

POLICY BRIEF



Algorithmic Value and Global Fiscal Coordination

2025

Mr Apoorv Kulkarni, Expert – Artificial Intelligence Systems, Rising Flame Foundation (India)
Dr Bina Ajay, Assistant Professor of Management, Sam Houston State University (US)



02

Digital
Transformation



Abstract

The world is in the midst of a race to build the most advanced and efficient artificial intelligence (AI) models, spearheaded by a handful of corporations concentrated in select countries. They are ushering in fundamental breakthroughs and are poised to capture the bulk of the value in an AI-transformed world. In this shifting landscape, policy briefs from Brazil G20-T20 have alluded to the substantial risks of value transfer from lower-income countries (consumers of AI) to creator nations. This will likely exacerbate existing inequalities. There is an urgent need to determine how value from AI advancements can be captured and distributed more equitably, in line with Sustainable Development Goal (SDG) 10 – reducing inequalities.

In this policy brief, the authors outline a set of guiding principles for achieving equitable distribution through taxation, aligned with SDG 10.4 on fiscal policies to reduce inequality. There are precedents of using taxation to further development goals such as increasing employment opportunities, stimulating infrastructure development, and enhancing education and health outcomes. In addition, scholars and practitioners have advocated for using taxation (eg, a tax on carbon emissions) to finance initiatives connected with the SDGs. The authors rely on insights from these precedents to offer guiding principles that could be used to equitably distribute the value from advances in AI, balancing the need for innovation and growth with human welfare.

The guiding principles fall into three categories: (1) identifying where and when value is being created (ie, point of taxation); (2) determining the value to be taxed; and (3) managing and redistributing the funds generated through taxation. Implementing these principles would necessitate the revision and refinement of existing tax treaties and the establishment of an international governance framework allowing for negotiations and arbitrations in a free and fair manner. Under the South African presidency, the G20 is uniquely positioned to initiate these actions to promote welfare-oriented innovation, aligned with SDG 17 (partnership for the goals), through the Task Force on Artificial Intelligence and Innovation.

Keywords: Artificial Intelligence, Innovation, Inequalities, International Tax Systems, Sustainable Development Goals

Diagnosis

“And we need a systematic effort to increase access to AI so that developing economies can benefit from its enormous potential. We need to bridge the digital divide instead of deepening it.” UN Secretary-General António Guterres (Davos, 2024)¹

Artificial intelligence (AI) has been advancing significantly, with corporations competing to develop the fastest, most efficient, and most advanced models for various uses such as drug development, car design, and moviemaking.² These developments offer the promise of a better future for all. However, there is a possibility that they could exacerbate global inequalities, with a handful of corporations and countries capturing a bulk of the financial and non-financial value from technological development. There is already evidence of this in the form of greater financier interest in and rising market capitalisations for these companies (eg, Nvidia, which makes chips for AI models, hit a \$3 trillion market capitalisation in mid-2024).³

We also observe that unequal value capture has happened in the past with other technological advancements, such as the internet. Even today, internet penetration around the world is skewed, with several parts of Africa having an internet penetration rate in 2025 of less than 50%.⁴ Further, there is unequal distribution of education, employment, and healthcare advances associated with the use of the internet. For instance, revenue from online education platforms

¹ (United Nations - Secretary General 2024)

² (Bousquette 2025) (Mims 2025) (Smolak 2025)

³ (Fitch 2024)

⁴ (Petrosyan 2025)

varies widely across countries – less than \$50 million in some versus more than \$3 000 million in others.⁵

The accelerating deployment of AI and automation technologies poses significant socio-economic risks, particularly in the domains of employment and public finance. As machines increasingly take over routine, manual, and even cognitive tasks, large segments of the workforce, especially in low- and middle-income countries, face heightened vulnerability to job displacement. This transition not only disrupts livelihoods but also threatens to erode traditional sources of government revenue, notably income taxes and payroll contributions, which form a substantial part of many countries' fiscal base. A shrinking tax base could undermine the state's capacity to fund essential public goods, including healthcare, education, and infrastructure. In this context, robust social protection mechanisms and large-scale investment in worker reskilling and upskilling become imperative. Without proactive intervention, the gains from AI-driven productivity growth risk being skewed in favour of a few countries/corporations, exacerbating inequality and weakening the social contract.

Our policy brief aligns with a key goal outlined in the South African G20 presidency – “Part of the paradigm shift requires G20 countries to situate inequalities at the heart of economic policymaking” – and is aligned with the theme components of “solidarity” and “equality”.⁶ As mentioned above, developments in AI are likely to exacerbate inequalities and therefore merit global attention and efforts towards neutralising or reducing this impact. In line with SDG 10 (reducing inequalities), which aims to “[a]dopt policies, especially fiscal, wage and social

⁵ (Statista 2024)

⁶ (G20 South Africa 2024)

protection policies, and progressively achieve greater equality” (10.4),⁷ we propose global taxation as a potential way to address the problem.

We suggest that a global taxation regime would be an appropriate mechanism to address inequalities stemming from AI. There are precedents on collaboration among countries on taxation, such as bilateral and multilateral tax treaties. In addition, with a view to reducing inequalities, the OECD, along with the G20, has proposed a framework known as base erosion and profit shifting (BEPS) that “equips governments with rules and instruments to address tax avoidance, ensuring that profits are taxed where economic activities generating them take place and where value is created”.⁸ These offer an initial structure for developing a framework specific to the taxation of AI.

Recommendations

As AI and automation technologies transform labour markets and economic structures, the G20 should proactively design a taxation framework that both mitigates adverse distributional consequences and enables inclusive technological progress. G20 members accounted for close to 80% of global GDP in 2024 as well as about 80% of global GDP growth from 2014–2024.⁹ Further, the G20 also accounts for a significant proportion of global exports.¹⁰ As a result, it can exert substantial influence over the global economy and is best placed to push for the radical changes required for a more equitable distribution of the benefits from the development of AI. Building on prior efforts, such as OECD Pillar 1 and BEPS frameworks, this brief proposes actionable recommendations across

⁷ (United Nations 2024)

⁸ (OECD 2016)

⁹ (World Economics 2025)

¹⁰ (Siripurapu, Berman, and McBride 2024)

four domains: purpose, scope and duration, design of the tax base, and governance.

1. Clarify purpose: Compensation and reskilling

The primary objective of taxing AI and automation should be two-fold:

- **Compensatory:** To mitigate fiscal risks stemming from reduced employment-based taxation (eg, payroll, income taxes) and support public welfare.
- **Transformative:** To finance large-scale reskilling and upskilling programmes that enable workers to transition into non-routine, cognitive, and creative roles.

This aligns with the approach proposed by Chand, Kostić, and Reis (2020), who argue that earmarked education taxes offer a viable path for funding just transitions.¹¹

2. Adopt a time-bound and adaptive implementation approach

While AI-induced disruption may have long-term effects, the taxation mechanism should initially be temporary, spanning a fixed term (eg, 10–15 years), with scope for re-evaluation. Societies typically undergo "adjustment phases" following technological revolutions, and time-limited policies allow space for innovation and learning.¹² A sunset clause – coupled with periodic review based on employment and productivity data – should be built into the legal framework.

3. Design taxation around corporations, not machines

Rather than taxing AI or robots directly, which raises complex legal and practical issues, we recommend placing the tax burden on corporations that benefit

¹¹ (Chand, Kostic, and Reis 2020)

¹² (Chand, Kostic, and Reis 2020)

economically from deploying automation. Firms, not machines, have the legal personality, decision-making authority, and fiscal accountability necessary for fair and effective taxation. This also avoids contravening tax policy principles such as neutrality, simplicity, and efficiency.

Within this corporate framework, broadly, three complementary approaches are available:

- **Imputed wage replacement model:**¹³ Estimate the hypothetical wages that would have been paid to human workers for tasks now performed by automation. This figure becomes a notional tax base, akin to shadow pricing, on which a modest levy can be applied.
- **Marginal profit taxation**¹⁴ **from automation:** Identify additional profits attributable to AI deployment – through productivity increases or cost reductions – and subject these marginal gains to a higher effective tax rate or surcharge. This echoes proposals to treat automation as a value-adding input with fiscal implications.
- **Limiting tax deductions for automation expenditure:**¹⁵ Disallow or restrict input credits, depreciation, or tax deductions for expenditures exclusively related to automation. This ensures that the tax code does not disproportionately subsidise capital over labour.

Among the corporate-based approaches, we recommend prioritising the limitation of tax deductions for automation-related expenditure as the most actionable and internationally aligned alternative for the following reasons:

- **Builds on existing tax structures:** Nearly all jurisdictions already provide depreciation and input deduction rules. Adjusting these rules for

¹³ (Englisch 2018) (Francisco Ossandón 2020)

¹⁴ (Francisco Ossandón 2020)

¹⁵ (Englisch 2018) (Francisco Ossandón 2020)

automation-related capital and operating expenditures avoids the complexity of introducing an entirely new tax.

- **Discourages over-incentivisation of automation:** Current tax regimes often inadvertently favour capital over labour by allowing full deductions or accelerated depreciation of automation investments. Rebalancing this bias restores equity between human and machine labour without penalising innovation.¹⁶
- **Minimises administrative burden:** Governments can implement this reform through existing tax codes and audit processes, making it more enforceable than creating hypothetical constructs like imputed wages or marginal AI-attributable profits.
- **Encourages responsible automation:** Firms that adopt automation in a way that complements rather than displaces human workers can still retain favourable tax treatment by demonstrating neutral or positive employment effects.
- Under this model, national tax authorities would be able to simply add or modify certain sections of their tax laws to disallow or cap depreciation, amortisation, or input tax credits for capital investments in AI, robotics, and process automation, while offering conditional deductions where firms demonstrate investment in reskilling, human-machine collaboration, or net employment growth.

4. Ensure global coordination and equity

Given the mobility of digital value creation, international tax cooperation is essential to prevent tax base erosion.¹⁷ The G20 should champion a multilateral convention on AI taxation, modelled on OECD Pillar 1 and the guidelines outlined

¹⁶ (Englisch 2018) (Francisco Ossandón 2020)

¹⁷ (Englisch 2018)

in this brief. Doing so, however, also means overcoming some key challenges. Pillar 1 of the OECD framework has been critiqued for the high thresholds it imposes for international taxation rules to apply. For instance, a country is only allowed to tax a multinational enterprise if the enterprise's revenues in the jurisdiction exceed EUR 1 million. Further, only 25% of residual profits (profits more than 10% of revenues) are taxable under the rules. These conditions and thresholds may need to be revisited to achieve a more equitable and meaningful redistribution – especially for developing countries.¹⁸ Further, in an increasingly nationalistic world, it can be difficult to (1) agree upon the terms of the arrangement, (2) decide who will implement the arrangement and how it will be implemented, and (3) engage in dispute resolution when the need arises.

5. Establish governance and monitoring mechanisms

Create an AI Fiscal Impact Observatory under the G20 or International Monetary Fund to monitor automation's effects on jobs, productivity, and public finance. This entity should publish guidance for national policy adjustments and conduct ex-ante impact assessments focusing on gender equity, informality, and regional inclusion.

¹⁸ (Chowdhary and Diasso 2022)

References

- Bousquette, Isabelle. 2025. "Ford Looks to Innovate Faster With AI Agents and Nvidia GPUs." WSJ. https://www.wsj.com/articles/ford-looks-to-innovate-faster-with-ai-agents-and-nvidia-gpus-05de57df?mod=ai_more_article_pos17.
- Chand, Vikram, Svetislav Kostic, and Ariene Reis. 2020. "Taxing Artificial Intelligence and Robots: Critical Assessment of Potential Policy Solutions and Recommendation for Alternative Approaches." <https://heinonline.org/HOL/LandingPage?handle=hein.journals/wldtxjrn2020&div=21&id=&page=3>.
- Chowdhary, Abdul M., and Sébastien B. Diasso. 2022. "Taxing Big Tech: Policy Options for Developing Countries." South Centre. <https://www.southcentre.int/tax-cooperation-policy-brief-27-21-december-2022/>.
- Englich, Joachim. 2018. "Digitalisation and the Future of National Tax Systems: Taxing Robots?" SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3244670.
- Fitch, Asa. 2024. "Nvidia Hits \$3 Trillion Market Cap, Passes Apple in Total Value." WSJ. <https://www.wsj.com/livecoverage/stock-market-today-dow-sp-500-nasdaq-live-06-05-2024/card/nvidia-hits-3-trillion-market-cap-IGDZALoglpdU1Qb0dyH1>.
- Francisco Ossandón, Cerda. 2020. "Robot Tax? Challenges for Tax Policy in the Age of Automation." *Revista Chilena de Derecho y Tecnología* 9 (2): 187-219. <https://doi.org/10.5354/0719-2584.2020.55578>.
- G20 South Africa. 2024. "G20 Presidency – G20 South Africa." G20 South Africa. <https://g20.org/g20-south-africa/g20-presidency/>.
- Mims, Christopher. 2025. "The Russo Brothers Upended Hollywood Once. Now They Aim to Do It Again." WSJ. https://www.wsj.com/tech/ai/the-russo-brothers-upended-hollywood-once-now-they-aim-to-do-it-again-8611e41b?mod=ai_more_article_pos27.
- OECD. 2016. "Base Erosion and Profit Shifting (BEPS)." OECD. <https://www.oecd.org/en/topics/policy-issues/base-erosion-and-profit-shifting-beps.html>.
- Petrosyan, Ani. 2025. "Global Internet Penetration Rate by Region 2025." Statista. <https://www.statista.com/statistics/269329/penetration-rate-of-the-internet-by-region/>.
- Siripurapu, Anshu, Noah Berman, and James McBride. 2024. "What Does the G20 Do?" Council on Foreign Relations. <https://www.cfr.org/backgrounder/what-does-g20-do>.
- Smolak, Helena. 2025. "Alphabet-Backed Isomorphic Labs Raises \$600 Million for AI Drug Development." WSJ. https://www.wsj.com/tech/ai/alphabet-backed-isomorphic-labs-raises-600-million-for-ai-drug-development-c5f1857f?mod=ai_lead_pos1.
- Statista. 2024. "Online Education - Worldwide." Statista. <https://www.statista.com/outlook/emo/online-education/worldwide>.

United Nations. 2024. "Goal 10 | Department of Economic and Social Affairs." Sustainable Development Goals. <https://sdgs.un.org/goals/goal10#overview>.

United Nations - Secretary General. 2024. "Secretary-General's Special Address to the World Economic Forum." United Nations - Secretary General. <https://www.un.org/sg/en/content/sg/statement/2024-01-17/secretary-generals-special-address-the-world-economic-forum-delivered>.

World Economics. 2025. "G20." World Economics. <https://www.worldeconomics.com/Regions/G20/>.

T20 South Africa Convenors



The Institute for Global Dialogue (IGD)



The South African Institute of International Affairs (SAIIA)



The Institute for Pan-African Thought and Conversation (IPATC)

© T20 South Africa and the original authors

This publication is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (CC BY-NC-ND 4.0).



This license enables reusers to copy and distribute the material in any medium or format in unadapted form only, for noncommercial purposes only, and only so long as attribution is given to the creator.

To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc-nd/4.0/>

For publication enquiries, please contact t20@t20southafrica.org

Website: www.t20southafrica.org