



Standardizing carbon accounting worldwide with a single, robust, cost-effective system

Written by Vincent Aussilloux, Yann Coatanlem, and Karthik Ramanna

The Atlantic Council Global Energy Center develops and promotes pragmatic and nonpartisan policy solutions designed to advance global energy security, drive economic opportunity, and foster a sustainable energy future.

Bottom lines up front

- Developed economies aren't just underinvesting in the climate transition—they are missing the mark by an order of magnitude. Because green financing is often characterized as underperforming, the capital they do deploy rarely reaches the projects or regions where it's needed most.
- But decarbonization doesn't have to be a synonym for "high risk." The key to unlocking high-impact, high-return investment lies in better risk management. Measuring a project's carbon footprint with greater accuracy will mitigate the guesswork that keeps capital on the sidelines.
- The authors advocate for the Climate Club, an intergovernmental decarbonization forum, to select a single, robust, and cost-effective method for computing products' carbon footprint. The framework would provide the rigor required to significantly scale climate finance.

Introduction

Carbon accounting has gained traction in recent years as the mechanism through which companies and countries can unlock competitive forces to drive innovation in decarbonization and energy availability. However, most emissions tracking today still occurs through a patchwork of carbon disclosure systems rather than through a true accounting framework. For instance, many companies currently estimate enti-

ty-level emissions under disclosure standards such as the Greenhouse Gas Protocol, which they then sometimes supplement with product-level measurement tools such as life-cycle assessments (LCAs) and environmental product declarations (EPDs). These approaches rely heavily on high-level estimates, such as regional and sectoral emissions factors, and thereby provide only static inventories that cannot be used to compare emissions performance across competing alternatives and time.¹ The ap-

1. P. Spiller, "Making Supply-chain Decarbonization Happen," McKinsey & Company, June 14, 2021, <https://www.mckinsey.com/capabilities/operations/our-insights/making-supply-chain-decarbonization-happen>; and R. Kaplan and K. Ramanna, "Accounting for Climate Change," *Harvard Business Review* (2021), <https://hbr.org/2021/11/accounting-for-climate-change>.

proaches do little to reward innovation in low-carbon production and thus can disincentivize it.

A true carbon accounting framework, by contrast, calculates the greenhouse gas (GHG) emissions across individual units of products, using primary data that varies across time and facility, aggregating these product-level numbers to generate entity-level carbon accounts. By construction, the data in such a carbon accounting system is fungible, accurate, and verifiable, avoiding double counting and enabling robust comparisons for competitive differentiation and continuous decarbonizing innovations.

The limitations of today's carbon disclosure systems are increasingly consequential as governments adopt trade and procurement policies that require accurate emissions data. For example, emerging carbon border tariff policies, such as the European Union's mandatory Carbon Border Adjustment Mechanism (CBAM) that is aimed at encouraging trade in low-emissions products, require that each transaction be linked to a specific emissions footprint. Yet existing disclosure systems cannot consistently provide such granular and comparable information across borders or complex supply chains. To implement the tariffs, jurisdictions have then resorted to simplified, partial accounting methods that cover only a narrow set of upstream, easy-to-measure products while excluding many downstream goods. This workaround, in turn, can create inadvertent deindustrializing effects (e.g., tariffing imported raw materials while exempting imported finished goods) and adds confusion and unnecessary compliance costs in the economy.²

Market and policy developments suggest that there is an urgent need for a single, comprehensive, robust, and cost-effective carbon accounting system worldwide: one that identifies low-emissions production across all products and services and across all jurisdictions and consistently over time.³

This document proposes a concrete and achievable first step toward such a global carbon accounting system: for a group of proactive member countries in the Climate Club (hosted by the Organisation for Economic Co-operation and Development (OECD)) to launch a call for tender to select a single, robust,

and cost-effective method for computing the carbon footprint of all products (and, by extension, companies) worldwide.

A common, trusted carbon accounting system would unlock several critical levers in the race to drive decarbonization while meeting global energy demand. It would enable finance to flow more efficiently toward high-impact, high-return decarbonization investments, allow governments to steer foreign trade and public procurement toward lower-emissions options, and support credible carbon labeling for customers seeking "greener" purchasing options.

Together, these mechanisms would accelerate decarbonization while strengthening economic security, energy resilience, and international competitiveness.

■ The urgency for economic security

Failing to implement fundamental global changes to both mitigate anthropogenic emissions and lower energy costs presents a serious risk to economic security across all countries. For member states of the OECD in particular, potential consequences include long-term economic deterioration and a loss of global competitiveness.⁴

Many OECD countries—including the United Kingdom, France, Belgium, Italy, and Spain—already face significant public finance risks from climate change. These stem both from the economic costs of unmitigated temperature rises (for example, a sharp drop in gross domestic product due to extreme-weather events, reduced government tax revenue, higher disaster-related spending) and the investment required to support a globally competitive low-emissions economy. These outlays could cause public debt to reach unsustainable levels, promoting a run on public treasuries.

Adding to the economic pressure is the already high cost of energy in some of these countries, which makes their products and services less competitive worldwide. Several OECD countries have experienced low or declining relative economic performance in recent decades, prompting the need for urgent policy solutions that unleash new sources of cheap, clean energy.

2. K. Ramanna, "How Europe's Import Carbon Tax Can Boost Prosperity, Not Hurt It," *Impact Alpha*, 2024, <https://impactalpha.com/how-europes-import-carbon-tax-can-boost-prosperity-not-hurt-it/>; and Michael Mehling et al., "Bridging the Divide: Assessing the Viability of International Cooperation on Border Carbon Adjustments," *Georgetown Environmental Law Review* 37 (2025), <https://www.law.georgetown.edu/environmental-law-review/wp-content/uploads/sites/18/2025/05/GT-GELR250012.pdf>.
3. Tatjana Vujic, Tim Profeta, and Mariam Al-Shamma, "The Benefits of Carbon Accounting and Why Current Carbon Reporting Falls Short," *Bipartisan Policy Center*, November 19, 2025, <https://bipartisanpolicy.org/article/the-benefits-of-carbon-accounting-and-why-current-carbon-reporting-falls-short/>.
4. Directorate-General for Economic and Financial Affairs, *2026 European Macroeconomic Report*, Institutional Paper 328, European Commission, 2025, https://economy-finance.ec.europa.eu/publications/2026-european-macroeconomic-report_en.

A new approach to climate and energy policy is thus an urgent matter of security across the OECD.

The proposed first step: Standardized accounting

A quick and impactful first step the Climate Club can take is to adopt a single, comprehensive, and scalable method for calculating the carbon footprint of all products and companies.

Currently, companies rely on a wide range of assumption-laden, noncomparable methods. As a result, emissions data cannot be meaningfully or reliably compared across products, firms, sectors, or borders. This fragmentation creates several obstacles, including:

- Inefficient mobilization of green finance: Banks and investors cannot properly validate the decarbonization impact of investments when emissions are measured inconsistently and inaccurately. As a result, they struggle to offer preferential financing for the most effective projects, slowing down capital deployment to where it is most needed and hindering effective decarbonization.⁵
- Barriers to low-carbon public policies: Many public authorities increasingly want to purchase lower-emissions products. Likewise, they want to drive cross-border trade toward lower-emissions products. However, today's inconsistent carbon calculation methods make implementing such policies at scale and at low compliance-cost difficult,⁶ even when the long-term value proposition is clear.⁷

To address this, we recommend that some or all Climate Club members jointly launch a call for tenders for a single, robust accounting system to compare carbon footprints across all products (and companies). The selected method should:

- Cover emissions from the entire “cradle-to-gate” production chain for all products, including all intermediate inputs.

- Rely on real and verifiable input data at each step of the chain, with clear audit and fraud-prevention mechanisms, including for avoidance of double (or multiple) counting.
- Be implementable at reasonable cost across firm sizes.

Based on the selected method, the Climate Club can define the acceptable standards for input data recording and verification thereof, as well as enforcement penalties for misreporting and noncompliance. Respondents to the tender should also be encouraged to propose solutions for these matters.

Ledger-based carbon accounting: An emerging solution

We especially recommend a solution based on ledger-based carbon accounting, which provides a universal and cost-effective solution that is simple to implement across the economy. Grounded in financial-accounting principles, it ensures accuracy, comparability, representational faithfulness (including completeness), and verifiability, while avoiding double counting of emissions.⁸

At the core of this approach are the emissions (or E-) ledgers built on the open-source E-liability approach.⁹ This system provides an incremental, accurate, and auditable measure of total “cradle-to-gate” emissions for every product and service in the economy.

The implementation mechanism for financial accountants is detailed as follows:

- Integration: Using purpose-built software layered onto existing inventory and cost-accounting systems, firms can calculate product-level emissions by aggregating and then allocating verified emissions data from their direct and purchased (upstream) emissions. The additional accounting burden from this step is likely modest, inexpensive, and scalable, making the method feasible for all firms, even small and medium enterprises and those in developing economies.

5. F. Djabali, N. Laut, and A. Massengo, “Green Securitisation: A Lever for Financing the Transition,” *Eco Notepad* 399, Banque de France blog, 2025, https://www.banque-france.fr/system/files/2025-03/399_Green-securitisation-a-lever-for-financing-the-transition.pdf.

6. Note that public procurement accounts for 14 percent of total demand in the European Union.

7. M. S. Lapp and F. Nicoli, *Advantages and Pitfalls of Green Public Procurement as a European Strategic Tool*, Working Paper, Bruegel, September 24, 2025, <https://www.bruegel.org/working-paper/advantages-and-pitfalls-green-public-procurement-european-strategic-tool>.

8. Kaplan and Ramanna, “Accounting for Climate Change.”

9. K. Ramanna et al., *A Proto-Standard for Carbon Accounting and Auditing Using the E-Liability Method*, E-Ledgers Institute, version 2, August 20, 2025, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5427956.

- Verification and enforcement:
 - Firm level: E-ledgers are prepared and assured by professional accountants subject to strict licensing standards; serious and persistent inaccuracies risk loss of professional accreditation.
 - National level: Third-country implementations are verified via parallel testing. Prolonged noncompliance triggers penalties for both firms and national authorities.
- Incentives to improve accuracy: Any intermediate product lacking verified carbon data is automatically assigned a high default-emissions value, which progressively increases over time (say, five years). This creates a strong incentive for exporting companies and countries to adopt the approach with full fidelity to remain competitive.
- Universal transparency: Once implemented, the carbon content of every product can be included directly on invoices, enabling transaction-level transparency and comparability at low cost.

As part of the tender selection process, Climate Club members can compare existing national and institutional methods for carbon counting, such as those developed by the European Commission’s Joint Research Centre; France’s Environment and Energy Management Agency, and various research and policy centers around the world, which can be useful inputs toward a more robust, operational standard for carbon accounting.¹⁰

How this method improves on existing protocols

Ledger-based carbon accounting, as formalized in the E-ledgers method,¹¹ represents a significant evolution in emissions accounting. It improves upon status quo approaches such as LCAs, EPDs, and the GHG Protocol’s Scope 2, Scope 3, and Product Life Cycle standards.

While traditional LCA and EPD approaches rely on static averages and infrequent updates, the E-ledgers approach tracks emissions dynamically and in real time, based on current

sourcing, production processes, and designs. Importantly, ledger-based carbon accounting does not replace LCAs and EPDs; rather, it complements them by providing verified, granular, product-level emissions data, making reports significantly more useful for decision-makers and regulators.

The carbon transition—and mechanisms such as CBAM—require that each transaction be linked to a specific emissions footprint accepted by both buyer and supplier. While the GHG Protocol can be used to calculate entity-wide direct emissions, and product-level tools like LCAs estimate generic, anticipated footprints, neither is built for transactional-level tracking. Ledger-based carbon accounting fills this gap by combining direct emissions data with verifiable information flows from the value chain, creating a solution that is comparable, scalable, and accessible.

Current GHG Protocol methodologies do not rely on cumulative information exchange across the value chain. Without this, companies are forced to independently estimate activities across their entire supplier network. This approach creates three critical problems:

1. Reliance on estimates: Most companies lack visibility into their full upstream supply chain and are forced to rely on generic estimates rather than primary data.
2. Inefficiency: Work is duplicated as every company in the chain independently repeats the same search, modeling, and estimation work for the same activities, generating unnecessary cost and inefficiency.
3. Inconsistency and bias: The resulting data is rarely comparable and open to bias. For example, as many Scope 3 categories are optional and there is no structured information flow, companies can cherry-pick value-chain emissions to yield the most favorable results for them.

Ledger-based accounting resolves these issues by enabling structured data transmission across the value chain. The resulting accounts can also be used by entities that wish to report under the GHG Protocol’s “scopes” approach.

10. See, for instance, A. Reeve and E. Aisbet, “National Accounting Systems as a Foundation for Embedded Emissions Accounting in Trade-related Climate Policies,” *Journal of Cleaner Production* 371, no. 133678 (2022), <https://www.sciencedirect.com/science/article/abs/pii/S0959652622032565>; and OECD, *Towards More Accurate, Timely, and Granular Product-Level Carbon Intensity Metrics: A Scoping Note*, Inclusive Forum on Carbon Mitigation Approaches Papers, no. 1, OECD Publishing, 2024, https://www.oecd.org/en/publications/towards-more-accurate-timely-and-granular-product-level-carbon-intensity-metrics_4de3422f-en.html.

11. Robert S. Kaplan and Karthik Ramanna, *E-ledgers Carbon Accounting*, Harvard Business School Accounting & Management Unit Working Paper No. 26-004, August 2, 2025, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5376839.

Leveraging standardization for widespread impact

Once a single carbon accounting method is officially endorsed by the Climate Club or a subset of members, the selected method can be promoted within the World Trade Organization or in the Paris Agreement framework. Companies and public services can start investing in decarbonization with a much higher degree of certainty.¹²

Even partial, early adoption would rapidly improve global emissions databases, which can then be leveraged by more countries and companies, making policies such as EU CBAM significantly easier and cheaper to administer.¹³

Operationally, because ledger-based carbon accounting is based on existing financial accounting rules and systems, the mandate of financial auditors can be extended to carbon ledgers. “Reasonable assurance” audits of emissions data would therefore be feasible, building trust among stakeholders while reducing misreporting risks.¹⁴

Digital invoicing platforms also offer a powerful integration opportunity. For example, in the EU, initiatives such as the VAT in the Digital Age and tools such as the Peppol (e-invoicing network) could automate the collection and reporting of emissions data at very low cost.

Recent developments in Europe regarding the Corporate Sustainability Reporting Directive (CSRD) could reinforce this opportunity. The compromise package¹⁵ explicitly mandates

the creation of a digital portal containing templates and guidance, serving as a complement to the European Single Access Point. This new portal could serve as the host for a carbon accounting data hub, providing reference values for upstream value-chain emissions. Notably, this concept already has industry support: A major federation of European accountants, Accountancy Europe, has recommended the inclusion of a carbon footprint calculator within this ecosystem.¹⁶ This approach would also align with ongoing initiatives at the product level (such as the primary product-level data hub initiative driven by central banks, international organizations, standard-setting bodies, research organizations, industry and academia¹⁷).

The benefits of carbon labeling

Once a standardized carbon accounting method is established, Climate Club countries could also define a carbon labeling method for end-consumer products.

Evidence shows that labeling is a viable and inexpensive policy tool, with studies highlighting effects on consumer behavior, supply organization, and a measurable reduction in average emissions.

First, they will allow a segment of consumers to steer their consumption toward less carbon-intensive products, even if they are currently more expensive. Today, high-income households that would like to buy less carbon-intensive products lack reliable information to do so. This matters because consumer goods (excluding direct fuel consumption) are estimated to

12. Theo Apeteche, “Investment Barriers to Sustainable Finance: How to Enable the Transition in G20 Economies,” Directorate-General for Economic and Financial Affairs, European Commission, Economic Brief no. 83, 2025, https://economy-finance.ec.europa.eu/publications/investment-barriers-sustainable-finance-how-enable-transition-g20-economies_en. Notably, the brief says: “Enabling conditions can be further improved by enhancing information to allow for a clear understanding of sustainability and resilience criteria in procurement procedures and auctions to help boost demand of renewables.”
13. Ramanna, “How Europe’s Import Carbon Tax Can Boost Prosperity.”
14. V. Aussilloux et al., “Policy Note: A Practical and Scalable Solution for Measuring Carbon Content at Product Level,” Unpublished working paper.
15. See, e.g., “Deal on Updated Sustainability Reporting and Due Diligence Rules,” Press Release, European Parliament, September 12, 2025, <https://www.europarl.europa.eu/news/en/press-room/20251208IPR32080/deal-on-updated-sustainability-reporting-and-due-diligence-rules>; and “EU Parliament Sub-Committee Endorses ‘Omnibus I’ Changes to Scope of CSRD and CSDDD,” BDO, October 16, 2025, <https://www.bdo.global/en-gb/insights/ifrs-and-corporate-reporting/2025/eu-parliament-sub-committee-endorses-%E2%80%98omnibus-i%E2%80%99-changes-to-scope-of-csrd-and-csddd#>.
16. “Political Compromise on Sustainability Omnibus Proposal: Views from the Accountancy Profession,” Accountancy Europe, December 11, 2025, <https://accountancyeurope.eu/news/political-compromise-on-sustainability-omnibus-proposal/>.
17. “International Working Conference: Building a Primary Product-level Emissions Data Platform,” De Nederlandsche Bank, August 14, 2025, <https://www.dnb.nl/en/general-news/statistical-news/2025/international-working-conference-building-a-primary-product-level-emissions-data-platform/>.

account for over 60 percent of emissions when the full production chain is considered.¹⁸

Carbon labeling would also strengthen supply-side incentives for decarbonization.¹⁹ Products with poor emissions performance could risk brand deterioration relative to competitors, encouraging many firms to decarbonize production and sourcing.²⁰ These pressures would extend to both domestic and foreign companies, reinforcing global spillovers.²¹ A study published in *Nature Climate Change* showed the effects on the behaviors of consumers, suppliers, and business organizations.²² For now, without any communication efforts aimed at the wider public and without regulatory constraints, most companies are under relatively little pressure to improve their carbon footprint.²³

Other research highlights the influence of food labels.²⁴ An empirical analysis of the influence of labeling on food choices in canteens and restaurants, for instance, shows that the introduction of carbon footprint labels was associated with a 4.3 percent reduction in average carbon emissions per meal.²⁵ These findings suggest that labels are a viable and inexpensive policy tool to fill the information gap and tap into the preferences of climate-conscious individuals.

■ The next step: Shifting demand

Once carbon accounting and product-labeling are in place, policy- and market-led innovation can drive a further step: making lower-carbon products cheaper than higher-carbon alternatives, thereby orienting the whole of demand.

As the rapporteurs of a French government report on economic challenges point out, many sources suggest that it would be more effective to target consumers directly rather than producers.²⁶ One proposal is to adjust value-added tax rates within product categories, lowering VAT on less carbon-intensive goods and raising it on more carbon-intensive ones. This approach could shift consumption patterns while preserving consumer choice, as well as incentivize third countries to decarbonize their products to keep their exports competitive.²⁷ Given that on various mass-market consumption products, there is a continuum of carbonized alternatives, this approach does not require a change in household consumption habits, preserving individual liberties and avoiding top-down mandates. For example, there are already varieties of low-carbon beef, and the approach can orient consumption toward those varieties. The same is true for most other consumption products, from fruits to furniture and clothing to cars, and across every type of personal technology. Since end-consumption is

18. J. Barrutiabengoa, J. Cubero, and P. Más, “Measuring the CO2 Footprint of European Households: A Comprehensive Approach,” BBVA Research, 2022, https://www.bbva-research.com/wp-content/uploads/2022/12/EW22_12_Measuring-the-CO2-Footprint-of-European-Households.pdf; and Statistical Data and Studies Department, “L’empreinte carbone de la France de 1995 à 2022 : Données et études statistiques,” Government of France, October 20, 2023, <https://www.statistiques.developpement-durable.gouv.fr/empreinte-carbone-de-la-france-de-1995-2022>.
19. T. Liu, Q. Wang, and B. Su, “Un examen de l’étiquetage carbone: normes, mise en œuvre et impact,” *Renewable and Sustainable Energy Reviews* 53 (2016): 68–79.
20. S. Hornibrook, C. May, and A. Fearn, “Le développement durable et le consommateur: exploration du rôle de l’étiquetage carbone dans les chaînes d’approvisionnement de détail,” *Business Strategy and the Environment* 24, no. 4 (2015) : 266–276.
21. Hornibrook, May, and Fearn A, “Le développement durable.”
22. K. M. R. Taufique et al., “Revisiter la promesse de l’étiquetage carbone,” *Nature Climate Change* 12 (2022).
23. S. K. Mahapatra, T. Schoenherr, and J. Jayaram, “Une évaluation des facteurs contribuant aux efforts de réduction de l’empreinte carbone des entreprises,” *International Journal of Production Economics* 235 (2021): 108073.
24. F. Carlsson, M. Kataria, and E. Lampi, “Sustainable food: Can information from food labels make consumers switch to meat substitutes?,” *Ecological Economics*, 201 (2022), <https://www.sciencedirect.com/science/article/pii/S0921800922002294>; N. Chanut, “Essays in public and environmental economics [Doctoral thesis],” London School of Economics and Political Science, 2022, <https://doi.org/10.21953/lse.00004489>.
25. P. M. Lohmann et al., “Do carbon footprint labels promote climatarian diets? Evidence from a large-scale field experiment,” *Journal of Environmental Economics and Management*, 114 (2022), <https://www.sciencedirect.com/science/article/pii/S0095069622000596>.
26. O. Blanchard and J. Tirole, rapporteurs, *The Great Economic Challenges Ahead*, Haut-commissariat à la Stratégie et au Plan (aka France Stratégie), Government of France, 2021, [https://www.promarket.org/2025/10/30/a-pro-market-framework-for-driving-decarbonization-part-ii/](https://www.strategie-plan.gouv.fr/en/publications/major-future-economic-challenges-olivier-blanchard-and-jean-tirole#:~:text=The%20President%20of%20the%20Republic%20asked%20Olivier%20Blanchard;and J. Poore and T. Nemecek, “Reducing the Environmental Impacts of Food through Producers and Consumers,” <i>Science</i> 360, no. 6392 (2018): 987–992.
27. K. Ramanna, “A Pro-Market Framework for Driving Decarbonization: Part II,” Commentary, <i>ProMarket</i>, George J. Stigler Center for the Study of the Economy and the State, University of Chicago Booth School of Business, October 30, 2025, <a href=).

estimated to account for about 60 percent of GHG emissions, driving decarbonization through this demand-side approach can tackle a major source of the pollution problem.²⁸

Such a strategy, if thoughtfully designed, could lower aggregate taxes on households over time, even as it improves the relevant jurisdiction's public finances. The strategy could lead to improved purchasing power of households at large, their quality of life (including health through cleaner air), and the fiscal situation of their governments. The strategy would accelerate global decarbonization, strengthen competitiveness in proactive countries, and make decarbonization investments more profitable. For many developing countries, this is particularly important. Limited public finances often prevent governments from subsidizing green investments. If decarbonization becomes profitable through market incentives, private finance can do much of the work.

By reducing uncertainty and improving returns on green investment, this approach can lower the need for public subsidies and mobilize private capital at scale.

■ Conclusion

A coalition of proactive countries has a unique opportunity to steer public procurement, green finance, and consumer demand toward lower-carbon products, using standardized product- and corporate-level carbon accounting and product carbon labeling.

As emerging work shows, the benefits of this strategy can extend well beyond decarbonization. They can include gains in growth, reindustrialization, public finances, household purchasing power, quality of life, and health—while also creating positive spillovers for many developing economies.

28. D. Ivanova et al., "Environmental Impact Assessment of Household Consumption," *Journal of Industrial Ecology* 20 (2016): 526–536, <https://onlinelibrary.wiley.com/doi/10.1111/jiec.12371>.

About the authors

Vincent Aussilloux is an economist at the European Commission's Directorate General for Trade. Throughout his career, he has focused on global and European issues, international economics, structural reforms, industry, ecological transition, innovation, productivity, competitiveness, and social and societal issues, particularly on the education and training system and on housing.

Just prior to his current position, he served as special adviser to the general commissioner of France Stratégie, a public think tank responsible for anticipating major challenges for the country, evaluating public policies, and informing and improving the quality of public debate. He served as the director of its economics department between 2014 and 2023.

Earlier, Aussilloux was general rapporteur for the French National Productivity Council, a member of the cabinet of two ministers, and served in the Office of the Secretary of State for Foreign Trade and the Directorate General of the Treasury in France.

He holds a doctorate in economics from the University of Montpellier.

Yann Coatanlem is an economist and the president of Club Praxis, a multidisciplinary think tank that promotes the use of big data in policymaking, in particular in revamping the tax and welfare system. His work has won multiple awards, including the special prize of the political economy, statistics, and finance section of the Académie des sciences morales et politiques.

He spent most of his research career at Citigroup as managing director and head of multiasset quantitative analysis. He is also a co-founder of GlassView—the inventors of Neuro-Powered Media™—and a member of the board of the Paris School of Economics. He co-authored *Capitalism against Inequalities*, with a postface from Nobel laureate Philippe Aghion, and was awarded the Prix Turgot and the Prix Louis Marin.

Since 2023, Coatanlem has contributed significantly to the awareness of cost of failure in the innovation gap between Europe and the United States and was instrumental in the inclusion of this first order factor in the “competitiveness compass” of the European Commission. His publications on the cost of failure and competitiveness in disruptive innovation received significant attention from European institutions, influenced the 2024 Draghi report on competitiveness, and triggered national debate.

He graduated from the École nationale supérieure d'informatique et de mathématiques appliquées and the École des hautes études commerciales de Paris. He is a recipient of the French National Order of Merit, the Gold Medal of La Renais-

sance Française, and the Médaille d'honneur des Conseillers du commerce extérieur.

Karthik Ramanna is a professor of business and public policy at the University of Oxford's Blavatnik School of Government and a fellow at St John's College. He teaches at the Blavatnik School on managing organizations in polarized times, which led to his 2024 book, *The Age of Outrage*. He also serves as principal investigator and co-founder of the E-ledgers Institute, a nonprofit organization advancing rigorous greenhouse gas accounting practices.

An expert on business-government relations, sustainable capitalism, and corporate reporting and auditing, Ramanna studies how organizations and leaders build trust with stakeholders. From July 2023 to April 2025, Ramanna was on partial public-service leave from Oxford to advise the US Public Company Accounting Oversight Board, an “auditor of auditors” in global markets.

Ramanna established the Case Centre on Public Leadership and the Transformational Leadership Fellowship, a bespoke, by-invitation program for senior leaders looking to reimagine their public-service impact, at the Blavatnik School. From 2016 to 2023, he was director of the school's master of public policy program that has educated over a thousand public leaders from about 120 countries.

His scholarship has won numerous awards, including the *Journal of Accounting and Economics* Best Paper Prize, the Harvard Business Review McKinsey Award for “groundbreaking management thinking,” and the international Case Centre's prizes for “outstanding case-writing,” dubbed by the *Financial Times* as “the business school Oscars.”

Previously, Ramanna taught at the Harvard Business School in both the MBA and senior executive-education programs. He has a doctorate from MIT's Sloan School of Management.

Acknowledgments

The views expressed are the authors' own and do not necessarily reflect the views of any organizations with which they are affiliated.

The authors would like to thank the following people for fruitful discussions and advice: Alain Trannoy, Philippe Aghion, Agnès Bénassy-Quéré, Gilbert Cette, Lionel Fontagné, Mathieu Lequien, Stéphane Dees, Kathleen Schubert, Aude Pommeret, Emmanuel Combet, Denis Tersen, Sébastien Jean, Natacha Valla, Anne Epaulard, Jérôme Cazes, Mathieu Glachant, Quentin Perrier, Paul Thomaré, Michele Stua, Melissa Mariën, Ulf von Kalckreuth, Jerome Cazes, Saurabh Kumar, Lauren Giral, Martin Reiser, Mathilde Dupré, Marjolaine Meynier-Millefert, Femke Nijssse, Arthur Feinberg, Jean-Louis Bal, Thomas Piketty, Jean Pisany-Ferry, Katarina Axelsson, François Charles, Clara Kogel, Antoine Dechezlepretre, Jean Chateau, Alain De Serres, Veronica Humi, Bertrand Badré, Thierry Bollier and Christian Déséglise.



The Atlantic Council is a nonpartisan organization that promotes constructive US leadership and engagement in international affairs based on the central role of the Atlantic community in meeting today's global challenges.

© 2026 The Atlantic Council of the United States. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without permission in writing from the Atlantic Council, except in the case of brief quotations in news articles, critical articles, or reviews. Please direct inquiries to:

Atlantic Council
1400 L Street NW, 11th Floor
Washington, DC 20005
(202) 778-4952
www.AtlanticCouncil.org