade changes, and broadly favor skills and trade openness.

KEY TAKEAWAYS

- This report summarizes a survey among the GTIPA, a network of like-minded pro-innovation and pro-trade think tanks. Despite sharing principles, members span diverse and geopolitical contexts, producing meaningful differences in their views.
- Respondents are optimistic about the impact of emerging technologies, as they expect technological change to deliver substantial benefits.
- Trade is the clearest area of concern. Respondents are skeptical that recent changes in the global trading system are improving the world economy, although those from Western-allied countries are notably more pessimistic.
- Cybersecurity and green-tech deployment generate strong cross-country agreement. Respondents see cyber risks as underprioritized for policymakers and clean-technology adoption as proceeding too slowly.
- U.S.-China competition is not a divisive topic, as most respondents are ambivalent about whether strategic rivalry will ultimately benefit the global economy.
- Respondents distinguish geopolitical competition from the foundations of innovation. Across the sample, they view skills and trade openness as more important than geopolitical alignment.

CONTENTS

Key Takeaways 1
Introduction 2
Methodology 4
Results 5
Expectations About the Impact of Technological Change 6
Recent Changes in the Global Trade System 6
Effects of the U.S.-China Competition in the Global Economy 7
Geopolitical Dynamics as a Technological Change Driver 7
Cybersecurity as a Policy Priority 8
AI and Biotechnology Advancements 9
Green-Tech Adoption 9
Continuity of Moore's Law 10
Advancements in Quantum Technology 11
Fusion Technology 12
Ranking of Policy Priorities 13
Conclusion 14
Endnotes 15

INTRODUCTION

Technological change is accelerating as the political environment around it becomes more contested. Rapid technological developments and geopolitical shifts raise a practical question for policymakers: are innovation-policy experts fundamentally optimistic about the next decade, or do geopolitical fragmentation, regulatory pressures, and technological uncertainty increasingly dominate their outlook? This report surveys like-minded think tanks to examine how those expectations are evolving—and where they diverge across countries.

Surveying global think tanks matters because they help shape policy priorities by informing governments, legislators, industry, and the broader thought leaders' community. Their views can therefore reveal which technological and economic issues are rising in importance and which policy responses command the greatest support. Comparing perspectives across countries also helps identify where priorities converge or diverge, offering an early indication of where future cooperation may prove easier or more difficult.

In this context, the Information Technology and Innovation Foundation (ITIF) surveyed 32 think tanks in 25 countries that are part of the Global Trade and Innovation Policy Alliance (GTIPA). Because the survey draws on a nonrandom sample of like-minded organizations, some convergence in views is expected. Nevertheless, GTIPA members operate across diverse economic, institutional, and geopolitical contexts, allowing the survey to identify meaningful

differences despite this inherent selection bias. Respondents assessed 10 propositions covering the following:

- Pace and impact of technological change
- The global trade system
- U.S.-China competition
- Geopolitics
- Cybersecurity
- AI and biotechnology
- Green technology
- Moore's Law
- Quantum computing
- Fusion energy

Respondents scored each one and ranked five approaches for strengthening national innovation capacity. For comparison, the report groups respondents into Western allies and other countries.

The clearest message is that technological optimism remains strong even as confidence in the policy environment weakens. Respondents are highly positive about technological change overall; however, they are similarly bullish on AI–biotechnology convergence and expect meaningful progress in quantum computing and fusion. At the same time, they are decidedly negative about recent changes in the global trading system, which received the lowest average score in the survey.

The most revealing differences concern where respondents expect technological opportunities to materialize and how they interpret the changing geopolitical environment. Western-allied respondents are somewhat more likely to view geopolitics as a primary driver of technological change and are considerably more pessimistic about recent changes in global trade. By contrast, respondents from other countries are more optimistic about AI-biotechnology convergence, the continuation of Moore's Law, and commercially applicable fusion.

Respondents are highly positive about technological change overall. At the same time, they are decidedly negative about recent changes in the global trading system, which received the lowest average score in the survey.

The report proceeds in two parts. It first explains the survey methodology and how respondents were divided into two country groups. It then examines each survey question in turn, focusing on the overall result, differences between Western allies and other countries, and the policy significance of those perceptions. The final subsection presents policy priorities based on respondents' rank-ordered choices, with skills development and workforce readiness, together with trade openness and international collaboration, identified as top priorities. Taken together, the findings suggest that policymakers should separate the geopolitical forces increasingly

shaping innovation from the underlying capabilities that determine whether countries can develop, adopt, and diffuse new technologies.

METHODOLOGY

ITIF surveyed all 60+ members of GTIPA, a global network of think tanks with shared principles, including promoting pro-innovation policies, trade openness, cross-border investment promotion, and market-based solutions. Of these, 32 think tanks from 25 countries responded to the survey.

To assess whether geopolitical position is associated with different views, the survey compares think tanks in countries belonging to Western alliances—such as those in the North Atlantic Treaty Organization (NATO), those allied to the United States, and Taiwan—with those whose foreign-policy relationships are more diverse or less formally tied to those structures, including those that are members or observers of the Non-Aligned Movement.[1] The grouping provides a simple analytical framework for testing whether geopolitical context is associated with systematic differences in views on technological change, trade, and innovation policy. Thus, the countries are divided into two categories: **Western Allies**, which includes Austria, Bulgaria, Canada, Denmark, Greece, Hungary, Italy, Japan, North Macedonia, Poland, Sweden, Taiwan, and the United States, and **non-aligned and other countries**, including Argentina, Brazil, Chile, the Dominican Republic, Ecuador, Ghana, India, Mexico, Pakistan, Peru, Singapore, and Vietnam.

The survey questionnaire included 10 questions in which respondents had to choose a score from 1 to 5, representing their organization's views for specific topics. Respondents answered Question 1 by indicating whether they were optimistic or pessimistic, and in the remaining questions, they either agreed or disagreed with the statement. An additional rank-choice question included five categories in which respondents had to prioritize their preferences from first to fifth according to their policy concerns. Thus, the questions/statements were the following:

1. Overall, how optimistic are you about the speed and positive impact of technological change?
2. Changes in the global trade system are positively affecting the global economy.
3. Competition between the United States and China is ultimately beneficial for the global economy.
4. Geopolitical dynamics are now the primary driver of technological change.
5. Cyber risks are not receiving policymakers' attention in proportion to the threat they pose.
6. The convergence of biotechnology and AI will be the most transformative innovation of the next decade.
7. Green-technology adoption is lagging behind what science suggests is necessary to combat environmental devastation.
8. Moore's Law still holds true today and will continue doing so for at least the next five years.
9. A commercially ready 10,000-bit quantum computer will be available in 10 years.

10. Fusion energy technologies will likely provide commercially applicable solutions within the next 15 years.
11. Please rank the following policy approaches by their potential to strengthen your country's innovation capacity, from most (a) to least (e) impactful:
    a. Industrial policies or targeted interventions in strategic sectors
    b. Trade openness and international collaboration
    c. Strategic alignment with either the U.S. or China technology ecosystem
    d. Attracting foreign direct investment (FDI)
    e. Skills development and workforce readiness

The survey reflects a nonrandom sample of organizations, as all respondents are GTIPA members—a community of think tanks sharing broad principles supporting innovation, rules-based trade, cross-border investment, competition, and productivity growth. Some convergence in views—particularly on trade and innovation—is therefore to be expected. Despite this limitation, GTIPA includes organizations from a diverse set of countries and institutional contexts, allowing the survey to capture meaningful differences within a broadly like-minded policy community.

RESULTS

The survey results reveal a policy community that is optimistic about technological progress but considerably less confident about the institutional and geopolitical environment surrounding it. Respondents expect substantial advances in areas such as biotechnology, quantum computing, and fusion, while expressing concern about changes in the global trading system, insufficient attention to cybersecurity, and the pace of green-technology adoption. These tensions frame the results that follow.

The survey results reveal a policy community that is optimistic about technological progress but considerably less confident about the institutional and geopolitical environment surrounding it.

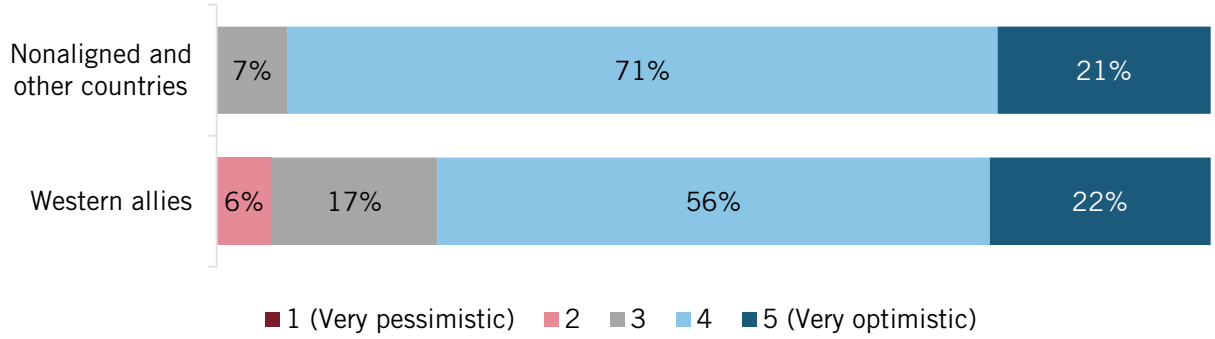
Comparing Western allies with other countries also reveals where views converge and where national circumstances appear to shape expectations. The two groups are nearly identical on cybersecurity and green-technology adoption, and they differ only modestly on the consequences of U.S.-China competition and the geopolitical drivers of technological change. Larger gaps emerge on frontier technologies. Respondents from non-Western-allied countries are considerably more optimistic about AI-biotechnology convergence, the continuation of Moore's Law, and commercial fusion. These differences should not be read as forecasts in themselves. Rather, they show how policy communities operating in different economic, technological, and strategic environments perceive the opportunities, risks, and likely pace of innovation over the coming decade.

Expectations About the Impact of Technological Change

The respondents are overwhelmingly optimistic about both the speed and the positive impact of technological change. Although this is a shared perception among like-minded pro-trade and pro-innovation think tanks, it still matters because expectations shape policy.[2] Thus, policy communities that view technology primarily as a threat are more likely to emphasize restrictions, while those that expect large gains have a stronger reason to focus on diffusion, adoption, skills, infrastructure, competition, and adjustment for workers and firms.

The overall score for this question is 4.03 out of 5, and 84 percent of respondents selected either 4 or 5. Only one respondent gave a pessimistic score, while just 13 percent were neutral. As figure 1 shows, 93 percent of respondents from non-Western allies are optimistic or very optimistic, versus 78 percent among Western allies.

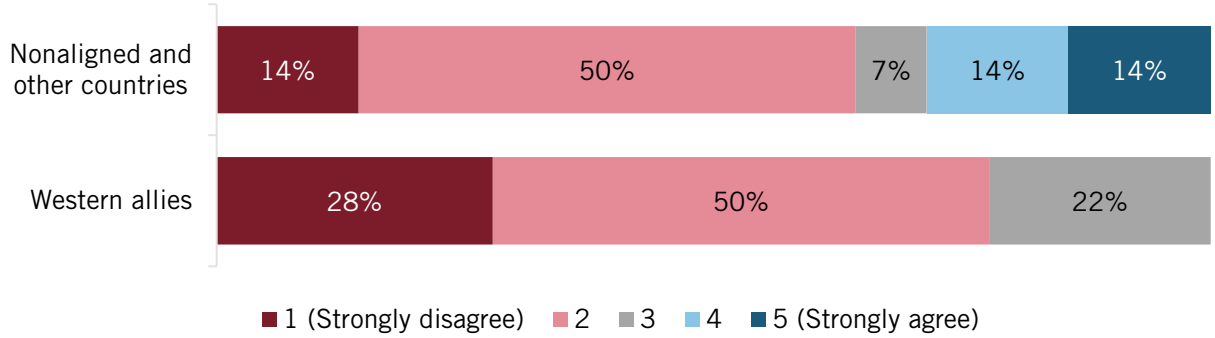
Figure 1: Expectations about the impact of technological change



Recent Changes in the Global Trade System

Most respondents agree that recent changes in global trade are negatively affecting the world's economy, with an average score of 2.25—the survey's strongest expression of pessimism. Nearly 72 percent disagree or strongly disagree that recent changes in the global trade system will have positive outcomes, while only 13 percent agree. Western allies are notably more negative; their average score is 1.94, compared with 2.64 for non-Western allies, a gap of 0.70 points. (See figure 2.) No Western ally respondent agrees that recent trade changes are positive—78 percent disagree. By contrast, 29 percent of respondents from Other Countries agree or strongly agree.

Figure 2: Changes in the global trade system are positively affecting the global economy



While optimism about technological change exists, it is colliding with trade pessimism. This might be contradictory, as technological progress can create the next wave of growth only if the trading system still allows that progress to spread.

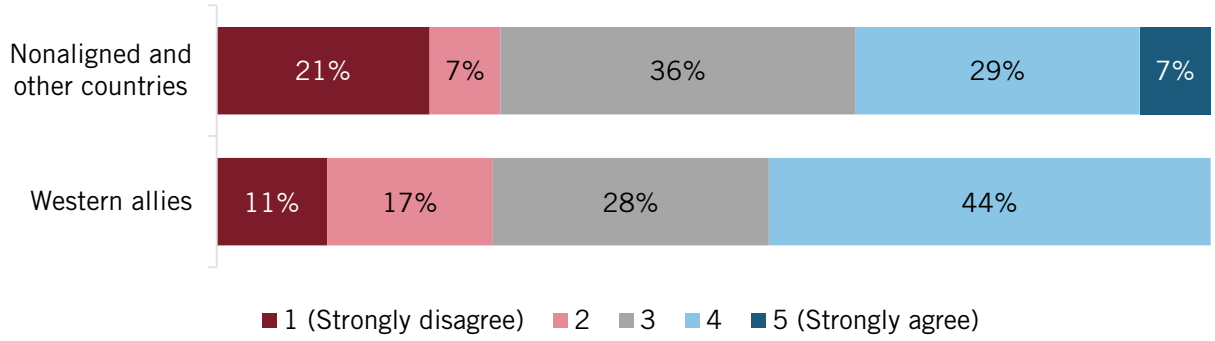
Effects of the U.S.-China Competition in the Global Economy

Strategic rivalry can spur investment, research, and competition for technological leadership. However, from the perspective of countries outside the great powers, it can also fragment markets, duplicate supply chains, restrict access to inputs and customers, and turn standards or technology platforms into geopolitical blocs.

Respondents do not share a common view that strategic competition between the world's two largest technology powers is either good or bad for the global economy. When asked whether U.S.-China competition will ultimately benefit the global economy, respondents averaged 3.00, reflecting ambivalence. About 41 percent agree that the competition is ultimately beneficial, 28 percent disagree, and 31 percent chose the midpoint. The distribution suggests that many respondents see a genuine trade-off between the potential innovation this competition could unlock and the pressures of great-power competition.

Moreover, the country-group split is small. Western allies averaged 3.06 and non-Western allies 2.93. Despite different exposure to China, alliance structures, and development priorities, respondents in both groups appear uncertain about the net global consequences—as figure 3 shows.

Figure 3: Competition between the United States and China is ultimately beneficial for the global economy



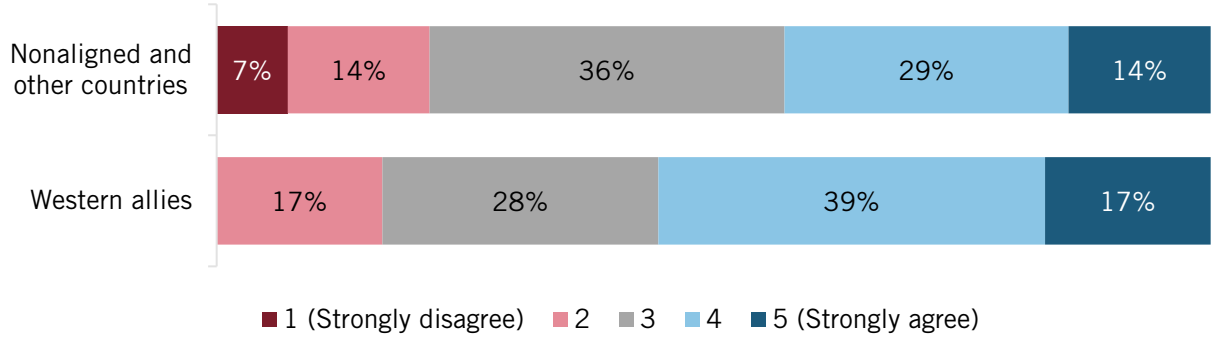
Geopolitical Dynamics as a Technological Change Driver

Understanding these geopolitical dynamics is increasingly important for designing effective technology and innovation policy. Global technology markets are no longer shaped solely by comparative advantage, firm capabilities, and consumer demand, as governments increasingly influence technological trajectories through export controls, investment restrictions, subsidies, procurement, standards, and access to critical inputs.[3] The Organization for Economic Cooperation and Development (OECD) describes economic-security concerns and disruptive technologies as part of a fundamentally new environment for science, technology, and innovation policy, while research on "weaponized interdependence" shows how countries controlling critical nodes in global economic networks can use those positions for strategic leverage.[4] Policymakers therefore need to understand where technological dependencies and chokepoints actually exist,

how competitors are attempting to gain advantage, and where allied coordination can strengthen collective capabilities.

Technology policy is increasingly inseparable from foreign policy, but respondents differ by country group. Western allies see current geopolitical dynamics as more influential in shaping the global technology landscape, with an average score of 3.56 compared with 3.29 among respondents from non-Western-aligned countries. (See figure 4.) The gap is modest, but it is consistent with the greater prominence of export controls, alliance coordination, defense requirements, supply-chain security, and strategic industrial policy in advanced-economy technology debates.

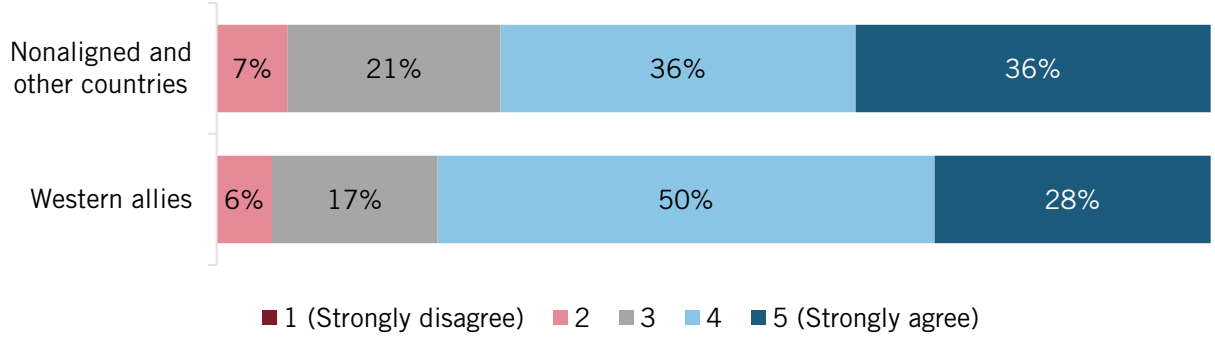
Figure 4: Geopolitical dynamics are now the primary driver of technological change



Cybersecurity as a Policy Priority

There is a shared concern regarding the lack of prioritization of cybersecurity issues in the policy debate. Indeed, most think tanks consider that cybersecurity issues have not received enough attention from policymakers. Three-quarters of all respondents agree that cyber risks are not receiving policy attention in proportion to the threat, while only 6 percent disagree. The average was exactly 4.00 for both Western allies and other countries.

Figure 5: Cyber risks are not receiving policymakers' attention in proportion to the threat they pose



Relegating cyberpolicy to lower priorities can have serious consequences. As more economic activity depends on connected systems, weak cybersecurity can reduce the economic returns from digital adoption. Firms may underinvest because some costs of insecurity fall on customers, suppliers, or the broader network, while governments may struggle to keep rules current as threats and technologies evolve.[5] Thus, governments need capable public institutions, a skilled

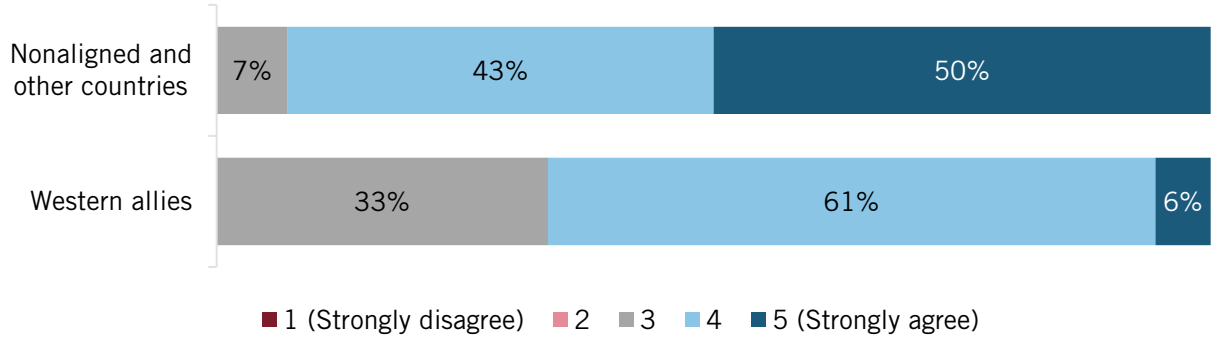
cyberworkforce, better information sharing, resilient procurement, and incentives that encourage organizations to manage risk without freezing particular technologies or security practices into regulation.[6]

AI and Biotechnology Advancements

The think tanks covered in this survey are optimistic about AI's impact on biotechnology advancements. Across the full sample, the statement that the convergence of biotechnology and AI will be the most transformative innovation of the next decade received an average of 4.03. Seventy-eight percent agree or strongly agree, and no respondent disagrees.

Non-Western-allied countries are substantially more bullish. Their average score for that group was 4.43, compared with 3.72 among Western allies—a gap of 0.71 points. Half of respondents from non-Western-allied countries strongly agree, and another 43 percent agree. (See figure 6.) Among Western allies, two-thirds agree, but one-third remain neutral, and only 6 percent strongly agree. The difference may reflect varying expectations about how quickly AI-enabled life-science tools will diffuse, where commercial opportunities will arise, or how regulatory and institutional constraints will affect deployment.

Figure 6: The convergence of biotechnology and AI will be the most transformative innovation of the next decade



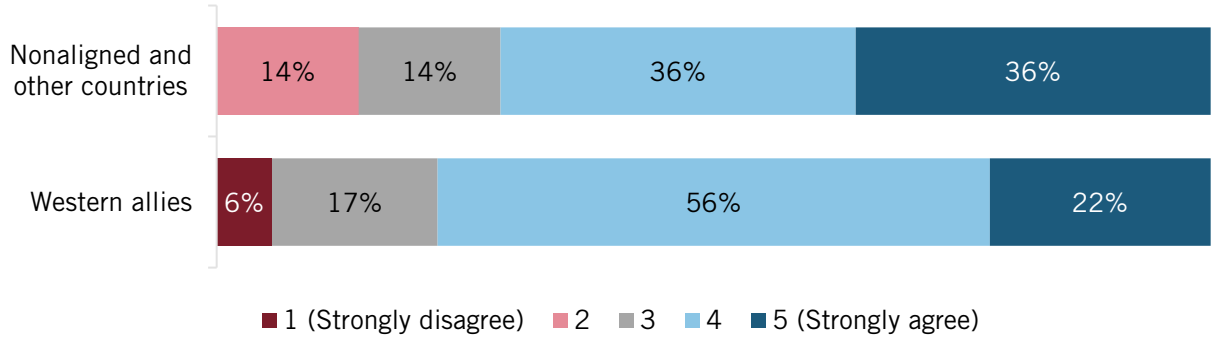
This greater caution among Western allies should not be mistaken for weaker positioning. If anything, many have entered the AI-biotechnology era with a stronger foundation for turning breakthroughs into economic and health gains. OECD data shows that U.S. businesses spent $117.1 billion on biotechnology research and development (R&D) in 2022—the highest level among reporting economies—while Japan spent about $2.65 billion and Canada $1.25 billion in 2021; several smaller Western allies also sustain substantial biotechnology research bases.[7] These countries also show superior health outcomes, so non-Western countries are expected to view the advances more optimistically, since they have more to gain. For example, the Western-allied countries separately covered in the dataset average a lifespan of about 81 years, compared with 75.5 years among the non-Western countries.[8]

Green-Tech Adoption

There is a broad concern that developing cleaner technologies is not enough when deployment across energy, transport, industry, and buildings proceeds too slowly. Respondents gave an average score of 3.91 to the statement that green-technology adoption is lagging behind what science suggests is necessary to combat environmental devastation. Three-quarters agree or strongly agree, while fewer than 1 in 10 disagree.

The average scores of the two country groups differed by almost nothing. Western allies averaged 3.89 and other countries 3.93. The distributions differed somewhat. As figure 7 illustrates, think tanks from Western allies are more concentrated at "agree," while those from other countries include both more strong agreement and more disagreement.

Figure 7: Green-technology adoption is lagging behind what science suggests is necessary to combat environmental devastation



This matters because the barriers to adoption differ widely across countries even when the perceived problem does not. Perceptions can shape which climate policies governments can realistically sustain. Research across six OECD countries finds that policymakers respond to shifts in public demand for climate action, while a meta-analysis finds that perceived fairness and effectiveness are among the strongest determinants of support for climate taxes and laws.[9] Thus, if policymakers and expert communities agree that deployment is too slow, they may have greater space to pursue policies that accelerate innovation, infrastructure investment, and technology adoption.

Continuity of Moore's Law

Coined by Intel cofounder Gordon Moore, the "law" (which, technologically speaking, refers to "process-node scaling") represents the notion that the number of transistors on a new microchip doubles about every two years, effectively meaning a semiconductor's capability in terms of speed and processing is doubled, even though its cost is halved.[10] Moore's prediction has proven prescient and historically highly reliable.[11] Discussions of the end of Moore's Law date back at least three decades, including when Gordon Moore himself reviewed its assumptions at a 1995 conference.[12]

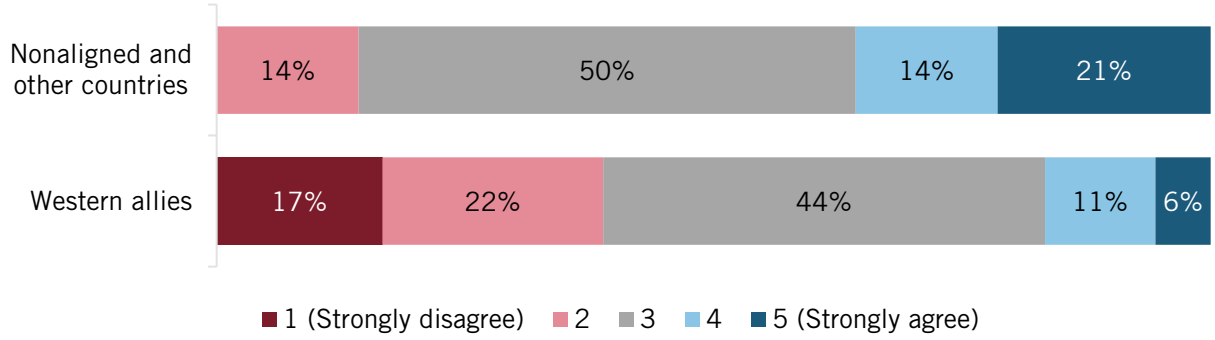
The survey shows no consensus that Moore's Law, as framed in the questionnaire, will continue to hold for at least another five years. The overall average is exactly 3.00. Nearly 47 percent selected the midpoint, 25 percent agree, and 28 percent disagree.

Western respondents appear more skeptical that traditional semiconductor scaling will continue on its familiar path. The gap between country groups is 0.76 points, as figure 8 shows. Non-Western-allied country think tanks average 3.43, compared with 2.67 among those from Western-allied countries.

Assuming or not assuming the continuity of Moore's Law has policy implications. So far, persistent improvements in computing performance and cost have enabled successive waves of digital innovation. If conventional scaling becomes harder or more expensive, policymakers will

need to focus on the broader semiconductor innovation system rather than assume that computing gains will continue automatically. A slowing of Moore's Law would therefore shift the policy challenge from scaling alone to sustaining innovation across the entire semiconductor stack.

Figure 8: Moore's Law still holds true today and will continue doing so for at least the next five years



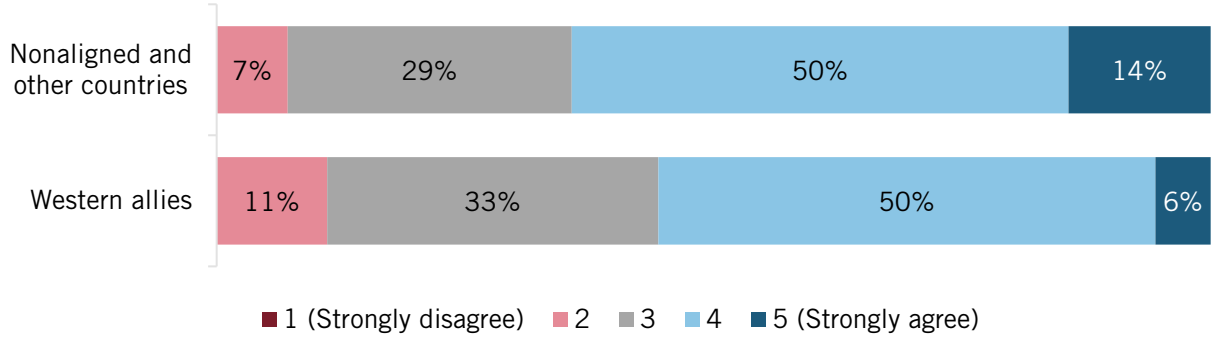
Advancements in Quantum Technology

Quantum computing refers to the development of computers that use quantum mechanics to perform calculations exponentially faster than classical computers can.[13] A qubit, or quantum bit, is the basic unit of information used to encode data in quantum computing.[14] To build a functional quantum computer, one must create a physical system that encodes, controls, and manipulates qubits to carry out computations.[15] Achieving 10,000-bit quantum computing is considered a critical step toward realizing practical quantum advantage, improving quantum computers' ability to handle complex problems currently beyond the reach of classical computers.[16]

A credible path toward large-scale quantum computing affects research priorities, talent competition, investment decisions, and cybersecurity planning, especially because future capabilities could undermine some widely used cryptographic systems.

Respondents lean toward believing that a commercially ready 10,000-bit quantum computer will be available within 10 years, with an overall score of 3.59. About 59 percent agree or strongly agree, only 9 percent disagree, and nearly one-third remain neutral. Differences across country groups are modest. Respondents from Western-allied countries averaged 3.50, while those from other countries averaged 3.71. Thus, commercialization within a decade seems plausible enough to warrant preparation, but not certain enough to anchor economic forecasts or specific policies.

Figure 9: A commercially ready 10,000-bit quantum computer will be available in 10 years

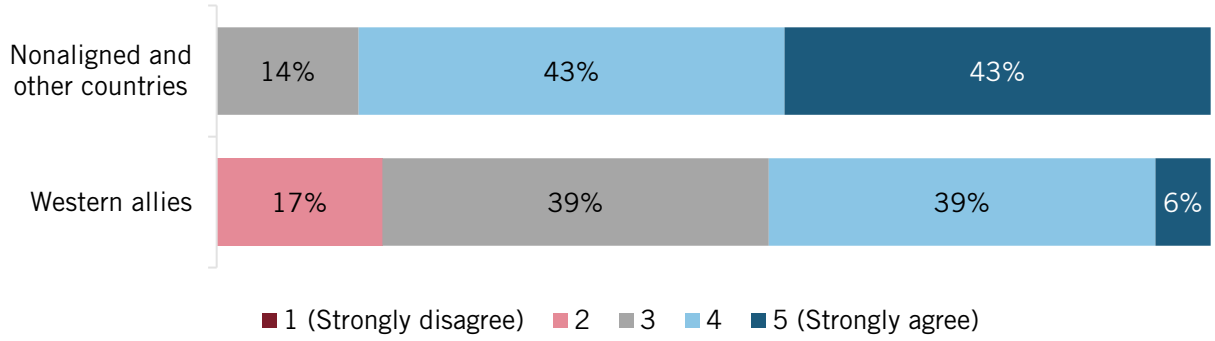


Fusion Technology

Nuclear fusion is a potential energy solution to achieve clean energy goals. It is a zero-carbon energy source that occurs naturally in the sun and stars the heating of plasma and allows nuclei to fuse together, producing energy.[17] According to research by the International Atomic Energy Agency (IAEA), "If nuclear fusion can be replicated on earth at an industrial scale, it could provide virtually limitless clean, safe, and affordable energy to meet the world demand."[18] Thus, fusion technology can be seen as a "classic" high-upside, high-uncertainty technology. If commercially viable, it could materially expand the menu of reliable low-carbon energy options, but timelines are difficult to forecast, and commercialization requires far more than a scientific demonstration.

Overall, the results are optimistic: respondents gave the proposition that fusion technologies will provide commercially applicable solutions within 15 years an average score of 3.75. Nearly 63 percent agree or strongly agree, 28 percent are neutral, and only 9 percent disagree. However, significant differences exist between country groups. Other countries averaged 4.29, compared with 3.33 among Western allies—a difference of 0.95 points, the widest gap across the 10 scored questions. As figure 10 exhibits, 86 percent of respondents from other countries agree or strongly agree, including 43 percent who strongly agree, that they are optimistic about fusion technologies. In contrast, among Western allies, only 44 percent agree, 39 percent are neutral, and 17 percent disagree.

Figure 10: Fusion energy technologies will likely provide commercially applicable solutions within the next 15 years



Ranking of Policy Priorities

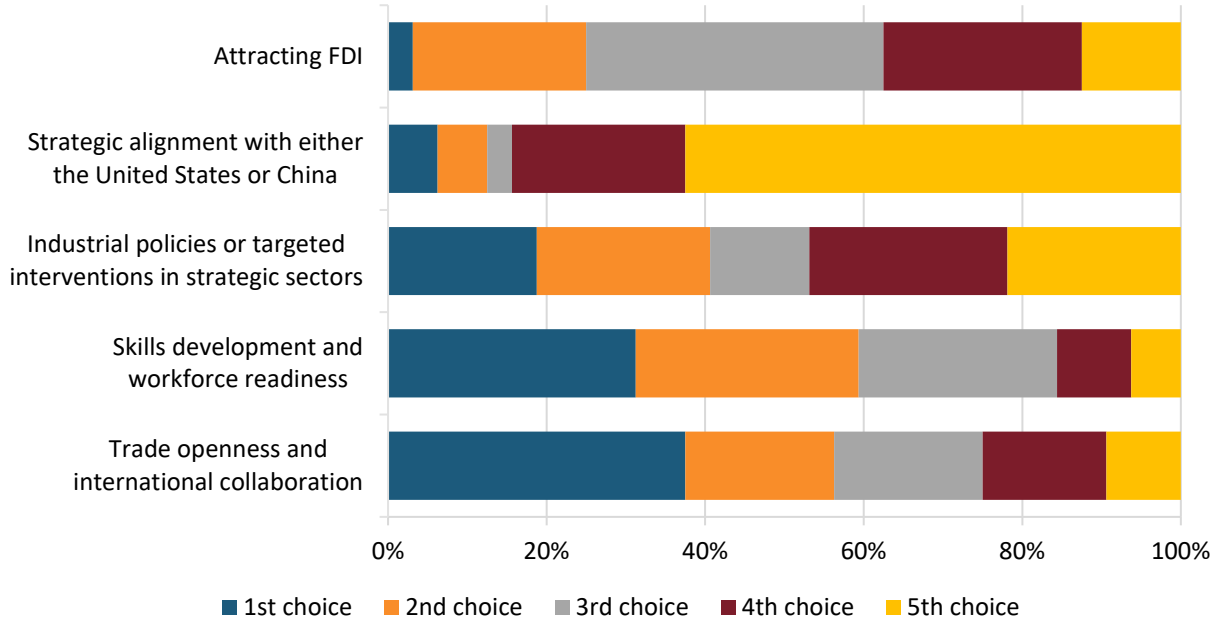
The final question asked respondents to rank five policy approaches by their potential to strengthen national innovation capacity. The results favor broad enabling conditions over geopolitical alignment. Skills development and workforce readiness received the highest average rank (2.31), narrowly ahead of trade openness and international collaboration (2.41). Yet trade openness was the most common first choice, selected by 37.5 percent of respondents, compared with 31.3 percent for skills. In other words, workforce development and trade openness remain the two most-valued foundations for innovation policy.

The remaining options were viewed as more conditional. Industrial policies or targeted interventions in strategic sectors averaged 3.09, with responses spread across the ranking rather than concentrated at either extreme. Attracting FDI averaged 3.22 and was most often ranked third, by 37.5 percent of respondents. Strategic alignment with either the United States or China ranked last by a wide margin: its 62.5 percent placed it fifth, producing an average rank of 4.28.

Workforce development and trade openness remain the two most valued foundations for innovation policy.

The ranking is notable because respondents recognize that geopolitics shapes technology policymaking. They distinguish between acknowledging rivalry and treating geopolitical alignment as the principal route to innovation. Instead, respondents place greater weight on capabilities that help economies innovate: skilled workers, access to knowledge and markets, and institutions' ability to absorb technology.

Figure 11: Ranking of policy priorities among respondents, by frequency of choices



CONCLUSION

The survey points to an innovation-policy community that remains confident in technological progress but increasingly concerned about the conditions surrounding it. Respondents expect major advances in AI and biotechnology, quantum computing, and fusion, but they are far less optimistic about the global trading system and broadly believe cybersecurity and green-technology deployment require greater policy attention. Western allies and other countries diverge on several issues—notably fusion, Moore's Law, biotechnology, and trade—but they agree on the bigger picture: namely, strong technological optimism tempered by uncertainty over whether institutions and geopolitical conditions will allow countries to capture the benefits.

The policy rankings reinforce that message. Respondents do not view geopolitical alignment as a substitute for innovation capacity. Nearly two-thirds ranked alignment with either the United States or China as the least important policy approach, while skills development and trade openness emerged as the strongest priorities. That distinction should guide policymakers as technology policy becomes increasingly intertwined with economic security.

Governments should identify strategic dependencies, protect genuinely critical capabilities, and prepare for emerging risks. Yet durable technological leadership still rests on the fundamentals of innovation policy; i.e., talented workers, competitive firms, access to markets and ideas, strong research capacity, and institutions that accelerate technology adoption. The central challenge is to build innovation systems that can benefit from technological change even as the geopolitical landscape grows less predictable.

Acknowledgments

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About the Author

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The Information Technology and Innovation Foundation (ITIF) is an independent 501(c)(3) nonprofit, nonpartisan research and educational institute that has been recognized repeatedly as the world's leading think tank for science and technology policy. Its mission is to formulate, evaluate, and promote policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress. For more information, visit itif.org/about.

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