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NOTES

Global Economic and Financial Implications of Artificial Intelligence

Lessons from a Scenario-Planning Exercise

Karim Barhoumi, Fabia de Carvalho, Michael Gorbanyov, Yosuke Kido, David Koll, Anh Dinh Minh Nguyen, Dragana Ostojic, Baoping Shang, Natalia Tamirisa (lead), Sally Toms, and Yunhui Zhao, under the guidance of Era Dabla-Norris

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**Global Economic and Financial Implications of Artificial Intelligence:
Lessons from a Scenario-Planning Exercise**

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Contents

Executive Summary	2
Introduction	3
State of Artificial Intelligence Technology and Related Economic Policy Issues	4
Overview	4
Frontier Capabilities versus Economic Adoption	4
Economic Growth, Productivity, Bottlenecks, and Debt Dynamics	6
Automation and Labor Markets Outcomes	7
International Inequality, Divergence, and Market Power	9
Society, Governance, and Policy Architecture	11
Main Takeaways	12
Scenario-Based Assessment of Artificial Intelligence’s Macroeconomic and Policy Implications	12
Overview	12
Macroeconomic Impacts under Current Policies	13
Policy Implications	15
Main Takeaways	18
Conclusions and Policy Implications	20
References	22
Appendix 1. Speakers and Presentations on Day 1 of the Workshop	24
Appendix 2. Methodology and Assumptions for the Scenario Planning Exercise	25
Appendix 3. Participants for the Scenario Planning Exercise (Day 2)	27
FIGURES	
1. Forecasts of Artificial General Intelligence’s Timeline	5
2. AI Usage Cost	6
3. AI and Acceleration of Research and Development Benchmarks	7
4. AI Performance versus Human Performance on Select Tasks	9
5. Cross-country Difference of GDP because of AI	10
6. Annualized Revenue of AI Companies	10
7. AI Scenarios and Shared Assumption	13
8. Policy Implications across AI Diffusion Scenarios	16

Executive Summary

This Note synthesizes insights from a high-level workshop and a scenario-planning exercise on the global economic and financial implications of artificial intelligence (AI), hosted by the IMF in collaboration with the Economics of Transformative AI Initiative (EconTAI) at the University of Virginia (December 10–11, 2025). AI is advancing rapidly and has the potential to restructure the global economy through task automation and accelerated research and development. This calls for treating AI as a macro-critical transition rather than a standard technology shock. However, the macroeconomic path will not only be shaped by frontier capability, but it also demands the speed and breadth of diffusion and the readiness of institutions and infrastructure to absorb the technology. Understanding the potential and implications of AI is crucial for the IMF's ability to support its member countries with high-quality policy advice.

Drawing on external and internal expertise, the workshop discussions underscored three constraints on near-term impact. First, physical and organizational bottlenecks—energy and grid capacity, data-center infrastructure, and the persistence of tasks requiring physical presence—can limit economy-wide productivity gains even under rapid improvements at the frontier. Second, the labor market effects of AI depend on how automation changes the task composition and expertise content of work—not only on headline job displacement—implying potentially divergent wage and employment effects across occupations. Third, market structure and rents matter: scale economies in computer and data can amplify the “winner-take-most” dynamics, raising the risk of greater within- and cross-country inequality. Governance and social cohesion emerge as critical constraints as the ability of institutions to acquire and maintain public trust determines the stability of the transition.

The workshop explored two alternative diffusion trajectories over a five-year horizon assuming rapid technological capacity progress, to map out a range of plausible yet challenging economic and financial implications of transformative AI. In the baseline scenario, adoption is uneven and constrained by regulatory, infrastructure, and organizational frictions. In the runaway diffusion scenario, adoption accelerates broadly, with rapid expansion of automation across services and industry, and more front-loaded labor displacement. Across both trajectories, productivity gains could be substantial but unevenly distributed within and across countries, with advanced economies better positioned to capture gains because of their stronger preparedness and higher access. Transition dynamics could strain fiscal frameworks through erosion of labor tax bases and rising social spending needs—particularly if employment-linked social insurance becomes less effective—while raising macrofinancial vulnerabilities as expectations and valuations adjust ahead of realized gains.

Building on these findings, this Note concludes by distilling cross-cutting policy lessons for macroeconomic and institutional preparedness. It focuses on the frameworks necessary to navigate the transition effectively, including (1) strengthening social spending and tax systems; (2) upgrading monetary diagnostics and scenario tools under noisier price signals and uncertainty about the neutral rate; (3) expanding supervisory technology and macroprudential monitoring to new transition risks; and (4) reinforcing competition, diffusion support, and international coordination on standards and taxation to mitigate concentration and cross-border spillovers.

Introduction

Artificial intelligence (AI) is advancing rapidly, with frontier models pushing toward increasingly broad and general capabilities. AI has the potential to reshape economies and finance, thereby affecting not only economic productivity, jobs, and inequality, but also fiscal positions, monetary operations, and financial stability. Uncertainties around the direction, speed, and diffusion of AI—combined with uneven institutional and structural readiness for the new AI realities—create significant challenges for policymakers across the world. The IMF has addressed these trends through a range of products, including the AI Preparedness Index, cross-country exposure measures, analyses of skill gaps and AI usage, and assessments of the role of policy (Brollo and others 2024; Cazzaniga and others 2024; IMF 2024; Lim, Singh, and Stobo 2025; Jaumotte and others 2026). However, a critical gap remains between high-level analysis and actionable, real-time operational guidance because of rapid developments in frontier models. Therefore, understanding AI's macrofinancial and structural implications is essential for the IMF's ability to support its member countries with high-quality policy advice and capacity development.¹

The IMF convened a workshop to analyze the evolving AI landscape through technical presentations and structured scenario-planning exercises. The workshop, “Global Economic and Financial Implications of Artificial Intelligence,” co-organized with Economics of Transformative AI Initiative (EconTAI) and strategic foresight experts, brought together AI technology experts, academics, and economists. Day 1 combined technical presentations and panels on frontier trends, early adoption signals, diffusion frictions, and macrofinancial implications (see Appendix 1 for the workshop agenda, the list of speakers, and the titles of presentations and panel discussions). Day 2 comprised a closed-door scenario-planning exercise that examined two diffusion paths under a shared assumption of rapid frontier capability progress. This Note summarizes key takeaways from the scenario-planning exercise, complementing related work on scenario planning for transformative AI transitions. Moreover, the Note details key lessons and takeaways from the workshop, extending the discussion of Dabla-Norris and Korinek (2026).

Discussions highlighted the profound uncertainty around the direction, speed, and diffusion of AI, thus making the role of scenario planning and institutional preparedness essential for effective policy design. A core workshop message is that AI should be treated as a macro-critical transition rather than a standard technology shock: human decisions—by managers, workers, regulators, and investors—shape adoption sequencing, acceptance, and political sustainability. State capacity was identified as a binding constraint on inclusive outcomes, as governments' ability to adapt tax systems, social protection, financial sector supervision, and data governance will shape both risk mitigation and gain distribution. Therefore, the central policy challenge is not to predict a single AI future, but to ensure that macroeconomic and institutional frameworks remain flexible, forward-looking, and resilient to a wide range of diffusion paths and transition risks.

¹ AI-related work at the IMF, including on real economy, labor market, fiscal policy and financial stability, is available at <https://www.imf.org/en/topics/artificial-intelligence> and summarized in IMF (2026).

The remainder of this Note is structured as follows. The “State of Artificial Intelligence Technology and Related Economic Policy Issues” section summarizes key insights from Day 1 of the workshop, focusing on frontier AI capabilities, diffusion frictions, and their implications for growth, labor markets, equality, financial stability, and governance under existing policy frameworks. The “Scenario-Based Assessment of Artificial Intelligence’s Macroeconomic and Policy Implications” section presents the results of the Day 2 scenario-planning exercise, describing two alternative AI diffusion paths and assessing their macroeconomic and policy implications under current policies and potential policy responses. The “Conclusions and Policy Implications” section distills cross-cutting lessons for macroeconomic surveillance, policy design, and institutional preparedness and discusses implications for the IMF’s analytical, surveillance, and capacity development work. Appendix 2 documents the scenario methodology and assumptions.

State of Artificial Intelligence Technology and Related Economic Policy Issues

Overview

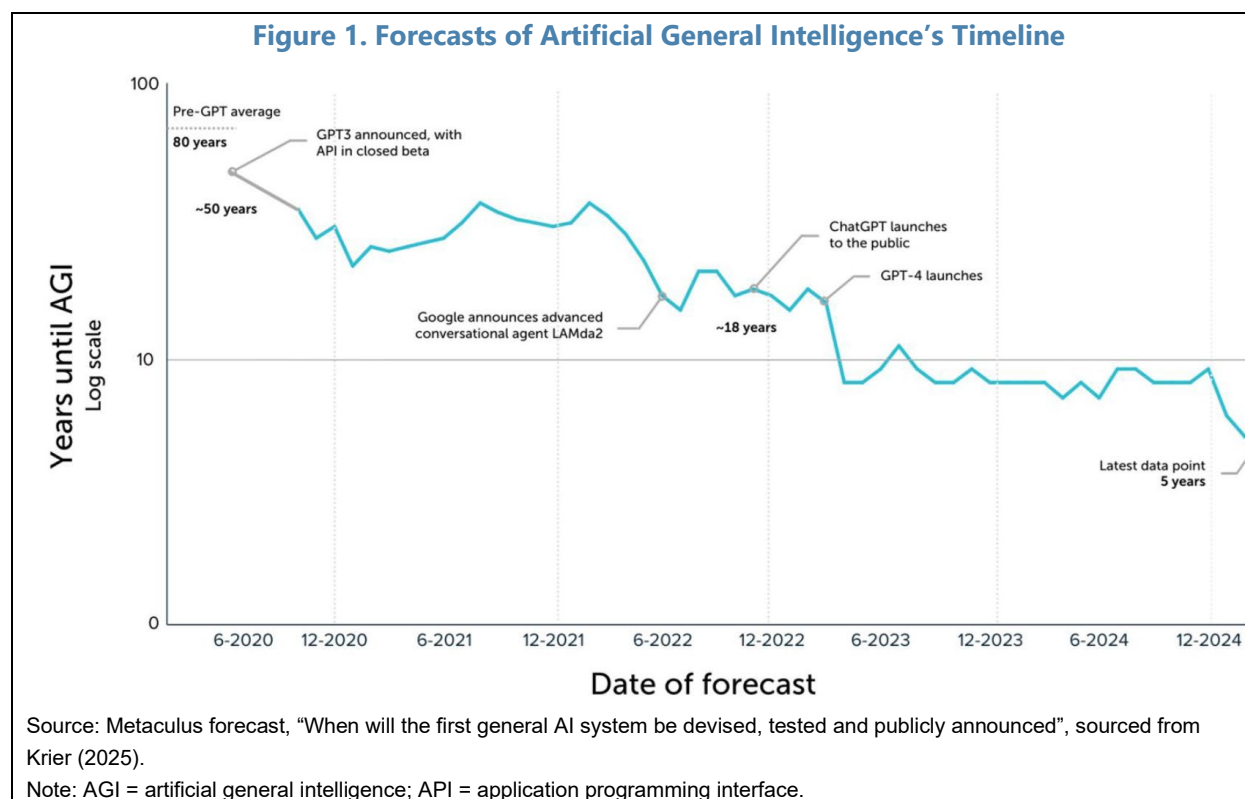
AI has emerged as a macroeconomic force with the potential to fundamentally reshape the global economy. The workshop’s proceedings established that AI is no longer a sectorspecific innovation but a broad macroeconomic transition. This section summarizes key insights from Day 1 of the workshop, synthesizing expert perspectives on frontier technological developments and their near-term economic ramifications. Presentations and panel discussions (Appendix 1) covered frontier technological trends, early adoption signals, and associated macroeconomic implications and policy challenges. Faster-than-expected technological progress positions AI as a major driver of economic change, even as diffusion is expected to remain uneven across sectors and jurisdictions.

Strategic policy responses must reflect AI’s dual role as both a growth engine and a source of macro risk. Although AI has the potential to reshape growth, labor markets, and fiscal dynamics, it also comes with challenges of maintaining financial and fiscal stability. Participants emphasized that uncertainty remains pervasive: capability growth is rapid but uneven, diffusion varies widely, and institutional and policy frameworks are still evolving. This uncertainty underscores the need for robust scenario planning. Because adoption is a sequence of human decisions—mediated by managerial judgment, worker expectations, and public narratives—there is no single “baseline” AI future that policymakers can assume. Therefore, policy advice must perform well across a wide range of scenarios, with emphasis on measurement, flexibility, and institutional preparedness to manage volatility.

Frontier Capabilities versus Economic Adoption

Frontier AI capabilities are advancing rapidly, compressing expected timelines for transformative outcomes. Workshop discussions highlighted that timelines for reaching artificial general intelligence have shortened considerably, with estimates of 8–10 years now viewed as conservative by segments of the tech community—the so-called “San Francisco Consensus.” This accelerating trend reflects falling computing costs, large-scale data-center investments, and hardware–software feedback loops, despite

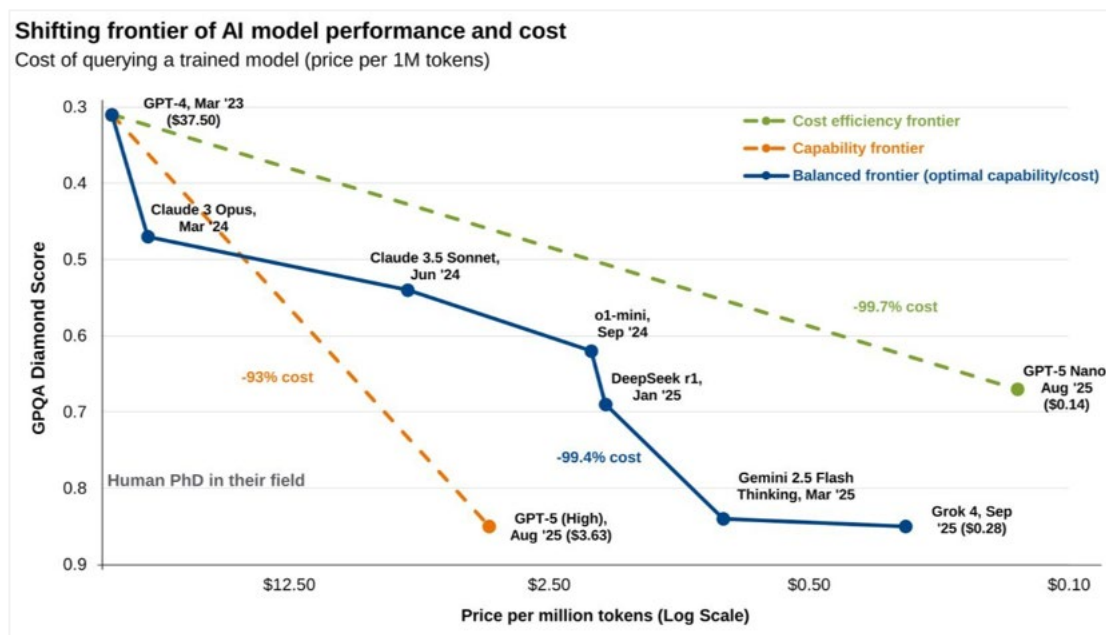
current “jagged” capabilities.² Forecasts increasingly point to the earlier arrival of artificial general intelligence (Krier 2025; Figure 1), a threshold at which AI shifts from a specialized tool to a broadly deployable, autonomous “dropin- worker.” Early firm-level evidence points to emerging gains as experimentation gives way to integration (Brynjolfsson, Li, and Raymond 2025; Aldasoro and others 2026), although adoption remains uneven across firms, sectors, and countries.



The transition from a technological capability to an economic impact is constrained primarily by institutional and organizational frictions. Although access costs continue to decline, with inference prices for certain frontier models dropping by over 99 percent (Figure 2), participants emphasized that adoption is limited not just by infrastructure but largely by regulatory uncertainty, compliance burdens, organizational inertia, and trust issues. Behavioral barriers, such as concerns over model reliability and managerial risk aversion, can further delay uptake. Inadequate or excessively complex regulation may unintentionally reinforce market concentration by favoring dominant firms able to absorb compliance costs. As AI ecosystems evolve toward multi-agent systems, the “rules of the game”—including institutional norms, conflict resolution, and trust—gain more significance than marginal improvements in model intelligence. As a result, although the “frontier” advances, economic gains will be delayed or concentrated among organizations with higher readiness.

² Specifically, some tasks are easily done by AI, while other tasks, which have a seemingly similar difficulty level, are outside the current capability of AI.

Figure 2. AI Usage Cost



Source: Ethan Mollick, "One Useful Thing", sourced from Krier (2025).

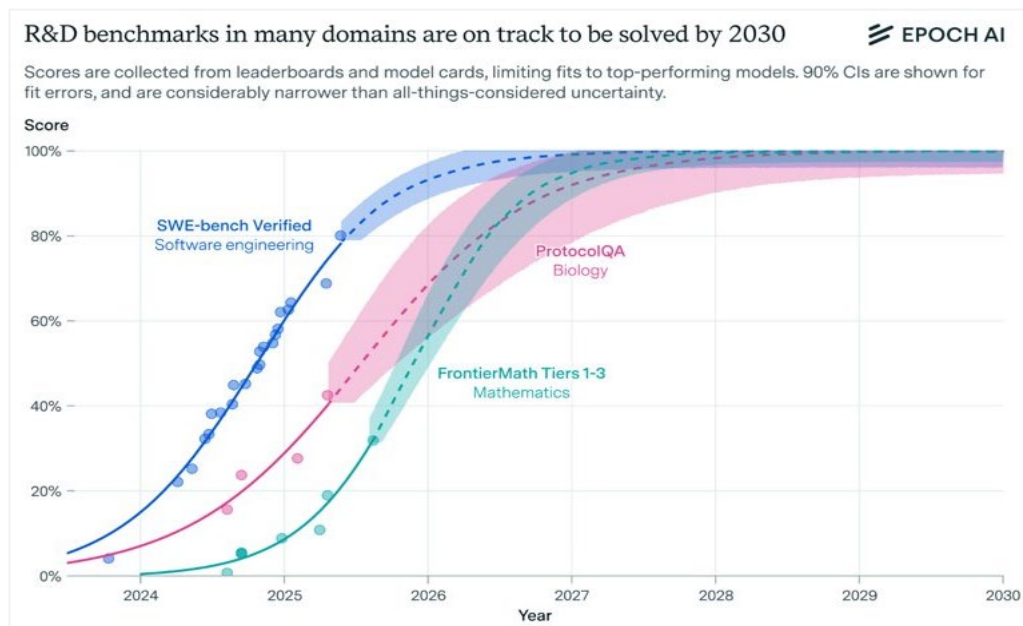
Economic Growth, Productivity, Bottlenecks, and Debt Dynamics

AI influences growth through task automation, within-task productivity gains, and accelerated research and development (R&D). In task-based, growth-theoretic frameworks, AI raises output by expanding the set of automated tasks and accelerating idea creation through AI-assisted R&D (Figure 3). Aggregate effects depend on the interaction of these channels rather than frontier AI capability alone (Jones 2025). Low elasticities of substitution, together with bottlenecks and diminishing returns, limit economy-wide gains, implying that even very high productivity achieved through automated tasks may translate into modest aggregate growth.

Physical, organizational, and institutional bottlenecks limit the scale of aggregate productivity gains. Participants highlighted constraints including energy demand, non-automatable complementary tasks, requirements for physical human presence, institutional and organizational coordination, challenges, and capital accumulation limits. Historical experience suggests that major technological advances do not automatically generate proportional productivity growth when such constraints bind. Growth outcomes also depend on feedback loops through capital accumulation, which automation may partially offset by relaxing diminishing returns. Overall, the share of tasks automated is likely to be more important for growth than productivity gains within individual tasks.

Automation of AI research itself may generate powerful feedback mechanisms with implications for long-term growth dynamics. A complimentary perspective focuses on recursive self-improvement in AI research (Davidson and others 2026). Although automating research can create strong feedback effects, intelligence explosions are not inevitable once diminishing returns and validation constraints to research are considered. Within semi endogenous growth frameworks (Jones 1995), AI-driven research may yield bounded or explosive outcomes depending on the strength of feedback and returns to scale.

Figure 3. AI and Acceleration of R&D Benchmarks



Source: Epoch.ai, sourced from Krier (2025).

Note: R&D = research and development.

Expectations about AI-driven growth can affect real interest rate and debt dynamics ahead of realized gains. If markets anticipate transformative AI scenarios—reflecting either rapid AI-driven growth or heightened existential risk—asset prices may adjust through higher real interest rates even before productivity materializes (Chow, Halperin, and Mazlish 2025). This interest rate channel is particularly relevant for highly indebted sovereign states, as higher real rates worsen debt dynamics during the transitional period (that is, raising interest-growth differential), even if growth prospects improve over the long term. However, current real interest rates provide limited evidence that markets are pricing in nearterm, extremely rapid AI-driven growth.

Automation and Labor Market Outcomes

Labor market effects depend on how AI alters task composition and expertise requirements, not only on job displacement. Automation can target either high-expertise or low-expertise tasks, producing distinct

labor market effects (Autor and Thompson 2025). Automation of high-expertise tasks (for example, driving taxis using GPS) reduces barriers to entry, which raises employment as more workers can perform the job but stagnate or reduces wages. By contrast, automation of low-expertise tasks (for example, proofreading tools) makes the remaining tasks more expert intensive. This raises average expertise, which leads to higher wages for the remaining workers but reduces the total employment in that occupation. These cases illustrate that automation often induces supply responses, rather than simply reducing labor demand.

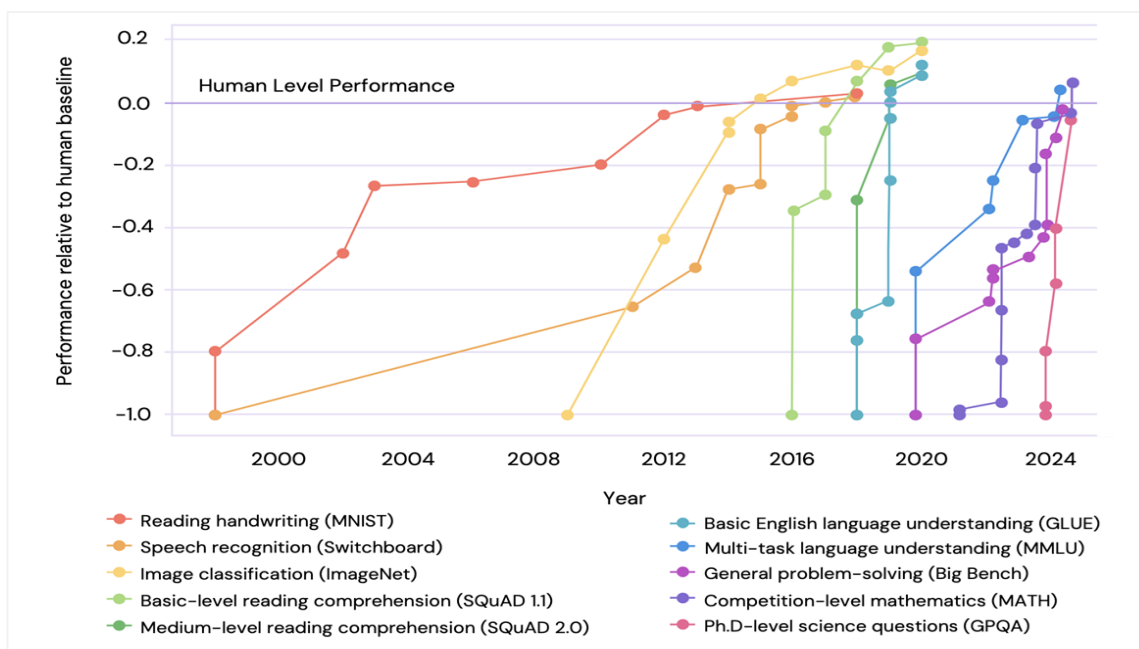
Expertise is a central determinant of wages, distinct from formal education. Task-based measures of expertise show a strong positive association with hourly earnings across occupations, even after controlling education. Expertise alone accounts for roughly one-third of observed wage variation, underscoring its central role in labor market outcomes (Autor and Thompson 2025). Changes in expertise over time—arising from both task addition and task displacement—are closely linked to shifts in wages and employment, reinforcing that the structure of work is more crucial than the volume of automation.

Economywide effects depend on substitution between intelligence-intensive and physical sectors. To assess economy-wide effects, one approach is to distinguish between an “intelligence” sector, encompassing tasks that can be performed virtually, and a “physical” sector, which requires human presence (Kording and Marinescu 2025). AI primarily substitutes for labor in intelligence-intensive tasks, reallocating workers toward physical activities. Wages may initially rise with productivity gains but decline at higher adoption levels if displaced labor concentrates in sectors with fixed capital. Outcomes depend critically on the degree of substitutability between intelligence and physical inputs. Even under rapid AI scaling, wage and output growth may eventually plateau if physical constraints become binding, implying that neither sharp wage collapses nor explosive growth is likely without a major structural change.

Targeted labormarket- adjustment is essential to manage displacement and social cohesion. First, aggregate measures of “AI exposure” provide an incomplete picture; effective monitoring should focus on how automation reshapes task composition, expertise intensity, and sectoral employment patterns (Heim 2025; Figure 4). Second, policy efforts are best directed toward facilitating labor reallocation—through retraining, improved job matching, and wage insurance—rather than attempting to impede technological adoption (Dabla-Norris, Garcia-Macia, and Nguyen forthcoming). Policymakers must acknowledge common implementation challenges—including low take-up, administrative complexity, and social stigma—that can undermine support even when formal assistance is available. Third, public investment in complementary sectors, including physical capital and activities that are less amenable to automation, can help sustain productivity growth while absorbing displaced workers. Fourth, strengthened social protection frameworks, such as transitional adjustment assistance and expanded wage insurance, can mitigate short-term income losses without undermining incentives to reallocate.³ Finally, if automation accelerates or diffuses across multiple sectors simultaneously, broader income support mechanisms may be required to preserve aggregate demand and social cohesion.

³ Participants argued that adjustment mechanisms and reskilling may only partially offset rising inequality risks. Reskilling, in particular, may be a less reliable solution when the target occupations themselves are on a shrinking horizon, reflecting the accelerating depreciation of human capital.

Figure 4. AI Performance versus Human Performance on Select Tasks



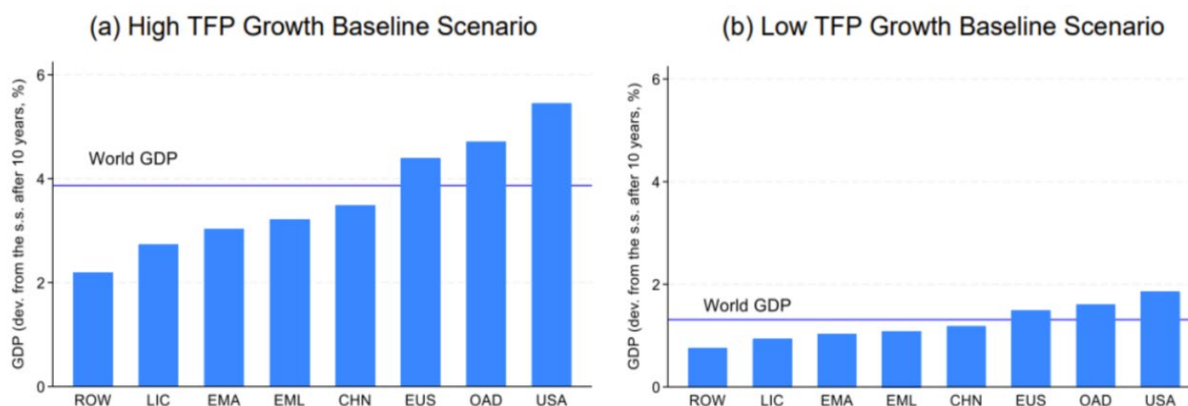
Source: Kiela and others (2023), sourced from Heim (2025).

International Inequality, Divergence, and Market Power

AI adoption risks widening cross-country inequality and reinforcing market concentration. Advanced economies are better positioned to benefit from AI because of higher exposure, advanced digital infrastructure, AI-ready labor pools, and stronger institutions, raising the risk of widening of cross-country inequalities (Cerutti and others 2025; Figure 5).⁴ Many emerging and developing countries have lower exposure to AI, and their readiness to adopt AI technologies is typically weaker. What matters is not frontier capability alone but also how AI is adopted and integrated into production, with resulting economic rents likely accruing disproportionately to AI-intensive firms and countries, generating the “winner-take-most” global dynamics.

⁴ Although Cerutti and others (2025) take into account countries' macro-structural information reflected in AI preparedness, which is associated with smooth AI adoption, the paper does not explicitly take into account institutional and organizational frictions discussed in Section “Frontier Capabilities versus Economic Adoption”.

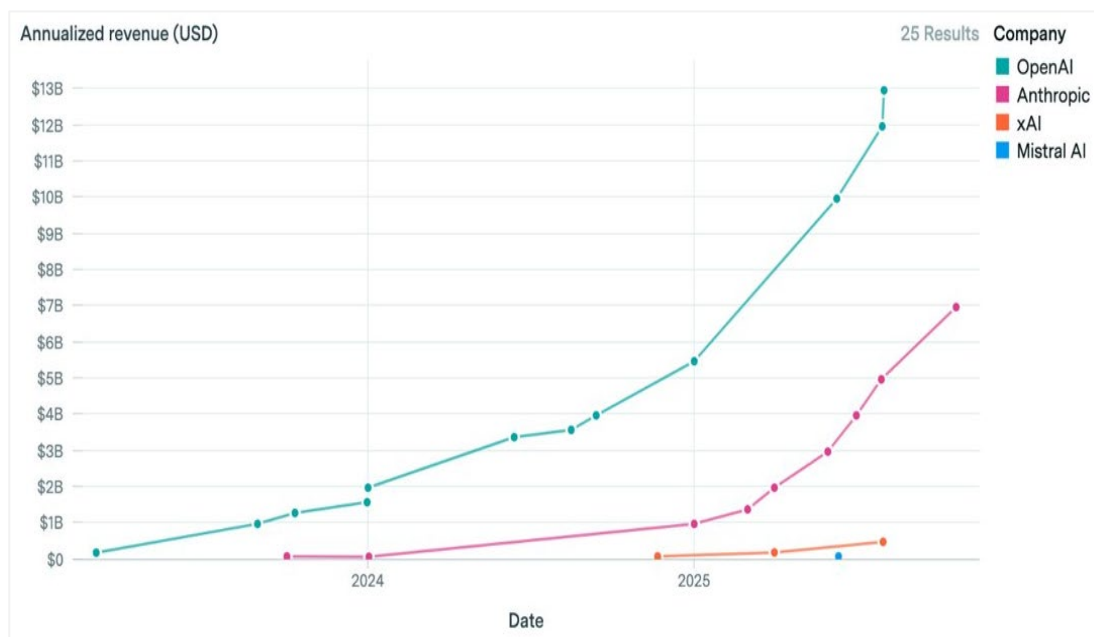
Figure 5. Cross-Country Difference of GDP Caused by AI



Source: Cerutti and others (2025).

Note: The left panel shows the deviations of real GDP from the steady state for the high TFP growth baseline scenario after 10 years. The right panel shows the deviations of real GDP from the steady state for the low TFP growth baseline scenario after 10 years. The global averages are shown as horizontal lines. EMA = Emerging Market Economies Asia, Central, Asia, Russia, etc.; EML = Emerging Market Economies Latin America, Middle East, Africa, etc.; EUS = EU and Switzerland, LICs = low-income countries; OAD = other advanced economies; ROW = rest of the World; TFP = total factor productivity.

Figure 6. Annualized Revenue of AI Companies



Source: Epoch.ai, sourced from Heim (2025).

Economies of scale in frontier AI models increase barriers to entry and market power (Figure 6). Generative AI requires large investments in compute (for example, specialized hardware and proprietary datasets), concentrating market power among a small number of dominant firms and “hyper-scalers” (Athey and Scott Morton 2025). Participants noted that market concentration, combined with escalating

geopolitical competition for technological supremacy, could permanently widen global inequality absent adaptive competition and governance frameworks. Without coordinated international intervention, the digital frontier may serve as a new barrier to global convergence rather than a bridge.

AI-driven automation may erode the traditional development pathways. As robotics compress labor costs, manufacturing and service activities may reshore to advanced economies, undermining export-led growth models in emerging markets and developing countries. Capital could reallocate toward jurisdictions with stronger AI readiness, regulatory clarity, institutional capacity, and reliable energy access, potentially increasing outflows from less-prepared economies. Participants emphasized that these cross-border risks—from financial instability to mobile rents and fragmented standards—necessitate urgent international coordination and clear policy sequencing to prevent global bifurcation. For many developing countries, the inability to provide these enabling conditions could lead to slower technological diffusion and a persistent cycle of industrial decline. Therefore, investing in AI preparedness—skills, institutions, and infrastructure—is critical to mitigating divergence.

Society, Governance, and Policy Architecture

AI governance frameworks are currently struggling to keep pace with rapid AI development. Limited standards, reporting, and enforcement mechanisms for frontier AI models challenge the balance between innovation, safety, and democratic accountability. The lack of harmonized international standards on AI safety and transparency risks could undermine public trust and global economic stability. AI governance gaps matter even before economywide diffusion, given the speed of progress and concentration of actors. Participants discussed a range of regulatory approaches—such as third-party audits, transparency and disclosure requirements, and licensing or liability regimes for frontier models—that could shape incentives and diffusion at the frontier, including by shifting oversight toward pre-deployment rather than ex-post correction. However, participants also stressed that poorly calibrated frameworks risk slowing diffusion and reinforcing concentration.

Existing labor market and social protection tools are likely to be insufficient under rapid AI diffusion. Participants emphasized the need for “humancentric” upgrades to unemployment insurance and transition support, focused on usability, trust, and delivery. Even in a scenario with slower AI capability growth, progress remains highly disruptive, emphasizing the need for temporary and targeted support that facilitates reskilling and job-to-job transitions. Under more extreme scenarios, the traditional link between employment and income may weaken, prompting consideration of nonstandard policies such as universal basic income. Unions and sectoral bargaining can also act as a vital instrument for participatory governance. Data gaps on AI deployment and labor impacts remain a major constraint on realtime policy calibration.

Cross-border risks require coordinated international policy responses. Financial instability, misuse, and geopolitical competition underscore the need for multilateral approaches to standards, surveillance, and policy sequencing. Effective international coordination and clear policy sequencing are essential to

managing deployment, transition, and more extreme scenarios. Coordination is critical to preventing global bifurcation and managing power asymmetries while ensuring broadly shared benefits.

Governance frameworks must remain robust across a wide range of AI capability trajectories. Across scenarios ranging from stalled progress to rapid acceleration, uncertainty regarding the pace, controllability, and concentration of AI development remains high. Workshop discussions emphasized governance approaches that explicitly account for how AI affects people and institutions in practice—by incorporating the perspectives of workers, firms, civil society, and affected communities into decisions on AI design, deployment, and regulation. Such approaches help maintain legitimacy, ensure participation, and address implementation challenges by aligning technological deployment with labor market adjustment, social protection capacity, and institutional trust.

Main Takeaways

There is no single “baseline” AI future that policymakers can assume with confidence. Discussions on Day 1 of the Workshop underscored the pervasive uncertainty surrounding the direction, speed, and diffusion of AI, reflecting the rapid, potentially nonlinear capability advances and highly uneven adoption across various sectors. This uncertainty strengthens the case for scenario planning as a core policy tool. Therefore, robust policy advice must be designed to perform well across a wide range of plausible futures, with emphasis on improved measurement, flexibility, and institutional preparedness to manage volatility associated with technological transitions.

AI policy outcomes depend as much on institutions and timing as on technological progress itself. Although advances at the technological frontier create the potential for economic transformation, actual outcomes are shaped by how AI interacts with existing governance frameworks and policy sequencing. Workshop discussions emphasized that without proactive and well-timed institutional responses, the gains from AI are likely to remain concentrated, exacerbating inequalities both within and across countries. Therefore, institutional readiness and calibration and timing of policy interventions are critical variables to ensure that the transition remains stable, inclusive, and socially sustainable. Managing this transition also requires effective international coordination to mitigate cross-border risks—ranging from financial instability to geopolitical competition—ensuring that safety and reporting standards remain interoperable across jurisdictions.

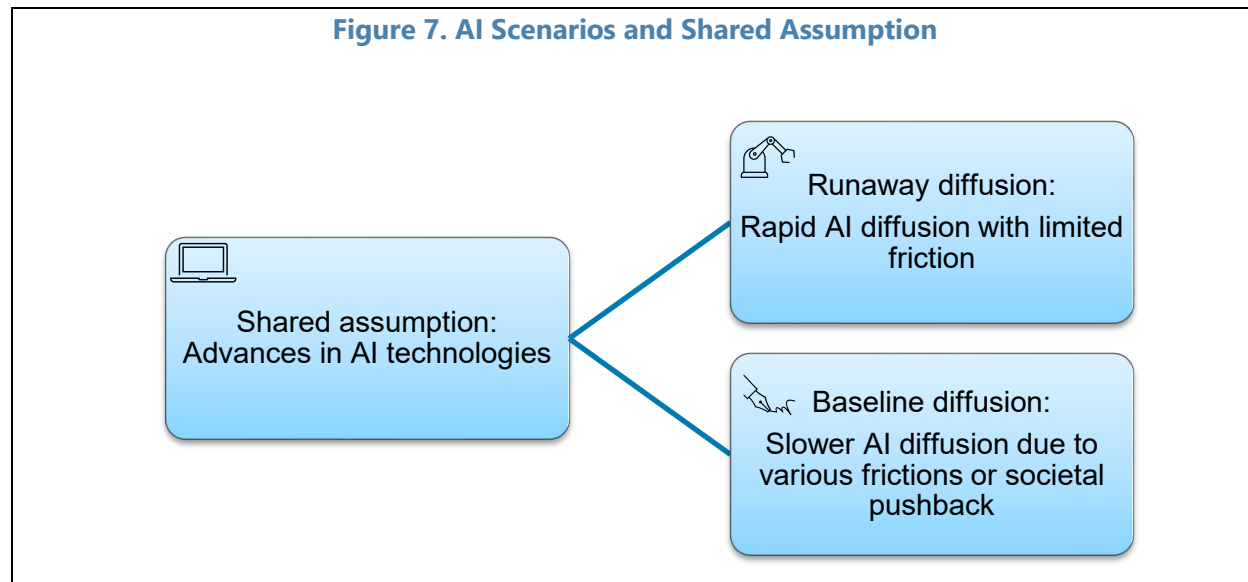
Scenario-Based Assessment of Artificial Intelligence’s Macroeconomic and Policy Implications

Overview

A structured scenario-planning exercise conducted on Day 2 explored the macrofinancial implications of alternative AI adoption paths. The exercise involved around 50 participants, including IMF staff from

various departments and invited external AI experts and economists, who engaged in closed-door group discussions organized around two contrasting AI diffusion scenarios. Discussions examined implications for economic growth and productivity, employment and income distribution, international trade and capital flows, financial stability, migration, and economic forecasting and policymaking (Appendix 2).

The scenarios shared a common assumption on frontier AI capability, differing only in diffusion speed and institutional absorption. In both scenarios, transformative AI technologies were assumed to attain the capacity to perform a wide range of cognitive and manual tasks by the early 2030s, allowing the discussion to abstract from uncertainty about technical feasibility and focus instead on adoption and diffusion dynamics (Figure 7). In the *baseline diffusion* scenario, adoption is gradual and uneven, constrained by regulation, societal resistance, infrastructure bottlenecks, and skills gaps. In the *runaway diffusion* scenario, adoption is rapid and widespread, leading to economy-wide automation, significant labor displacement, and a high concentration of economic power among a small number of large AI firms.



Group discussions were organized into two brainstorming sessions. In the first session, participants examined the implications of each scenario for their assigned focus areas under the assumption of no policy changes. In the second session, participants discussed potential government interventions and policy responses. Key takeaways from the group discussions were subsequently presented in two plenary sessions.

Macroeconomic Impacts under Current Policies

This subsection summarizes participants' views on the macroeconomic implications of AI adoption under current policy frameworks. It assumes that the existing policy framework persists and there is no

discretionary government intervention. Under both the baseline and runaway diffusion scenarios, AI is expected to have far-reaching effects on the real economy, cross-border flows, and financial stability.

AI is expected to boost productivity and output over the next five years, with stronger effects under runaway diffusion. Global growth rises through higher productivity and associated capital accumulation, particularly in the runaway diffusion scenario, supported by greater confidence in and social acceptance of AI technologies. In the baseline scenario, growth outcomes diverge sharply across industries. Sectors facing tighter regulations and stronger societal resistance experience slower productivity gains, whereas less-regulated sectors see faster AI uptake. As a result, overall, growth effects are weaker in the baseline scenario, reflecting stronger institutional frictions and social pushbacks.

Labor markets face widespread job displacement pressures, with outcomes shaped by institutional frictions. Rapid AI diffusion leads to broad job displacement. Task automation and AI-powered robots displace routine cognitive and physical jobs in both manufacturing and service sectors. Some high-skilled workers in occupations that complement AI technologies benefit disproportionately from new AI capabilities. AI also has significant impact on wealth inequality, as capital owners capture a large share of the gains. In the baseline scenario, country-specific labor market institutions and social acceptance slow adjustment. Older workers tend to retain greater job security because of licensing requirements, labor unions, and political protection, whereas younger, less-experienced workers face higher displacement risk. Although younger workers may adapt more easily to AI-enabled roles, labor force participation declines as discouraged workers exit the labor market.

AI adoption reshapes market structure and the spatial distribution of economic activity. High data and computational requirements create barriers to entry, contributing to concentration among core AI service providers. Excessive concentration could dampen innovation and reduce positive spillovers to other sectors. At the same time, AI reinforces spatial disparities: metropolitan areas with innovation hubs and advanced AI infrastructure attract capital and talent, whereas regions with weaker digital and energy infrastructure fall further behind.

Supply-side expansion from automation interacts with weaker demand, generating ambiguous price pressures. Significant advances in AI technologies expand productive capacity through automation, but investment demand rises with higher returns to capital. At the same time, household consumption weakens as job displacement increases. Therefore, the net effect on prices is uncertain and depends on the balance between expanded supply and subdued demand.

Cross-country inequalities widen as advanced economies capture a disproportionate share of AI-related gains. Stronger infrastructure, human capital, and access to finance allow advanced economies—particularly the United States, which is home to major AI service providers—to benefit more from rapid diffusion. Emerging markets and low-income countries also experience growth gains, but to a lesser extent, reflecting weaker infrastructure and limited capacity to deploy AI technologies. At the same time, even if advanced economies are better positioned to reap the benefits of AI, they could face greater political resistance because of a higher share of workers exposed to AI. Rising demand for energy and critical raw materials required for AI infrastructure could further heighten geopolitical tensions.

Rapid AI diffusion accelerates cross-border reallocation of resources. In the runaway scenario, reduced frictions increase firm mobility, directing capital to countries with favorable tax regimes, regulatory clarity, reliable energy supply, and data access. Reshoring of manufacturing to advanced economies accelerates as robotics compress labor costs, while services concentrate in digital hubs. The timing and scale of this substitution depend on technology prices and cost efficiency. Countries lacking these enabling conditions face capital outflows and slower AI diffusion. In the baseline scenario, country-specific labor market structures, energy regulations, and cultural attitudes toward AI play a major role in shaping cross-border allocation of resources.

Migration patterns adjust in response to AI-driven changes in labor demand. Although uncertainty remains high, traditional migration flows from lower- to higher-income countries are likely to decline as labor demand in advanced economies falls. In the runaway scenario, extensive automation reduces the economic role of migrants and strengthens political incentives to restrict immigration. In the baseline scenario, persistent frictions may encourage workers displaced by automation to seek opportunities in countries where similar tasks have not yet been automated.

AI adoption introduces new and potentially significant financial stability risks. In the runaway scenario, large-scale job losses weaken household balance sheets and raise default risks, putting pressure on banking systems with high exposure to consumer credit. AI also has important capital market implications. AI-driven trading strategies could heighten herding risks, decouple market movements from fundamentals, amplify bubbles, and elevate volatility and uncertainty. During the transition, elevated leverage to finance AI-related investment, coupled with rapid capital obsolescence risks, increases uncertainty around future earnings and asset valuations, complicating credit risk assessments by banks. In addition, greater concentration in the technology sector elevates single-source exposures, undermining risk diversification and amplifying macrofinancial feedback loops.

Real economy disruptions from AI adoption can spill over into the financial system. Sharp declines in household and firm income during periods of rapid adoption weaken debt servicing capacity, transmitting adjustment pressures into banking losses and tighter credit conditions. These risks are especially acute during the transition, when displacement costs are concentrated among incumbent workers and borrowers, whereas productivity gains accrue primarily to new entrants and AI-intensive firms.

Policy Implications

Workshop participants assessed that AI development and adoption will materially alter the effectiveness of existing macroeconomic policy frameworks (Figure 8). Across the workshop scenarios, the primary source of uncertainty relates to the speed and breadth of adoption and the resulting strain on institutions that mediate production, income generation, and risk sharing. In the baseline diffusion scenario, uneven uptake—shaped by regulatory frictions, skill gaps, and infrastructure constraints—produces gradual but persistent pressures on fiscal space and policy transmission. In the runaway diffusion scenario, rapid and widespread automation intensifies these pressures, potentially outpacing the adaptive capacity of labor markets, fiscal systems, and financial oversight.

Policy responses must aim to capture AI's productivity gains while managing transition risks. This section summarizes policy implications discussed during the workshop, focusing on (1) protecting fiscal capacity and redesigning social protection as labor income becomes less central; (2) upgrading monetary policy diagnostics and toolkits under noisier signals and potential shifts in neutral interest rates; (3) extending macrofinancial oversight to new transition risks and dependencies; and (4) strengthening structural policies and international cooperation, particularly on competition, diffusion support, and standards and taxation.

Figure 8. Policy Implications across AI Diffusion Scenarios

<p>Fiscal policy</p> <ul style="list-style-type: none"> • Erosion of labor tax bases • Rising spending pressures in social welfare and cyber security • De-linking safety nets from employment • Shift toward capital and rent taxation • Targeted public investment in AI infrastructure 	<p>Monetary policy</p> <ul style="list-style-type: none"> • Noisier inflation signals • Uncertainty about monetary policy stance and transmission • Greater reliance on scenario analysis • New tools under digitalized economy and finance
<p>Financial stability</p> <ul style="list-style-type: none"> • AI-linked investment booms and leverage cycles • Concentration, interconnected, and solvency risks • Expanded regulatory and supervisory perimeter • Forward-looking, scenario-based approach to risk management • Enhanced monitoring of AI exposures and linkages to the financial sector • Expanded scope for LoLR 	<p>Structural and international policies</p> <ul style="list-style-type: none"> • Competition and governance of AI services • Skills upgrading and labor reallocation • Develop public-good AI capabilities • International cooperation on standards and taxation

Note: LoLR = lender of last resort.

Fiscal Policy: Pressures on Revenue and Expenditure

Erosion of the labor tax base will necessitate adaptation of tax systems. Declines in employment and wage income weaken personal income tax bases, particularly under rapid diffusion, even after accounting for potentially higher wages for remaining workers. Shifting taxation from labor to capital through higher corporate income taxes may only partially offset these losses given capital mobility, market concentration, and international tax competition. These issues are more pronounced in the runaway scenario and most acute for countries that primarily consume AI services, rather than produce them. Therefore, tax systems should rebalance toward better capturing economic rents while minimizing distortions on investment decisions, supported by a stronger AI-enabled tax administration. Avoiding blunt “robot taxes,” strengthening capital income taxation at the individual level with safeguards against base erosion, and leveraging AI to improve compliance and enforcement are important across scenarios.

Social spending pressures rise as displacement increases and employment links weaken. Employment-linked social insurance systems become less effective under rapid AI diffusion as job opportunities decline. This points to the need for transfer systems that can scale quickly, target vulnerable groups, and operate with weaker ties to formal employment. De-linking social protection and safety nets from employment status, facilitating labor market adjustment, and supporting skill adaptation are central to building public support for AI adoption. In more extreme cases, social spending needs could rise sharply, increasing pressure to consider broadbased income support mechanisms, including universal basic income (UBI)-type programs.

Public investment can ease diffusion frictions and support broader adoption. Infrastructure bottlenecks—particularly energy, data centers, and connectivity—underscore a role for targeted public investment and coordinated diffusion support. In both scenarios, governments might need to facilitate AI adoption by financially constrained small and medium enterprises and state-owned enterprises through access to shared infrastructure or public good AI models. However, limited fiscal space may restrict government policy options, particularly under the runaway diffusion scenario.

Monetary Policy: Ambiguous Signals and Rethinking the Policy Toolkit

Monetary policy faces greater uncertainty in signal extraction and transmission. AI-driven productivity gains can generate both upward and downward price pressures, especially under runaway diffusion where supply capacities expand quickly. Large relative price changes complicate inflation diagnostics, and traditional indicators of slack become less informative as human employment plays a minor role in defining capacity constraints. Increased uncertainty regarding the level and volatility of the neutral interest rate, combined with potentially weaker transmission mechanisms, such as AI adoption reducing labor's bargaining power, reduces the effectiveness of conventional monetary policy tools. This raises the value of scenario-based analysis and more explicit consideration of alternative policy options, particularly in the runaway scenario.

Greater digitalization can reshape central bank operations but poses new tradeoffs. Expanded use of digital money, including central bank digital currency-type instruments, could facilitate operational adaptation of central banks to a more digital economy. However, such shifts require rethinking of central bank mandates and governance arrangements. The prevalence of digital currencies, such as the ones pegged to major currencies, could weaken the transmission of monetary policy, especially in smaller and more open economies, and affect central bank independence and monetary policy autonomy.

Preserving Financial Stability: Transition Risks amid Leverage Cycles

Financial sector policy must adapt to the transition risks that accompany AI-linked investment cycles. AI adoption can amplify investment booms and market concentration, creating new transition risks even when long-term productivity prospects improve. Although vulnerabilities may differ across scenarios, key policy priorities include enhancing visibility into the accumulation of AI-related systemic risks across the financial system—particularly where exposures are concentrated or highly correlated—strengthening the design and deployment of efficient macroprudential buffers, and containing leverage and excessive risk-taking among banks and systemically important nonbank financial institutions. A precondition is improved

data collection on financial institutions' exposures to AI-sensitive sectors and their adoption of AI technologies, to support effective risk monitoring.

Supervisory perimeters and crisis management tools may need to adapt to evolving AI-related macrofinancial risks. Given their growing systemic importance, central banks' lender-of-last-resort frameworks may need to consider systemically important nonbank financial institutions, as AI-linked macrofinancial risks, as well as behavioral impacts from their technological adoption, could introduce new vulnerabilities across the broader financial sector. At the same time, extension of liquidity support or supervisory reach would need to be carefully designed to mitigate moral hazard risks, including by ensuring appropriate ex-ante oversight, conditionality, and loss-absorbing capacity. Reduced scope for risk diversification, combined with lower return predictability and heightened uncertainty about collateral values, complicates risk management and makes the calibration of optimal buffers more challenging. In this environment, supervisory and macroprudential authorities should adopt forward-looking (including scenario-based) approaches to risk assessment, including enhanced monitoring of leverage, valuation practices, and collateral quality in AI-intensive sectors. Greater uncertainty surrounding returns and collateral values strengthens the case for robust capital and liquidity buffers, as well as for stress testing against adverse valuation and concentration shocks. More broadly, supervision should comprehensively capture AI-related dependencies across sectors, supported by enhanced data on AI deployment, financing structures, and interconnected risks.

Structural Policies and International Cooperation: Competition and Governance

Structural policies must address concentration of AI service providers, while supporting skill adaptation. High concentration among AI service providers creates vulnerabilities that warrant government intervention and supervision to preserve contestability in models, data, and compute. In both scenarios, governments will need to balance between public interest and private power by developing "public-good" capabilities and regulatory bodies to oversee AI deployment. At the same time, education and training systems must be upgraded to prepare workers to complement AI technologies and facilitate labor reallocation. Reforms to labor contracts, including mechanisms for broader sharing of gains, can reduce resistance to AI diffusion.

International cooperation on AI standards and taxation is pivotal to avoid bifurcation. Rapid AI diffusion risks concentrating production, capital, and rents in a subset of economies with strong infrastructure and AI capabilities. Cross-border spillovers—through capital flows, mobile rents, and fragmented standards—make cooperation on taxation principles and interoperable assurance frameworks particularly important, especially for emerging and developing economies seeking to avoid being locked into low diffusion equilibria.

Main Takeaways

The scenario-planning exercise highlights that AI should be understood as an unprecedented, macroeconomic transition rather than a conventional technology shock. Outcomes depend not only on advances at the frontier—which were assumed to be rapid in all scenarios—but critically on the speed,

breadth, and sequencing of diffusion, as well as on how institutions adapt during the transition. Across scenarios, productivity gains are substantial but structurally uneven. Strong complementarities with skills, data access, energy, and compute imply that early movers and digitally mature firms and countries consolidate advantages, whereas later adopters experience slower absorption and weaker spillovers. As a result, dispersion within and across countries emerges as a defining characteristic of the AI transition.

Transition dynamics can generate significant macrofinancial risks well before gains are fully realized. Valuation cycles around AI-intensive firms, financing structures tied to data centers and energy infrastructure, and the increasing concentration of economic activity in a narrow set of firms and hubs can propagate shocks across balance sheets and borders. These risks are amplified when expectations of AI-driven growth adjust faster than realized productivity gains, leading to asset repricing, leverage stress, and feedback loops between the real economy and financial markets. Importantly, many of these vulnerabilities may arise during the transition phase, well before any new steady state is reached.

State capacity emerges as a binding constraint on inclusive and stable outcomes. Effective mitigation of distributional, fiscal, and financial risks depends on governments' ability to adapt their core functions—particularly tax administration, delivery and scope of social protection, supervisory technology, and data governance. Countries with stronger administrative and digital public infrastructures are better positioned to capture rents, cushion labor market adjustment, and monitor emerging financial risks in real time. By contrast, limited capacity can lock countries into slow diffusion equilibria characterized by weaker growth, eroded tax bases, and heightened exposure to volatility. Preexisting fiscal constraints are also likely to limit policy options, particularly for low-income countries and fragile states. Countries should carefully consider sequencing and prioritization considering their capacity and policy space.

Rapid AI diffusion places increasing strain on existing policy frameworks. When adoption is slow and uneven, AI gradually raises productivity while remaining broadly compatible with current fiscal, monetary, and financial frameworks. When diffusion is rapid and economy-wide, pressures intensify across labor markets, fiscal systems, monetary frameworks, and international adjustment mechanisms, challenging standard diagnostics and policy tools. In such environments, aggregate productivity growth alone becomes an insufficient guide for policy, as it can mask growing distributional pressures, concentrated pricing power, and balance sheet vulnerabilities.

The central policy challenge is to manage transition risks, rather than predict a single AI future. Even when AI raises aggregate income and productivity, the transition may involve prolonged periods of labor displacement, income concentration, and financial stress. These dynamics are central to surveillance and policy design, as they determine whether productivity gains translate into durable and broadly shared improvements in welfare. Therefore, macroeconomic and institutional frameworks must be sufficiently flexible, forwardlooking, and resilient to perform effectively across a wide range of diffusion paths.

Conclusions and Policy Implications

AI offers large potential gains, but the transition will test fiscal and monetary frameworks, financial stability, and social cohesion. The workshop's core message is that diffusion speed and complementarities—not frontier capability alone—will shape macrofinancial outcomes. Therefore, the immediate policy challenge is not forecasting a single endpoint but managing adjustment dynamics under deep uncertainty. These dynamics are fundamentally shaped by a sequence of human decisions whose expectations, incentives, and perceptions of legitimacy dictate the adoption sequence.

Policy frameworks must pair inclusive diffusion with effective cushioning for dislocation. Fiscal policy should protect tax capacity and fairness if labor income becomes less central while also managing pressures on public debt dynamics during the transition. Monetary policy frameworks need to adapt to greater uncertainty around equilibrium interest rates and noisier inflation signals driven by relative price adjustment. Macroprudential oversight should extend to third party and vendors as risk migrates across institutions and infrastructures. Industrial policy has a role in addressing market deficiencies in scaling up clean power and smart electric grids with rising compute power demands, especially where the private sector cannot provide them alone. Regulatory frameworks must avoid inadvertently reinforcing market concentration through overly complex or poorly calibrated rules. Safety and reporting standards should promote interoperability while limiting fragmentation and contagion.

Behavioral frictions play a critical role in shaping the pace and stability of the transition. Beyond institutions and infrastructure, adoption dynamics depend on how workers and firms respond to uncertainty. Where willingness to adopt AI is met by high perceived risks—related to job loss, compliance liability, reputational harm, risk aversion, or doubts about model reliability—adoption and diffusion may become hesitant and uneven. Such frictions can delay productivity gains while prolonging structural instability and periods of financial stress.

Inclusive outcomes require policy designs that explicitly account for implementation and trust. Governments need adjustment mechanisms that build and sustain social consensus, particularly when distributional impacts are front-loaded and concentrated. Clear and transparent public communication and expectations management should support policy buy-in and public trust. Policies that ease labor market transitions and support skill adaptation are more likely to attenuate political and social pressures than delayed support or weak delivery. Effective design must account for common implementation challenges—including low take-up, administrative complexity, and social stigma—that can undermine policy effectiveness even when formal programs exist.

Looking ahead, a key priority could be to close data gaps and strengthen diagnostic capabilities to support timely policy responses during the AI transition. Workshop participants underscored the importance of systematically tracking indicators of AI diffusion, sectoral concentration, and labor market exposure across countries in near real time. Improved measurement of AI adoption and usage, combined with better data on task-level impacts and investment flows, would help distinguish between gradual and more rapid diffusion paths and support earlier identification of emerging macrofinancial risks. Closing

these data gaps—particularly on AI-related investment, pricing, occupational exposure, adoption, and usage—will be critical for timely and data-driven policy responses.

Beyond data improvements, the scenario discussions highlighted several broader priorities for future work. Fiscal analysis could incorporate scenarios with persistent declines in labor income share, whereas monetary and financial policy frameworks could account for weaker transmission and new sources of volatility. Multilateral surveillance should consider AI as a potentially asymmetric global shock with implications for spillovers and policy coordination. These priorities underscore the benefit of flexible, forward-looking frameworks that are resilient to a wide range of diffusion paths and transition risks, and well grounded in the evolving macrofinancial reality. These efforts should be supported by regular scenario refreshes to keep analysis and policy responses aligned with the advancing frontier.

References

- Aldasoro, Iñaki, Leonardo Gambacorta, Rozalia Pal, Debora Revoltella, Christoph Weiss, and Marcin Wolski. 2026. "AI Adoption, Productivity and Employment: Evidence from European Firms." EIB Working Paper No. 2026-02.
- Athey, Susan, and Fiona Scott Morton. 2025. "Artificial Intelligence, Competition, and Welfare." NBER Working Paper 34444.
- Autor, David, and Neil Thompson. 2025. "Expertise." *Journal of the European Economic Association* 23 (4): 1203–71.
- Brollo, Fernanda, Era Dabla-Norris, Ruud de Mooij, Daniel Garcia-Macia, Tibor Hanappi, Li Liu, and Anh D. M. Nguyen. 2024. "Broadening the Gains from Generative AI: The Role of Fiscal Policies." IMF Staff Discussion Note 2024/002, International Monetary Fund.
- Brynjolfsson, Erik, Danielle Li, and Lindsey Raymond. 2025. "Generative AI at Work." *The Quarterly Journal of Economics* 140 (2): 889–942.
- Cazzaniga, Mauro, Florence Jaumotte, Longji Li, Giovanni Melina, Augustus J. Panton, Carlo Pizzinelli, Emma J. Rockall, and Marina Mendes Tavares. 2024. "Gen-AI: Artificial Intelligence and the Future of Work." IMF Staff Discussion Note SDN/2024/001, International Monetary Fund.
- Cerutti, Eugenio M., Antonio I. Garcia Pascual, Yosuke Kido, Longji Li, Giovanni Melina, Marina Mendes Tavares, and Philippe Wingender. 2025. "The Global Impact of AI: Mind the Gap." IMF Working Papers 2025/076, International Monetary Fund.
- Chow, Trevor, Basil Halperin, and Zachary Mazlish. 2025. "Transformative AI, Existential Risk, and Real Interest Rates." Working Paper.
- Dabla-Norris, Era, and Anton Korinek. 2026. "AI Futures: Planning for Transformative Scenarios before They Hit." Peterson Institute for International Economics (PIIE) Blog.
- Dabla-Norris, Era, Daniel Garcia-Macia, and Anh D. M. Nguyen. Forthcoming. *From Insurance to Reallocation: Labor Market Policy Responses to AI Shocks*. Washington, DC: International Monetary Fund.
- Davidson, Tom, Basil Halperin, Thomas Houlden, and Anton Korinek. 2026. "When Does Automating AI Research Produce Explosive Growth? Feedback Loops in Innovation Networks." Manuscript.
- Heim, Lennart. 2025. "Technological Advances – Some Remarks." Presentation at the Workshop "Global Economic and Financial Implications of Artificial Intelligence."

- International Monetary Fund (IMF). 2024. "Advances in Artificial Intelligence: Implications for Capital Market Activities" (Chapter 3). In *Global Financial Stability Report*. Washington, DC, October.
- International Monetary Fund (IMF). 2026. "A Summary of IMF Work on AI: Economic Impacts and Policy Implications." Mimeo, International Monetary Fund, Washington, DC.
- Jaumotte, Florence, Jaden Kim, David Koll, Elmer Li, Longji Li, Giovanni Melina, Alina Song, and Marina Mendes Tavares. 2026. "Bridging Skill Gaps for the Future: New Jobs Creation in the AI Age." IMF Staff Discussion Notes No. 2026/001, International Monetary Fund, Washington, DC.
- Jones, Charles I. 1995. "R & D-Based Models of Economic Growth." *Journal of Political Economy* 103 (4): 759–84.
- Jones, Benjamin F. 2025. "Artificial Intelligence and Economic Growth: Capabilities and Potential Bottlenecks." Mimeo.
- Kiela, Douwe, Tristan Thrush, Kawin Ethayarajh, and Amanpreet Singh. 2023. "Plotting Progress in AI." Contextual AI Blog.
- Kording, Konrad, and Ioana Elena Marinescu. 2025. "(Artificial) Intelligence Saturation and the Future of Work." Brookings Working Paper, November 13.
- Krier, Sebastian. 2025. "Frontier AI: State of Play and Where We Are Heading." Presentation at the Workshop "Global Economic and Financial Implications of Artificial Intelligence."
- Lim, Xiang-Li, Puja Singh, and Richard Stobo. 2025. "Regulatory Considerations Regarding Accelerated Use of AI in Securities Markets." Technical Notes and Manuals No. 2025/016, International Monetary Fund.

Appendix 1. Speakers and Presentations on Day 1 of the Workshop

Welcome and Opening Remarks: **Nigel Clarke**, IMF Deputy Managing Director

Keynote Speech with Q&A: **Jason Matheny**, President and CEO, *RAND*

Session on Technological Advances

Moderator: Anton Korinek (Professor and Faculty Director, EconTAI)

Lennart Heim (Lead on AI & Compute, *RAND's Technology and Security Policy Center*)

Sébastien (Séb) Krier (Frontier Policy Development Lead, *Google DeepMind*)

Panel on Society and Governance

Moderator: Era Dabla-Norris (Deputy Director, Fiscal Affairs Department, IMF)

Stephanie Bell (Chief Programs and Insights Officer, *Partnership on AI*)

Justin Bullock (VP of Policy, *Americans for Responsible Innovation*)

Duncan Cass-Beggs (Executive Director, *Global AI Risks Initiative at CIGI*)

Economic Paper Session 1:

Moderator: Jim Tebrake (Deputy Director, Statistics Department, IMF)

AI and Economic Growth: Capabilities and Potential Bottlenecks

Ben Jones (Northwestern University)

Transformative AI, Growth Explosions, and Real Interest Rates

Basil Halperin (University of Virginia), with Tom Davidson, Thomas Houlden, and Anton Korinek

Economic Paper Session 2:

Moderator: Andrew Berg (Deputy Director, Institute for Capacity Development, IMF)

Artificial Intelligence, Competition, and Welfare

Susan Athey (Stanford University) with Fiona Scott Morton

The Global Impact of AI: Mind the Gap

Giovanni Melina (IMF) with Eugenio M Cerutti, Antonio Garcia Pascual, Yosuke Kido, Longji Li, Marina Mendes Tavares, and Philippe Wingender

Economic Paper Session 3:

Moderator: Atish Rex Ghosh (Deputy Director, Strategy, Policy, and Review Department, IMF)

Expertise

Neil Thompson (Massachusetts Institute of Technology) with David Autor

(Artificial) Intelligence Saturation and the Future of Work

Ioana Marinescu (University of Pennsylvania) with Konrad Kording

Role of Fiscal Policy in Broadening the Gains of AI

Anh Dinh Minh Nguyen (IMF) with Era Dabla-Norris and Daniel Garcia-Marcia

Appendix 2. Methodology and Assumptions for the Scenario-Planning Exercise

The scenario-planning exercise conducted on the second day of the workshop aimed at mapping out a range of plausible yet challenging economic and financial implications of transformative AI development. Drawing on external and internal expertise, it focused on implications for (1) productivity and growth; (2) policy space, including fiscal and monetary policy implications; (3) employment and within-country income distribution; (4) cross-country inequality and migration; (5) international trade and capital flows; and (6) financial stability. The exercise intended to generate innovative ideas and operated under *Chatham House Rules*.

About 30 IMF staff and 15 external experts participated in the exercise. They were split into 6 groups of 7–8 participants, with discussion in each group moderated by two facilitators. Groups differentiated by scenarios of AI diffusion and their implications for particular focus areas. Group discussions were organized into two brainstorming sessions. In the first session (dubbed “Status Quo”), the participants brainstormed the implications of the given scenario for their assigned focus areas under the assumption of no policy changes or government interventions. In the second session (named “Governments Respond”), participants assumed that governments respond with policy changes or interventions that they perceive as likely or important given the details and assumptions of the scenario. Speakers from each group presented main takeaways on the AI impact and likely policy responses for their group’s focus areas in two plenary sessions.

The scenarios were developed in collaboration with the Windfall Trust organization. In the spirit of preparing for out-of-distribution events, both scenarios assumed AI advances on the accelerated timelines projected by the heads of leading AI companies, which were significantly faster than what is embedded in median economic forecasts. In both scenarios, AI technologies were assumed to attain human expert-level capabilities over the next five years, driven by technological advancements in major economies, particularly in the US and China. They envisaged that by the early 2030s, AI would exhibit the technical capacity to perform most cognitive and physical tasks and would replace human workers across sectors, supported by its integration into robotics. The decisive difference between the scenarios was how quickly societies absorb and deploy these technologies. Fiscal and monetary policies were assumed to operate under existing frameworks.

Scenario 1: Baseline Diffusion

Although the underlying capabilities of AI technologies and robots become very powerful, the society-wide adoption and diffusion across sectors and countries remain uneven, constrained by societal pushback, government interventions, and infrastructure bottlenecks. Many countries adopt restrictive AI-related regulations that increase legal risks and compliance costs, and they enforce strong job protection programs. The gap between advanced economies and most emerging and developing economies in AI-related preparedness persists.

Many workers and firms initially struggle to use new AI technologies. In the service sector, AI diffusion is significant but not transformative given many strict occupational and licensing policies, as well as costly human supervision requirements. Robot diffusion in the mining, construction, and manufacturing sectors is

hindered by strict regulations such as safety standards and tight job protection requirements. Public skepticism persists and anti-AI sentiment emerges among vulnerable workers.

The expansion of data centers continued throughout 2026. In 2027, however, there was a change in expectations in financial markets as the immediate financial returns from AI adoption underwhelmed and investors started questioning the optimistic projections of leading labs. AI-intensive firms that used various debt and equity instruments to finance data centers faced a reckoning.

Integration of AI into fiscal and monetary policy operations is guarded. The adoption of AI technologies in the financial sector is constrained by regulatory requirements.

Scenario 2: Runaway Diffusion

AI diffuses rapidly across sectors under minimal regulatory constraints, in part propelled by intelligent AI agents that drive the process. AI technologies continue to be dominated by a small number of large firms that train better models, collect better data, and have a disproportionate share of computation resources at their disposal. Education and training programs focus on leveraging AI technologies. Cross-country differences in AI-related preparedness (for example, digital infrastructure, human capital, institutions) remain, with some nations catching up and others falling behind.

The private sector drives the diffusion process, focused on cost optimization and profit maximization. In the service sector, AI performs cognitive tasks in areas including finance, health care, and education, under minimal human supervision; in customer-facing jobs, human workers become optional. AI technologies are deeply integrated into automated robotic and machinery systems and are actively deployed in manufacturing, construction, and mining, expanding production capacities. With the rapid diffusion of robotics and growing demand for this new “work” force, robots produce more robots. Supply-chain management and transportation benefit greatly from AI technologies. AI-enabled firms operate with a small number of or no employees. Although AI has moved to the center stage of societal debate, no strong steps are taken to meaningfully slow down its advance. AI is displacing many jobs. In many parts of the economy, humans are still paid to perform work but are increasingly seen as an optional choice rather than a necessity.

AI technologies are adopted into fiscal and monetary policy operations, such as data analysis, forecasting, fiscal operations, and policy decisions.

Appendix 3. Participants for the Scenario-Planning Exercise (Day 2)

Only institutional affiliations of participants are listed according to the Chatham House Rule:

- Board of Governors of the Federal Reserve System
- Centre for International Governance Innovation
- Google DeepMind
- International Monetary Fund
- Massachusetts Institute of Technology
- Northwestern University
- Partnership on AI
- Peterson Institute for International Economics
- RAND Corporation
- University of Virginia



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