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Empirical Essays on Global Cooperation for Sustainable Development

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> "By defining our goal more clearly, by making it seem more manageable and less remote, we can help all peoples to see it, to draw hope from it, and to move irresistibly toward it."
>
> **John F. Kennedy**, Commencement Address at American University, Washington, D.C., June 10, 1963

> "We know that solving the planet crisis is not utopia, it's not fantasy. We have the solution for a secure stable future for humanity"
>
> **Prof. Johan Rockström**, TED Talk, Seattle Washington, July 2024 (winner of the Tyler Prize, known colloquially as the "Nobel Prize for the Environment")

> "Eight decades later, the United Nations remains the essential, one-of-a-kind meeting ground to advance peace, sustainable development and human rights. But eight decades is a long time. And because we believe in the singular value and purpose of the United Nations, we must always strive to improve the institution and the way we work. We have the hardware for international cooperation — but the software needs an update."
>
> **Antonio Guterres**, UN-Secretary-General, in "remarks to the Security Council – on the Maintenance of International Peace and Security: Practicing Multilateralism, Reforming and Improving Global Governance", February 2025

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The intellectual work is entirely my own, including the framing, conceptualization, statistical analysis, preparation of data tables, drafting, editing and formatting, except for chapter 2 which is an extension of a paper co-authored with Prof. Jeffrey D. Sachs. The views expressed in this dissertation do not reflect the views of any UN agencies or of the SDSN Secretariat and Leadership Council.

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Abstract

In 2015, all 193 UN member states adopted the 2030 Agenda, which includes the 17 Sustainable Development Goals (SDGs). Ten years after their adoption, despite the progress observed in some countries, regions, and indicators, less than 20% of the targets are on track to be achieved by 2030 on average globally. This Ph.D. dissertation aims to understand the successes and failures of global and national governance for the SDGs. It builds on economic and international relations' theories and primarily empirical research methods to evaluate countries' support for UN-based multilateralism and global cooperation for sustainable development (Chapter 2), SDG performance and the drivers of SDG progress at the country level (Chapter 3), the *steering effect* of the SDGs on rhetorics, strategies and policies adopted by national governments (Chapter 4) and the integration of the SDGs into the operations of international organizations focusing on the International Monetary Fund (IMF) (Chapter 5). The principal conclusion of this Ph.D. dissertation is that the world has not made as much progress in implementing the SDGs as it could have, due in large part to failures in global governance systems. A key observation is the persistent lack of sustained leadership and insufficient support for the SDGs, and more broadly UN-based multilateralism by the US federal government, which continues to hold a uniquely influential position in the global economic and political system. This inconsistency and preference for unilateral policy approaches have substantially weakened collective international efforts to advance sustainable development. This dissertation proposes a new framework for achieving sustainable development in the 21st century, which includes major reforms of the UN system and new principles that should underpin global cooperation for sustainable development in a multipolar world. Ultimately, this dissertation concludes that the paradigm of sustainable development remains a relevant framework at the international level for advancing the well-being of current and future generations.

Keywords: Sustainable Development, Finance, Governance, United Nations, Multilateralism, Geopolitics, Government

Résumé

En 2015, les 193 États membres des Nations Unies ont adopté l'Agenda 2030, qui inclut les 17 Objectifs de développement durable (ODD). Dix ans après leur adoption, malgré les progrès observés dans certains pays, régions et indicateurs, moins de 20 % des cibles sont, en moyenne au niveau mondial, en voie d'être atteintes d'ici 2030. Cette thèse de doctorat vise à analyser les réussites et les échecs de la gouvernance mondiale et nationale en matière d'ODD. Elle s'appuie sur les théories économiques et de relations internationales ainsi que sur des méthodes de recherche principalement empiriques afin d'évaluer : le soutien des pays au multilatéralisme onusien et à la coopération mondiale pour le développement durable (chapitre 2), la performance en matière d'ODD et les facteurs de progression des ODD au niveau national (chapitre 3), l'effet d'entraînement des ODD sur les discours, stratégies et politiques adoptés par les gouvernements (chapitre 4), ainsi que l'intégration des ODD dans les activités des organisations internationales, en se concentrant sur le Fonds monétaire international (FMI) (chapitre 5). La conclusion principale de cette thèse est que le monde n'a pas réalisé autant de progrès dans la mise en œuvre des ODD qu'il aurait pu, en grande partie en raison des défaillances des systèmes de gouvernance mondiale. Une observation clé concerne l'absence persistante de leadership durable et le soutien insuffisant du gouvernement fédéral des États-Unis aux ODD et plus largement au multilatéralisme onusien, alors même que ce pays occupe une position d'influence unique dans le système économique et politique mondial. Cette incohérence et cette préférence pour des approches unilatérales ont considérablement affaibli les efforts collectifs internationaux visant à promouvoir le développement durable. Cette thèse propose un nouveau cadre pour atteindre le développement durable au XXIe siècle, comprenant d'importantes réformes du système onusien ainsi que de nouveaux principes qui doivent soutenir la coopération internationale pour le développement durable dans un monde multipolaire. Enfin, cette thèse conclut que le paradigme du développement durable demeure un paradigme pertinent au niveau international pour promouvoir le bien-être des générations présentes et futures.

Keywords : Développement durable, Gouvernance, Finance, Nations unies, Multilatéralisme, Géopolitique, Gouvernement

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List of acronyms and abbreviations

ACLED: Armed Conflict Location & Event Data

AFD: Agence Française de Développement

ASEAN: Association of Southeast Asian Nations

AI: Artificial Intelligence

AU: African Union

BRI: Belt and Road Initiative

BRICS: Brazil, Russia, India, China, and South Africa

BRICS+: Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Indonesia, Iran and the United Arab Emirates

CAREC: Central Asia Regional Economic Cooperation Program

CELAC: Community of Latin American and Caribbean States

CGE: Computable general equilibrium

COP: Conference of the Parties

DDP: Deep Decarbonization Project

DSA: Debt Sustainability Analysis

DSSI: Debt Service Suspension Initiative

ECOWAS: Economic Community of West African States

EESC: European Economic and Social Committee

EIU: Economist Intelligence Unit

EMDE: Emerging Market and Developing Economies

EU: European Union

FABLE: Food, Agriculture, Biodiversity, Land-Use, and Energy (FABLE) Consortium

FDI: Foreign Direct Investment

FICs: Financing in Common (network)

FFD: International Conference on Financing for Development

FOLU: Food and Land Use Coalition

FSAP: Financial Sector Assessment Program

GDP: Gross domestic product

GFA: Global Financial Architecture

GFC: Global Financial Crisis (2008)

GHG: Greenhouse gas emissions

GPG: Global Public Goods

GSDR: Global Sustainable Development Report

HIC: High-income country

HLPF: High-Level Political Forum

IAEG-SDGs: Inter-Agency and Expert Group on SDG Indicators

IAM: Integrated Assessment Model

IDDRI: Institut du Développement Durable et des Relations Internationales

IEP: Institute for Economics and Peace

IFI: International Financial Institutions

ILBIO: International law-based international order

IMF: International Monetary Fund

INFF: Integrated National Financial Framework

IPCC: Intergovernmental Panel on Climate Change

IPE: International Political Economy

IW: Inclusive Wealth

JRC: Joint Research Centre

LIC: Low-income country

LMIC: Lower-middle-income country

MENA: Middle East and North Africa

MDG: Millennium Development Goals

NDC: Nationally Determined Contributions

NGO: Non-Governmental Organization

ODA: Official development assistance

OECD: Organisation for Economic Co-operation and Development

OGP: Open Government Partnership

OLS: Ordinary least square

PB: Planetary Boundary

PCA: Principal Component Analysis

PCSD: Policy Coherence for Sustainable Development

PDB: Public Development Bank

PPP: Purchasing Power Parity

RBIO: Rules-based international order

SALT: Strategic Arms Limitation Talks

SDG: Sustainable Development Goals

SDGi: SDG Index (headline version)

SIDS: Small Island Developing States

SDSN: Sustainable Development Solutions Network

SNA: System of National Accounts

UCM: Unilateral Coercive Measure

UMIC: Upper-middle-income country

UN: United Nations

UN DESA: United Nations Department of Economic and Social Affairs

UN-Mi: Index of countries' support for UN-based multilateralism

UNCTAD: UN Trade and Development

UNFCCC: United Nations Framework Convention on Climate Change

UNGA: UN General Assembly

UNEP: United Nations Environment Program

UNDP: United Nations Development Program

UNSD: UN Statistics Division

V-DEM: Varieties of Democracy

VNR: Voluntary National review

WJP: World Justice project

Chapter 1 General Introduction

The year 2025 marks the 80th anniversary of the creation of the United Nations (UN). As emphasized by Antonio Guterres, the creation of the UN in 1945 "signaled a commitment to an entirely new level of international cooperation grounded in international law and our founding Charter". Yet, eight decades later, the world faces unprecedented challenges. There is overwhelming scientific evidence to support this claim. The Doomsday Clock of the Bulletin of Atomic Scientists aims to measure how close humanity is to self-destruction, mainly caused by nuclear Armageddon, but also through environmental catastrophe (Bulletin of Atomic Scientists 2025). The Doomsday Clock is currently the closest to midnight in the clock's history since its introduction in 1947 (the most proximate to humanity's self-destruction). In 1947, the Doomsday Clock was set at 7 minutes from midnight. At the end of the Cold War in 1991, the Clock was set at 17 minutes from midnight. In January 2025 (latest update), the Clock was set at just 89 seconds to midnight. Estimates from the peer-reviewed Armed Conflict Location & Event Data (ACLED) suggest that as of December 2024, approximately 1 in 8 people in the world were exposed to violent conflict in 2024, and that violent conflicts have doubled in the past five years (Raleigh et al. 2010; Raleigh and Katayoun 2024). The international community is not on track to achieve the Sustainable Development Goals (SDGs) and the Paris Climate Agreement by 2030 and 2050, respectively (Hansen et al. 2025; Sachs et al. 2024).

By 2030, the current universal set of global goals for sustainable development, unanimously adopted by the international community in 2015 to promote the so-called 5Ps (Peace, Prosperity, People, Planet, and Partnerships) will expire. The year 2030 will also mark the hundredth anniversary of John Maynard Keynes' famous essays on the "Economic Possibilities of our Grandchildren". In this essay, written during the Great Depression and before the publication of the "General Theory" (Keynes 1936), Keynes discusses the long-term opportunities for humankind. Despite the significant economic turmoil caused by the stock market crash of 1929, Keynes, perhaps surprisingly, makes the optimistic prediction that the standard of living in progressive countries in one hundred years would be four to eight times higher than in 1930, driven largely by technological progress and capital accumulation. While Keynes' prediction on working hours and leisure time might not have fully realized (Lorenzo and Gustavo 2010) and while, as notably argued by Stiglitz, Keynes might have at least partially overlooked the problem of wealth distribution (Stiglitz 2008) it is striking to see that between 1920 (no global data is available for 1930) and 2022 GDP per capita (in international $USD at 2011 prices) was multiplied on average globally by 6.7 from $2,493 USD to $16,677 USD, exactly within Keynes long-term prediction bracket (Bolt and Van Zanden 2024). In the United Kingdom, where Keynes was born and lived, GDP per capita increased by 4.4 times between 1930 and 2022 from $8,673 USD to $38,407 USD, also within Keynes' prediction.

Arguably, the challenge of sustainable development will be the paramount long-term challenge of the 21st century although major breakthroughs are within reach. It is, of course, far more complex in nature than the narrower challenge discussed by Keynes of raising GDP per capita. Yet, according to the latest literature, there are no fundamental financial or technological barriers to achieving sustainable development (Sachs et al. 2020). Including for achieving the goal of ending extreme poverty and hunger (Sachs 2006; von Braun et al. 2021), securing universal access to basic services and infrastructure, including education (Delamonica et al. 2004) and health (Sachs 2012a), while at the same time ensuring

that humans stay within biophysically safe operating space as defined in the Planetary Boundaries (Steffen et al. 2015; Collste et al. 2023; Rockström, Kotzé, et al. 2024; Rockström, Donges, et al. 2024). The UN Commission on Trade and Development estimates that the annual SDG investment gap in developing countries is equivalent to about $4 trillion USD (UNCTAD 2024), a small percentage of annual global output and savings, but which of course can represent a significant investment gap as a share of national GDP in developing countries (Sachs, Kroll, et al. 2022; Sachs et al. 2023). As such global partnerships and the coordination of investment, policies, and the use of cutting-edge technologies across Nation-States are crucial for preserving peace and achieving sustainable development in the 21st century, as emphasized by the international community through the adoption of SDG17 (Partnerships for the Goals).

This Ph.D. thesis titled "Empirical Essays on Global Cooperation for Sustainable Development: Successes and failures of global and national governance for the Sustainable Development Goals over the period 2015-2024" empirically explores the reasons behind the lack of progress on the SDGs since their adoption in 2015, and more specifically, the reasons why Nations States have *failed* to coordinate their efforts to achieve sustainable development. This general introduction provides further background on the origins and definitions of sustainable development in the international context, presents the theoretical and empirical framework that underpins the rationale and methods used in this Ph.D. thesis, and specifies the problem definition and the main and sub-research questions.

1.1 Origins and history of global cooperation for sustainable development

1.1.1 Origins and definition of sustainable development

Etymologically, sustainable development or "sustainability" comes from the Latin word "sustinere" (to hold). Even though it was only explicitly conceptualized as a field of study and object of international relations in the second half of the 20th century, the concepts and philosophies that underpin sustainable development have been around for centuries (Du Pisani 2006; Grober 2007; Caradonna 2014; Mensah 2019; Sachs, Sorondo, et al. 2022). This was one of the conclusions of the "Ethics in Action" initiative led by Columbia University and the Pontifical Academy of Social Sciences, which argued in 2022, after two years of workshops and seminars involving religious leaders and philosophers from all over the world that (Sachs, Sorondo, et al. 2022):

> "there is overlapping ethical consensus centered on the Sustainable Development Goals shared by a diverse group of religious and secular ethical traditions" […] "These traditions consistently—if imperfectly—summon their adherents and others to live their lives more deeply in accord with a vision of human dignity and the common good, marked by environmental sustainability, a just distribution of resources, and a holistic sense of well-being centered on the fullest development of capacities".

The concept of sustainable development was more succinctly defined in 1987 as part of an influential Commission set up by the United Nations. In its final report "Our Common Future", the 1987 United

Nations Commission on Environment and Development, chaired by the former Prime Minister of Norway, defined sustainable development as:

> "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland 1987)[1].

This definition is widely accepted as the most influential definition of sustainable development (Biermann 2012; Borowy 2013). On the corporate side, John Elkington, famously argued ten years later that the "triple bottom line" of sustainable development (i.e. social justice, economic prosperity, and environmental quality) will be the business imperative of the 21st century (Elkington 1997).

1.1.2 A brief history of global cooperation for sustainable development

The systems of the United Nations were born in 1945 "out of the ashes of the Second World War[…] to save succeeding generations from the scourge of war." (United Nations Secretary-General 2025). Its founding documents, including the UN Charter (1945) and Universal Declaration of Human Rights (1948), primarily focused on global cooperation for peace, human rights, and socio-economic development. Sustainable development and climate change were introduced in international policy discussions in the 1970s. Figure 1.1 provides a summary of major international milestones that led to the adoption of policy and financing agreements to advance global action for sustainable development.

The first UN Conference on the Human Environment took place in Stockholm, Sweden, in 1972, coinciding with the release of the "Limits to Growth" study (Meadows et al. 1972). The 1972 Conference notably gave birth to the United Nations Environment Program (UNEP). Interestingly this period corresponds to the so-called "Détente", which refers to the period of easing tensions between the United States of America (US) and the Soviet Union during the Cold War, ten years after the Cuban Missile Crisis. It is also in 1972 that the "First Strategic Arms Limitation Talks" (SALT 1) treaty was adopted, which was followed by SALT 2 in 1979. It is also in the early 1970s that the target of international solidarity was formalized in a UN General Assembly Resolution, which called on the most economically advanced countries to provide 0.7% of their gross national income (GNI) as official development assistance (ODA). Twenty years later, in 1992, recognizing the increased threats for humanity posed by climate change and biodiversity degradation, the Conference on Environment and Development ("Earth Summit") led to the adoption of five international declarations and agreements, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). The first Convention of the Parties (COP1) took place in Berlin, Germany, in 1995. The Kyoto Protocol (later replaced by the Paris Climate Agreement) and the Montreal Protocol, which have healed the ozone layer and are considered an environmental success story (Young et al. 2021) were also adopted in the mid-1990s.

International conferences and agreements on financing for sustainable development emerged in the early 2000s. The International Monetary Fund (IMF) and the World Bank traditionally focus on macroeconomic

[1] In her foreword, Prime Minister Brundtland writes: "What is needed now is a new era of economic growth – growth that is forceful and at the same time socially and environmentally sustainable". With the 1992 Rio Declaration on Environment and Development, 178 UN Member States agreed that "Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature".

stability and economic development, although their role and scope of activities has evolved over the past eighty years (Stiglitz 1999; Georgieva and Weeks-Brown 2023). For the IMF, this corresponds to ensuring the coherence of systems by promoting monetary cooperation, balanced growth in international trade, and a stable system of exchange rates. It also provides financial support and advice to countries facing balance of payments deficits. As a lending institution, the World Bank promotes long-term economic prosperity. The first International Conference on Financing for Development took place in Monterrey, Mexico in 2002 and led to the adoption of the "Monterrey Consensus", which underlined the "dramatic shortfalls" in resources required to achieve shared development goals on poverty, living standards, and protect the environment as well as called for new partnership between developed and developing countries notably via Foreign Direct Investment (FDI) and the effective use of ODA (United Nations 2002; Despierre Corporon 2021). This was followed by three major international conferences on financing for development in 2008, 2015, and 2025, as well as the progressive incorporation of sustainable development into the strategic orientations of global International Financial Institutions (IFIs) (Gable et al. 2015; Gaspar et al. 2019).

The concept of "goal-based development," as a complement to "rules-based development" (via treaties, norms, and conventions), emerged in the 1990s and came into force in 2000. The process that led to the adoption in 2000 of the Millennium Development Goals (MDGs) began in the aftermath of the Rio Earth Summit in 1992. The World Summit on Social Development, held in Copenhagen in 1995, provided further impetus in a rapidly changing geopolitical context. The MDGs were formally adopted by the UN General Assembly as part of the resolution "United Nations Millennium Declaration" (A/RES/55/2) in September 2000. They included 8 goals, 21 targets, and 60 indicators primarily oriented toward developing countries. Although counterfactual analysis cannot be performed at the global scale, and despite the Global Financial Crises of 2008 and rising geopolitical tensions that emerged in the aftermath of 9/11, some evidence suggests that the goals have contributed to accelerating the pace of development (compared to business-as-usual scenario), especially in improving health outcomes and statistics in developing countries (Andresen and Iguchi 2017; McArthur and Rasmussen 2018).

The first universal, integrated vision and goals for sustainable development were adopted by the UN General Assembly in 2015. Three years earlier, in 2012, at the Rio+20 Conference, world leaders recognized that "goals, targets and indicators […] are valuable in measuring and accelerating progress" (United Nations 2012). The Rio+20 outcome document "The Future We Want" paved the way for kick-starting a process that would lead to the adoption of sustainable development goals to guide development efforts beyond 2015 (the expiration date of the MDGs). In September 2015, the UN resolution "Transforming our world: the 2030 agenda for sustainable development" (A/RES/70/1), including the 17 SDGs and 169 targets, was unanimously adopted by all 193 UN Member States. They officially came into force in January 2016 and apply universally to both developing and developed countries. In 2015, the international committee also adopted the Paris Climate Agreement and the Action Agenda of Financing for Development. In 2024, all 193 UN member states adopted the "Pact for the Future" by consensus, which includes the Global Digital Compact and a Declaration on Future Generations, thereby reaffirming their intention to implement all the SDGs (United Nations 2024).

From this brief historical overview of global cooperation on sustainable development (1972-2025), three important points can be made:

- First, the international community managed over the last five decades to agree on "what" is sustainable development, leaving space for more in-depth discussions about "how" to collectively achieve sustainable development, as also argued by the UN Secretary-General Ban-ki Moon in 2015[2].

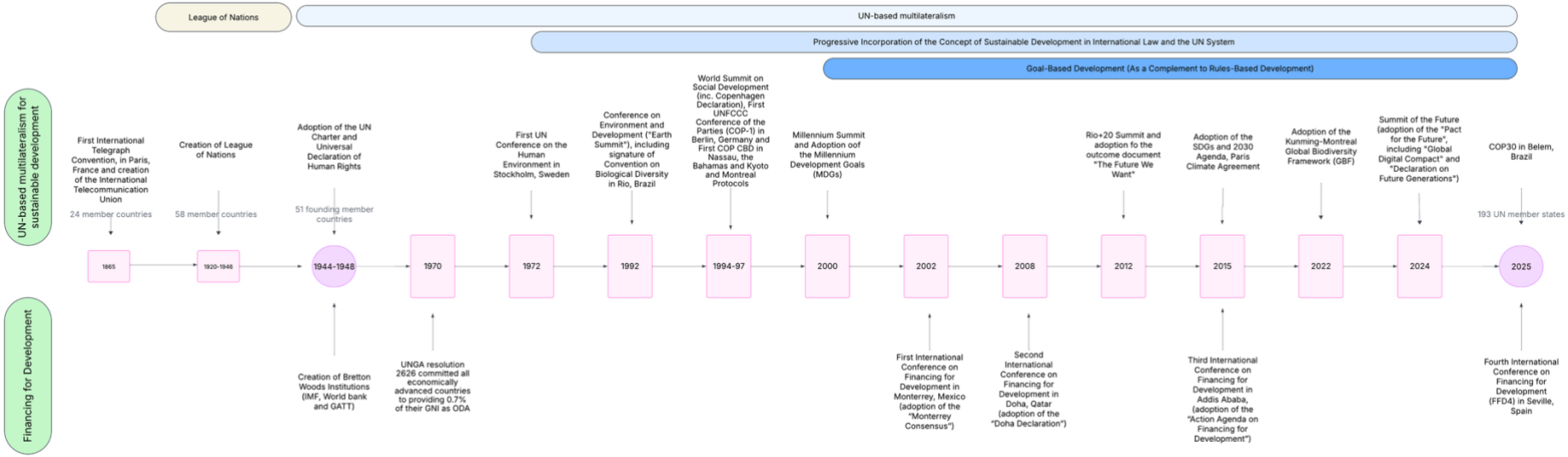
- Second, important breakthroughs in formalizing global cooperation for sustainable development via international treaties and declarations tend to happen in periods of relative appeasement in international relations, for instance during the 1970s (Cold War "détente"), early 1990s (end of the Cold War), and 2015 (in the aftermath of the Global Financial Crisis (GFC)), although successful outcomes and so-called "agenda keeping" (Maertens 2018; Louis and Maertens 2021; Ide et al. 2023; Aykut and Maertens 2023) may be possible in times of financial and geopolitical crises, as observed during the MDGs (2000-2015).

- Third, goal-based sustainable development as a complement to rules-based development is still nascent at the international level, and only formally started in 2000 (for developing countries) and in 2015 (as a universal agenda). The rationale and concept that underpin goal-based development build on successful national experiments, including John F. Kennedy's Moonshot program in the 1960s and his strong belief in the power of goal setting to galvanize action[3]. More recently, and using the "Moonshot" reference, the economist Mariana Mazzucato has promoted new approaches based on mission-driven innovation and government action (Mazzucato 2018; 2021). Yet, at the international level, the SDGs remain the first attempt to use goal-setting or mission-driven approaches as a governance strategy, and as such, scholars, practitioners, and policymakers are still learning from successes and failures since their introduction in 2015.

[2] As emphasized by the UN Secretary-General Ban Ki-moon in 2015, right after the adoption of the SDGs: "The true test of commitment to Agenda 2030 will be implementation. We need action from everyone, everywhere. Seventeen Sustainable Development Goals are our guide. They are a to-do list for people and planet, and a blueprint for success".

[3] John F. Kennedy famously emphasized the importance of goal setting in his Commencement address at the American University (1963): "So let us persevere. Peace need not be impracticable, and war need not be inevitable. By defining our goal more clearly, by making it seem more manageable and less remote, we can help all peoples to see it, to draw hope from it, and to move irresistibly toward it."

Figure 1.1 Brief Overview of Major International Milestones on Sustainable Development Conferences, Policy, and Financing Agreements (1945-2025)



Source: Author.

1.1.3 Moving beyond GDP: SDG indicator and review framework

The 17 Goals and 169 Targets adopted as part of the 2030 Agenda were accompanied by a separate parallel process, which led to the adoption of the global indicator framework for the SDGs. The development of the SDG indicator framework precisely aimed at supporting accountability and the effective implementation of the SDGs (UNSTATS 2024). They were formally adopted in a specific UN General Assembly resolution (A/RES/71/313) in July 2017. The global indicator framework was developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) and agreed upon at the 48th session of the United Nations Statistical Commission (a Commission established in 1946, bringing together Chief Statisticians from UN member states from around the world).

The indicator framework was designed as a "voluntary and country-led instrument" (A/RES/71/313). From the start, the global indicator framework was meant to be refined and adjusted as part of regular review processes as additional data and technologies become available. The global framework was also meant to be complemented by regional and national-level indicator frameworks. As of March 2024, the global SDG indicator framework included 231 unique indicators; 157 are tier I indicators (clear methodology and data), 66 are tier II indicators (clear methodology but not regular data collection), and 8 are multi-tier indicators (different components of the indicator are classified into different tiers) (UN Economic and Social Council 2024). Since 2016, and on an annual basis, the Sustainable Development Goals Report, led by the UNSD, has taken stock of progress made on the official SDG indicators (UNSD 2024).

By design, the adoption and refinement of the global indicator framework contribute to moving beyond GDP as the sole measure of societal progress. The development of national accounts, which underpin the calculation of the GDP, was famously considered in 1999 by the U.S. Department of Commerce as its "achievement of the century" and as "a living, growing monument to the ability of American economic genius to meet the challenges of every period" (U.S. Department of Commerce 2000). Yet, as argued by Kuznets, who contributed extensively to the development of the System of National Accounts (SNA) while GDP is a useful accounting measure, "the welfare of a nation can scarcely be inferred from a measurement of national income as defined by the GDP" (Kuznets 1934).

By adopting SDG target 17.19, all UN member states have explicitly recognized the need to develop indicator frameworks for sustainable development that complement GDP[4]. This commitment was reaffirmed in the "Pact for the Future" (2024) and "Sevilla Commitment" (2025). Prior to the adoption of the SDGs, a substantial body of literature had already emerged on the limitations of GDP as a measure of societal well-being and progress (Stiglitz, Sen, and Fitoussi 2009). Interestingly, since the early 2000s, the People's Republic of China has taken various steps to move away from its primary focus on GDP growth, which led to the launch of the "Green GDP program" (Wang 2016) and the inclusion of the concept of "Ecological Civilization" in the Constitution in 2018 (ADB 2019).

As argued by Beisheim (2018), in addition to the global SDG indicator framework, the annual UN High Level Political Forum also plays "a central role in overseeing a network of follow-up and review processes"

[4] SDG target 17.19: "By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement GDP, and support statistical capacity building in developing countries."

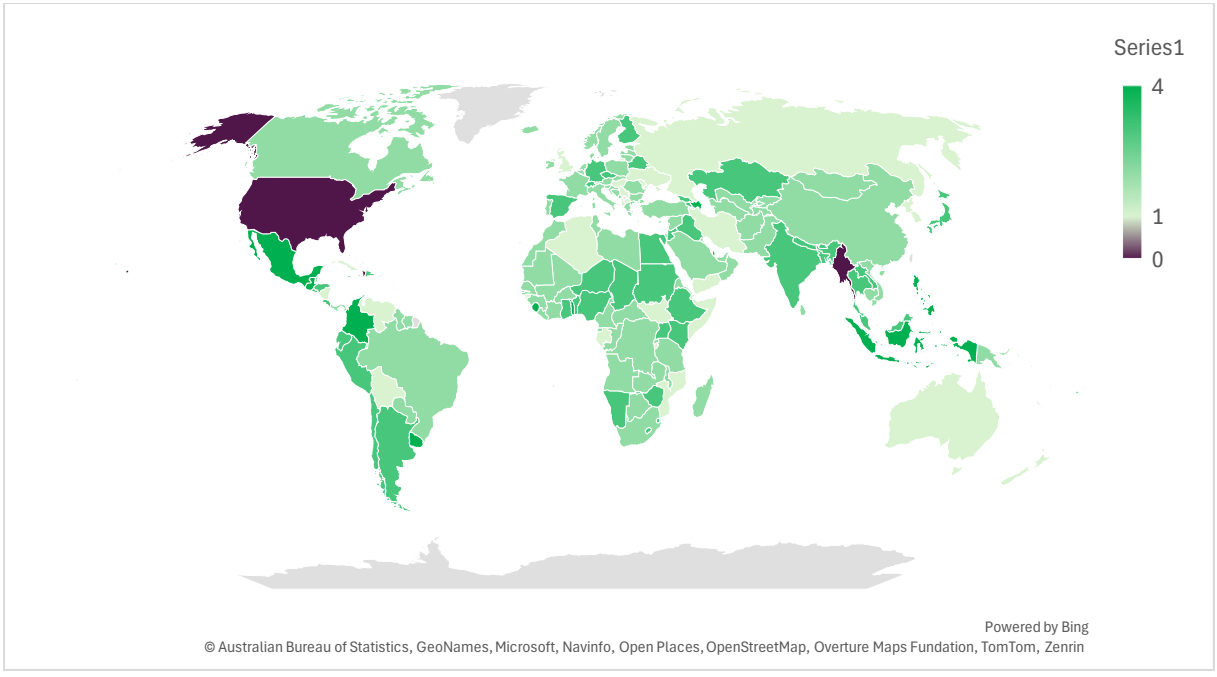
via five principal building blocks. First, via thematic and SDG reviews conducted each year on a subset of goals. Second, via the presentation of Voluntary National Reviews (VNRs), whereby each year, around 40 countries present their action plans and progress toward achieving sustainable development. As of 2025, 190 countries have participated in the VNR process, with many countries participating more than once, and up to four times. This leaves Haiti, Myanmar, and the US as the only three UN member states that have never contributed to the VNR process (Lafortune and Sachs 2025). Third, by providing a platform for peer-to-peer learning among various stakeholders to implement the goals. Fourth, the publication of the Global Sustainable Development Report (GSDR) is conducted every three years by the Independent Group of Scientists, appointed by the UN Secretary-General, to provide a science-based analysis of SDG gaps and possible pathways to achieve the goals (United Nations 2016). Fifth, via the adoption of a Ministerial declaration to sustain the political momentum and commitment over time.

The UNSD notes an improvement in the availability of data and statistics (UNSD 2024). The 2024 Sustainable Development Goals Report by UNSD notes that:

> "Overall, commendable progress has been made in improving internationally comparable data for SDG monitoring. In 2016, when the global indicator framework for the Goals and associated targets was initially adopted, only about one-third of indicators had good data coverage (that is, data were available for more than 50% of countries), and 39% of the indicators lacked internationally established methodologies or standards. Today, 68% of indicators have good data coverage."

Contributions from the scientific community and scientific networks in monitoring SDG progress and commitments are also very significant (Leal Filho et al. 2018; Yamaguchi et al. 2023).

Figure 1.2 Country participation in UN Voluntary National Review (VNR) process to present national action plan on the SDGs, 2016-2025



Source: Author, based on Sachs, Lafortune and Fuller (2025) and United Nations (2025).

1.2 The economics of sustainable development

Since the landmark report "Limits to Growth" in 1972 (Meadows, 1972), a large body of literature emerged on the macroeconomics and microeconomics of sustainable development (Goodland and Ledec 1987; Söderbaum 1994; Jespersen 2004; Stiglitz 2006; Munasinghe 2009; Sachs 2015; Verma and Kandpal 2021), including on monetary policy and the environment (Rochon et al. 2022) and sustainable trade policy (Damian et al. 1997). There is also a growing body of work related to green growth (Hallegatte et al. 2012; Jacobs 2013; Capasso et al. 2019), inclusive growth (Ali and Son 2007; Ngepah 2017; Ranieri and Almeida Ramos 2013), the well-being economy (Helliwell 2001; Helliwell et al. 2024; Diener and Suh 1997; Diener and Seligman 2004; Dolan et al. 2008), doughnut economics (Raworth 2017; Warnecke 2023), beyond GDP and GDP+ (Fleurbaey 2009; Costanza et al. 2009; Aitken 2019; Charveriat et al. 2024), regenerative growth (Pretty et al. 2025) and degrowth (Kallis et al. 2012; 2018; Hickel 2021; Hickel et al. 2022).

Three theories underpin the conceptual and empirical work presented in this Ph.D. dissertation, which focuses on global and national governance for sustainable development. Two economic theories (Inclusive Wealth and Global Public Goods) and one geopolitical theory (multilateralist theory). The three theories seem particularly relevant for this dissertation since they emphasize the importance of long-term policies for sustainable development, which should consider various forms of capital (including natural and social capital) in economic policy-making at all levels (Inclusive Wealth); the need for collective action to safeguard Global Public Goods (including environmental public goods); and provide a normative compass for collective problem-solving in the emerging multipolar world (multilateralist theory).

1.2.1 Inclusive wealth and genuine saving rates

The Inclusive Wealth (IW) and related concept of Genuine Savings Rates provide useful conceptual and accounting frameworks for managing current and future well-being, considering a broader set of inputs, including human and natural capital. At its core, the IW theory emphasizes the importance of investing and safeguarding various forms of capital important for intergenerational well-being. The concept was developed notably by economists such as Kenneth Arrow and Sir Partha Dasgupta (Arrow et al. 2012) , and at the international level, IW was used extensively, notably over the past twenty years by organizations such as the World Bank, the United Nations University International Human Dimensions Programme (UNU-IHDP) and UNEP (World Bank 2021; UNEP, 2023). IW has also been applied to measure and inform polices at the country level (Fan et al. 2022), subnational level (Walker et al. 2010; Ikeda et al. 2017; Cheng et al. 2022), and industry level (Collins et al. 2017).

In essence, IW is an approach to measuring the wealth of a nation-state, taking into account a broader set of capital (including natural capital). IW builds extensively on the literature and concept of "genuine saving rates" (also called adjusted net saving (ANS)), which considers a broader set of capital as an adjustment and expansion of the classical "saving rates" in national accounting (Hamilton and Clemens 1999). IW can be achieved if there is enough investment (and savings to finance it) to provide adequate future capital (including natural and human capital) and future income. Intertemporal well-being (V) is defined as the integral of discounted future true consumption (Arrow et al. 2012; Duraiappah and Muñoz

2012; Schmidt-Traub 2018). For sustainable development to occur, IW suggests that the change in wealth (dV) should not decline over time; that is, when dV > 0, also known as the "Brundtland test" (Schmidt-Traub 2018). In other words, true sustainability is achieved if a nation-state's capital base (including natural capital) remains non-declining over time, which means that it is possible for GDP per capita to be growing while the IW is decreasing.

The IW concept provides a useful theoretical framework for monitoring the sustainability of an economy, for comprehensive macroeconomic surveillance, and to assess investment needs. It has also been proposed as an all-encompassing measure for the SDGs at the country-level (Sugiawan et al. 2023). Sachs, Lafortune et al (2023) have argued that the fundamental barrier for SDG implementation in developing countries is the lack of fiscal space to invest in these various forms of capital (business, human, and natural capital). Yet there are persisting measurement challenges, which are well documented in the literature (Polasky et al. 2015). One well-known challenge is related to the estimation of "shadow prices", which can vary across studies to estimate various forms of capital assets, including natural capital (Millennium Ecosystem Assessment 2005; Duraiappah and Muñoz 2012). IW notably underpins the approach in Chapter 5, which focuses on the IMF surveillance mechanisms and the consideration of climate and natural capital in macroeconomic risk assessments.

1.2.2 The Global Public Goods theory

The Global Public Goods (GPGs) theory provides a conceptual compass for characterizing and managing public goods that are not confined to any one nation or group but are available for the benefit of the global community (Hume 1739; Samuelson 1954; Stiglitz 2006; 2006; Sandmo 2006; Gazier and Touffut 2006; Chin 2021; Zajc Kejžar and Ponikvar 2023; Rodrik and Walt, 2024). Building on the pioneering work of Samuelson (1954), GPGs are typically assumed to have two critical properties: (i) non-excludability: the goods are available to all and (ii) non-rivalry: the goods can be consumed over time without diminishing the benefits for other consumers. One important public policy implication of the GPGs theory is that International Organizations (IOs) and Nation-States must play a role in the provision of these goods because otherwise they will be undersupplied by the market.

Stiglitz (1995) identifies five such GPGs: international economic stability, international security (political stability), international environment, international humanitarian assistance, and knowledge. The investments (or costs) for GPGs are realized today, but the benefits can be realized in the future, for example, in public education and the safeguarding of natural capital (Chin 2021). Not all public goods are global; there are also continental (e.g., continental transport and energy infrastructure), national (e.g., national defense), and local public goods (e.g., public fireworks used for celebrations). Chapter 2 of this Ph.D. dissertation builds on the implications of the GPGs theory to evaluate Nation-States' support for coordinated global action and UN-based multilateralism, including the ratification of socio-economic and environmental treaties and membership in IOs.

1.2.3 The Multilateralist theory (in political economy)

There is also a substantial literature focusing on the political economy and geopolitics of global cooperation for sustainable development (van Zeijl-Rozema et al. 2008; Meuleman 2019; SDSN and OECD 2019; Meuleman 2021; Zeigermann 2020; Lafortune et al. 2021). More specifically, there is a growing literature on earth systems' governance (Biermann et al. 2010), and environmental negotiations (Carraro and Siniscalco 1998; Rudel et al. 2011; Bailer and Weiler, 2015). The broad literature on the "governance of sustainable development" tends to draw from various academic traditions, including international relations, political economy, geography, public administration, social sciences, and philosophy.

Political economy and geopolitics are often considered as sub-disciplines in International Relations (IR) (Mamadouh and Dijkink 2006), which incorporate specific economic and geographic considerations into the analysis of international relations and processes. They are particularly useful to understand how to implement sustainable development in a context of rising international tensions among superpowers. The economist Jeffrey D. Sachs (2023) distinguishes between three major theories of geopolitical stability: The hegemonic stability theory, the realist theory, and the multilateralist theory. As described by Sachs, the first theory is structured around the role of the hegemon for stabilizing the state of global affairs. The second theory is structured around the notion of the balance of powers. The third theory focuses on international rules, norms, and organizations (including the system of the United Nations) to promote peace and global stability.

Sachs dismisses the hegemonic stability theory (and its variants) because no country is currently able to claim hegemony. While recognizing that this theory might explain the current state of turbulence globally, it fails to provide a normative compass for achieving peace and collective problem-solving in a multipolar world. The economist Dani Rodrik also recently argued that "global primacy is an unreachable goal and its all-out pursuit would be counter-productive" (Rodrik and Walt 2024). Sachs recognizes the theoretical and practical superiority of the realist theory (compared with the hegemonic stability theory); yet, by focusing on "a game of winning and losing among the major powers," it fails to recognize the opportunities to "pool resources to face global-scale crises." Fundamentally, the realist theory does not offer a compelling explanation for how peaceful transformations of the international system can occur in the context of the rise and fall of superpowers, nor does it provide a prescriptive theory about pathways to long-term peace (Sachs 2023a).

One fundamental argument raised by Sachs, that echoes the argument made by other scholars, is that the realist theory ignores the latest evidence from experimental game theory on how to sustain cooperative outcomes in the long run. In practice, most people tend to cooperate more than theory predicts, notably for moral reasons and based on values (Jervis 1988). These values that underpin cooperation can be nurtured over time (Fan 2000). So-called cheap talk (discussions between participants before the game starts) and information sharing (Matsui 1991; Fiala and Suetens 2017), repeated games and trust building, as emphasized by the so-called *Folk Theorem* (Fudenberg and Maskin 1986), and perceived fairness in past and future distribution of outcomes including in sustainability game theory (Rabin 1993; Parrachino et al. 2006; Alessio and Manfredi 2022) can result in positive and sustained cooperative outcomes.

At its core, the multilateralist theory focuses on the set of international norms, rules, mechanisms, and organizations that can promote effective global cooperation. Yet, within the multilateralist theory, there are differing views among contemporary scholars on how to preserve and strengthen the international order as the world shifts from a unipolar to a multipolar world. The "4C" classification distinguishes between four types of multilateral cooperation, which can be based primarily on the *Charter* (which focuses on the UN and treaty-based bodies), a *Club* (focus on liberal democracies as the engine of the rules-based international order), a *Concert* (joint actions and negotiations led by major powers) and *Coalitions* (ad hoc arrangements between different groups of countries depending on the issues) (Stewart 2023). Using this classification, we compare and contrast the views of three prominent Western scholars who recently put forward ideas on the future of multilateralism, namely, one political scientist, John Ikenberry (Princeton University), and two economists, Dani Rodrik (Harvard University) and Jeffrey D. Sachs (Columbia University). In 2024, Ikenberry wrote "Three Worlds: the West, East and South and the competition to shape global order" (published in *International Affairs*); in 2024 Dani Rodrik (and co-author Stephen Walt) wrote "How to construct a new global order " (published in the *Oxford Review of Economic Policy*) and in 2023 Jeffrey D. Sachs wrote "The New Geopolitics" (published in the *Horizons: Journal of International Relations and Sustainable Development*).

For John Ikenberry, liberal democracies are more likely to promote a rules-based international order. Ikenberry was the lead author of the final report of the *Princeton Project* entitled: "Forging A World of Liberty Under Law: U.S. National Security in the 21st Century" (Ikenberry and Slaughter 2006). For Ikenberry, liberal democracies should come together as a club of like-minded countries to advance their interests and the concept of "international liberalism" (Ikenberry 2018). Clubs, forums, and international organizations of like-minded countries, such as the G7 and the OECD, play a crucial role in fostering these alliances among liberal democracies. Building on similar arguments, Ivo Daalder and James Lindsay (both former counsellors under the Clinton administration and with affiliations at the Brooking Institutions) but also the scholar Robert Kagan, called in the early 2000s for an "Alliance of Democracies" based notably on the argument that the functioning of the UN is undermined by non-democratic regimes (Daalder and Lindsay 2004; Kagan and Daalder 2007). Ikenberry considers liberal democracies to be particularly vulnerable to war and interference from others (Ikenberry 2023). He recently called for defending the US legacy in international relations over the last century as a "global balancer" (Ikenberry 2024). In his 2024 article, Ikenberry argued that today's world can be divided into three major blocs, the global West (led by the US), the global East (led by China and Russia) and the Global South (led by India and Brazil), and that the Global West and the Global East will compete for the support of the Global South. For Ikenberry, the multilateral order in the 21st century will be largely defined by this competition between the West (liberal order) and the East (illiberal order).

Dani Rodrik's research has primarily focused on the "Do's and Don'ts" of global governance. Compared with Ikenberry, Rodrik is less concerned with qualifying national governance systems and recognizes "the demand for institutional diversity" (Rodrik 2019). Rodrik focuses on the spheres of responsibility of global governance and mechanisms that are more likely to lead to effective global cooperation. Rodrik promotes the concept of "democracy-enhancing global governance" (DEGG), following Keohane et al. (2009), which he opposes to "globalization-enhancing global governance" (GEGG). For Rodrik, issues such as climate change, pandemics, and the management of GPGs do require some form of global cooperation, yet DEGG would leave most policy domains to the national level, with "global oversight restricted to

procedural safeguards such as transparency, accountability, use of scientific/economic evidence", which are intended to support democratic deliberations (Rodrik 2019). As such, his proposal in "How to construct a new global order" is primarily a procedural one. Rodrik proposes a meta-regime to cluster four types of policies (prohibited actions; mutual agreements; autonomous policy response; and multilateral governance to manage GPGs) and for each cluster of policies, Rodrik offers a process to reach multilateral agreements. He tests his meta-regime on the issues of the Ukraine war and rising political tensions in Taiwan. Rodrik also wrote extensively about industrial and trade policies, as well as how to manage the international spillovers of domestic policies (Rodrik 2004; 2024).

Jeffrey D. Sachs considers that the UN Charter and UN institutions should be at the center of global cooperation to achieve long-term sustainable development. Sachs does not establish clear normative hierarchies between governance and institutional systems, which he considers are the fruit of history, culture, geography, and other factors (Sachs 2012b) but rather focuses on countries' adherence and implementation of the universal principles established in the UN Charter and their support for universally adopted goals for sustainable development. In that sense, Sachs' vision is close to the concept of "peaceful coexistence" among diverse communities and nations, a concept also promoted by the People's Republic of China, to promote peace and sustainable development in the 21st century (Sachs 2024a). Sachs was a strong advocate of the SDGs before their adoption and remains to this date an advisor to the UN Secretary-General on the implementation of the SDGs (as an SDG Advocate). In the "Age of Sustainable Development" (Sachs 2015), has also theorized the division of responsibilities across levels of government (global, regional, national, and local) and the importance of the principles of solidarity and subsidiarity for sustainable development (Sachs 2016). Sachs sees the UN as the central actor for global cooperation and has argued for the UN to be able to collect its own revenues (via the form of global taxation, for example, on financial transactions, shipping, or aviation). Yet, Sachs also recognizes differences in countries' economic and geopolitical weights and the importance of "spheres of security" (Sachs and Mearsheimer 2025). For emerging economies, medium, and small countries, Sachs argues that moderation and neutrality may be the best paths to peace, collective security, and sustainable development (Sachs 2025).

The three scholars share at least three similarities. Firstly, all three agree that certain issues require international mechanisms for cooperation. All three do not see good alternatives to an effective multilateral system; the alternative being more chaos, fragmentation, and conflicts. Secondly, they all consider that multilateralism is currently in crisis owing to the end of the US-led unipolar world. Thirdly, they have all published influential pieces since 2022, summarizing their theoretical and practical views on the future of multilateralism. Yet, they also differ in significant ways. Compared with Ikenberry, Sachs and Rodrik tend to structure their arguments less around the characteristics and superiority of specific national governance systems and more around the collective achievement of positive societal outcomes, namely sustainable development (for Sachs) and decent jobs, industrial policy, and reduced inequalities (for Rodrik). Sachs and Rodrik fundamentally depart from viewing great power competition as a zero-sum game and consider that the UN Charter can continue to play a crucial role in providing the fundamental principles and norms for effective multilateralism. Both Sachs and Rodrik agree that global primacy by one country (or a group of countries) is currently unattainable. Despite these similarities, Sachs and Rodrik have expressed very different practical views on how to solve international crises, notably the war in Ukraine and rising tensions in Taiwan (Rodrik and Walt 2024; Sachs 2022; 2024b).

This Ph.D. thesis aims to contribute to the multilateralist theory by examining the conditions for effective global cooperation in support of sustainable development. We draw on the "4C" classification and the latest literature presented here (and from other global scholars) to build an effective international order, with a specific focus on achieving universally agreed-upon Global Goals for sustainable development. We discuss throughout the various chapters countries' support for UN-based multilateralism, the role of global cooperation and various forms of partnerships as a driver of sustainable development, and the integration of goal-based development into the operations of IOs, focusing on the IMF.

1.3 Global cooperation for sustainable development: Rationale and challenge

1.3.1 The role of partnerships for achieving the goals

From a practical perspective, all 193 UN member states, as recognized via SDG 17 (Partnerships for the Goals), have identified five major contributions of global cooperation to achieving sustainable development. First, through international financing and the benefits of pooling resources to invest in sustainable development. This is at the heart of efforts to reform the so-called Global Financial Architecture (GFA) defined as the complex system of public and private finance that channels the world's savings into global investment (Sachs et al. 2023). Second, through technology transfer and diffusion, including ICT (target 17.8) and environmentally sound technologies (target 17.7). Third, through capacity-building and peer-learning activities, notably for long-term SDG planning. Fourth, through an open and rules-based international trade system as an important source of income for many developing and developed countries. Fifth, through the management of systemic risks, including macroeconomic stability, policy coherence (and the management of negative externalities and spillovers), and strong data and accountability frameworks for sustainable development.

1.3.2 Global systemic risks in the 21st century

The 21st century will be marked by an increased probability of global systemic risks (Galaz et al. 2021; Aven and Zio, 2021; Haass 2022). These can be classified in five broad categories (Elsner et al. 2025):

1. Geopolitical (including nuclear confrontation, geoeconomic confrontation, armed conflicts)
2. Environmental (including extreme weather events, natural resource shortage)
3. Technological (including cyberwarfare, adverse AI outcome)
4. Economic (including financial and sovereign debt crises)
5. Societal (including pandemics, antimicrobial resistance, societal polarization, mass population displacement).

Most of these crises are man-made, including the 2008 GFC, nuclear and military escalation, and, most likely, the COVID-19 pandemic (Committee on Oversight and Government Reform 2024; Stoyan and Chiu 2024).Preventing and responding effectively to these global risks requires global coordination and investments, including climate mitigation and adaptation, which have the potential to significantly disrupt Earth's systems and societies in the coming decades (Sachs, Karim, et al. 2022; Sachs, Lafortune, and Fuller, 2024). The era of the Anthropocene began in the 18th century in the aftermath of the first Industrial Revolution[5], in, which humanity started to have major geological and geobiological impacts on Earth systems. The 2024 Planetary Health Check (Caesar et al. 2024) suggests that six of the nine Planetary Boundaries have been transgressed[6], putting humanity at risk of crossing irreversible environmental "tipping points" and permanent changes to Earth's life support systems, which would have significant impacts on livelihoods.

According to Hansen (2025), global warming accelerated since 2010, and "Earth is now warmer than at any time in the Holocene, the past 11,700 years of relatively stable climate in which civilization developed". he annual funding needs for climate adaptation in developing countries are estimated to range from $160 billion to $340 billion USD by 2030 and from $315 billion to $565 billion USD by 2050, although considerable uncertainties exist in these estimates, which may be significantly higher (UNEP 2022). The largest public opinion survey on climate change published by UNDP in 2024 revealed that 80% of people want more climate action from their country and 86% believe that countries should "work together on climate change even if they disagree on other issues, such as trade or security" (UNDP 2024).

1.3.3 The emerging multipolar world: Changing economic and geopolitical weight of nations

The world has undergone significant shifts in relative economic power over the past forty years and is likely to continue doing so throughout the 21st century, accompanied by changes in geopolitical weight. According to Maddison's database, China, Europe, and India collectively represented between 70% and 75% of the world's global output throughout the 18th century and up to 1820 (Maddison 2007). The first and second opium wars, respectively in 1839 and 1853, and the so-called "unequal treaties" led to a sharp decline in the relative power of China from the second half of the 19th century to the second half of the 20th century, sometimes considered as the "Century of Humiliation" for China (Scott 2008; Krosinsky 2020). The de-industrialization of India from the second half of the 18th century to the mid-1990s is closely related to India's control by Great Britain, first through the British East India Company from 1757 to 1858, then followed by British imperial rule from 1858 to 1947 (Subrahmanyam 2006; Tharoor 2018).

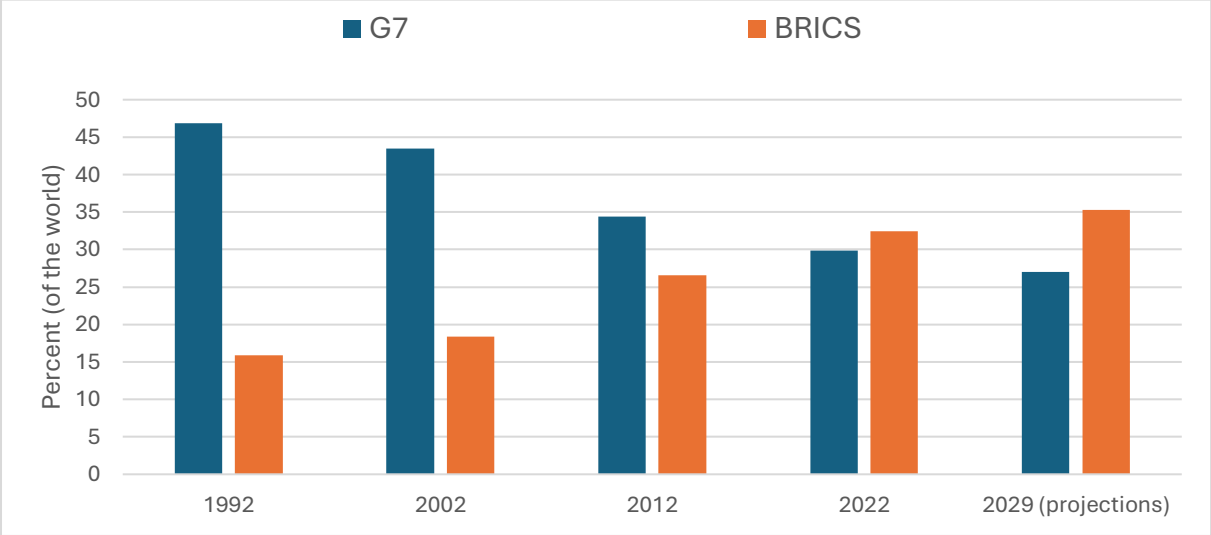
As such, the rise in the relative economic power of China and India, which are projected to become by 2050 respectively the first and second largest economies in the world (Fouré et al. 2012; Fontagné et al. 2022) is to some extent a return to the balance of economic power observed during the 18th century, with

[5] According to Nobel Prize-winning atmospheric earth scientist Paul Crutzen, the Era of the Anthropocene began precisely in 1784 (Crutzen and Stoermer 2021), less than a hundred years after the first application of steam power in coal mining by Thomas Savery. Yet the concept and start date of the Anthropocene remain contested in the literature (Witze 2024).

[6] The six Planetary Boundaries (PBs) that have been transgressed in 2024 are: Climate Change, Biosphere Integrity, Land System Change, Freshwater Change, Biogeochemical Flows, and the Introduction of Novel Entities. Three PB processes remain within the Safe Operating Space: "Ocean Acidification, Atmospheric Aerosol Loading, and Stratospheric Ozone Depletion" (Caesar et al. 2024).

of course now the US and other emerging economies also capturing a significant share of global output. One estimate using the macro econometric model of the Global Economy (MaGE) suggests that China could surpass the US in terms of GDP in volume (constant 2011 USD prices) by 2027 (Fontagné et al. 2022). Expressed in Purchasing Power Parity (PPP), instead of nominal values, and taking into account the local cost of goods and services, China's GDP already surpassed the US. According to IMF data, the BRICS countries now represent a larger share of the world's global GDP (at PPP) than the G7 countries (IMF, 2024). This also marks a return to a stronger alignment between demographics and economics, with China and India being the two most populous countries in the world, each with a population exceeding 1.4 billion (compared to 335 million in the US) (World Bank 2025).

Figure 1.3 GDP based on Purchasing Power Parity (PPP), share of world, G7 versus BRICS, 1992-2029



Note: G7 countries: Canada, France, Germany, Italy, Japan, the United-Kingdom and the United States. BRICS: Brazil, Russian Federation, India, China and South Africa.

Source: IMF, 2024b.

These trends and projections will inevitably continue to shape the nature of global cooperation for sustainable development, including the priorities and operations of IOs. China and India, which in 2024 represent 19.1% and 8.2%, respectively, of the world's GDP at PPP (IMF 2025b), but only hold 6.1% and 2.6% respectively, of the voting rights at the IMF (IMF 2025a). By contrast, the US, which in 2024 represented 15% of the world's GDP at PPP, holds around 16.5% of the voting rights at the IMF, which effectively gives the US veto power on many major decisions, including, for instance, a modification of the IMF charter, which would require 85% of the votes. As the most populous country in the world and a rising economic power, India has been arguing for years that it deserves a permanent seat at the UN Security Council, and these pressures are likely to intensify in the coming decades (Government of India 2024).

1.4 Problem definition and research questions

1.4.1 Main and sub-research questions

According to the lead assessments provided by UN agencies and scientific networks, the international community will fail collectively to implement the 17 SDGs and 169 targets by 2030 (Sachs, Lafortune, and Fuller 2024; UNSD 2024b). In 2024, less than 20% of the targets are on track to be achieved globally, with more than 80% of the targets showing signs of stagnation or even reversal in progress, especially since 2020 (Sachs et al. 2024). While some of the goals, such as the transition to zero-carbon energy systems, necessarily require a longer-term horizon to 2050, there is an overwhelming recognition that progress in achieving the SDGs has been too slow and uneven (Malekpour et al. 2023; Fuso Nerini et al. 2024).

The trends on climate and nature-related goals, including SDG 13 (Climate Action), SDG 14 (Life Below Water), and SDG 15 (Life on Land), but also on SDG 2 (Zero Hunger), SDG 11 (Sustainable Cities and Communities), and SDG 16 (Peace, Justice and Strong Institutions) are particularly alarming. At the same time, numerous studies suggest that the global financing gap to achieving the SDGs represents only a small percentage of global savings and that there are policy and technology pathways to achieve these goals collectively (Gaspar et al. 2019; SDSN and MH 2019; Sachs et al. 2023; UNCTAD 2024).

To frame the main research question, we begin with the normative stance that the UN system and Nation-States must be held accountable for implementing what they all agreed to achieve in 2015 with the adoption of the 2030 Agenda and the SDGs. Considering that the literature does not identify fundamental financial or technological barriers to achieving the SDGs at the global level, this Ph.D. dissertation aims to answer the following overarching research question:

- **Why do most Nation-States individually and collectively have so far failed to implement the Sustainable Development Goals? (Overarching Research Question)**

Our most fundamental hypothesis is that the world is failing to achieve most SDGs not because the goals themselves were poorly designed or because they are impossible to achieve, but largely due to failures in international governance systems and leadership from powerful and influential Nation-States. The goals were adopted by and for Nation-States and Nation-States remain at the heart of the UN system. It is therefore their primary responsibility to scale up and align international financing flows for sustainable development and adopt ambitious and effective long-term policy and investment frameworks to achieve the SDGs.

This Ph.D. dissertation aims to make a primarily empirical contribution to the literature. We aim to provide new empirical methods, databases, and analytics to explore the successes and failures of global and national governance for the SDGs. As such we aim to make a novel contribution to the field of Development Economics and International Political Economy; the latter according to Walzenbach (2022) corresponds to “the study of the reciprocal relationship between politics and economics in the global system […], which builds on some of the insights and the familial frameworks of the various International Relations theories by linking political actors across states to international economic relations”.

To answer the overarching research question, this analysis is divided into four chapters, each of which includes sub-research questions that address specific aspects of the topic. These chapters aim to understand how Nation-States support for UN-based multilateralism can be measured at one point in time and over time; the domestic and international drivers of SDG progress over the period 2015-2023; the steering effect of goal-based development and; how IFIs can better align their operations to achieve long-term sustainable development, focusing more specifically on the IMF Surveillance Mechanism. This Ph.D. dissertation tests the hypotheses that countries' support for UN-based multilateralism can be tracked in a structured and statistically coherent way; that peaceful relationships among nations, multilateral engagement, and fiscal space correlate with SDG progress at the country-level since the adoption of the SDGs in 2015; that the SDGs had discursive *steering effect* at the international and national level; and that despite some progress since 2015, IFIs, including the IMF, still do not incorporate meaningfully all of the dimensions of sustainable development in their operations. The synthesis section summarizes the key findings and discusses their practical implications, including how to strengthen UN-based multilateralism to achieve sustainable development in the 21st century.

1.4.1.1 Measuring countries' support for UN-based multilateralism

The UN Charter, the founding document of the UN, was signed on 26 June 1945, in San Francisco, at the UN Conference on International Organization. At the time, the main purpose of the UN was to provide an effective global mechanism to promote peace and collaboration across the 51 founding UN Member States in the aftermath of the Second World War, which had an estimated death toll of around 75 million people across all continents and collapsed infrastructure. The US, under the leadership of President Roosevelt and its allies, played a major role in shaping the UN system, building on the lessons learned from the failures of the League of Nations, which was created in 1920.

Eighty years later, multilateralism faces strong headwinds and is often considered fragmented or even in crisis (Jones and Malcorra 2020; Gowan 2022; Puglierin 2023). At the same time, considering the global nature of today's challenges, including climate change, global cooperation and UN-based multilateralism must underpin any effort to move towards the triple bottom line of sustainable development (social, economic, and environmental) and meet the needs of future generations (Brundtland 1987; Jeurissen and Elkington 2000; Sachs et al. 2019). Keohane (1990) defines multilateralism as "the practice of coordinating national policies in groups of three or more states, through ad hoc arrangements or using institutions." The international community relies on "rules and norms to manage flows of people, goods, and investment, and to regulate the use of force among countries" (Woods 2023). Traditionally, leading realist scholars tend to discuss the false promises of international institutions (Mearsheimer 1994). In contrast, leading liberal scholars, including Keohane (1989) and Ruggie (1992), argue that, under certain conditions, multilateralism and international norms and institutions can facilitate global cooperation by enshrining commitments to diffuse reciprocity and peaceful dispute settlement. Since 1945, UN-based multilateralism is the most comprehensive form of multilateral arrangement bringing together, as of 2025, 193 member states.

Nation-States continue to hold the primary responsibility for promoting effective UN-based multilateralism. The UN is based on the principle of sovereign equality of all its members. Each country has one vote at the UN General Assembly. Nation-States are responsible for signing, ratifying, and implementing

international treaties and conventions. The 6th edition of the report "The UN in the 21st Century" recalls that "[…] the UN is the creation of its member states; it is they who decide what it is that they will allow this organization to do and what resources – financial and otherwise – they will provide. Thus, the UN is very much subject to the winds of world politics and the whims of member governments" (Mingst, Karns, and Lyon 2022). Nation-States should, therefore, be accountable for promoting UN-based multilateralism and making global cooperation fit for 21st century challenges. Yet, despite the vast literature on multilateralism and global cooperation, to our knowledge, there is no comprehensive, structured, and quantitative assessment of countries' support for UN-based multilateralism.

The absence of a comprehensive measure of countries' support for UN-based multilateralism generates the first research question:

Research Question 1: Which countries and regions are most and least committed to UN-based multilateralism?

Several sub-research questions are considered. They include (i) How can countries' support for UN-based multilateralism be measured? and (ii) How has the support of major countries for UN-based multilateralism evolved over time? To answer these questions, we use the UN Charter as our conceptual framework, especially Article 1, and several databases made available by the United Nations, notably to track ratification of major international treaties, votes aligned with the international majority at the UN General Assembly, memberships in international organizations, and payment of financial dues to the UN. We leverage databases provided by other organizations to track countries' commitments to achieve peace and demilitarization, use of Unilateral Coercive Measures (UCMs), and for OECD/DAC members, the share of GNI devoted to official development assistance. We test how our Index correlates with other measures that aim to capture related concepts (for instance, countries' diplomatic size) and countries' structural characteristics (size, structural vulnerability, and others). We finally explore the evolution of countries' support for UN-based multilateralism by examining specific indicators over the period 1950-2022, focusing on eight large countries from different continents: Brazil, China, France, India, the Russian Federation, Saudi Arabia, the United Kingdom, and the US.

Chapter 2 makes a new empirical contribution to the literature by providing a new database and statistical analyses. By proposing a new monitoring framework to gauge countries' efforts to promote UN-based multilateralism and discussing the implications of our findings for the management of GPGs, we also make a theoretical contribution to the field of International Political Economy, and more specifically the literature on the management of Global Public Goods (GPGs).

1.4.1.2 Exploring the drivers of SDG performance and progress over the period 2015-2023

Failures to prevent and respond effectively to multiple and simultaneous global crises certainly played a role in explaining the lack of SDG progress globally, especially since 2020 (Sachs, Karim, et al. 2022; Sachs, Lafortune, and Fuller 2024). Yet, progress was already too slow even before the COVID-19 pandemic hit (Sachs, Lafortune, et al. 2023).

At the same time, the global average SDG progress also masks important disparities in progress across regions, countries, and indicators. Recent studies have highlighted progress made in certain regions and on specific indicators, primarily related to basic access to infrastructure and services (Kharas et al. 2024). Despite the large body of literature and international reports on SDG monitoring, pathways, and synergies, to our knowledge, no comprehensive empirical analysis is available that evaluates the drivers of SDG progress over the period 2015-2023.

The second research question considered in this thesis is therefore the following:

Research Question 2: What are the drivers of SDG progress at the country-level over the period 2015-2023?

We consider the following sub-research questions: (i) Which are the countries and regions that currently perform best on the SDGs (at one point in time), including their international dimensions (or so-called international spillover effects)? And (ii) Which countries, regions, and indicators have progressed the fastest over the period 2015-2023 (trend analysis)?

Our study aims to fill this knowledge gap by proposing a method to empirically explore some of the drivers of SDG progress at the country level over the period 2015-2023. We notably leverage the peer-reviewed and statistically audited SDG Index and Dashboards database to create a headline SDG Index, which maximizes data coverage over time and country coverage while being very strongly correlated with the original full SDG Index.

Our study includes a specific focus on the role of fiscal space and multilateral engagement, including peaceful relationships among nations, participation in VNR processes, ratification of UN treaties, and the impact of Unilateral Coercive Measures (UCMs). We also discuss the implications of our findings more specifically for developing countries, which tend to be more affected by limited access to affordable and long-term private and public capital to invest in the SDGs. Ahead of important international summits on climate and international financing, and as the world will soon start negotiating the post-2030 agenda, we hope that our analysis can provide relevant insights to reform the GFA and strengthen the means for implementation to achieve sustainable development by 2030 and beyond.

1.4.1.3 The *steering effect* of goal-based development: an empirical global assessment of SDG commitment and performance

There is a debate among scholars and practitioners around the so-called *steering effect* of goal-based development. This debate emerged during the Millennium Development Goals (MDGs) and continued in the context of the SDGs. The debate is whether or not goal setting has any impact on development outcomes (compared, for instance, with projected business-as-usual scenarios and the continuation of the past growth rate). Empirically, this is very challenging to evaluate since there is no counterfactual. Comparing development outcomes across periods, such as two 15-year periods, may not be the best way to establish a meaningful causal relationship, as external events and multiple crises, independent of the goal-setting process, may directly affect sustainable development outcomes.

Yet, while establishing a causal relationship is challenging, there is a strong case for developing rigorous methods to gauge the discursive and policy effects of the SDGs and evaluate whether, on average across regions and countries, stronger SDG commitments tend to be associated with higher SDG performance at one point in time, as well as over time. Public and private investors, including impact investors, as well as alternative sovereign credit risk agencies, are interested in understanding whether the policy landscape might be conducive to future SDG impact. More broadly, there is an interest from scholars and practitioners to understand whether the adoption of the SDGs had an effect on discourse and strategic priorities, but also whether they penetrated public management practices and procedures in a context where the international community might soon begin negotiations that may lead to a post-2030 global agenda for sustainable development.

The limited empirical evidence available at the global level on SDG Commitment and its relationship with SDG Performance leads to our third research question:

Research question 3: Did the SDGs have a steering effect on discourse, policies, and performance on sustainable development?

We make three main hypotheses. First, that high SDG performance tends to be associated with stronger SDG commitment characterized by more integrated implementation of the SDGs in various public management practices and procedures. Second, that the COVID-19 pandemic in 2020 and rising geopolitical tensions since 2022, including the war in Ukraine, led to a decline in the discursive steering effect of the SDGs in the G20 and in Europe. Third, that emerging technologies (including Artificial Intelligence and advanced text-mining techniques) provide new opportunities to gauge the SDG steering effect on discourse and policies at a single point in time and over time and can help fill persistent data gaps on the means for SDG implementation.

Chapter 4 aims to provide four novel contributions to the literature. First, to demonstrate that high SDG performers also tend to care about the SDGs, and the 2030 Agenda, as demonstrated by the high level of SDG integration in their public management practices and procedures. Second, to provide new analyses of the impact of multiple crises on the steering effect of goal-based development on discourse and strategies. Third, to identify the best practices that emerged over the period of 2015-2025 on SDG governance in developed and developing countries, including SDG integration in budgeting, and long-term investment frameworks. Fourth, to identify persistent data and knowledge gaps regarding the means of implementation for the SDGs and how emerging AI-trained tools and advanced text mining methods can help improve the understanding of SDG commitments and the policy landscape for sustainable development at multiple levels.

1.4.1.4 The IMF surveillance mechanism and the SDGs

At the global level, the IMF plays a key role in providing policy advice and technical support to promote sustainable economic growth and macroeconomic stability. Since the 2008 GFC and over the past decade, with the adoption of the SDGs, 2030 Agenda, and Paris Climate Agreement in 2015, the IMF has expanded its scope of work into a broader range of substantive topics (Georgieva and Weeks-Brown 2023). There is growing evidence that new and emerging risks must be considered by IFIs, alongside traditional financial and institutional risks. These include pandemics, as well as climate and nature-related

risks. Over the past twenty years, climate-vulnerable emerging market and developing economies have lost an estimated $525 billion USD to extreme weather events, accounting for around one-fifth of their collective GDP (V20 2022).

Since 2015, the IMF has published thematic research papers and developed new lending tools to support long-term sustainable development. In 2019, the Fiscal Affairs department published the first-of-its kind SDG costing study focusing on 155 countries to estimate the SDG financing gap (Gaspar et al. 2019). In 2022, the IMF introduced the Resilience and Sustainability Facility (RSF) with 20-year maturity and a 10½ -year grace period during which no principal is repaid to provide "affordable long-term financing to countries undertaking reforms to reduce risks to prospective balance of payments stability, including those related to climate change and pandemic preparedness" (IMF 2022). In 2023, the IMF published a set of guidelines for the issuance of sovereign ESG Bonds, focusing on green, social, and sustainability-linked bonds (Lindner and Chung 2023). In April 2024, the IMF released a set of guidelines on how to use its SDG Financing Tool (SDG-FiT) to assess the macroeconomic coherence of countries' SDG financing plans (IMF 2024a).

Yet the integration of broader sustainable development issues in the IMF's formal surveillance mechanisms remains largely undocumented. Each year, the IMF ensures multilateral surveillance of the global economic system via the World Economic Outlook (WEO), the Global Financial Stability Report (GFSR), and the Fiscal Monitor. The IMF also provides bilateral surveillance and policy advice to its member countries, primarily through Article IV consultations and the Financial Sector Assessment Program (FSAP). The IMF's surveillance processes can significantly influence countries' macroeconomic policies, including fiscal and tax policies, debt management, and public sector provision of key services (Hopkins 2018).

The absence of such a comprehensive assessment leads to our Research Question 4:

Research Question 4: To what extent has the IMF integrated all the dimensions of sustainable development in its global and bilateral macroeconomic surveillance system?

For the first time, this chapter (5) assesses whether the IMF surveillance mechanism has intensified its focus on long-term, sustainable development issues, utilizing the SDGs as an overarching framework. We focus on both multilateral and bilateral surveillance over the period 2015-2024. To our knowledge, this is the first time a systematic assessment of SDG integration in the IMF's surveillance system has been conducted, focusing on the economic and climate dimensions of the SDGs, as well as social, institutional, and nature-related risks. The study uses advanced text mining techniques to analyze more than 1300 IMF documents (representing more than 100,000 pages). It also provides specific recommendations to strengthen the integration of the SDGs, notably in the indicator framework used in Article IV consultations. This analysis aims to make a new theoretical and practical contribution to strengthening the surveillance of systemic risks at both the global and national levels. The chapter makes an empirical and theoretical contribution to the literature on the political economy of Inclusive Wealth (IW) and sustainable development at large. Conceptually, it argues that SDG analytical tools can be used to establish bridges between the IW and SDG frameworks by clustering SDGs into sub-categories (or various forms of capital assets).

1.4.2 Research methods

This Ph.D. dissertation employs a mixed-methods empirical research approach. While it aims to make a novel contribution to the field of international political economy and sustainability research, it builds on the literature and methods provided by multiple disciplines, including development economics, international relations, political science, environmental science but also philosophy, history, and law. As widely recognized in the literature, interdisciplinary research is a necessity in the field of sustainable development, as it accurately addresses the complexity, knowledge gaps, and human and behavioral dimensions of sustainable development (Berkes and Folke 2000; Robert et al. 2005; Sachs 2015). Numerous research centers have emerged over the last twenty years to advance interdisciplinary research in sustainable development, including the Earth Institute (Columbia University), the Stockholm Resilience Centre (SEI), and the Copernicus Institute of Sustainable Development (Utrecht University), among others.

Chapter 2 introduces the conceptual framework, database, and the Index of Countries' support for UN-based multilateralism, which uses international standards to build a valid and sound composite index. The method builds notably on the steps identified in the OECD-JRC handbook for constructing sound composite indices (OECD and JRC 2008). The data extraction was achieved via web scraping, desk research and extractions from third-party websites. Correlation analysis and Principal Component Analysis (PCA) were performed to assess how our new construct correlates with related constructs (such as constructs that aim to capture the concept of a "Good Country" or diplomatic size) but also to inform the weighting scheme. Longitudinal trend data were compiled using historical databases to evaluate how countries' support for UN-based multilateralism evolved over time.

Chapter 3 empirically and quantitatively explores some of the potential drivers of SDG progress at the country level over the period 2015-2023. To minimize missing data bias and maximize country coverage, a headline SDG Index (SDGi) was created, which is highly correlated (collinear) with the main full SDG Index. Correlation analysis was performed to empirically identify some variables that correlate with SDGi performance. Several Ordinary Least Squares (OLS) regressions were then performed using the growth rate of the SDGi over the period 2015-2023 to understand, in particular, how variables related to fiscal space, multilateral engagement, and peace correlate with SDG progress over time. We insert interaction effects in the OLS regressions to explore more specifically the strength of the correlation when focusing on developing countries (LICs, LMICs, UMICs) versus developed countries (HICs). We test the robustness of our results by conducting quantile regression analysis, which is more robust to outliers, and confirm via this procedure that the coefficients remain relatively stable compared to the OLS regression.

Chapter 4 combines empirical quantitative research methods and insights from qualitative case studies focused on Nation-States that have performed well on the SDGs or have made significant progress in sustainable development since 2015. The empirical part builds on a conceptual framework to gauge SDG commitment, a comprehensive database to evaluate SDG Commitment with indicators that capture political leadership, bureaucratic leadership, engagement with the UN system, and civil society engagement with the SDGs. The database covers 75 countries and the EU. We then compare the average SDG Commitment between two groups: high SDG performers and other countries. We also leverage emerging technologies to assess the SDG discursive effect in G20 communiqués and declarations and

in the EU's leadership strategic orientations (2019-2024 versus 2024-2029). The qualitative sections focus on four countries and entities that perform particularly well in achieving the SDGs and aim to understand how these countries have approached the governance of the SDGs since 2015. We focus on Finland (which ranks number one in the SDG Index), the European Union (also a leader in international SDG benchmarks), and two countries that have showcased rapid progress on the SDGs since 2015: the Republic of Benin (in Sub-Saharan Africa) and the Republic of Uzbekistan (in Central Asia). The qualitative analysis incorporates other elements, including debt levels, debt burden, and certain structural characteristics.

Chapter 5 employs advanced text mining methods to assess the alignment of the IMF surveillance system, both globally and bilaterally. We first extracted 1,363 IMF surveillance documents prepared between January 2015 and September 2024. These include 57 global surveillance documents (Fiscal Monitor, Economic Outlook, and Global Financial and Stability Report), 1,046 bilateral Article IV Consultations and 260 bilateral Financial Sector Assessment Program (FSAP). We then leverage the SDG Mapper, a web-based application on the KnowSDGs platform (https://knowsdgs.jrc.ec.europa.eu) developed by Borchardt et al. (2023) to automate the analysis of large documents using text mining and natural language processing techniques. To simplify the interpretation of the results we present results clustered in five major categories (adapted from the classification used in Jacouton et al. 2022). Economy, finance & infrastructure (SDG 8, 9, and 10); Social (SDG 1, 2, 3, 4, 5, 7, and 11); Climate (SDG 12 and 13), Nature (SDG 6, 14 and 15) and Institutions and Partnerships (SDG 16 and 17). We test the robustness of our results against the SDG Prospector, developed by the Agence Française de Development (AFD), which uses deep learning techniques to analyze the information contained in any written document.

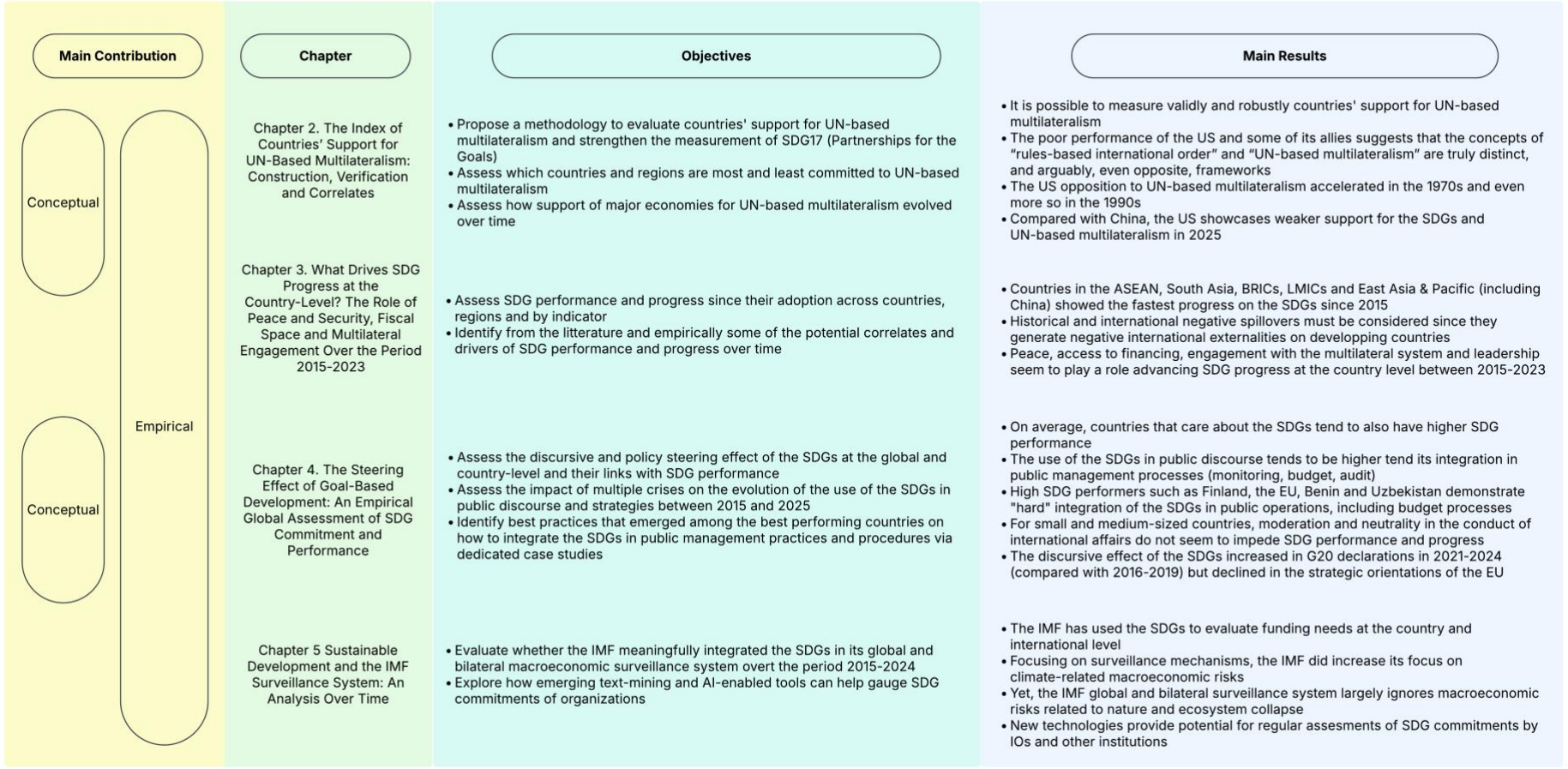
In addition to the theoretical contribution, we also aim to build on our findings to make practical recommendations to strengthen global cooperation for sustainable development. In each chapter, in addition to the theoretical and empirical contributions, we discuss in detail the policy implications of our research and potential solutions to address the identified problems and gaps. This Ph.D. dissertation builds on numerous formal and informal exchanges with practitioners in IFIs, the UN and national and subnational governments that took place for instance at the "EESC Seminar on Europe's Future and the Sustainable Development Goals" (Brussels, January 2024), the "Pontifical Academy of Social Sciences Workshop on the Summit of the Future" (Vatican City, April 2024), the "Pontifical Academy of Social Sciences UN Finance for Development Summit" (Vatican City, April 2025) and the "Columbia University Pre-Summit of the Future Academic Seminar" (New York, September 2024) among others. Preliminary and advanced findings were presented and discussed at these events, notably to strengthen their policy relevance. The case studies discussed in Chapter 4 build on regular and direct personal experience with each of these countries since 2021.

1.4.3 Structure of the Ph.D. dissertation

This Ph.D. dissertation is therefore structured as follows. Chapter 2 introduces the Index of Countries' Support for UN-Based Multilateralism, identifies correlates and discusses its implications for advancing global cooperation for sustainable development. Chapter 3 presents the methodology and offers new insights into countries' SDG performance and progress, highlighting the importance of peace, multilateral

engagement, and fiscal space, particularly in developing countries. Chapter 4 discusses the SDG steering effect at the global and country-level and explores the relationship between SDG Commitment and Performance using quantitative and qualitative research methods. Chapter 5 employs advanced text-mining approaches to investigate the alignment of the IMF's surveillance mechanism, focusing on five clusters of SDGs (economy, social, climate, nature, and institutions), and identifies persisting gaps, including the surveillance of nature-related macroeconomic risks. Chapter 6 synthesizes the answers to the research questions, discusses the policy implications of our findings, and outlines the limitations of our research and areas for future research.

Figure 1.4 Ph.D. Dissertation Overview (Diagram)



Source: Author

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Chapter 2 The Index of Countries' Support for UN-Based Multilateralism: Construction, Verification and Correlates

> "The world is very different now. For man holds in his mortal hands the power to abolish all forms of human poverty and all forms of human life". President **John F. Kennedy's, "**Inaugural Address", 1961
>
> "How [the United Nations'] potentialities are used depends first and foremost on the moderation and good sense of its members, not on its precise institutional machinery. The prime need today as perhaps never before, therefore, is for prudent and yet courageous statesmanship." **Geoffrey Goodwin**, Professor and Diplomat, In "Britain and the United Nations", 1957

Abstract

Global cooperation and a robust United Nations system are essential for implementing shared global goals, such as the Paris Climate Agreement and the Sustainable Development Goals. For the first time, we present a new Index of Nation-States' Support for UN-Based Multilateralism (UN-Mi), based on the principles established in the UN Charter in 1945. We use six headline indicators and follow best practices to verify the statistical validity and robustness of our construct. Our findings suggest that there are significant differences in countries' support for UN-based multilateralism. Some large economic powers showcase low and declining support for UN-based multilateralism. The poor performance of the United States (US) and some of its allies suggests that the concepts of "rules-based international order" and "UN-based multilateralism" are truly distinct, and arguably, even opposite, frameworks. Our statistical analysis confirms that the UN-Mi captures something different than other existing constructs that aim to capture, for instance, the size of diplomatic networks or people's confidence in the UN.

Keywords: Economic and Environmental Cooperation, United Nations, Votes, Treaties, Unilateral Coercive Measures, Military Expenditure, Financing

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The supplementary information is accessible here: https://direct.mit.edu/asep/article/23/3/1/124683/The-Index-of-Countries-Support-for-UN-based
The full dataset and data platform are accessible here: https://sdgtransformationcenter.org/

2.1 Introduction

In 2024, multilateralism faces strong headwinds. It is often considered fragmented or even in crisis (Jones and Malcorra 2020; Gowan 2022; Puglierin 2023). Recently, the international community failed to prevent and respond effectively to the COVID-19 pandemic (Sachs et al. 2022). Global diplomacy, including via the United Nations (UN), seems unable to resolve many of the ongoing military conflicts, including in South Sudan, Yemen, and, recently, in Ukraine or Gaza. Six of the nine planetary boundaries have been breached and, collectively, humanity fails to safeguard Global Public Goods (GPGs) , including the biological and physical resilience of Earth's physical systems through more effective global governance mechanisms (Biermann et al. 2022; Richardson et al. 2023; Ishii et al. 2024). The Global Financial Architecture (GFA) is failing to channel global savings into investments at the necessary pace and scale to achieve the Sustainable Development Goals (SDGs), and the Paris Climate Agreement, especially in the poorest nations (Sachs, Schmidt-Traub, and Lafortune 2020; Sachs et al. 2023; Sachs et al. 2023). Some scholars, national leaders, and international practitioners have called for major reforms of the UN Security Council (Wouters and Ruys 2005; Dabhade 2022), Bretton Woods Institutions (Gallagher et al. 2023; Espinosa 2023), and some recently proposed new global governance frameworks and paradigms to protect planetary commons and strengthen the UN system (Rockström et al. 2024; d'Orville 2023).

The idea that multilateralism is in crisis is not new. In the context of the 40th anniversary of the UN in the 1980s, a series of lectures and workshops led by the Institute of Social Studies in the Netherlands resulted in the publication of a book titled "The UN Under Attack" (Harrod and Schrijver 1988). In his preface to this book, Professor and Sir Shridath Ramphal, who served a few years later as one of the Co-Chairs of the UN Commission on Global Governance, writes:

> "The paradox – and the tragedy – of recent times is that even as the need for better management of relations between nations and for a multilateral approach to global problems has become more manifest, support for internationalism has weakened – eroded by some of the strongest nations whose position behoves them to be at its vanguard and who have in the past acknowledged that obligation of leadership. This is most true, of course, of the United States, whose recent behaviour has served actually to weaken the structures of multilateralism, including the United Nations itself."

Considering the *global* nature of today's challenges – including climate change – effective mechanisms for *global* cooperation must underpin any effort to move towards the triple bottom line of sustainable development – social, economic, and environmental – and meet the needs of future generations (Brundtland 1987; Jeurissen and Elkington 2000; Sachs et al. 2019). Keohane (1990) defines multilateralism as "the practice of coordinating national policies in groups of three or more states, through ad hoc arrangements or using institutions." The international community relies on "rules and norms to manage flows of people, goods, and investment, and to regulate the use of force among countries" (Woods 2023). Traditionally, leading realists' scholars tend to discuss the false promises of international institutions (Mearsheimer 1994). In contrast, leading liberal scholars, including Keohane (1989) and Ruggie (1992), argue that, under certain conditions, multilateralism and international norms and institutions can facilitate global cooperation by enshrining commitments to diffuse reciprocity and peaceful dispute settlement.

This paper focuses on the specific form of multilateralism at the center of international law – UN-based multilateralism – and aims to evaluate, in a structured and quantitative way, the efforts made by Nation-States to promote or undermine UN-based multilateralism based on the principles set in the UN Charter in 1945. There are other forms of multilateralism that emphasize notably the role of *Clubs, Concerts, and Coalitions* (Stewart 2023). Yet we build on the hypothesis that adherence to the UN Charter and engagement with the UN system, alongside other forms of bilateral and regional partnerships, matter to advance effective multilateral cooperation for sustainable development (Sachs 2015; Sachs et al. 2024). There are now multiple datasets, structured and unstructured, that can be leveraged to evaluate empirically and quantitatively countries' support for UN-based multilateralism. For the first time, this paper presents a new Index of countries' support for UN-based multilateralism (UN-Mi) using six headline indicators – (i) UN treaty ratification, (ii) votes aligned with the majority at the UN General Assembly, (iii) membership in UN organizations, (iv) participation in conflicts and militarization, (v) use of unilateral coercive measures against other Nation-States and (vi) contribution to the UN budget & international solidarity – and discusses its implications in the era of long-term global commitments for sustainable development. More specifically, it aims to answer the following three questions:

1. How can countries' support for UN-based multilateralism be measured?

2. Which countries and regions are most and least committed to UN-based multilateralism?

3. How has the support of major economies for UN-based multilateralism evolved over time?

While other country-level studies have focused on related concepts – such as the size of diplomatic networks, people's confidence in global cooperation and the UN system, or SDG implementation – it is, to our knowledge, the first attempt to quantify in a structured and quantitative way, countries' support for UN-based multilateralism. A sound, structured, and evidence-based diagnosis of countries' support for UN-based multilateralism is crucial for holding governments accountable for adhering to the principles of the UN Charter and informing global debates on how to strengthen and reform the UN system to address the challenges of the 21st century.

Overall, our findings suggest that most of the world population lives in a country where support for UN-based multilateralism is high and has increased compared with the early years of the UN. However, there are significant differences across countries and indicators with some of the greatest powers showcasing low and declining support for UN-based multilateralism. The poor performance of the US and some of its allies suggests that the concepts of "rules-based international order" (RBIO) and "UN-based multilateralism" are truly distinct, and arguably, even opposite, frameworks. Our statistical analysis confirms that the UN-Mi captures something different than other existing constructs that aim to capture, for instance, the size of diplomatic networks or people's confidence in the UN. We hope our findings can provide useful evidence and possibly serve as an impetus to strengthen the UN system and address the shared global challenges of our time.

2.2 Literature review

In economics, the Global Public Goods (GPGs) literature discusses the properties and mechanisms for collectively managing GPGs (Hume 1739; Samuelson 1954; Stiglitz 2006; 2006; Sandmo 2006; Gazier and Touffut 2006; Chin 2021; Zajc Kejžar and Ponikvar 2023). Traditionally, GPGs have two critical properties: (i) non-excludability – the goods are available to all, and (ii) non-rivalry – the goods can be consumed over time without diminishing the benefits for other consumers. Stiglitz (1995) identifies five such GPGs: international economic stability, international security (political stability), international environment, international humanitarian assistance, and knowledge. The GPGs literature recognizes the role of international cooperation and multilateralism in managing such GPGs (Jenks 2012; Devarajan 2022; Kaul 2022; Rodrik and Walt 2024). Jenks (2012) argues that the UN Charter itself can be conceived as a GPG and describes how the UN's contribution to the production of GPGs evolved over time.

One branch of the Multilateralist theory in the field of geopolitics argues that the principles and norms established in the UN Charter and treaties are critical for effective global cooperation. According to Sachs, "only global cooperation and multilateralism, organized around UN institutions" can effectively safeguard GPGs and protect humanity from "war, dangerous technologies, or human-induced climate change" (Sachs 2023). We adhere to this theory, and since Nation-States are at the heart of the UN system (they ratify treaties and vote at the UN General Assembly), we aim to understand how they promote UN-based multilateralism. Our focus on UN-based multilateralism is distinct from other conceptual alternatives, such as the "rules-based international order" (RBIO). Concepts like RBIO, used notably in the National Security Strategy of the United States (White House 2022), and primarily by other Western countries, have never been explicitly defined (Talmon 2019; Vylegzhanin et al. 2021). Some argue that RBIO might prioritize the interests and values of specific nations or groups of nations over international law and treaties, and be at the expense of GPGs (Dugard 2023; Congyan 2023). Many countries promote the "international law-based international order" (ILBIO) based on the UN Charter, international law, and UN institutions, and crucially on the Doctrine of Non-Intervention in the internal affairs of other nations (Congyan 2023).

A substantial body of literature exists that seeks to assess the effectiveness of international law, UN institutions, and global cooperation. Both the Index of Multilateralism (International Peace Institute and Institute for Economics and Peace 2022) and the Global Solidarity Report (Global Nation 2023) usefully explore the state of multilateralism, focusing on the world as one single observation but do not provide overall results country-by-country. The OECD pioneered groundbreaking work to evaluate the effectiveness of international organizations (OECD 2016; 2019; 2021), and various studies have analyzed the population's support for global cooperation and the UN, using household survey data (Torgler 2008; Trithart and Case 2023; Garton Ash et al. 2023).

Some initiatives track specific aspects of Nation-States' multilateral behavior. The SDG Index measures countries' progress towards achieving the UN SDGs, primarily using outcome statistics (Schmidt-Traub et al. 2017; Lafortune et al. 2018; Sachs et al. 2023). To track SDG 17 (Partnerships for the Goals), the authors of the SDG Index use indicators of domestic resource mobilization, international tax cooperation (SDG 17.1), or statistical performance (SDG 17.18). Bibliometric analysis has also been used recently to assess the impact of multiple crises on achieving the global goals (Leal Filho et al. 2023). Other initiatives measure the size of diplomatic representation (Lowy Institute 2021), efforts to promote peace and demilitarization (IEP 2022), trade openness (UNCTAD 2023), or countries' positive and negative spillovers

(Anholt 2021; SDSN et al. 2021; Lafortune et al. 2021; Ishii et al. 2024). For decades, scholars have analyzed voting patterns at UNGA primarily to identify coalitions, alliances, and blocs on specific international political issues (Ball 1951; Lijphart 1963; Dreher et al. 2006; Voeten 2012; Bailey et al. 2017). Scholars have also looked at the status of treaty ratification across country groups, for instance, recently across Asian sub-regions (Le et al. 2023; Le and Ho 2024).

Good data and clear metrics are critical for establishing a fair diagnosis of countries' intentions to engage with the UN, understanding the drivers of countries' support for UN-based multilateralism, and strengthening the functioning of the UN. Yet, none of these initiatives tracks countries' support for UN-based multilateralism in a universal, structured, and quantitative way. Building on Keohane's definition of multilateralism, we define UN-based multilateralism as *the practice of coordinating national policies following the values and procedures of the United Nations epitomized by Article 1 of the UN Charter*. Our goal is to capture *intentionality* to engage with UN-based multilateralism. Other initiatives track in various ways different aspects of the *implementation* of UN treaties, including diverse aspects of the UN Declaration of Human Rights (1948), such as health and education outcomes (WHO 2024; UNESCO 2023), or freedom of speech (Reporters without borders 2024), among others.

2.3 Conceptual framework and method summary

There is no single indicator that can comprehensively capture countries' support for UN-based multilateralism. Although they have well-known weaknesses, composite indices that build on a combination of indicators can help "synthesize complex information into a single number and may be more effective in stimulating public debates than a large number of individual scores which could result in cherry-picking" (Schmidt-Traub et al. 2017). As emphasized by the UN Statistics Division (UNSD) "A long list of indicators is neither communicable nor effective in galvanizing public support" (UN Statistics Division 2015). As presented in the Annex (2.7), we followed the steps described in the JRC and OECD handbook to design a sound composite index (OECD and JRC 2008).

Our conceptual framework for measuring countries' support for UN-based multilateralism is Article 1 of the UN Charter and its four paragraphs. These define the core purposes of the UN. As such, our conceptual framework is different and narrower than other initiatives that aim, for instance, to measure global solidarity at large (Global Nation 2023), or the broader concept of a "Good Country" (Anholt 2021). Building on UNSD (UN Statistics Division 2015), we identified clear criteria for the indicator selection. Our objective is to capture overall engagement with UN-based multilateralism, rather than sectoral policy engagement, for instance, in international trade, fiscal, migration, environment, health, or education policy.

The selection of the indicators was based on desk research, expert judgment, and public targeted consultation. Figure 2.1 presents our conceptual framework, while the Annex (2.7) provides further details on the indicator selection, descriptive statistics, and data sources. We used five main criteria for selecting the indicators: (1) relevance, (2) country coverage, (3) time coverage, (4) methodological soundness, and (5) limited in number. The multivariate analysis confirmed the absence of collinearity across the indicators selected. Most indicators correlate positively with each other. The results of the multivariate analysis and expert judgement were used to assign weights. The results of the sensitivity analysis suggests that our

overall construct is fairly robust to changes in the aggregation and weighting system especially at the top and bottom of the distribution although some country scores in the middle of the pack can be more sensitive to methodological choices as presented in the supplementary information (URL link provided after the abstract). We assess countries' support for UN-based multilateralism at one point in time (2023 or the closest available year), and over time (1950-2023). A more comprehensive list of indicators that were considered is available in the supplementary information, including reasons for their exclusion from the UN-Mi. The Annex describes how the indicators were treated, transformed, and aggregated into a composite score from 0 (low country support for UN-based multilateralism) to 100 (high country support for UN-based multilateralism). We briefly describe below the rationale and scope of each indicator selected:

- *Percentage of UN Treaties ratified*: The preamble of the UN Charter calls on all UN member states "to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained". This indicator considers all Conventions, International Conventions, and Agreements adopted by the United Nations from 1945 to 2023, including those adopted before 1945 that were later added to the UN Treaty system. It excludes Protocols, Optional Protocols, and Amendments, as well as Conventions that were later terminated or only apply to a small number of countries. One hundred and fifty-two instruments were initially considered. To focus on the "major" UN treaties, we retained 59 UN instruments adopted by more than half of the UN member states. The signature of a treaty is not legally binding, whereas ratification (or acceptance, accession, definitive signature, and succession) is legally binding. The data were obtained from the UN treaty database via Python web scraping.

- *Percentage of United Nations General Assembly (UNGA) votes with the international majority*: Chapter IV of the UN Charter describes the role and function of UNGA. UNGA is the main decision-making body of the United Nations. This indicator considers 5,256 UNGA resolutions with a recorded vote since 1945. It establishes, over the period 2018-2022, the percentage of time that each UN member state voted with the simple international majority (not weighted by population). For each resolution, UN member states can vote "Yes", "No", abstain, or be absent. In many of the cases (98% or more) the majority vote was a "Yes". The data were obtained from the UN digital library via Python web scraping.

- *Membership in UN Organizations & Agencies:* Chapter IX of the UN Charter describes the role of specialized agencies in fostering "International Economic and Social Cooperation". We tracked the status of UN membership of all UN member states as of February 1, 2023, for 24 UN organizations and agencies covering global cooperation on economic, trade, social, and environmental issues, namely: the six UN funds and programs (UNDP, UNEP, UNFPA, UN-HABITAT, UNICEF, and WFP) the 15 specialized agencies (FAO, ICAO, IFAD, ILO, IMF, IMO, ITU, UNESCO, UNIDO, UNWTO, UPU, World Bank Group, WHO, WIPO, WMO), as well as three other UN bodies— UNCTAD, UNFCCC, and WTO). The data were obtained through desk research on the web portals of individual organizations and agencies.

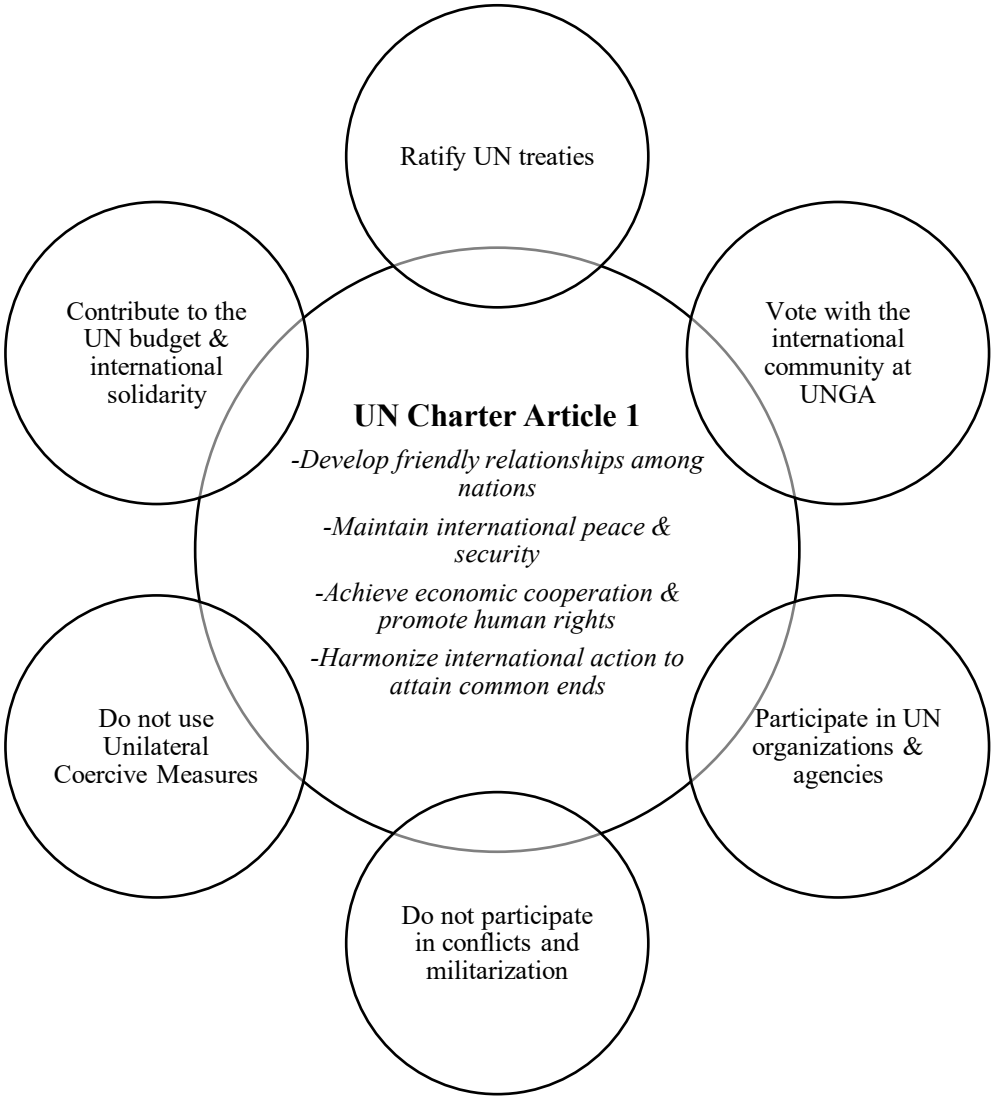
- *Participation in conflicts & militarization*: This indicator captures countries' efforts to promote and preserve peace, which is at the heart of the UN Charter. It builds on data provided by the Global

Peace Index (GPI) 2023 (compiled by the Institute for Economics and Peace) and is computed as the simple average of GPI Pillar 1 (Ongoing domestic & international conflict) and Pillar 2 (Militarization). Comparable data on military expenditure as a percentage of GDP and the number of armed service officers per capita were gauged, as were the financial contributions to United Nations peacekeeping missions.

- *Use of Unilateral coercive measures (UCMs):* Several UN resolutions stress that unilateral coercive measures and practices are "contrary to international law, international humanitarian law, the UN Charter and the norms and principles governing peaceful relations among States", and highlight that in the long-term, "these measures may result in social problems and raise humanitarian concerns in the States targeted" (OHCHR 2023). In 2014, the Human Rights Council created the mandate of the Special Rapporteur on the negative impact of unilateral coercive measures on the enjoyment of human rights. UCMs are sanctions adopted without the consent of the UN Security Council. The data on UCMs come from the Drexel Global Sanctions Database and correspond to sanctions adopted unilaterally from 1950 to 2021 that are still in place as of 2022. For our purpose, a sanction was considered unilateral if it had not been approved by the UN Security Council, even if it was imposed by multiple countries. Sanction regimes adopted unilaterally by regional organizations, such as the EU or the League of Arab States, were allocated to their member organizations.

- *Contribute to the UN budget and international solidarity:* Articles 17 and 19 of the UN Charter cover the financial and budgetary arrangements of the UN. Under Article 19, "a Member of the United Nations which is in arrears in the payment of its financial contributions to the Organization shall have no vote in the General Assembly if the amount of its arrears equals or exceeds the amount of the contributions due from it for the preceding two full years". The UN Fifth Committee maintains the list of countries that are subject to the provisions of Article 19, and those countries were assigned a value of "0" on this indicator in the UN-Mi while other countries a value of "100". For OECD/DAC and high-income countries (HICs) with available data, this score was adjusted based on their contribution to international solidarity as measured by the share of GNI devoted to official development assistance (ODA). Following the publication of the Pearson Commission Report (Pearson 1969), a UN resolution adopted in October 1970 established that "Each economically advanced country will progressively increase its official development assistance […] and will exert its best efforts to reach a minimum net amount of 0.7% of its gross national product […] by the middle of the Decade" (UNGA 1970). This objective was renewed in 2015 under SDG Target 17.2.

Figure 2.1 Conceptual framework and indicators to measure countries' support for UN-based multilateralism



Note: The large circle in the center is the concept we aim to measure: countries' support for UN-based multilateralism under the UN Charter. The smaller circles are the indicators retained that each measure a part of the overarching concept.

2.4 Results

2.4.1 UN-Mi by individual country

Overall, we found that most countries demonstrated relatively high support for UN-based multilateralism. The average UN-Mi across 193 UN member states was equal to 65, and the median was 70. We estimate that 90% of the world population lives in a country with an UN-Mi score above 50; this means more than half of the way toward perfect support for UN-based multilateralism. As an example, out of 193 UN member states, 90% ratified two-thirds or more of the major UN treaties, 66% voted with the international majority at UNGA two-thirds of the time or more, more than half (55%) were members of the 24 organizations & entities considered, 80% had limited or no participation in conflicts and militarization (score below 2 out of 4 on the adjusted Global peace Index), around 70% made no use or very limited

use of UCMs (i.e. have less than 5 UCMs currently in place) and the vast majority of countries were not subject to the provisions of Article 19 related to significant arrears in the payment of dues to the UN.

Yet, there were important differences in support of UN-based multilateralism across countries and country groupings (Table 2.1 and Figure 2.2, panels A & B). Barbados stood out as the country most committed to UN-based multilateralism, followed by Antigua and Barbuda, and Uruguay. In contrast, the Democratic Republic of the Congo, the Russian Federation, the Syrian Arab Republic, Afghanistan, the Islamic Republic of Iran, the Democratic People's Republic of Korea, Israel, South Sudan, Somalia, and the US were at the bottom of the ranking.

2.4.2 UN-Mi by regions and country groups

On average, Latin America & the Caribbean, East Asia & Pacific, and Sub-Saharan Africa tended to be particularly supportive of UN-based multilateralism with average scores of 68 and above. Compared to other regions, the score of Latin America and the Caribbean was rather homogeneous, with a minimum value above 50 and a standard deviation below 10. Looking at other country groupings and coalitions, the ASEAN, SIDS, African Union, G77, and the EU generally performed above the world average. The BRICS (Brazil, the Russian Federation, India, China, and South Africa) and BRICS+ countries (including all the BRICS and countries invited to join the BRICS in 2023, namely Argentina, Egypt, Ethiopia, Islamic Republic of Iran, Saudi Arabia, and the United Arab Emirates) were on par with the world average. Among the ASEAN member states, Malaysia, the Philippines, and Viet Nam performed particularly well with overall scores exceeding 80, whereas Myanmar was the worst-performing ASEAN member, with a score of 51. By contrast, North America, NATO, OECD, P5 (The UN Security Council's five permanent members – the US, China, France, the Russian Federation, and the United Kingdom), Nuclear Powers (China, India, United Kingdom, Pakistan, France, the Russian Federation, the Democratic People's Republic of Korea, Israel, and the US) and G20, tended to perform below the world average UN-Mi. This was partly driven by the low scores of the US and the Russian Federation.

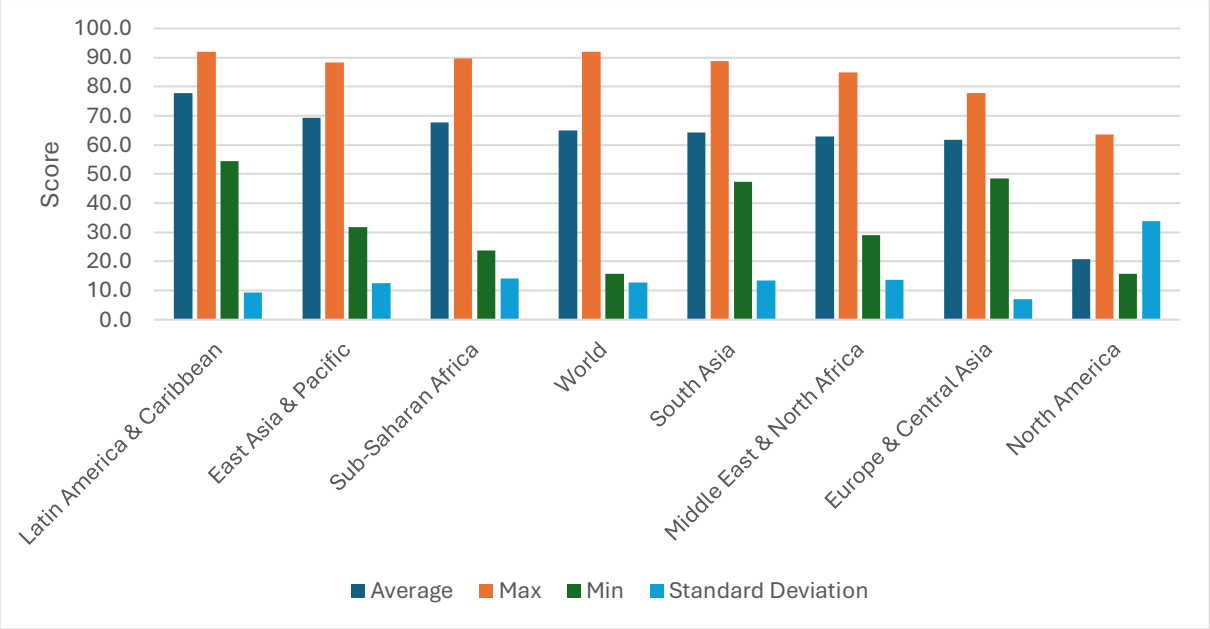
Table 2.1 Index of countries' support for UN-based Multilateralism, overall country rank and scores, 2023

Rank	Country	Score	Rank	Country	Score
1	Barbados	92,0	50	Uganda	77,3
2	Antigua and Barbuda	91,1	51	Algeria	77,3
3	Uruguay	90,7	52	Brazil	77,2
4	Mauritius	89,7	53	Cambodia	77,1
5	Maldives	88,8	54	South Africa	77,0
6	Jamaica	88,7	55	Gabon	77,0
7	Costa Rica	88,6	56	Sri Lanka	77,0
8	Argentina	88,6	57	Guyana	76,7
9	Fiji	88,3	58	Austria	76,7
10	Chile	87,2	59	Togo	76,6
11	Belize	86,8	60	Kazakhstan	76,6
12	Paraguay	86,7	61	Mexico	76,5
13	Mongolia	86,3	62	Luxembourg	76,4
14	Senegal	85,6	63	Japan	76,2
15	Trinidad and Tobago	85,5	64	Mozambique	76,1
16	St. Vincent and the Grenadines	85,4	65	Moldova	76,1
17	Bahamas, The	85,0	66	Qatar	76,0
18	Tunisia	85,0	67	Gambia, The	75,7
19	Zambia	84,7	68	Nepal	75,7
20	Panama	84,6	69	Switzerland	75,6
21	Sierra Leone	84,6	70	Samoa	75,3
22	Cabo Verde	84,5	71	Colombia	75,0
23	Guatemala	84,3	72	New Zealand	74,8
24	Peru	83,9	73	Mauritania	74,7
25	Malaysia	83,1	74	Thailand	74,5
26	Madagascar	82,8	75	Indonesia	74,5
27	Philippines	82,7	76	Ireland	74,2
28	Botswana	82,6	77	Albania	73,9
29	St. Lucia	82,5	78	Grenada	73,5
30	Dominican Republic	82,5	79	Ecuador	73,4
31	El Salvador	82,3	80	Germany	73,3
32	Suriname	81,5	81	Nigeria	73,2
33	Namibia	81,3	82	North Macedonia	72,8
34	Cote d'Ivoire	81,2	83	Croatia	72,7
35	Ghana	80,7	84	Benin	72,7
36	Bolivia	80,6	85	Vanuatu	72,6
37	Jordan	80,2	86	Tanzania	72,6
38	Bangladesh	80,2	87	Djibouti	72,2
39	Viet Nam	80,1	88	Kenya	72,0
40	Kuwait	79,5	89	Brunei Darussalam	71,8
41	Honduras	79,2	90	St. Kitts and Nevis	71,6
42	Nicaragua	79,0	91	Cuba	71,0
43	Malawi	78,6	92	Bosnia and Herzegovina	70,7
44	Malta	78,4	93	Hungary	70,4
45	Seychelles	78,2	94	Angola	70,3
46	Lesotho	78,1	95	Oman	70,3
47	Montenegro	77,7	96	Netherlands	70,3
48	Morocco	77,6	97	Zimbabwe	70,1
49	Lao PDR	77,6	98	Congo, Rep.	69,8
			99	Azerbaijan	69,7

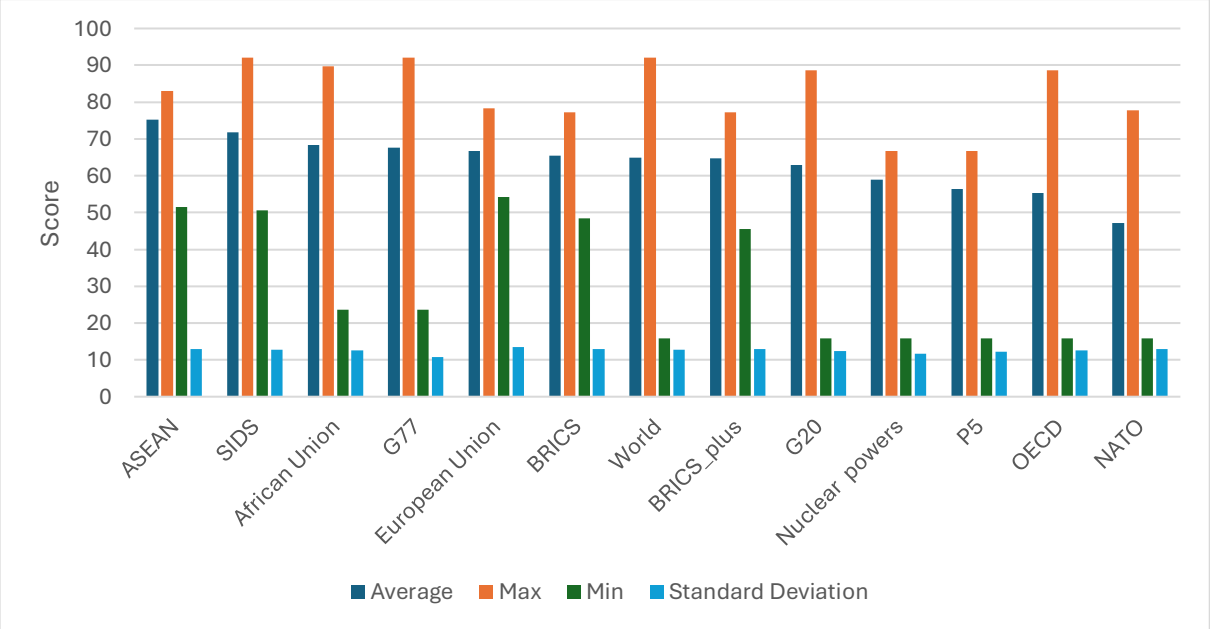
Rank	Country	Score	Rank	Country	Score
100	Portugal	69,6	150	Burundi	60,3
101	Iceland	69,4	151	Sao Tome and Principe	60,3
102	Spain	69,2	152	Turkmenistan	60,3
103	Guinea-Bissau	69,2	153	Saudi Arabia	60,2
104	Bahrain	69,2	154	Tonga	59,9
105	Guinea	69,2	155	Belarus	59,8
106	Sweden	68,6	156	Tuvalu	59,6
107	Norway	68,5	157	Australia	59,6
108	Singapore	68,5	158	Eswatini	59,1
109	Italy	68,4	159	Uzbekistan	58,9
110	Mali	68,3	160	United Kingdom	58,9
111	Georgia	68,3	161	Comoros	58,5
112	Egypt, Arab Rep.	68,1	162	Pakistan	58,4
113	Denmark	67,7	163	Türkiye	58,3
114	Kyrgyz Republic	67,6	164	Marshall Islands	57,4
115	Cyprus	67,5	165	Greece	57,2
116	Rwanda	67,5	166	Yemen, Rep.	57,1
117	Finland	67,4	167	Palau	56,8
118	Monaco	67,2	168	Ethiopia	56,6
119	Liechtenstein	67,0	169	Dominica	56,5
120	China	66,8	170	Liberia	55,6
121	United Arab Emirates	66,7	171	France	55,5
122	San Marino	66,6	172	Estonia	55,4
123	Czechia	66,5	173	Lithuania	54,9
124	Slovenia	66,3	174	Sudan	54,4
125	Armenia	66,1	175	Venezuela, RB	54,4
126	Belgium	65,4	176	Latvia	54,2
127	Romania	64,9	177	Central African Republic	54,0
128	Niger	64,7	178	Nauru	52,1
129	Burkina Faso	64,4	179	Chad	51,9
130	Bulgaria	64,3	180	Myanmar	51,5
131	Libya	64,3	181	Micronesia, Fed. Sts.	50,6
132	Timor-Leste	64,2	182	Ukraine	50,3
133	Tajikistan	63,7	183	Equatorial Guinea	50,0
134	Serbia	63,7	184	Congo, Dem. Rep.	49,4
135	Poland	63,6	185	Russian Federation	48,5
136	Papua New Guinea	63,6	186	Syrian Arab Republic	47,6
137	Canada	63,6	187	Afghanistan	47,4
138	Iraq	63,5	188	Iran, Islamic Rep.	45,5
139	India	63,5	189	Korea, Dem. Rep.	31,7
140	Korea, Rep.	63,3	190	Israel	29,0
141	Cameroon	63,1	191	South Sudan	24,1
142	Kiribati	63,0	192	Somalia	23,6
143	Bhutan	62,3	193	United States	15,8
144	Solomon Islands	62,1			
145	Eritrea	61,2			
146	Haiti	61,0			
147	Slovak Republic	60,9			
148	Lebanon	60,9			
149	Andorra	60,8			

Figure 2.2 UN-Mi, Population weighted averages, by geography, country groupings & coalitions

A. By World Bank geographic country groupings



B. By selected country groupings and coalitions



Note: In descending order from highest to lowest population-weighted averages. From 0 (low support for UN-based multilateralism) to 100 (high support for UN-based multilateralism).

2.4.3 Correlations between the UN-Mi and other related measures

We explored correlations between the UN-Mi and other related variables of engagement with multilateral processes and country characteristics. The summary table is included in the supplementary information. This broad empirical evidence can, in part, be taken as evidence of construct validity i.e. the UN-Mi consistently correlates with measures that should influence or should be influenced by countries' support of UN-based multilateralism according to theory (OECD 2017).

Overall, we found a statistically significant correlation between the UN-Mi and countries' engagement with the current global set of goals for sustainable development – the SDGs – using the score of "Government effort and commitment for the SDGs" which captures the use of the SDGs in public policies (speeches, budget, indicators) and countries' efforts to report regularly their action plan and progress to the rest of the international community via the so-called UN Voluntary National Reviews (Sachs et al. 2023; Lafortune et al. 2022). In 2023, five countries – Haiti, South Sudan, Myanmar, the US, and Yemen – never engaged with the VNR process, and these countries are also among the bottom 25% performers in the UN-Mi. A high UN-Mi also tended to be associated with higher levels of structural vulnerability (including vulnerability to extreme weather events and climate change) and lower negative impacts on the Global Commons. A higher UN-Mi was also associated with higher implementation of the Rule of Law when HICs were excluded from the sample, yet the Rule of Law did not seem to be a differentiating factor among HICs. Antigua and Barbuda, Barbados, Chile, and Uruguay – all HICs – performed very well on the UN-Mi, although, according to the 2023 Rule of Law Index, they were among the bottom half performers in implementing the Rule of Law among HICs (World Justice Project 2023).

Our analysis also confirmed that the UN-Mi captured something different from the size of diplomatic networks, existing measures of SDG 17 (Partnerships for the Goals), and the Good Country Index. The size of diplomatic networks, as measured by the Global Diplomacy Index from the Lowy Institute (number of embassies, consulates, permanent missions, and other forms of representation), is almost collinear with countries' economic size, as measured by nominal GDP (logged). The Good Country Index has a broader approach to measuring countries' positive global contributions (including the number of international students, registered patents, and birth rate), which in many cases correlated well with per capita GDP. Interestingly, the UN-Mi did not correlate with existing measures of the population's trust in the UN (or related concepts) and the level of engagement of cities and regions with the SDGs, as measured by the number of Voluntary Local reviews submitted.

The supplementary information provides additional information related to the sensitivity of the UN-Mi to different weighting scheme and aggregation methods. This analysis confirmed that the UN-Mi is fairly robust, especially at the top and bottom of the distribution.

2.4.4 Longitudinal analysis of countries' support for UN-based multilateralism

We present an assessment over time of countries' support of UN-based multilateralism, focusing on 58 countries that joined the UN between 1945 and 1950. Together, these 58 countries represent 72% of the current world population. Due to data gaps and limitations, we made some adjustments to the indicators, which are described in the Annex. We could not track over time the payments of contributions to the UN, and we replaced the Global Peace Index (available only since 2008) with military expenditure as a percentage of GDP. The results are presented by decade to focus on structural trends rather than year-on-year changes.

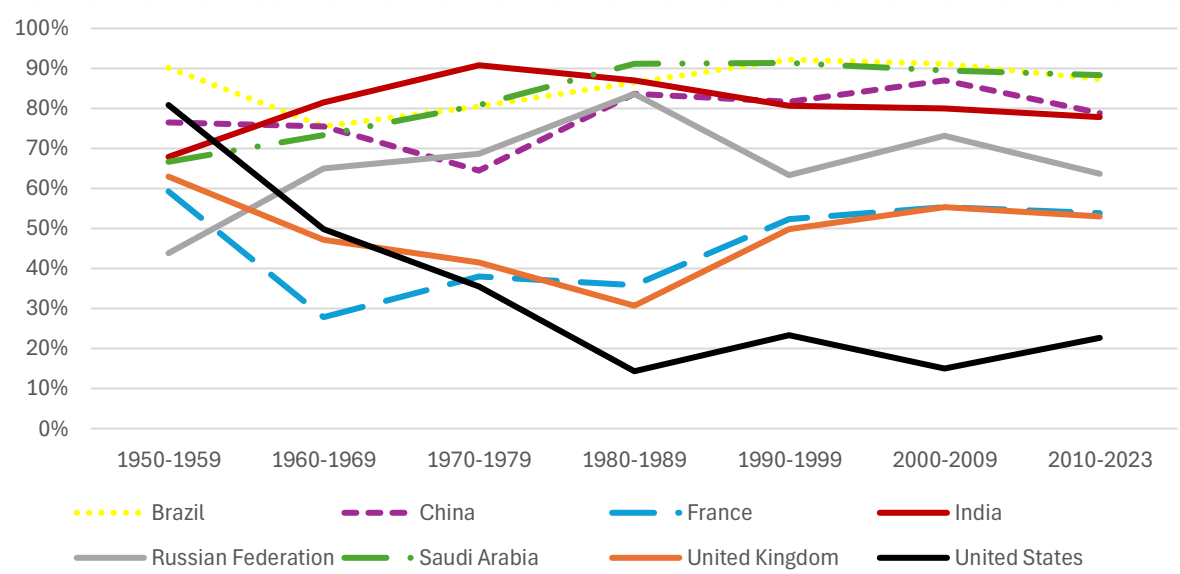
Overall, we found that most countries, on average, tended to be more committed to UN-based multilateralism over the period 2010-2023 than in the decade 1960-1969. We used the 1960s as our main benchmark because our goal was to analyze *long-term* trends, and because by the 1960s the countries

in our sample had been UN member states for at least ten years. Compared with the 1960s, we found that the majority of countries tended to ratify more UN treaties (as a share of the cumulative total number of instruments possible to ratify by decade), reduce their military expenditure as a share of the economy, and vote more often with the rest of the international community at UNGA (while the size of the majority tends to remain stable on average across decades at around 70%), and to participate more in UN organizations and entities. However, the use of UCMs was more widespread in the 2010s than in the 1960s, driven largely by the growing use of UCMs since the 1990s.

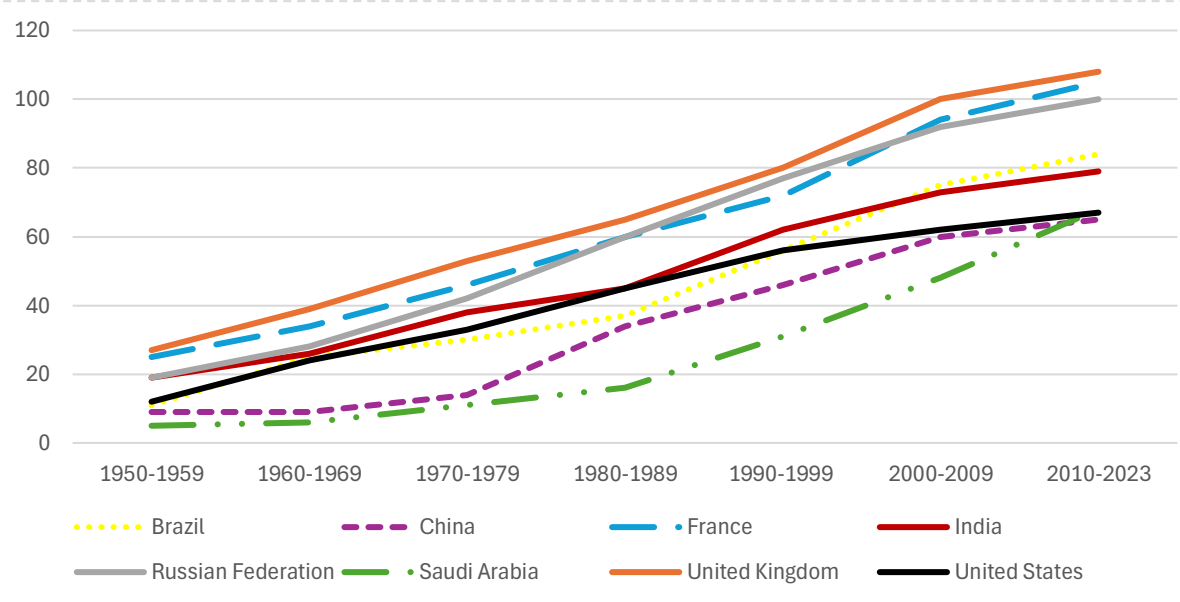
Yet, there were significant differences across countries (Figure 2.3). We focus our analysis on the P5 and three other large economies (Brazil, India, and Saudi Arabia), covering diverse geographic regions. On UNGA votes (panel A), out of the 162 UNGA resolutions with a recorded vote during the decade 1950-1959, Brazil, China, and the US recorded the highest share of votes with the international majority at 75% and above. In contrast, the Russian Federation was the only P5+3 country below 50%. Over the period 2010-2023, out of the 1,106 UNGA resolutions with a recorded vote, the rate dropped to 23% in the US, while it is above 50% in all P5+3 countries and even above 75% in Brazil, China, India, and Saudi Arabia. On treaty ratification (panel B), there was a sharp acceleration of treaty ratification in China and Saudi Arabia, respectively, in the 1980s and 1990s and the rate of treaty ratification over the past thirteen years is now on par with the US at around 40%. This remains significantly below the rate of treaty ratification of France and the United Kingdom, which is at around 70%. On membership in UN organizations (panel C), there was a sharp increase in the participation of the Russian Federation in the 1990s, and of Saudi Arabia in the early 2000s, whereas it slightly declined in the US in the 1970s – and even more so in the 1980s – as well as in France and the United Kingdom since the early 2000s notably driven by the temporary or long-lasting withdrawal in membership to UNIDO (France, United Kingdom and US), UNESCO (US and United Kingdom) and UNWTO (United-Kingdom and US). Military expenditure (panel D) and the use of UCMs (panel E) show opposite trends. As a share of the economy, most countries reduced military expenditure compared to the 1960s, although some countries have experienced a sharp increase in military expenditure since 2022 (SIPRI 2024). Among P5+3, Saudi Arabia is by far the country with the highest level of military expenditure as a share of the economy (around 9%). The use of UCMs, on the other hand, increased sharply compared to the 1960s, driven by a significant acceleration in their use in the 1990s, particularly by the US, EU member states, and the United Kingdom.

Figure 2.3 Indicators of countries' support for UN-based multilateralism, by decade, 1950-2023

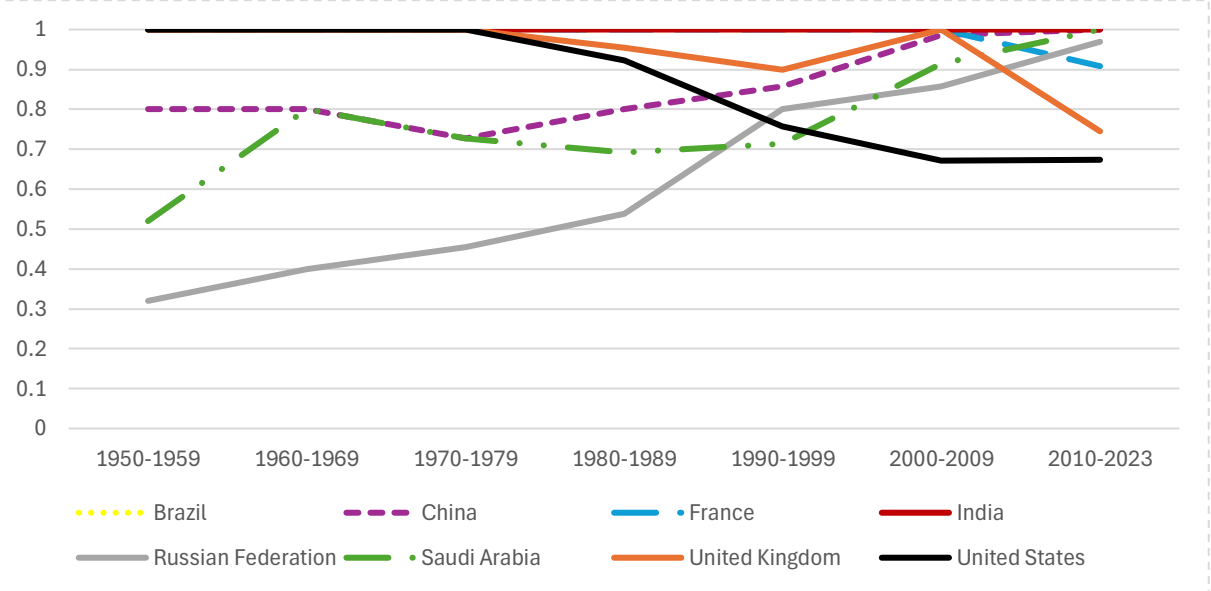
A. UNGA votes with the majority (percent)



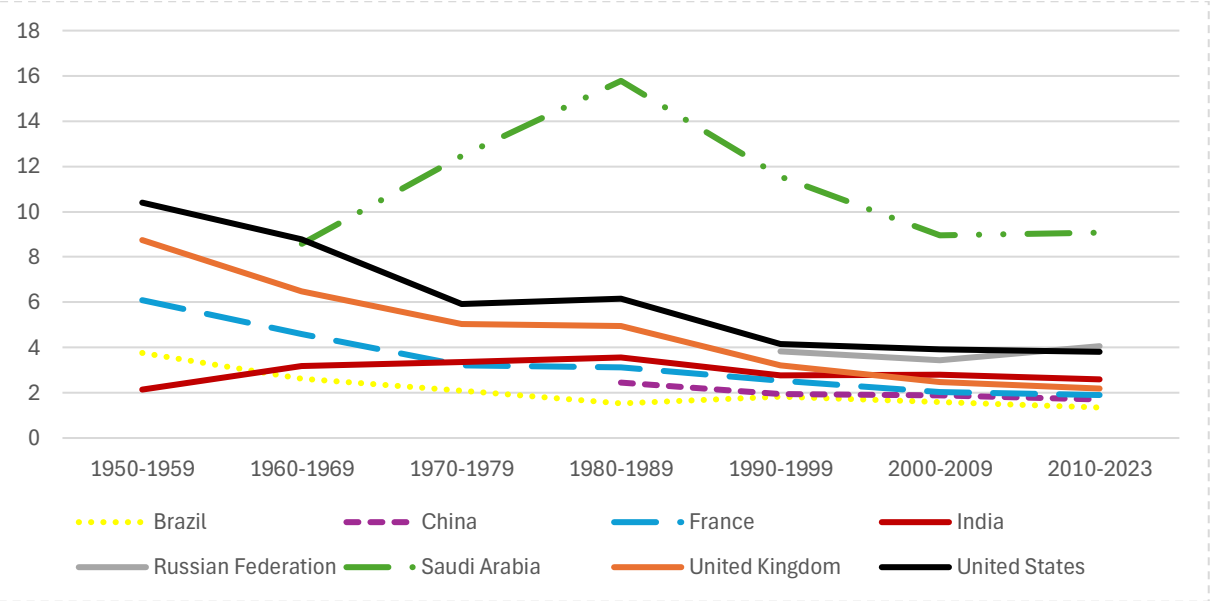
B. UN treaties ratified (cumulative total)

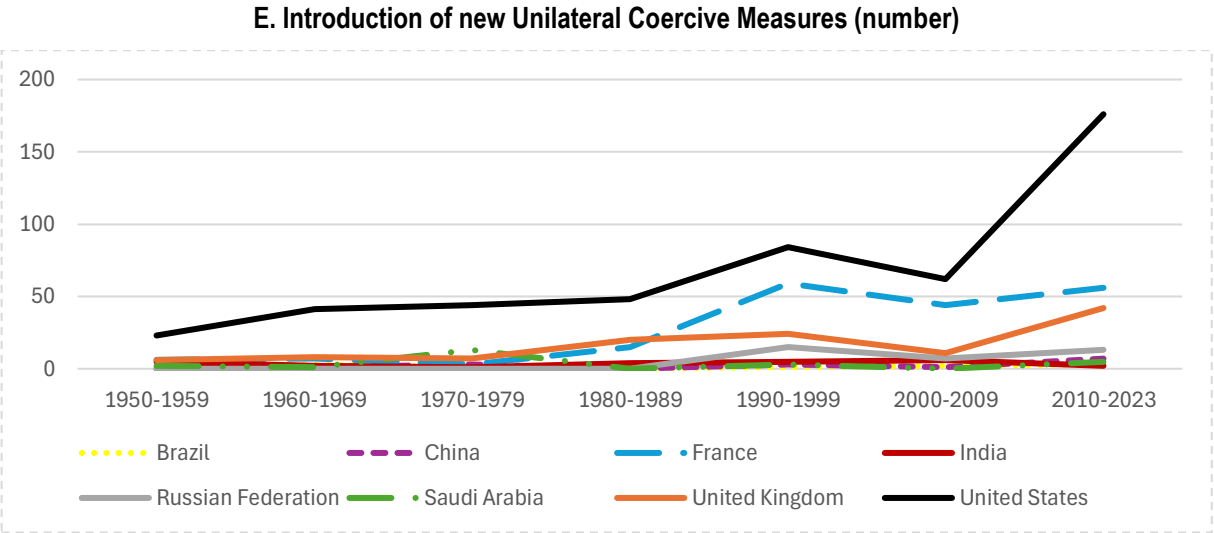


C. Membership in selected UN Organizations (score)



D. Military expenditure (percent GDP)





Source: Authors; based (A) UN Digital library, voting data; (B) UN treaty database; (C) UN dedicated web portal & desk research; (D) SIPRI; (E) Global Sanctions Database, HTWG, Drexel University & WIFO.

2.5 Discussion

We would like to emphasize four major findings from our study. Firstly, it is possible to measure universally and in a statistically valid and robust way countries' support for UN-based multilateralism. By doing so, we reject the hypothesis that countries' public support of the broader concept of global "rules-based order" is always conducive to high support for UN-based multilateralism under the UN Charter. Secondly, we find that most people live in countries where support for UN-based multilateralism is high and increasing when compared to the early years of the UN. At the same time, some of the largest economies demonstrate relatively lower support for UN-based multilateralism. Thirdly, we found positive correlations between countries UN-Mi and countries' engagement with the SDGs and other global objectives such as limiting negative impacts on the Global Commons. Fourthly, focusing on structural long-term trends, most of the world population lives in a country that is more supportive of UN-based multilateralism now (average 2010-2023 period) than in the 1960s, although there are significant variations across countries and indicators. Short-term trends on military expenditure and adoption of UCMs (and possibly other measures) may indicate, however, a decline in support for UN-based multilateralism over the past two years. The COVID-19 pandemic and recent military conflicts – including the intensification of military tensions in Ukraine since 2022 – may have impacted country results on the variables related to participation in conflicts, and militarization and votes aligned with the majority at UNGA. These global crises and the failure to respond effectively might also be a consequence of limited support for UN-based multilateralism among some UN Member states.

It is notable, or one might say fundamental, regarding the current state of international relations, that the US ranks last in the UN-Mi with poor or below-average results across all six dimensions. The US is the lead promoter of the RBIO, yet it is last in terms of support for UN-based multilateralism. This suggests that the RBIO and "UN-based multilateralism" are truly distinct, and arguably, even opposite, frameworks. The rules-based order is the set of behaviors or rules favored by the US and its allies. The UN-led order is the set of rules established by international law and UN institutions. Regarding the sub-components of the UN-Mi, the US ratified only around 60% of major UN treaties (and a third of the nine UN Human Rights' Treaties), voted with the international majority at UNGA less than 25% of the time over the past five years

(2018-2022) – and on average over a longer period (1950-2022) – is not a member of UNIDO and the UN World Tourism Organization and left on several occasions UN organizations and agencies including UNESCO. The US actively participates in conflicts and militarization, it uses UCMs more than any other country in the world, in particular, since the 1990s, and committed only around 0.18% of its GNI to ODA between 2018 and 2022— far from the international target of 0,7%. Over the period 2020-2025, the US paid its dues to the UN regular budget with significant delays (United Nations 2024b).

The US opposition to UN-based multilateralism, which accelerated in the late 1970s and even more so in the 1990s, is associated with repeated attacks against goal-based development since the early 2000s. Starting in the 1970s the US opposed major reforms of the global economic and financial order, including the New International Economic Order (NIEO) agenda formally introduced in 1974 by developing countries as an attempt to reform the liberal world order and accelerate socio-economic development (Rasmussen, Keefer, and United States Department Of State 2009; Mahiou 2010; Ogle 2014). It is also in the mid-1970s that the US opposition to UNESCO's strategic orientations emerged, notably over the Israel-Palestine issue, leading to the US withdrawal from UNESCO in the mid-1980s. Later, the opposition of the Bush administration to the Millennium Development Goals (MDGs) is well documented in the literature, notably ahead of the World Summit (2005) when the appointed US Ambassador to the UN – John Bolton – called for the elimination of almost all references to the MDGs and objected to the accountability framework (Hulme 2010; McArthur 2013). As of 2025, the US is one of the three UN member states in the world that never took part in the UN Voluntary National Review (VNR) process (Sachs et al, 2025). On March 4, 2025 the US became the first country in the world to oppose the universally agreed SDGs (Lafortune and Sachs 2025). A month later, on April 8, 2025, the US reaffirmed its opposition to the SDGs via its Mission to the UN agencies in Rome in the context of the 177th Session of the FAO Council[7]. The decline, from the 1970s, in the US UNGA votes aligned with the majority is largely explained by the US opposition to international financial reforms for development, votes against Israel's continued occupation of Palestinian territories captured in the 1967 war, and votes to end unilateral economic sanctions (Lafortune and Sachs 2025).

This position does not reflect the historical role that US leadership played in establishing the UN-based international order following the end of the Second World War. As argued by Ikenberry: "After all, it is the United States and its western partners that put open and multilateral rules and institutions at the centre of the modern world system. The United States championed the founding of the United Nations, which has long been the most important platform for elevating the voice and authority of the global South" (Ikenberry 2024). Ikenberry also points out that, "There was a time when the architects of the post-1945 system tried to build an international order that would not be run by the United States. President Franklin D. Roosevelt sought to keep the Soviet Union inside the postwar order and to centre global leadership around the United Nations" (Ikenberry 2024). As argued by Sachs (2024), the turning point may have been the end of the Cold War and the decision made by the successive Unites States administrations to pursue hegemony and total dominance over peace and global cooperation beginning in the early 1990s. At a fundamental level, we argue that since the 1970s, and even more so since the 1990s, the US has started acting against the UN-based international order it helped create in 1945. As argue by Rodrik: "US and European policymakers view themselves as well-intentioned, benign actors in the international arena.

[7] U.S. Statement Delivered at the 177 Session of the FAO Council (Tuesday, April 8, 2025): https://usunrome.usmission.gov/u-s-statement-delivered-by-charge-daffaires-rodney-hunter-at-the-177-session-of-fao-council/

This makes it easy for them to overlook not only their own transgressions of the post-war order they constructed, but also the fact that this order was designed largely to suit their countries' interests in the first place." (Rodrik and Walt 2024).

The comparison between the US and China in terms of support for UN-based multilateralism is particularly striking. China ratified more than three-quarters (76%) of major UN treaties. Table 2.2 compares the ratification of selected UN treaties between China and the US, categorized into four groups of treaties: collective security, international justice and the functioning of the UN system, environment and human rights. China ratified more treaties than the US in all categories, especially treaties related to the functioning of the UN, environmental treaties, and human rights treaties. China's votes at the UNGA were aligned with the international majority 76% of the time over the period 2018-2022. China is a member of all 24 UN organizations covered in our assessment. China does not use UCMs as a major foreign policy instrument. China is not a member of the OECD/DAC, but it has surpassed the US as the world's largest lender of development and infrastructure assistance, notably through the Belt and Road Initiative (Ikenberry 2024). Over the period 2020-2025, China paid its dues with only moderate delay after the end of the 30-day due period (Honour Roll II). China submitted two VNRs and while the US announced its withdrawal in 2025 from the Paris Climate Agreement, Xi Jinping strengthened its commitment for the Paris Climate Agreement by announcing that China would prepare a 2035 Nationally Determined Contribution (NDC) covering all economic sectors and all greenhouse gases before the UN Climate Change Conference (COP30) in Belém, Brazil (Ministry of Foreign Affairs of China 2025).

According to Professor. David Daokui Li (Tsinghua University) there are profound philosophical and historical reasons that explain China's commitment for UN-based multilateralism and respectful relationships among Nation-States (Li 2024). Li (2024) argues the following:

> "Let us not forget that China is in fact a beneficiary of the modern world order with the United Nations, World Trade Organization (WTO), World Bank and International Monetary Fund (IMF) being the pillar institutions. Whenever there are international crises, whether in Iraq, Iran, North Korea, or Syria, China has always called for the UN to play the most prominent role in resolving these issues rather than through unilateral actions by the United States and its allies. […] China has maintained very good working relationships with all these international institutions. There is no reason for China to seek to undermine the world order. As a matter of fact, it is the United States that failed to pay its dues to the United Nations and often complained about the World Bank and the IMF, and even withdrew its membership from WTO." (Li 2024, p.242)

Table 2.2 UN Treaties Ratified, Selected Treaties by Category, China and United States, 2025

Category	Treaty	China	United States of America
Collective security	Comprehensive Nuclear-Test-Ban Treaty (1996)		
	Arms Trade Treaty (2013)		
	Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction (1997)		
	Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (1992)		
	International Convention Against the Taking of Hostages (1979)		
International Justice & Functioning of the UN System	Rome Statute of the International Criminal Court (1988)		
	International Convention on the Suppression and Punishment of the Crime of Apartheid (1973)		
	Vienna Convention on the Law of Treaties (1969)		
	Vienna Convention on Consular Relations (1963)		
	Convention on the Privileges and Immunities of the Specialized Agencies (1947)		
Environment	Kyoto Protocol to the United Nations Framework Convention on Climate Change (1997)		
	United Nations Convention on the Law of the Sea (1982)		
	Stockholm Convention on Persistent Organic Pollutants (2001)		
	Paris Climate Agreement (2015)		
	Convention on Biological Diversity (1992)		
Human Rights	International Covenant on Economic, Social and Cultural Rights (1966)		
	International Covenant on Civil and Political Rights (1966)		
	Convention relating to the Status of Refugees (1951)		
	Convention on the Rights of the Child (1989)		
	Core UN Human Rights Treaties ratified (out of 9)	6	3

Note: Green=ratified. Red=Not ratified.

Source: Author, based on UN Treaties Database.

One interesting finding is that the UN-Mi does not appear to correlate with any measures of people's confidence in the UN or with the engagement of subnational entities (cities and regions) in multilateral processes. This suggests that the UN-Mi measures primarily the support of national governments or the "elite," which may not accurately represent the views of the people and civil society regarding the UN and global cooperation. Some countries with low UN-Mi scores do demonstrate high support for multilateral processes at the subnational level, via the preparation of SDG Voluntary Local Reviews (VLRs) for instance. The US is one of the 38 countries where subnational entities have submitted VLRs, nine in total, with New York City being the first city in the world to prepare and submit a VLR in 2018 (United Nations 2024a). Similarly, despite its relatively poor performance on the UN-Mi, a recent study showed that more than half of the population in the Russian Federation considers that a good leader is one who "seeks the best for its country through international cooperation" as opposed to only "standing up for its own independence" (Garton Ash et al. 2023).

The UN-Mi has several limitations. It has clear and limited scope and purpose: to measure efforts that promote UN-based multilateralism covering all 193 UN member states. As such, the UN-Mi may not capture countries' diplomatic efforts and engagement with other forms of bilateral and regional partnerships for instance in the G7, G20, OECD or BRICS. The UN-Mi measures the ratification of UN treaties but not their effective implementation in practice. Similarly, it measures membership status in organizations but not the active and constructive contributions of countries within these organizations.

The UN-Mi uses indicators with universal or near-universal coverage. Over time, we hope to be able to refine our indicator selection and define sound methodologies to capture not only "extreme" arrears of payments under Article 19 as listed by the UN but also recurring delays in payment of contributions as well as non-military interference in domestic affairs of other countries (including via cyberwarfare).

Yet, available evidence suggests that the inclusion of such metrics would most likely reinforce our findings rather than contradict them. Over the last thirty years, according to UN records and academic research, the US and other countries at the bottom of the UN-Mi ranking accumulated large arrears to the UN. (United Nations 2024b; Bond 2003). According to Levin (2019), 117 partisan electoral interventions were made by the US and the USSR/Russian Federation between 1 January 1946 and 31 December 2000 (69% by the US and 31% by the USSR/Russian Federation) – two countries that perform poorly on the UN-Mi. O'Rourke (2018) finds that between 1947 and 1989, the US attempted to change other nations' governments 72 times, with 66 covert operations and six overt ones. Due to limitations in data completeness and attribution, cyberwarfare is currently excluded from the UN-Mi despite its potential to impact friendly relationships among nations as called for by the UN Charter. As emphasized by Mezzour et al. (2014), "cyber criminals behind attacks in Central America are probably from other regions, but choose this region for conducting cybercrime because of attractive conditions there". The Cyber Threat Intelligence team ranks China and the US as the place of origin of more than a third of global cyberattacks in 2021, yet it is difficult to distinguish between state-sponsored versus criminal operations (DavidPur 2022). The Council on Foreign Relations tracks suspected state-sponsored cyberattacks but recognizes that the current methodology tends to over-report "incidents or threat actors affecting countries where English is widely spoken" (Council on Foreign Relations 2023).

2.6 Concluding remarks

Overall, this paper argues that it is possible to measure countries' support for UN-based multilateralism validly and robustly. Nations-States hold the primary responsibility for making UN-based multilateralism work effectively to support the sound and collective management of Global Public Goods (GPGs). They should therefore be held accountable for implementing the principles of the UN, epitomized in the UN Charter of 1945. Our main conclusion is that most of the world population lives in a country that adheres in large part to the views described in the Multilateralist theory (which emphasizes the fundamental importance of global cooperation under the UN to solve pressing global problems). In most countries, UN-based multilateralism is high and has increased compared with the early years of the UN in the 1950s and 1960s, although there are significant differences across countries and indicators. In particular, we emphasize the declining support of the US and some of its allies for UN-based multilateralism, compared to other major powers, including China. As such, our study suggests that the concept of "UN-based multilateralism" is distinct from other related concepts, including the concept of RBIO used notably by the US and its allies.

Eighty years after the creation of the UN, this analysis should provide momentum to strengthen the UN system in addressing the shared global challenges of our time – including the implementation of the SDGs and the Paris Climate Agreement. Further research is needed to refine the indicator set, notably with universal and sound measures of cyberwarfare and non-military interference in other countries' affairs, but also to understand the drivers of countries' support for UN-based multilateralism over different time periods, which is beyond the scope of this study. From a practical perspective, new global mechanisms and perhaps institutions must be considered to address global challenges in a context of low and declining support for UN-based multilateralism among some of the greatest powers. As such, the introduction of global taxation, for example, on CO2 emissions, air travel, and financial transactions may help to mobilize the financial resources needed to help the UN fulfill its global missions and needed GPGs. Our findings might also support the proposal made by other practitioners and scholars to create a "UN Parliament" to establish the representation of *We the Peoples* in the UN and strengthen oversight of UN norms and procedures, including the budget (Sachs et al. 2024; CUNPA 2024). Yet, considering that to this day, Nations-States' support is needed for any major reform of the UN system, we underscore the importance of sound, transparent, universal, quantitative and regular assessments of countries' support for UN-based multilateralism to make UN member states accountable to their peers and population for their adherence to the UN Charter.

2.7 Annex: Detailed methods

2.7.1 Purpose and scope

Nation-States continue to hold the primary responsibility for promoting effective UN-based multilateralism. The UN is based on the principle of sovereign equality of all its members. Each country has one vote at the UN General Assembly. Nation-States are responsible for signing, ratifying, and implementing international treaties and conventions. The 6th edition of "The UN in the 21st Century" report recalls that "[…] the UN is the creation of its member states; it is they who decide what it is that they will allow this organization to do and what resources – financial and otherwise – they will provide. Thus the UN is very much subject to the winds of world politics and the whims of member governments" (Mingst et al. 2022). Nation-States should, therefore, be accountable for promoting UN-based multilateralism and making global cooperation fit for 21st-century challenges. Yet, despite the vast literature on multilateralism and global cooperation, there is to our knowledge no comprehensive, structured, and quantitative assessment of countries' support for UN-based multilateralism.

The UN Charter adopted in 1945 guides the purposes and principles of the UN. Based on Article 1 of the UN Charter, the UN is an international organization created to "maintain international peace" (Article 1.1), "develop friendly relationships among nations" (Article 1.2), "achieve international co-operation in solving international problems of an economic, social, cultural, or humanitarian character" (Article 1.3) and "be a Centre for harmonizing the actions of nations in the attainment of these common ends" (Article 1.4). The UN's membership has grown from the original 51 Member States in 1945 to the current 193 Member States. We do not discuss bilateral and regional partnerships and coalitions (such as countries' involvement in ASEAN, MERCOSUR, European Union, etc.), the role of regional institutions and economic fora (such as regional development banks but also the G77, G20, G7, BRICS and OECD multilateral formats), but focus only on countries' commitment to *global* cooperation via the UN system.

2.7.2 Indicator selection process and consultation process

Our objective was to measure countries' support for UN-based multilateralism. Our conceptual framework is the UN Charter (1945) and in particular the four paragraphs under Article 1. We used five main criteria for selecting the indicators: (1) relevance, (2) country coverage, (3) time coverage, (4) methodological soundness, and (5) limited in number. In total 17 indicators were considered for inclusion. 6 indicators were retained. The supplementary information[8] provides additional tables related to the criteria for the indicator selection the indicators considered for inclusion and the reasons for their non-inclusion.

A pilot version of the UN-Mi covering 74 countries was published in the Sustainable Development Report 2023 (Sachs et al, 2023) and the indicator selection and detailed methodology were submitted for public consultation between November 2023 and February 2024 (Sachs, Lafortune, and Drumm 2023). Preliminary results were discussed and presented at the Workshop on the Summit of the Future in March

[8] The supplementary information can be accessed: https://direct.mit.edu/asep/article/23/3/1/124683/The-Index-of-Countries-Support-for-UN-based

2024 organized by the UN Sustainable Development Solutions Network and the Pontifical Academy of Social Sciences.

2.7.3 Data sources

We used six headline indicators to compile the UN-Mi. The indicators related to treaty ratification, UNGA votes, membership in UN organizations, and financial contribution to the UN were compiled using the UN website and database either via desk research or Python web scraping. The other indicators related to conflicts and militarization and UCMs. The ODA variable used only for OECD/DAC and high-income countries (HICs) with available data – came from third-party sources.

2.7.4 Management of missing data

The influence of missing data is very limited in our assessment, and where it did occur, we had a strategy in place. We managed to compile data for all 193 UN member states, except for two variables: Participation in conflicts and militarization and official development assistance. Since we could not find any evidence of recent military interventions made by one of these countries and external sources suggest that, when available, most of these countries have low levels of military expenditure (<1.5% of GDP), we imputed a perfect score on "Participation in conflicts and militarization" to Barbados, Antigua and Barbuda, Maldives, Fiji, Belize, St. Vincent and the Grenadines, The Bahamas, St. Lucia, Suriname, Cabo Verde, Luxembourg, Malta, Seychelles, Samoa, Grenada, St. Kitts and Nevis, Brunei Darussalam, Vanuatu, Sao Tome and Principe, Comoros, Liechtenstein, Monaco, San Marino, Dominica, Kiribati, Solomon Islands, Andorra, Tonga, Marshall Islands, Tuvalu, Palau, Nauru, and Micronesia. We only considered official development assistance (ODA) for countries with available data in the OECD Development Assistance Committee (DAC) portal.

2.7.5 Multivariate analysis

The multivariate analysis was conducted with a sample of 155 countries with populations above 1 million. Each indicator had different units. To aggregate the results, they were transformed into a common scale. After establishing the upper and lower bounds, variables were transformed linearly to a scale between 0 and 100 using the following rescaling formula for the range [0; 100]:

Equation 1:

$$x' = \frac{x - min(x)}{max(x) - min(x)} \times 100$$

where *x* is the raw data value; *max/min* denote the upper and lower bounds, respectively; and *x'* is the normalized value after rescaling. The rescaling equation ensured that all rescaled variables were expressed as ascending variables (i.e., higher values denoted better performance).

This normalization method mirrors the method used in the SDG Index (Sachs et al, 2023). The min-max formula was preferred to the Z-score transformation to enable the results to be interpreted as the distance to full country support for UN-based multilateralism (instead of distance to the mean), and because some of the variables were partly skewed. It also had the advantage of simplicity. Maximum values correspond to technical optimums, for instance, full participation in UN organizations or ratification of all major treaties. Maximum values for ODA and UNGA votes with the majority were set, respectively, to 0.8% of GNI and 95%. Minimum values corresponded to the lowest 2.5th percentile in the distribution (rounded), except for UCMs where there was one significant outlier within the lowest 2.5th percentile. For UCMs, the minimum value corresponded to the lowest percentile plus one standard deviation. Censoring values at the lowest 2.5th percentile is a standard threshold used for building composite indices and treating outliers (OECD and JRC, 2008). Skewness and kurtosis tests were conducted to verify the shape of the distribution. Some variables such as UCMs, UN membership, and the payment of UN contributions were more skewed which reflects the fact that the vast majority of countries do not use UCMs, participate in all or most UN organizations, and pay their dues to the UN.

Correlation matrices and principal component analysis were used to inform the aggregation method and weighting scheme. The correlation matrix showed no signs of collinearity among the indicators retained. Most indicators showed weak to moderate statistically significant and positive correlations. UCMs correlated negatively with the treaties and conflict variables. This is largely driven by the use of UCMs by European countries, which, however, tended to perform well on the treaties and conflict variables. The principal component analysis suggests that two factors explain about 65% of the total variance after orthogonal rotation. The treaties and conflicts variable were loaded together under the same factor that we called "Peaceful relationships & rule-based UN diplomacy". The UCMs, UNGA votes, UN membership, and payment of UN contributions & solidarity variables were loaded together under another factor that we called "Global cooperation for socio-economic and environmental progress under the UN". The two factors were correlated when excluding the EU member states, which performed as an outlier region. The final weighting scheme was closely aligned with these groupings; the variables on treaties and participation in conflicts weighed 50% of the total UN-Mi score and the other four variables also weighed 50% of the total UN-Mi score. Considering its overarching importance to implement all the principles established in the UN Charter, the variable on participation in conflicts and militarization was weighted more than any other variable (at 30%). The total score is computed by using the arithmetic average applying the weights mentioned above and in Table 2.1 (Equation 2 and Equation 3).

Equation 2:

$$\bigcup N - Mi = \frac{\sum_{i=1}^{n} w_i x_i}{\sum_{i=1}^{n} w_i}$$

Which expands to **Equation 3**:

$$UN - Mi = \frac{0{,}2(treaties) + 0{,}2(UNGA\ votes) + 0{,}3\ (conflicts) + 0{,}1(UCMs) + 0{,}1(membership) + 0{,}1\ (paydues)}{1}$$

2.7.6 Sensitivity and robustness tests

We tested the sensitivity of our results to the weighting scheme (using equal weights for all six variables) and aggregation method (using geometric mean). Detailed tables are available in the supplementary information, including median rank changes for countries with a population of 1M and above (and all countries). Overall, the sensitivity tests suggest that the UN-Mi is quite robust – differences of 11 ranks can be interpreted with confidence using the reduced sample- and very robust at the top and bottom of the distribution. The scores of some small countries, including San Marino, Saint Vincent & the Grenadines, Sao Tome and Principe, the Solomon Islands, and Vanuatu tend to be more sensitive to methodological choices driven notably by low values on the membership and/or payment of UN contributions' variables. Median rank changes are systematically below 10% of the total sample.

2.7.7 Procedure for longitudinal analysis

Since our goal is to focus on structural trends, and less on year-on-year changes, we computed average results over time by decade. We focus on 58 early members of the United Nations (countries that joined the UN between 1945 and 1950).

Due to data gaps over time, adjustments were made to compute the longitudinal dataset of countries' support of UN-based multilateralism over time. The UN membership focuses on a subset of seven organizations (instead of 24 in the cross-sectional analysis). These are UNESCO, WHO, IMF, UNIDO, WB Group, World Tourism Organization, and WTO. Country scores correspond to the total number of membership years divided by the maximum possible number of years for which countries could be members of these organizations in each decade. As such it rewards membership over multiple years. The UCM variable captures new UCMs introduced by decade. The treaties variable focuses on a more comprehensive list of 152 UN instruments mainly conventions and agreements (including for instance the Convention on the Abolition of Slavery and the Paris Climate Agreement) and captures the cumulative number of treaties ratified during each decade. Regional and expired legal instruments were excluded. The Global Peace Index has been available only since 2008, we therefore used military expenditure from SIPRI as our proxy for participation in conflicts and militarization. ODA data has been available since the 1960s from the OECD database. We could not find longitudinal data to track whether countries contributed their fair share to the UN annual budget and whether these contributions were provided without significant delays. The variable on the UNGA votes corresponds to the average number of votes aligned with the vote of the international majority by decade.

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Chapter 3 What Drives SDG Progress at the Country-Level? The Role of Peace and Security, Fiscal Space, and Multilateral Engagement Over the Period 2015-2023

Abstract

The SDGs, adopted by all UN member states in 2015, provide, for the first time in human history, an integrated and universal vision for sustainable development. While less than 20% of the SDG targets are on track to be achieved by 2030, to our knowledge, there is a limited understanding of the regions and countries that have made the most progress on the SDGs over the period 2015-2023, as well as the factors associated with faster progress over time. Using a headline set of SDG indicators (SDGi) to reduce missing data bias and maximize country coverage, we explore empirically and quantitatively the drivers of SDG performance and progress since their adoption in 2015. We find that countries in East Asia & Pacific (including China) and in South Asia progressed most on the SDGs over the period, whereas the performance of low-income countries, including many Sub-Saharan African countries, did not converge toward the world average SDGi. Controlling for countries' baselines SDGi in 2015 and other regressors, we find that peace, engagement with the multilateral system, fiscal space, effective business regulations, and larger population size tend to be associated with faster SDG progress over the period. Focusing on fiscal space and multilateral engagement, the correlation with SDG progress is particularly strong for developing countries. Our findings emphasize the importance of global cooperation, including adherence to the UN Charter, and of the reform of the Global Financial Architecture to achieve long-term sustainable development.

Keywords: SDG Performance, SDG Progress, International Spillovers, Fiscal Space, Conflicts, Structural Characteristics

3.1 Introduction

In 2015 the international committee adopted the 2030 Agenda and the Sustainable Development Goals (SDGs). That same year, the Addis Ababa Agenda for Financing Development acknowledged the crucial role of international financing in achieving sustainable development, particularly in developing countries (United Nations 2015a). In 2015, countries also agreed that each year about forty countries would present their action plans to achieve the SDGs at the United Nations in National Voluntary Reviews (VNRs) (United Nations 2015b). All 193 UN Member States recommitted to achieving the SDGs, reforming the Global Financial Architecture (GFA), and to international cooperation in the Pact for the Future, adopted by consensus by the UN General Assembly in September 2024 (United Nations 2024).

Ten years after their adoption, the world is not on track to achieve the SDGs. On average, globally, according to international assessments, less than 20% of the SDG targets are on track to be achieved by 2030, while the other targets have shown only moderate improvement or a reversal in progress since 2015 (UNDESA 2024; Sachs et al. 2024). The financing gap to achieve the SDGs is estimated to represent $2-4 trillion USD (or around 2-4% of world global output) (Gaspar et al. 2019; SDSN et MH 2019; OECD 2020; UNCTAD 2023). Failures to prevent and respond effectively to multiple and simultaneous global crises certainly played a role in explaining the lack of SDG progress globally, especially since 2020 (Sachs, Karim, et al. 2022). Yet, progress was already too slow before the COVID-19 pandemic hit (Sachs, Lafortune, et al. 2023). At the same time, the global average SDG progress also masks important disparities in progress across regions, countries and indicators. Recent studies have highlighted progress made in certain regions, such as the Asia-Pacific (Sachs et al. 2024) and on specific indicators primarily related to basic access to infrastructure and services (Kharas et al. 2024).

Despite the large body of literature and international reports on SDG monitoring, pathways, and synergies, to our knowledge, no comprehensive empirical analysis is available that evaluates the drivers of sustainable development over the period 2015-2023 using the SDGs as the overarching framework. This might simply be because the SDGs were adopted only ten years ago and as such the literature on the drivers of SDG progress is still nascent. It might also be due to the fact that the SDG framework combines policy outcomes (such as no poverty, zero hunger, life expectancy) and means for implementation (such as access to financing, partnerships, strong institutions) and needs adjustments in order to unpack the outcomes from the drivers. At the global level, the lack of available quality data over time also represents a significant barrier to pursuing this type of analysis. In particular, no study has empirically and quantitatively documented whether fiscal space and engagement with the multilateral system have been conducive to SDG progress since their adoption in 2015.

Our study aims to fill this knowledge gap by proposing a method to empirically explore some of the drivers of SDG progress at the country-level over the period 2015-2023. We notably leverage the peer-reviewed and statistically audited SDG Index and Dashboards database to create a headline SDG Index that maximizes data coverage over time and country coverage while being very strongly correlated with the original full SDG Index. More specifically, our study focuses on the following three research questions:

- Which are the countries and regions that currently perform best on the SDGs?
- Which countries, regions, and indicators have progressed the fastest over the period 2015-2023?

- What are some of the factors correlated with higher SDG performance and progress over the period 2015-2023?

Our study has a specific focus on the role of fiscal space and multilateral engagement, including peaceful relationships among nations, participation in VNR processes, ratification of UN treaties, and the impact of unilateral coercive measures. We also discuss the implications of our findings more specifically for developing countries, which tend to be more affected by limited access to affordable and long-term private and public capital for investing in the SDGs. Ahead of important international summits on climate and international financing, and as the world prepares to start negotiating the post-2030 agenda, we hope that our analysis can provide relevant insights to reform the GFA and strengthen international cooperation to achieve the SDGs by 2030 and beyond.

3.2 Literature review

The SDGs were adopted after the expiration of the MDGs, which covered the period 2000-2015 and focused primarily on developing countries, with a much-reduced set of goals and targets. The literature from the MDG period suggests that goal-based development likely led to an acceleration of progress compared to baseline scenarios, especially in terms of health outcomes (McArthur and Rasmussen 2017) and played a role in supporting global mobilization to achieve a set of important societal priorities (Sachs 2012). Although similar to the SDGs, it remains very difficult to empirically and quantitatively isolate the effect of internationally agreed-upon sets of goals on development due to the absence of a counterfactual (United Nations 2012). The MDG literature emphasized the role of financing (Lee et al. 2004; Fryatt et al. 2010; McArthur 2013), global cooperation and partnerships (Lomazzi et al. 2014), long-term planning (Sachs 2004), technology (Byrne et al. 2011), and other structural and non-structural factors (Hickmann et al. 2023) in moving towards the goals. More broadly, a substantial literature exists on the drivers of long-term economic development, including the roles of institutions, conflicts, and human capital (Acemoglu and Robinson 2012; Acemoglu et al. 2014; Collier 2004; Collier and Rohner 2008; Sachs 2015).

For the first time in human history, the international community adopted in 2015 a common set of goals that encompass the triple bottom line of sustainable development (social, economic, and environmental) and apply to all UN member states, including both developing and developed countries. As also emphasized in the Global Public Goods (GPGs) literature (Wickstead 2015), the SDGs underline the importance of policy coherence and policy coordination across countries to address negative spillovers notably under SDG 12 (Responsible consumption and production), and SDG 17 (Partnerships for the Goals). The adoption of the SDGs was quickly accompanied by a growing body of academic literature focusing on SDG synergies and trade-offs and pathways to achieve the SDGs or specific goals. The European Commission's Joint Research Center (Miola et al. 2019) identified back in 2019 already 220 English-only documents that discuss the issue of SDG interlinkages (and related terms). Boar et al. (2022) and Bennich et al. (2023) released respectively a systematic review of 408 and 51 papers analyzing SDG interactions. As argued by Nilsson et al. (2018), synergies and trade-offs across SDGs and SDG targets are ultimately very dependent on the context, governance system and the time horizon considered. The World in 2050 project aimed to provide forward-looking SDG scenarios (TWI2050 2018), and several other initiatives and studies have aimed to provide model-based pathways for achieving the SDGs as a

whole (van Vuuren et al. 2015; Moreno et al. 2023) or some of the SDGs, focusing for instance on SDG 2 (Zero Hunger) (Mosnier et al. 2022) or SDG 13 (Climate Action) (Deep Decarbonization Pathways Project 2015).

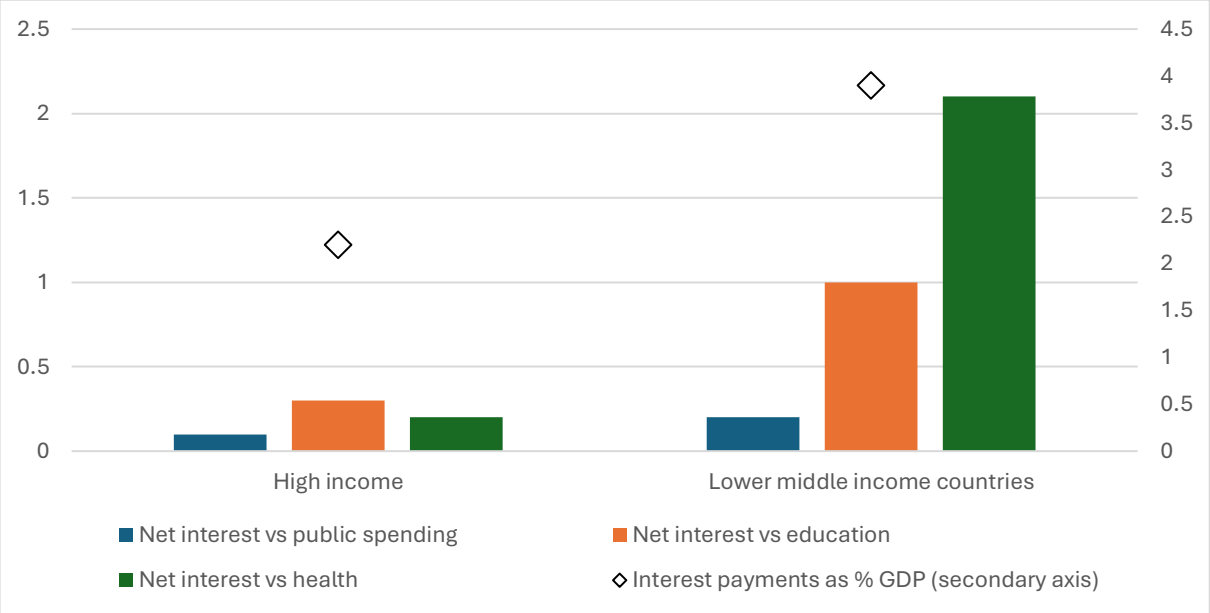
Several drivers of SDG progress were identified by consortiums of scientists. Building on the synergies and nexus literature, scholars and networks of scientists came up with priority policies and investments called entry-points (Independent Group of Scientists appointed by the Secretary-General, 2019) and key SDG transformations (Sachs et al. 2019). The Global Sustainable Development Report (GSDR) identified in 2023 five levers for SDG transformations: governance, economy and finance, science and technology, individual and collective action and capacity-building. SDSN's "Sustainable Development Report" has emphasized in its 2022, 2023 and 2024 editions the importance of peace, global cooperation and international financing to support SDG progress (Sachs, Kroll, et al. 2022; Sachs, Lafortune, et al. 2023; Sachs et al. 2024).

The SDGs are often considered as an investment agenda, notably in social capital (health, education and social protection) and physical infrastructure (roads, water, sanitation, renewable energy, internet access) (Schmidt-Traub 2015). In 2019, two major studies conducted by the IMF and the SDSN estimated for the first time the global financing gap in developing countries to achieving the SDGs (Gaspar et al. 2019; SDSN and MH 2019). The latest UNCTAD estimate suggests that the global financing gap represents around 4 trillion USD per year (UNCTAD 2024b). Several studies also emphasized that debt burden and limited fiscal space represent a major barrier to implementing the SDGs in developing countries (Sachs et al. 2023; UNCTAD 2023; Songwe and Schmidt-Traub 2024). Many developing countries spend more on interest payments than on investment, health or education. The 2024 UNCTAD report "A World of Debt" puts it in these terms (UNCTAD 2024a):

> "This dynamic is largely a result of high borrowing costs which increase the resources needed to pay creditors, making it difficult for developing countries to finance investments. Developing regions borrow at rates that are 2 to 4 times higher than those of the United States and 6 to 12 times higher than those of Germany."

The latest report by the UN Commission on Trade and Development (UNCTAD) confirms the limited fiscal space available in developing countries to invest in sustainable development. Figure 3.1, compares the net interest payments against public expenditure and education and health expenditure. A ratio greater than 1 means that a country spends more on interest payments to service the debt than on other categories of spending. Focusing on health expenditure, this ratio corresponds to 0.2 for high income countries versus 2.1 in lower middle-income countries. Interest payments in high income countries represent 2.2% of GDP against 3.9% in lower middle-income countries (UNCTAD 2025).

Figure 3.1 Interest payments, high-income versus lower-middle income countries, three-years average 2021-2023



Source: UNCTAD, 2025, *A World of Debt*.

Beyond fiscal space, peaceful relationships among nations and global partnerships are also often considered as crucial drivers, or even prerequisite, for development (Kumar and Roy 2018; Yarnall et al. 2021; Mensah et al. 2024; Singh and Singh 2024; UNDP 2024). International conflicts and civil war can also be the consequence of material deprivation and poverty (Collier 2004). Conflicts and violence lead to sharp declines in living standards and can also have negative environmental impacts (Lawrence et al. 2015; Vuong et al. 2024).

The engagement with the multilateral system is also often considered as an important driver of development and can take several forms. First, according to the comparative advantage theory and the endogenous growth theory trade openness generally tends to be associated with positive socio-economic outcomes often accompanied by technology transfers (Hoppe 2005). Although unsustainable supply chains also drive negative environmental impacts (Malik et al. 2021; 2023; 2024). Trade dependency can also be the mirror of structural factors, for instance in Small Island Developing States (SIDS), which can be conducive to vulnerabilities in the context of global shocks that affect global supply chains, for instance the food supply chain (Grassia et al. 2022). Second, countries' engagement with the UN system and commitment to achieve the SDGs – including the ratification UN treaties, participation in UN organizations and in UN VNR processes – can signal countries' intention to move toward sustainable development which may, in principle, lead to better SDG plans, monitoring frameworks and outcomes. Finally, countries can also be illegally prevented to access the multilateral system – including the international trade and financial system – via so-called unilateral coercive measures which can have disastrous socio-economic impacts (De Zayas 2014; Bolivar 2022; Douhan 2023). These UCMs are forbidden under international law and the UN has mandated a Special Rapporteur to investigate and monitor the humanitarian impacts of UCMs (OHCHR 2023). Cuba and Venezuela for instance have been under illegal sanction regimes imposed by the United States since respectively 1958 and 2005.

Good governance, technological advancement, and human capital are widely recognized as critical drivers of both short- and long-term sustainable development, although their interrelationships are often

complex and may involve temporal lags. The introduction of the 2030 Agenda (paragraph 9) mentions the following:

> "We envisage a world in which every country enjoys sustained, inclusive and sustainable economic growth and decent work for all. […] One in which democracy, good governance and the rule of law, as well as an enabling environment at the national and international levels, are essential for sustainable development […]"

Several approaches and metrics are available to gauge countries' governance systems. On democracy and sustainable development, while Banik (2022) argues that "democracy provides the best platform and guarantees for difficult negotiations and deliberations that are required for the achievement of sustainable development", Munslow and Ekoko (1995) find "no strict correlation between democracy and sustainable development" yet "some items in the democratic package are capable of being prioritized and can help build sustainable development". Focusing on environmental goals and OECD countries and building panel data estimation over the period 1990 through 2015 Akalin and Erdogan (2021) argue that "[…] democracy, non-renewable energy consumption, and real income per capita have statistically significant negative effects on environmental quality, whereas renewable energy consumption has a positive effect. […] These findings show the poor functioning of democracy in addressing environmental issues among OECD countries".

While the concept and measurement of "democracy" tend to be debated (Boese 2019), there is a general consensus that strong, effective, transparent and accountable institutions, the implementation of the rule of law, long-term planning and political vision can provide impetus to advance sustainable development (Acemoglu and Robinson 2012; Acemoglu et al. 2014; SDSN and OECD 2019; Mahmutovic and Alhamoudi 2023). A recent body of literature and new data also explores the importance of trust in institutions to advance long-term sustainability objectives and also to strengthen societal resilience to shocks (Lloyd's Register Foundation and Gallup 2021; Perry 2021; OECD 2024). Other aspects of good governance, including the ease of doing business and timeliness of procedures (including the time to get a building permit, management of property rights and other factors related to the ease of doing business) may also be conducive to sustainable development through greater FDI and socio-economic outcomes (Rose-Ackerman and Tobin 2005; Bah and Fang 2015; Ma and He 2024). The government ability to tackle inequalities and stimulate fairness is covered under SDG 10 (Reduced Inequalities) but is also often considered as an enabler of societal cohesion, which in turn can have positive impacts on the achievement of societal and environmental outcomes and in reducing corruption (Muller 1988; Baek and Gweisah 2013; Bagchi and Svejnar 2015; Zhou and Li 2020).

Finally, structural factors such as exposure to climate risks and country size might also play a role. Scholars have analyzed the linkages between Structural Multidimensional Vulnerabilities and SDG outcomes, focusing in particular on SIDS (Massa et al. 2023). Geography and country size may also impact countries' development prospects (Gallup et al. 1999).

To our knowledge, no study has analyzed comprehensively, empirically and quantitatively the combined role of these potential policy levers to achieve sustainable development. Building on this literature review, our study precisely aims to fill this knowledge gap, with a specific focus on the role of fiscal space, peaceful relationships among nations, multilateral engagement, good governance and structural factors (including structural vulnerabilities and country size) on SDG progress over the period 2015-2023.

3.3 Method summary

Our primary objective is to empirically identify the main factors associated with high SDG performance and progress over the period 2015-2023. To do so, we rely on the SDG Index database as our primary source for computing the levels and rates of progress toward sustainable development in each country. The SDG Index has several advantages. First, it generates quantitative scores at the overall SDG Index, goal, and indicator level, which represent distance to target achievement (and over time percentage point change toward achieving the targets). Second, it covers all 193 UN Member states. Third, its longitudinal datasets provide scores for each year over our period of interest, 2015-2023. Fourth, it has been peer-reviewed (Schmidt-Traub et al. 2017) and the 2019 edition underwent statistical auditing by the European Commission Joint Research Center (Papadimitriou et al. 2019). Fifth, it is widely used by national governments and other stakeholders. It is regularly mentioned in the VNRs and was listed by the European Parliament Research Service among the ten composite indices useful for policymakers (EPRS 2021), and is used extensively by academics.

To reduce missing data bias, especially when computing progress over time, we calculate an adjusted version of the SDG Index which we refer to as the "Headline SDG Index (SDGi)". The full SDG Index uses 98 global indicators, yet, due to data gaps and time lags in international statistics the longitudinal SDG Index scores are impacted by missing data bias, which would significantly reduce the reliability and country coverage of our analysis. Fifteen headline SDG indicators were retained covering most of the individual goals based on their relevance, time coverage, country coverage, and ability to statistically replicate the full SDG Index scores. For this study, SDG 10 (Reduced Inequalities) and SDG 17 (Partnerships for the Goals) are not captured in the SDGi dependent variable but treated as means for implementation. For SDG 16, the SDGi uses the "Corruption Perception Index" as an outcome variable, but broader measures related to peace and security and good governance are treated as means for implementation. Overall, our SDGi construct is collinear with the full version of the SDG Index, and the growth rates of both constructs are also strongly and statistically correlated (Annex 3.7). Our SDGi was computed for all 193 UN member states, yet our sample focuses on 165 countries excluding countries with significant missing and outdated data and major outliers.

We first test whether the SDGi performs according to what the literature would suggest by correlating our new construct with other variables (including income, well-being and other social, economic and environmental constructs). We then analyze progress made across regions, countries and indicators. We then explore the potential drivers of SDG progress over the period 2015-2023. Building on the methods used in the economic literature to analyze the drivers of economic growth (Sachs and Warner 1995; Barro 1996; Wacker et al. 2024), we use the growth rate (in percentage point) of the SDGi score as our dependent variable which we then compare to baseline values (including baseline SDGi and other regressors). Our model controls for the baseline SDGi score in 2015, since major progress might be more difficult to achieve for already high achievers. We also control for structural and historical factors including structural vulnerabilities, debt burden and population size. The effect of trade regulations and openness is captured in the Ease of Doing Business indicator (time and cost to import and export), infrastructure indicator (ports, roads, railroads and ICT) and under the Structural Multidimensional Vulnerability Index (trade openness). The OLS regression focuses on countries with population greater than 1.3 million inhabitants to minimize the impact of outliers (extremely small countries) on the results.

The independent and control variables are sourced from various sources, as presented in Table 3.1 and Table 3.2. To avoid overfitting, we conducted Principal Component Analysis to create our constructs related to peaceful relationships among nations and multilateral engagement and reduce the total number of covariates. The PCA results are accessible in the Annex. The PCA identifies two main factors, which we call "Conflict" & "Multilateral Engagement" which were computed as the arithmetic mean of the variables with factor loadings above 0.6 under each factor with eigen values above 1. Our model uses only continuous variables (scores 0-100), where 0 represents the negative outcome (low progress) and 100 the positive outcome (e.g. rapid progress) – except for population and debt/gdp ratio which are log transformed – and our dependent variable (Change in SDGi score) is normally distributed. Further details about the underlying variables and their transformation are accessible in the Annex 3.7.

Table 3.1 Main variables regressed against SDGi growth rate

Variable	Brief description	Source
SDGi baseline (SDGi_2015)	Countries' SDGi starting point. As countries achieve high SDGi scores, it might be harder to achieve large progress over a limited time-period. We therefore control for countries' starting point in our OLS regressions.	Adapted from Sachs et al. 2024
Fiscal space (Fiscal) (logdebt)	We test two measures that aim to gauge countries' financial ability to invest in the SDGs: • Ratio of public interest payments to investment expenditure (UNCTAD) • Debt / GDP ratio (IMF), used as control variable (logged)	UNCTAD; IMF
Multilateral engagement (Multilateral)	Based on PCA we construct a composite measure which captures countries' willingness to engage with the multilateral system but also whether they are prevented by others to engage with the multilateral system: • Index of Countries' Support for UN-Based Multilateralism (Lafortune and Sachs, 2024) • Number of VNRs & VLRs produced, as a proxy of whole of society engagement with the global goals (United Nations, 2024) • Number of Unilateral Coercive Measures that are applied against individual countries preventing them to access the international trade and financial system and other benefits from multilateral engagement (Drexel, 2023)	Lafortune and Sachs, 2024: United Nations; Drexel et al. 2023
Conflict (Conflict)	Base on PCA we aim to capture the intensity and conflict status in 2015 and over the period analyzed. We rely on a composite measure which combines: • Battle-related deaths (number of people) • ACLED Conflict Index assesses every country and territory in the world according to four indicators – deadliness, danger to civilians, geographic diffusion, and armed group fragmentation	Uppsala Conflict Data Program and ACLED
Human Capital & Research (Human capital)	Access to and quality of primary, secondary tertiary education and spending on Research and development (R&D)	World Intellectual Property Organization (WIPO)
Infrastructure (Logistics Performance Index, Infrastructure Score) (Inf)	Survey-based average assessment of the quality of trade and transport related infrastructure, e.g. ports, roads, railroads and information technology	World Bank
Ease of doing business (Doing business)	The ease of doing business score measures an economy's performance with respect to a measure of regulatory best practice	World Bank
Multidimensional Structural Vulnerability Index (MVI)	Structural vulnerabilities (economic, development and environmental)	Massa et al. 2023
Population Size (logpop)	Total number of inhabitants (logged)	World Bank (from multiple sources)

Source: Author.

Table 3.2 Five governance variables tested in OLS model

Variable	Brief description	Source
Government effectiveness (WGI_Gvt Effective)	Quality of bureaucracy, satisfaction with services, quality of transport infrastructure, coverage of basic infrastructure, policy instability and state failure	Worldwide Governance Indicators, World Bank
Rule of Law (WGI_Rule of Law)	Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence	Worldwide Governance Indicators, World Bank
Democratic Electoral System (Vdem_Electoral)	Elected political leaders: broad elections choose the chief executive and legislature	V-Dem, Varieties of Democracy Database
Fairness & income redistribution (Fairness / GINI)	GINI Coefficient	World Bank
Government Cares for People's Well-Being (Gvtcares)	The government cares about you and your well-being (combined a lot and somewhat)	Lloyd's Register Foundation, World Risk Poll

Source: Author.

Our linear ordinary least squares (OLS) regression is specified in equation X:

$$Yi = Xi\beta i + \varepsilon i \quad (1)$$

Where the dependent variable Yi is the SDGi rate of change (in percentage point, and normalized from 0 to 100), Xi denotes the matrix of regressors and control variables. βi is the matrix of regression coefficients estimated in this OLS model, and εi is the error term.

In our simple model, equation 1 expands to equation 2 and 3:

$$\Delta\,\mathrm{SDG}_i = \alpha_0 + \alpha_1 SDG2015_i + \alpha_2\, Fiscal_i + \varepsilon_i \quad (2)$$
$$\Delta\,\mathrm{SDG}_i = \alpha_0 + \alpha_1 SDG2015_i + \alpha_2\, Multilateral_i + \varepsilon_i \quad (3)$$

Where $\Delta\,\mathrm{SDG}_i$ corresponds to the rate of change of the SDGi our dependent variable, where SDG2015, Fiscal and Multilateral are the independent variables, where α_0 is the intercept, where α_1, α_2 ...α_k are the coefficients for the independent variables and ε is the error term.

To test, the marginal effect on developing countries we use equations 4 and 5, applied to Fiscal and Multilateral independent variables, where Fiscal and Multilateral are multiplied by the dummy variable Inc, where 0 corresponds to developing countries and 1 to High income countries:

$$\Delta\,\mathrm{SDG}_i = \alpha_0 + \alpha_1 SDG2015_i + \alpha_2\, Fiscal_i + \alpha_3 Fiscal_i \times Inc_i + \varepsilon_i \quad (4)$$
$$\Delta\,\mathrm{SDG}_i = \alpha_0 + \alpha_1 SDG2015_i + \alpha_2\, Multilateral_i + \alpha_3 Multilateral_i \times Inc_i + \varepsilon_i \quad (5)$$

Our main model finally expands into equation 6:

$$\Delta\,\mathrm{SDG}_i = \alpha_0 + \alpha_1 SDG2015_i + \alpha_2\, Fiscal_i + \alpha_3\, Multilateral_i + \alpha_4 Conflict_i + \alpha_5\, Human\ capital_i + \alpha_6 Doing\ business_i + \alpha_7 MVI_i + \alpha_8 \ln(Population)_i + \alpha_9 \ln(debt)_i + \varepsilon_i \quad (6)$$

Due to collinearity problems between human capital and physical infrastructure, the latter was removed from the main model. Yet, we present a version of the model which includes a transformed Infrastructure

variable (Inf_hat2) which is derived from the residuals after regressing infrastructure on human capital in order to remove the redundant information.

Building on Mehmetoglu (2014) we evaluated several underlying assumptions after the OLS regression using commonly accepted thresholds related to heteroskedasticity (Breusch-Pagan hettest >0.05), multicollinearity (Variance Inflation Factors test <5.00), normal distribution of residuals (Shapiro-Wilk test >0.01), model specification (linktest >0.05), appropriate functional form (RESET test >0.05) and influential observations (Cook's distance <1.00). Robustness checks were conducted by contrasting our findings with quantile regression models which deal better with outliers (Table 3.7 in the Annexes).

3.4 Results

3.4.1 SDG performance in 2023 and correlates

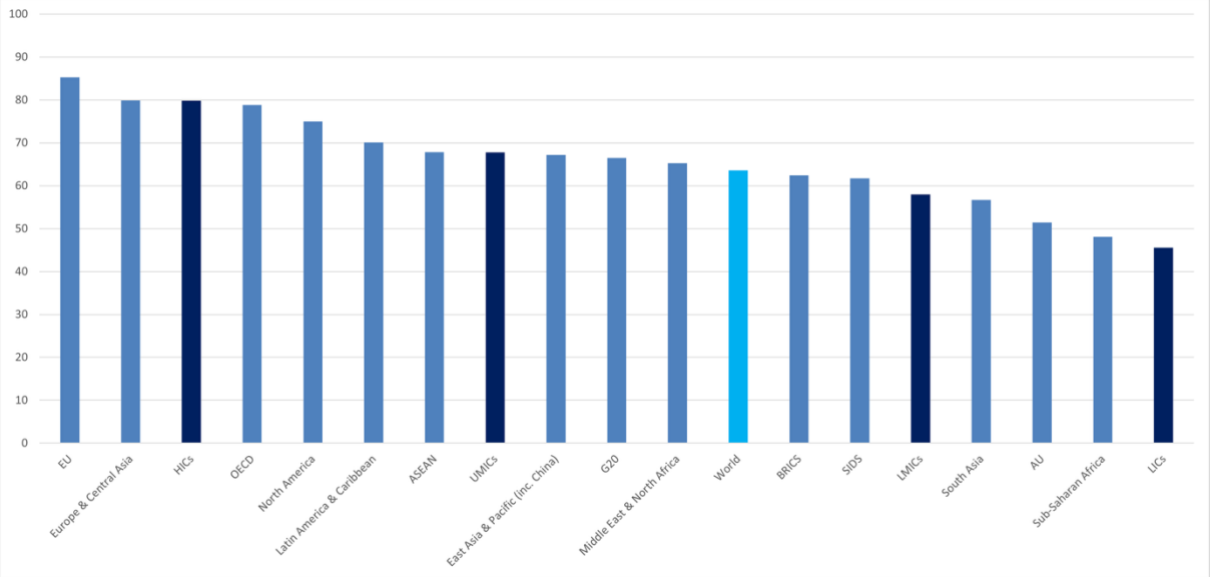
We first confirm that the SDGi performs according to what the theory would suggest, by presenting a detailed correlation matrix with various socio-economic and environmental variables.

Overall, in 2023, the best SDGi performers tend to be European countries. By contrast low-income countries, especially those in Sub-Saharan Africa tend to perform much more poorly. Annex 3.7 presents the detailed correlation matrix between SDG performance and various covariates. The SDGi is strongly and positively correlated with GDP per capita, subjective well-being, strong institutions (effective government and implementation of the Rule of Law), democratic electoral system, human and physical capital, and the ease of doing business. Countries that perform well on the SDGi also tend to be less impacted by the humanitarian impacts of war, conflicts and unilateral sanction regimes. In general, countries with a high SDGi in 2023 also progressed slower over the period 2015-2023, which suggests that marginal progress in countries with SDG performance is already high might be harder to achieve compared with countries starting with lower baselines. There is no correlation or weak correlation between the SDGi and fiscal space variables (Debt service / investment ratio and Debt/GDP ratio), commitment to UN-based multilateralism and with structural characteristics such as the MVI and population size. Countries with high SDG performance tend to generate larger negative international spillovers (notably via the trade system, tax haven or illicit financial flows) and are also historically responsible for the lion's share of cumulative CO2 emissions.

We investigate in greater detail the relationship between the SDGi and (i) per capita GDP; (ii) subjective well-being; (iii) negative international spillovers and (iv) cumulative CO2 emissions. Interestingly, despite the strong and statistically significant correlations between SDGi performance and each of these variables, the best line of fit is quadratic in all cases and not linear. On per capita GDP, this suggests that the marginal effect of income on the SDGi (and vice versa) is particularly strong in countries with low baselines. As suggested in the literature, as countries' income level increases and populations become happier, there are increasing marginal returns to sustainable development on well-being. As countries become wealthier the subjective well-being of their citizens stagnates – as emphasized in the so-called Easterlin paradox (Easterlin, 1974) - unless further economic growth is more sustainable by, for instance, promoting policies that increase access to and quality of key services, equity and environmental outcomes (De Neve and Sachs, 2020). Yet, sustainable development domestically may also be conducive to

negative impacts abroad, as suggested by the strong negative correlation between the SDGi and negative international spillovers (Lafortune et al. 2021; Tørsløv et al. 2018; Alstadsæter et al. 2023). At the same time, countries with very high SDGi (80<) can generate very large or moderate negative international spillovers which suggests that through the right policy mix it is possible to achieve high levels of sustainable development without outsourcing too many negative impacts abroad via unsustainable consumption, exports and illicit financial flows. This information, combined, with the strong and positive correlation between the SDGi and historical CO2 emissions, might suggest that high SDGi performers and wealthy countries may have a special responsibility to strengthen action and global cooperation for sustainable development.

Figure 3.2 2023 SDGi Score by country groups

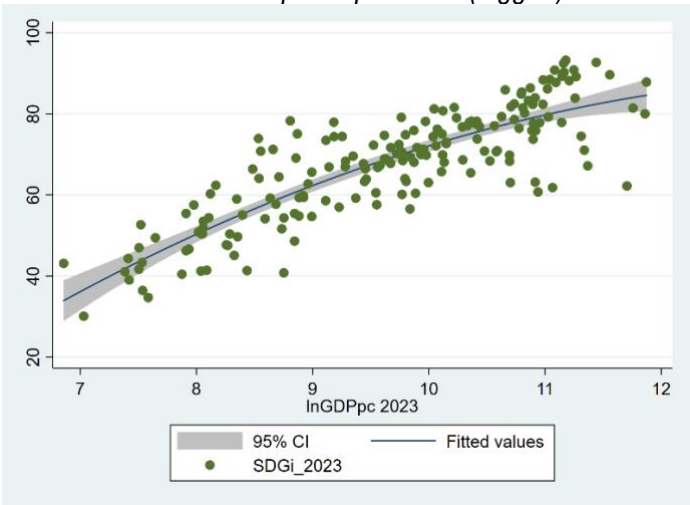


Note: Population-weighted averages. In **light blue** world average, **dark blue** averages by countries' income level group.

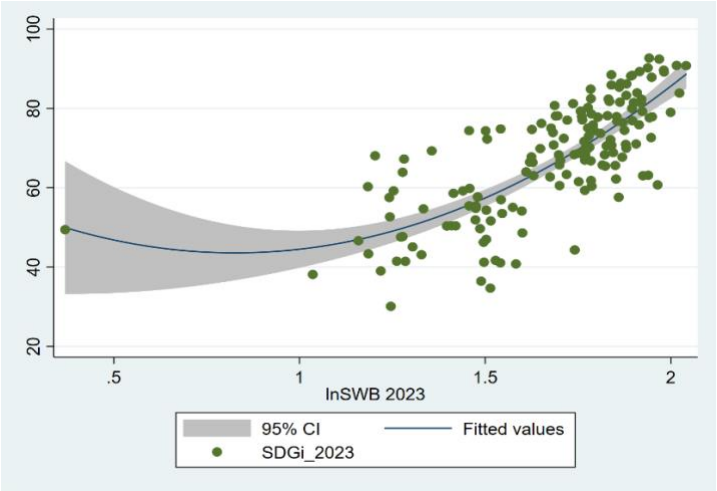
Source: Author, based on Sachs et al. 2024.

Figure 3.3 SDG performance in 2023 and correlates

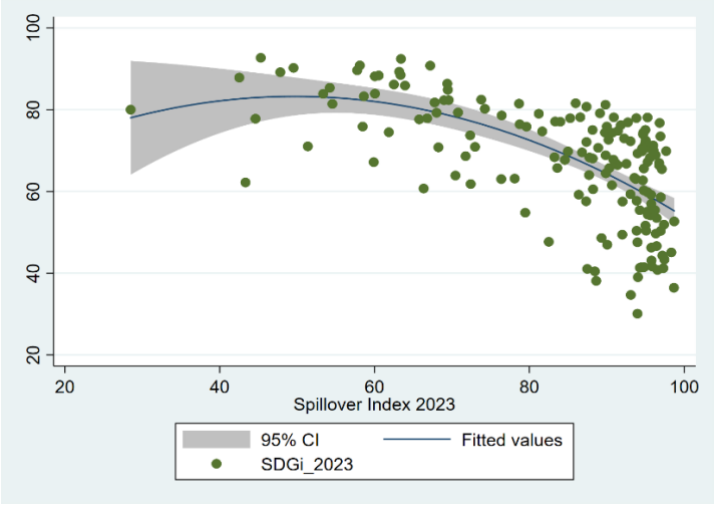
A. SDGi and per capita GDP (logged)



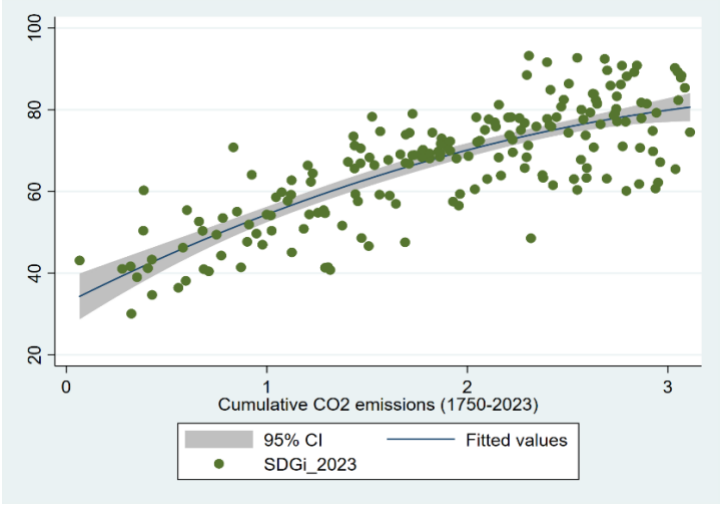
B. SDGi and subjective well-being (logged)



C. Panel C. SDGi and negative spillovers (0-100 score)



D. SDGi and historical CO2 emissions (logged)



Notes: Panel a. N= 166, r=0.854***; Panel b. n=15, r=0.723***; Panel c. n= 164, -0610***; Panel d. N=172, r=0.820***

Source: Authors. See Annexes for details on underlying data sources and full correlation matrices.

3.4.2 SDG progress by country, regions and indicators over the period 2015-2023

We now focus on progress on the SDGi over the period 2015-2023. In general, countries with lower SDGi baselines in 2015 progressed faster toward sustainable development than countries with higher SDGi baselines, although there are important variations across individual countries and country groupings (Figure 3.4). Countries in the ASEAN, South Asia, BRICS, LMICs and East Asia & Pacific (including China) progressed the fastest (4.5 p.p <=). By contrast, the progress made by countries in the EU, Europe & Central Asia, North America, OECD and HICs was much slower (<= 2.5 p.p). At the same time, countries in Sub-Saharan Africa, the African Union and LICs which started with the lowest SDGi baselines did not catch-up on sustainable development with the world average (around 3.7 percentage point growth rate) and emerging economies in Asia and other parts of the world. With SDGi growth rates over the period at around 3.5 p.p. SIDS and MENA countries started with similar baselines as East Asia and Pacific (including China) and the ASEAN countries, but progressed about two times slower over the period at around 2.5 p.p.

On average, the indicators related to basic services and infrastructure progressed faster than the indicators related to climate, biodiversity, hunger and health. Over the period 2015-2023, the fastest progress was achieved on SDG 9 (Internet Use), SDG 6 (Access to sanitation), SDG 5 (Women in Parliament) and SDG 7 (Access to Electricity). Increased access to internet and digital technologies is an important outcome, as it promotes greater access to key services, including health services and financial inclusion, and increases resilience to shocks via teleworking and remote education (Popkova et al. 2022; Tay et al. 2022; Comin et al. 2022). There was overall stagnation (growth rate <=1 p.p. and =>-1) on SDG 16 (Corruption perception index), SDG 12 (Nitrogen production) and SDG 13 (CO2 emissions per capita). Reversal in progress was observed on SDG 3 (Life expectancy), SDG 2 (Undernourishment) and SDG 15 (Red List Index). These findings are broadly aligned with the findings from other recent studies (for instance (Kharas et al. 2024).

Figure 3.4 SDGi baseline score in 2015 (y-axis) & progress in percentage points (x-axis) by country groups

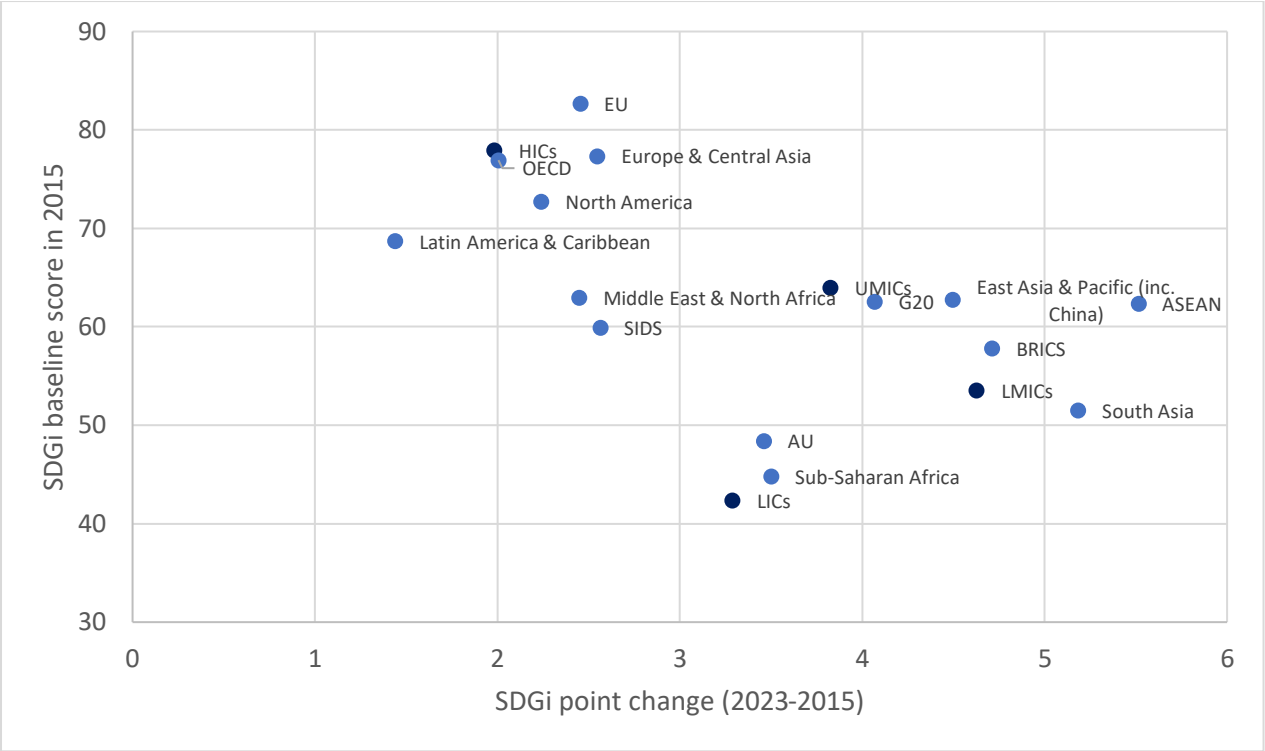
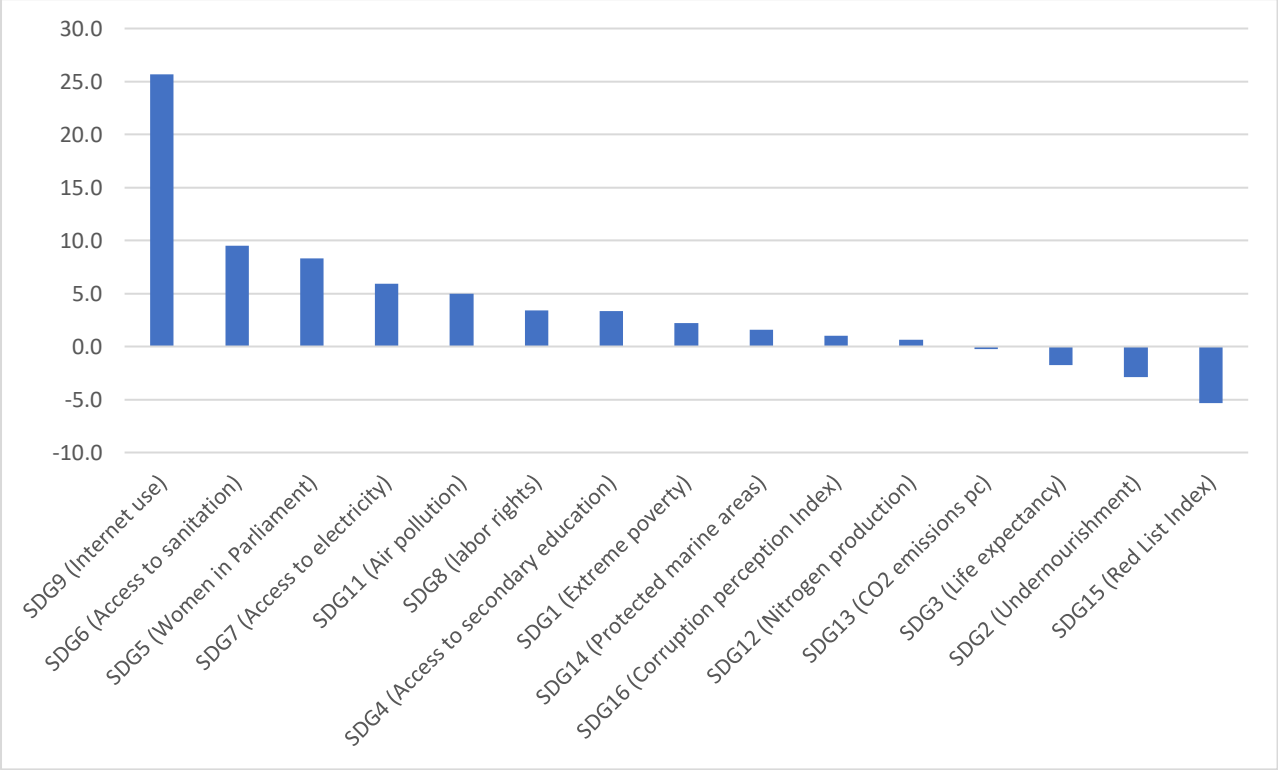


Figure 3.5 SDGi progress by indicator



3.4.3 Exploring the potential drivers of SDG progress

Finally, we aim to identify some potential drivers of SDG progress at the country-level over the period 2015-2023. Our main hypothesis, based on the literature, is that countries' ability to invest in the SDGs, via increased fiscal space, and countries' engagement with the multilateral system might be correlated with SDG progress, after controlling for SDGi baselines and other structural and non-structural variables. We expect this to be particularly true for developing countries (non-HICs). The detailed regression tables are presented in the Annex, section 3.7.6.

Table 3.3, presents the results of simple regressions between the change in SDG score and fiscal space (m1) (measured by the ratio of debt servicing to investment) and multilateral engagement (m2) when controlling baseline SDG levels in 2015. These regressions suggest that we can reject the null hypothesis ($p<0.1$) and that changes in the independent variables are related to changes in the dependent variable. As expected, a high 2015 baseline is negatively correlated with SDG progress. Interestingly, as expected from the literature, the correlation between fiscal space and multilateral engagement differ between developing countries and rich countries. The marginal positive effect of fiscal space (m3) and multilateral engagement (m4) on SDG change seems to be larger for developing countries (LICs, LMICs and UMICs) compared with developed countries (HICs).

Table 3.3 *Simple model:* OLS regression between SDGi change (in p.p), fiscal space and multilateral engagement, including interaction effects by countries' income levels

	(1) Δ SDGi	(2) Δ SDGi	(3) Δ SDGi	(4) Δ SDGi
SDGi_2015	**-.192****	-.066	**-.192***	-.16
	(.092)	(.132)	(.1)	(.125)
Fiscal	**.106***	**.176****		
	(.064)	(.084)		
Inc		10.012		**38.181****
		(7.869)		(17.228)
Fiscal*Inc		**-.211****		
		(.104)		
Multilateral			**.351*****	**.515*****
			(.118)	(.138)
Multilateral*Inc				**-.667****
				(.266)
_cons	56.564***	45.003***	42.513***	30.653***
	(8.808)	(11.251)	(10.23)	(11.044)
Observations	146	146	146	146
R-squared	.05	.082	.085	.129

Standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

Note: (1) and (2) Robust standard errors are computed due to the existence of heterokedasticity (Breusch-Pagan hettest > 0.05).

The second regression table presents a more comprehensive model with additional regressors and control variables (Table 3.4). Our model explains close to 23% of the variance in SDG score over the period 2015-2023 (m5) and 32% for developing countries (m9). Fiscal space and multilateral engagement are positively and statistically correlated with SDG progress in this larger model, and the marginal effect of these two variables remains higher in developing countries compared with developed countries (m7 and m8). There is a statistically significant and positive correlation between peace and SDG progress, between the ease of doing business and SDG progress and between population size and SDG progress. There is a statistically significant negative correlation between human capital and SDG progress and between the MVI and SDG progress. Due to high levels of correlation between levels of human capital and physical capital (infrastructure) at the country level, the main model only retained the human capital variable. However, after regressing infrastructure on human capital and predicting the residuals to create a non-redundant infrastructure variable (Inf_hat) to integrate in the model, we conclude that the non-inclusion of the infrastructure variable does not change the main results or lead to a significant drop in the explanatory power of the model (m6).

Table 3.4 *Main model:* OLS regression between SDGi change (in p.p) and covariates

	(5) Δ SDGi	(6) Δ SDGi	(7) Δ SDGi	(8) Δ SDGi	(9) Δ SDGi
SDGi_2015	-.269	-.312	-.274	-.273	-.236
	(.191)	(.215)	(.189)	(.19)	(.234)
Fiscal	**.138****	**.139****	**.213*****	**.135****	**.269*****
	(.065)	(.07)	(.073)	(.064)	(.085)
Multilateral2015	**.245****	**.248****	**.251****	**.382*****	**.338****
	(.118)	(.1)	(.117)	(.142)	(.156)
Conflict	**.263****	**.29****	**.25****	**.253****	**.278****
	(.107)	(.113)	(.106)	(.106)	(.119)
Human capital	**-.353****	**-.421****	-.289	-.231	-.369
	(.17)	(.181)	(.184)	(.187)	(.258)
Doing business	**.576*****	**.697*****	**.64*****	**.512****	**.705*****
	(.209)	(.253)	(.209)	(.215)	(.253)
MVI	**-.373***	**-.38***	**-.414****	**-.404****	**-.57****
	(.203)	(.195)	(.202)	(.203)	(.25)
logpop	**3.895*****	**4.351*****	**3.689****	**3.417****	**5.897*****
	(1.399)	(1.378)	(1.445)	(1.451)	(1.875)
logdebt	3.211	3.668	2.587	2.263	**7.789***
	(2.562)	(3.031)	(2.545)	(2.588)	(3.964)
Inf_hat2		-.168			
		(.109)			
Inc			16.009	27.694	
			(10.324)	(17.572)	
Fiscal*Inc			**-.263****		
			(.121)		
Multilateral*Inc				**-.505***	
				(.269)	
_cons	-56.86*	-70.915**	-57.451*	-49.384	-119.997***
	(29.665)	(32.642)	(29.898)	(29.971)	(43.499)
Observations	145	144	145	145	101
R-squared	.226	.241	.257	.25	.319

Standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

The third set of regression introduces additional governance variables. Overall, we find no conclusive evidence, over the period 2015-2023, that countries with higher baseline scores on the WGI Government effectiveness pillar, WGI Rule of Law pillar and V-Dem Electoral democracy score progressed faster on the SDGs than other countries. Interestingly, there is a positive and statistically significant correlation between the share of the population in a country that considers that their government "Cares for them and their Well-Being" and SDG progress.

The fourth set of regressions uses a modified dependent variable focusing on sub-dimensions of the SDGs, namely the "Leave-No-One Behind" dimensions (SDG 1-9) and "Planet" dimension (SDG 11, 12, 13, 14 and 15). Overall, our main model performs slightly better for the LNOB dimension (R2=.262) than for the "Planet" dimension (R2=.190).

Finally, the fifth regression table presents the results using quantile regression. The results of the quantile regression suggests that our model is fairly robust. The coefficients and their statistical significance do not change significantly compared with our original OLS regression. OLS coefficients fall within the confidence intervals of the quantile regression coefficients. This implies that our quantile regression results are not statistically different from the OLS results (Annex 3.7).

3.5 Discussion

First, our analysis suggests that SDG performance is notably associated with higher levels of well-being, income, and stronger institutions, as well as higher levels of negative spillovers and historical CO2 emissions. However, these relationships are not linear but rather quadratic. Second, there are large disparities in SDG progress over the period 2015-2023, across countries and SDG indicators. The Asia-Pacific and South Asia regions progressed the fastest on the SDGs, whereas Sub-Saharan and low-income countries more broadly made significantly slower progress. Indicators related to basic access to infrastructure and services, including internet use and sanitation, progressed the fastest on average whereas indicators related to climate, biodiversity, hunger, and health declined or stagnated on average. Third, the econometric analysis suggests that increased fiscal space and engagement with the multilateral system might be important drivers of SDG progress, alongside peace and the ease of doing business. Structural factors also appear to play a role, with population size being positively correlated with SDG progress. Our analysis does not find conclusive evidence that link democratic governance and SDG progress, however, there is a statistically significant correlation between SDG progress and the share of the population that believes their governments cares for their well-being.

To illustrate our findings, it is interesting to note that countries such as Benin and Uzbekistan are among the top 5 countries in our sample with the fastest SDG progress over 2015-2023, alongside Nepal, Sierra Leone, and Togo. By contrast, Venezuela, the Syrian Arab Republic, and Yemen rank the lowest in SDG progress. Benin and Uzbekistan started with relatively low baseline SDGi but benefited from relative political stability and the absence of major military conflicts in 2015 and over the entire period. Benin and Uzbekistan are not under sanction regimes and their baseline fiscal situation in 2015 were relatively strong with investment expenditure being on par or even lower than interest payments and relatively low levels of debt/GDP at 31% and 10% respectively. Both countries were pioneers in issuing sovereign SDG Bonds

and submitted one or several VNRs. Uzbekistan adopted a new constitution in 2023, which makes several references to sustainable development. While both countries are not typically considered as very large countries, they are still among the top 50% most populated countries with more than 13 million inhabitants in Benin and 36 million inhabitants in Uzbekistan in 2023. By contrast, Venezuela, the Syrian Arab Republic, and Yemen are facing military conflicts and/or are severely impacted by international sanction regimes preventing them, to a large extent, from accessing the international trade and financial system.

Our findings have several implications. First, fiscal space matters for SDG progress, particularly in developing countries. Our findings suggest that the marginal effect of income on SDG performance is particularly important in countries with very low levels of GDP per capita. Also, countries that progressed most over the period analyzed tend to be those that had more fiscal space back in 2015 to invest in the SDGs. This emphasizes the importance of advancing the reform of the GFA to increase access to affordable and long-term financing to low- and middle-income countries to invest in the SDGs (Sachs et al. 2023). Debt for nature and debt for climate swap may help reduce debt burden while accelerating the pace of investments to address the climate and biodiversity crises. The case for high-income countries to take the lead in mobilizing additional financing to address the climate and biodiversity crises is particularly strong considering that, as presented in the first part of the analysis, they are responsible for the lion's share of negative international spillovers and historical CO2 emissions. Sharing the burden of human-induced climate change impacts fairly and globally remains an important priority for achieving climate justice (Sachs, Massa, et al. 2023; Songwe and Schmidt-Traub 2024; Ishii et al. 2024).

Second, countries should enhance their engagement with the multilateral system, including full adherence with the UN Charter, and not be illegally prevented by others to benefit from global supply chains and the financial system via illegal unilateral coercive measures. As expected, being impacted by military conflicts and violence is a significant barrier to SDG progress and as such peace, conflict prevention and diplomacy should remain a paramount objective of the multilateral system. Countries' that tend to ratify UN treaties, participate in UN organizations, that have presented SDG action plans via VNRs and that are not under illegal international sanction regimes tend to progress faster on the SDGs. This emphasizes the importance of monitoring countries' commitments for UN-based multilateralism but also to the humanitarian impacts of UCMs which negatively impact countries' development prospects. Professor Alfred de Zayas, who served as the first UN Independent Expert on the Promotion of a Democratic and Equitable International Order goes as far as considering that: *"When unilateral coercive measures cause widespread hunger and death, as they do, they may amount to crimes against humanity, under article 7 of the Statute of the International Criminal Court"* (De Zayas 2024). The fact that the best performing countries also generate the largest negative spillover effects, from unsustainable consumption and illicit financial flows, also support stronger concerted action at the global level to clean up international supply chains, curb illicit financial flows and harmonize fiscal rules which can unlock additional financing to invest in sustainable development.

Third, our findings suggest that government vision and the business environment also matter for SDG progress. While the current best SDG performers tend to be countries where the government is highly effective, the rule of law is well implemented and with highly democratic institutions these three variables do not seem to play a significant role in explaining country progress on the SDGs over the period 2015-2023 in developed and developing countries when controlling for other covariates. However, countries

where the government is perceived as paying significant attention to people's well-being tend to have progressed faster. Countries such as China, the Philippines, Tanzania, the United Arab Emirates, Uzbekistan, and Vietnam progressed relatively fast on the SDGs and their population tends to believe that their country leaders care for their well-being. A predictable and effective business environment also seems to be an important driver of SDG progress, especially to advance the "People" dimension of the SDGs. Countries with higher human capital tend to perform better on the SDGs. Yet, while numerous studies emphasize the importance of human capital for long-term development, over the period analyzed 2015-2023, human capital did not seem to be a decisive factor in explaining SDG progress after controlling for baselines and other covariates, yet it is statistically correlated with progress on "Planet" related SDGs.

Fourth, more attention should be paid in understanding the linkages between structural country characteristics and SDG performance. We find no clear association between countries' current SDG performance and population size. Yet, larger countries tend to have progressed faster over the period 2015-2023 after controlling for other covariates. There is a statistically significant negative correlation between countries' multidimensional structural vulnerabilities, including being small and remote from other large markets and vulnerability to climate events, and current SDG performance. This is aligned with findings presented in other international reports (Massa et al. 2023). While structural vulnerabilities are not associated with lower SDG progress over the period 2015-2023, the fact that our sample includes very few of the most structurally vulnerable countries in the world due to missing data, such as SIDS, and that the frequency and magnitude of climate-related events will likely increase in the coming years should call for prudence in interpreting these results. It may well be that in the coming decades SDG progress in structurally vulnerable countries, especially SIDS, will be increasingly hindered by the increased frequency of climate-related events and sea-level rise, especially if investments on climate adaptation remain insufficient. It is beyond the scope of our study to analyze in depth the relationship between structural vulnerabilities and the achievement of specific SDGs, yet other studies have found that the most vulnerable SIDS face specific challenges in achieving SDG 2 (Zero Hunger) (Massa 2021).

Our study has several limitations. To reduce missing data bias, we rely on a subset of SDG Indicators. While the SDGi is collinear with the SDG Index, the use of other indicators can impact individual country results. Important dimensions of the SDGs are not captured such as access to housing, more moderate poverty issues, sustainable agriculture, quality education and climate adaptation (among others). There are also well-known limitations to cross country regressions which rely on a limited set of observations and can be sensitive to small adjustments to the dependent or independent variables (Levine and Renelt 1992; Maddala and Wu 2000). The time period is also relatively narrow (2015-2023) and, depending on the country and indicator, there can be a two to three years lag and therefore might represent progress over less than eight years. Our findings on the drivers of SDG progress may not be applicable to long-term SDG progress say over 15-20 years. These results should therefore be interpreted with caution as an attempt to explore large-scale trends and correlations. As such there may be reverse causality and omitted variable bias. Our goal is to stimulate a reflection on the structural and non-structural drivers of SDG progress and inspire further research including more detailed and in-depth qualitative reviews. We also rely extensively on several highly aggregated indices, and further research could test how individual indicators included in these aggregates perform.

Further research could also incorporate lagged variables. For instance, to test whether investments and specific policies related to R&D, infrastructure, education, health and other potential drivers say over the period 2000-2015 are associated with faster SDG progress after 2015. The impact of such investments and expenditure may take years to lead to positive SDG outcomes and it may well be that investments and commitments made by countries during the MDG era explain at least partly progress during the SDG era. As data quality over time increases, panel regression techniques can also be used at the country, regional and global level. Many of our covariates and SDG indicators only had data for limited years, yet national and regional datasets may provide room for panel regression analysis to test the impact of specific policies, investments and events.

3.6 Outlook

Overall, we believe that our study provides a novel contribution to the understanding of SDG performance and progress at the country level. Our study emphasizes the importance of fiscal space, multilateral engagement and peace as important drivers of SDG progress, especially in developing countries. These findings have numerous implications including in the context of upcoming negotiations to advance concerted actions on the reform of the GFA and to adopt the next set of goals and means for implementation of the post-2030 global agenda for sustainable development that might continue the SDGs beyond 2030. The next chapter complements these quantitative findings with more qualitative case studies of innovative governance frameworks introduced by countries that progressed rapidly on the SDGs since 2015.

3.7 Annex

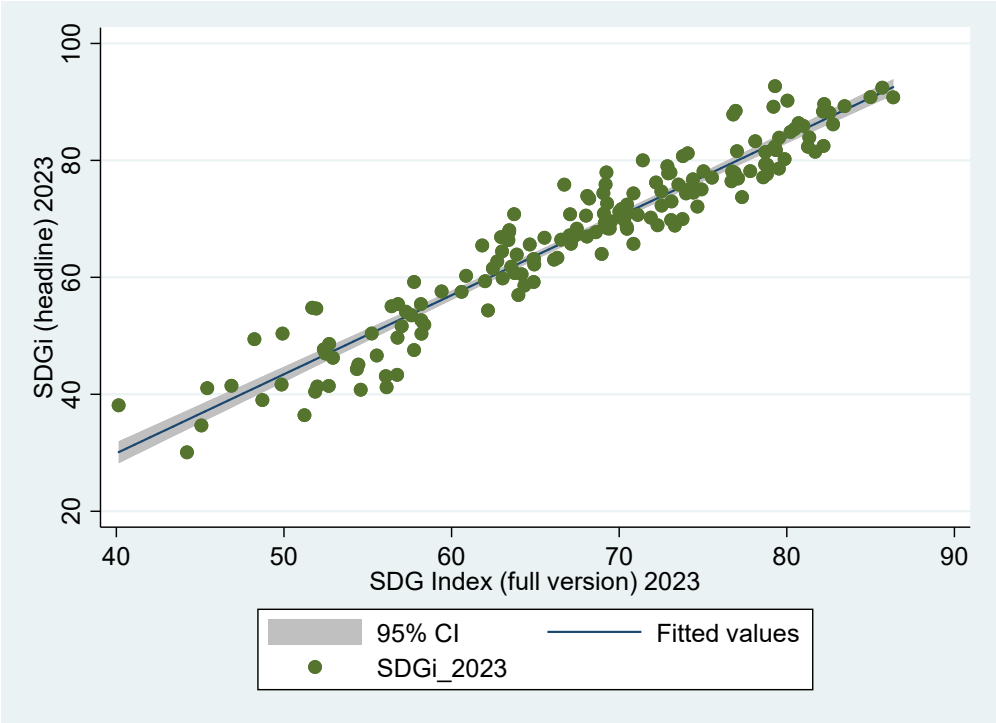
3.7.1 List of SDG headline indicators

SDG	Indicator	IndCode	Base year	Latest year	Optimum (= 100)	Lower Bound (=0)	Justification for Optimum	Source	Dwldlink
1	Poverty headcount ratio at $2.15/day (2017 PPP, %)	sdg1_wpc	2015	2024	0	73	SDG Target	World Data Lab	http://worldpoverty.io/
2	Prevalence of undernourishment (%)	sdg2_undernsh	2015	2021	3	42	SDG Target	FAO	https://www.fao.org/faostat/en/#data/SDGB
3	Life expectancy at birth (years)	sdg3_lifee	2015	2021	83	54	Average of best performers	UNDESA	https://population.un.org/wpp/Download/Standard/MostUsed/
4	Lower secondary completion rate (%)	sdg4_second	2015	2022	100	18	SDG Target	UNESCO	https://data.worldbank.org/indicator/SE.SEC.CMPT.LO.ZS
5	Seats held by women in national parliament (%)	sdg5_parl	2015	2024	50	1	SDG Target	IPU	https://data.ipu.org/women-ranking?month=1&year=2024
6	Population using at least basic sanitation services (%)	sdg6_sanita	2015	2022	100	10	Leave no one behind	JMP	https://data.worldbank.org/indicator/SH.STA.BASS.ZS
7	Population with access to electricity (%)	sdg7_elecac	2015	2021	100	9	Leave no one behind	IEA, IRENA, UNSD, WB, WHO	http://data.worldbank.org/indicator/EG.ELC.ACCS.ZS
8	Fundamental labor rights are effectively guaranteed (worst 0–1 best)	sdg8_rights	2015	2022	1	0	Average of best performers	World Justice Project	https://worldjusticeproject.org/our-work/wjp-rule-law-index
9	Population using the internet (%)	sdg9_intuse	2015	2022	100	2	Leave no one behind	ITU	https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx
11	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) ($\mu g/m^3$)	sdg11_pm25	2015	2022	6	87	Average of best performers	Washington University in St Louis	https://sites.wustl.edu/acag/datasets/surface-pm2-5/
12	Production-based nitrogen emissions (kg/capita)	sdg12_nprod	2015	2024	2	100	Average of best performers	UNEP	http://scp-hat.lifecycleinitiative.org/module-2-scp-hotspots/
13	CO_2 emissions from fossil fuel combustion and cement production (tCO2/capita)	sdg13_co2gcp	2015	2022	0	20	Technical Optimum	Global Carbon Project	https://www.icos-cp.eu/science-and-impact/global-carbon-budget

SDG	Indicator	IndCode	Base year	Latest year	Optimum (= 100)	Lower Bound (=0)	Justification for Optimum	Source	Dwldlink
14	Mean area that is protected in marine sites important to biodiversity (%)	sdg14_cpma	2015	2023	100	0	Technical Optimum	Birdlife International et al.	https://unstats.un.org/sdgs/indicators/database/?indicator=14.5.1
15	Red List Index of species survival (worst 0-1 best)	sdg15_redlist	2015	2024	1	1	Technical Optimum	IUCN and Birdlife International	http://unstats.un.org/sdgs/indicators/database/?indicator=15.5.1
16	Corruption Perceptions Index (worst 0-100 best)	sdg16_cpi	2015	2023	89	13	Average of best performers	Transparency International	https://www.transparency.org/

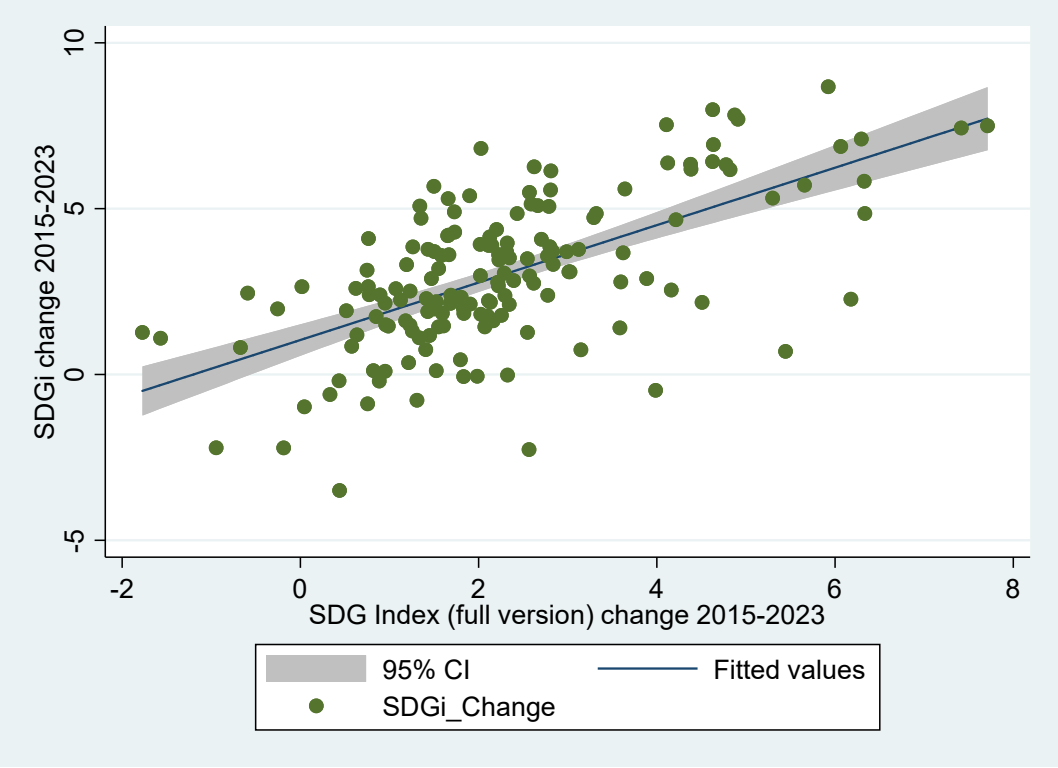
3.7.2 Correlation with overall SDG Index and Subjective Well-Being

Figure 3.6 SDGi 2023 (headline) and SDG Index (full version) 2023, 0-100 scores



Note: Coefficient of correlation (r) = 0.956*** (p<0.01).
Source: Authors, based on Sachs et al. 2024

Figure 3.7 SDGi growth rate and SDG Index (full version) growth rate, in percentage points



Note: After removing four outliers (Afghanistan, Guyana, Qatar and Saudi Arabia) r = 0.625*** (p<0.01). Including all observations, coefficient of correlation (r) = 0.527*** (p<0.01).
Source: Authors, based on Sachs et al. 2024.

3.7.3 List of independent and control variables

IndCode	Indicator	Imputation	Original unit	Final unit / direction	Normalization thresholds	Years	Source	Weblink	Note
Dependent variables									
SDGi_2023	Headline SDG Index performance in 2023	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
SDGi_Change	Change in SDG Index score 2015-2023	None	Percentage point change (2015-2023)	0 (worst) - 100 (best)	Min(-3.5);Max (8.7)	2015-2023	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
SDGi_ChangeLNOB	Change in SDG Index LNOB score 2015-2023	None	Percentage point change (2015-2023)	0 (worst) - 100 (best)	Min(-4);Max (12)	2015-2023	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
SDGi_ChangePlanet	Change in SDG Index Planet score 2015-2023	None	Percentage point change (2015-2023)	0 (worst) - 100 (best)	Min(-3.5);Max (8.7)	2015-2023	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
Independent & control variables									
SDGi_2015	Headline SDG Index performance in 2015	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2015	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
SDGi_LNOB2015	Headline SDG Index (average goals 1-9) in 2015	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2015	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
SDGi_LNOB2023	Headline SDG Index (average goals 1-9) in 2023	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
SDGi_Planet2015	Headline SDG Index (average goals 11-15) in 2015	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2015	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
SDGi_Planet2023	Headline SDG Index (average goals 11-15) in 2023	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
Vdem_Average2015	Average electoral, liberal, participatory, deliberative, and egalitarian democracy score (expert based)	None	Score (0-100)	0 (less democratic) - 100 (more democratic)	not applicable	2015	Variety of Democracies (V-Dem)	https://ourworldindata.org/grapher/varieties-democracy-vdem?tab=table	

IndCode	Indicator	Imputation	Original unit	Final unit / direction	Normalization thresholds	Years	Source	Weblink	Note
Vdem_Average2023	Average electoral, liberal, participatory, deliberative, and egalitarian democracy score (expert based)	None	Score (0-100)	0 (less democratic) - 100 (more democratic)	not applicable	2023	Variety of Democracies (V-Dem)	https://ourworldindata.org/grapher/varieties-democracy-vdem?tab=table	
Base_n_sdg9_rdex	Expenditure on research and development (% of GDP)	Average by income level	Score (0-100)	0 (worst) - 100 (best)	not applicable	2015 (or closest)	Scores extracted from Sachs et al. 2024; Original source: UNESCO	http://data.uis.unesco.org/index.aspx?queryid=3684	
Base_n_sdg10_gini	GINI coefficient	Average by income level	Score (0-100)	0 (worst) - 100 (best)	not applicable	2015 (or closest)	Ibid, World Bank	https://data.worldbank.org/indicator/SI.POV.GINI	
Base_n_sdg16_admin	Timeliness of administrative proceedings (worst 0 - 1 best)	Average by income level	Score (0-100)	0 (worst) - 100 (best)	not applicable	2015	Ibid, World Justice Project	https://worldjusticeproject.org/rule-of-law-index/	
Base_n_sdg17_statperf	Statistical Performance Index	Average by income level, except SIDS	Score (0-100)	0 (worst) - 100 (best)	not applicable	2015	Ibid, World Bank	https://www.worldbank.org/en/programs/statistical-performance-indicators	
Doingbusiness_2016	Ease of doing business (permits, regulations, property rights etc.)	Average by income level	Score (0-100)	0 (worst) - 100 (best)	not applicable	2016	Ibid, World Bank	https://archive.doingbusiness.org/en/rankings	
n_sdg9_rdex	Expenditure on research and development (% of GDP)	Average by income level	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023 (or closest)	Ibid; UNESCO	http://data.uis.unesco.org/index.aspx?queryid=3684	
n_sdg10_gini	GINI coefficient	Average by income level	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023 (or closest)	Ibid, World Bank	https://data.worldbank.org/indicator/SI.POV.GINI	
n_sdg16_admin	Timeliness of administrative proceedings (worst 0 - 1 best)	Average by income level	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023	Ibid, World Justice Project	https://worldjusticeproject.org/rule-of-law-index/	
n_sdg17_statperf	Statistical Performance Index	Average by income level, except SIDS	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023	Ibid, World Bank	https://www.worldbank.org/en/programs/statistical-performance-indicators	

IndCode	Indicator	Imputation	Original unit	Final unit / direction	Normalization thresholds	Years	Source	Weblink	Note
Doingbusiness_2020	Ease of doing business (permits, regulations, property rights etc.)	Average by income level	Score (0-100)	0 (worst) - 100 (best)	not applicable	2020	Ibid, World Bank	https://archive.doingbusiness.org/en/rankings	
VNR_VLR_Index	The Index captures the number of Voluntary National reviews and Voluntary Local Reviews. It is a proxy for societal engagement with the SDGs and 2030 Agenda.	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2024	Author, based on United Nations	https://hlpf.un.org/vnrs	
UN_Mi	The Index of countries' support for Un-based Multilateralism	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023	Lafortune and Sachs, 2024	https://direct.mit.edu/asep/article-abstract/doi/10.1162/asep_a_00902/124683/The-Index-of-Countries-Support-for-UN-based?redirectedFrom=fulltext	
Sanctions	Number of Unilateral Coercive Measures in place against individual Nation-States	None	Number	0 (worst) - 100 (best)	not applicable	2023	Global Sanctions Database (GSDB), 2023 update, based on Felbermayr, G et al. 2020	https://www.globalsanctionsdatabase.com/	
Wardeaths_2015	Battle-related deaths (number of people)	Zero imputed (countries with low ACLED)	Number	Number	Lowest/Worst 2.5th percentile (min/worst), 8000; 0 (max/best)	2015	Uppsala Conflict Data Program (accessed via World Bank Group)	https://databank.worldbank.org/source/world-development-indicators/Series/VC.BTL.DETH#	

IndCode	Indicator	Imputation	Original unit	Final unit / direction	Normalization thresholds	Years	Source	Weblink	Note
Wardeaths_2023	Battle-related deaths (number of people)	Zero imputed (countries with low ACLED)	Number	Number	Lowest/Worst 2.5th percentile (min/worst), 8000; 0 (max/best)	2023	Uppsala Conflict Data Program	https://databank.worldbank.org/source/world-development-indicators/Series/VC.BTL.DETH#	
ACLEDConflict_Index2024	ACLED Conflict Index assesses every country and territory in the world according to four indicators – deadliness, danger to civilians, geographic diffusion, and armed group fragmentation	None	Index	0 (worst) - 100 (best)	1 (Min/Worst); 0 (Max/Best)	2024	Armed Conflict Location & Event Data (ACLED)	https://acleddata.com/conflict-index/index-july-2023/	
InterestXinvestment_2015	Ratio of public interest payments to investment expenditure	Average by income level	Ratio	0 (less fiscal space to invest) - 100 (more fiscal space to invest)	Lowest/Worst 2.5th percentile (Min/Worst, 2); 0 (Max/Best)	2014-2016	UN Trade & Development (UNCTAD)	https://unctad.org/publication/world-of-debt/dashboard	Relative proportion of a country's general government's resources that are dedicated to net interest payments to those allocated to public investment. A value greater than 1 shows that a country spends more on interest payments than on investments.

IndCode	Indicator	Imputation	Original unit	Final unit / direction	Normalization thresholds	Years	Source	Weblink	Note
InterestXinvestment_2023	Ratio of public interest payments to investment expenditure	Average by income level	Ratio	0 (less fiscal space to invest) - 100 (more fiscal space to invest)	Lowest/ Worst 2.5th percentile (Min/Worst, 2); 0 (Max/Best)	2019-2021	UN Trade & Development (UNCTAD)	https://unctad.org/publication/world-of-debt/dashboard	Relative proportion of a country's general government's resources that are dedicated to net interest payments to those allocated to public investment. A value greater than 1 shows that a country spends more on interest payments than on investments.
InterestXhealth_2015	Ratio of public interest payments to public health expenditure		Ratio	0 (less fiscal space to invest) - 100 (more fiscal space to invest)	Lowest/Worst 2.5th percentile (Min/Worst, 4.4); 0 (Max/Best)	2014-2016	UN Trade & Development (UNCTAD)	https://unctad.org/publication/world-of-debt/dashboard	
InterestXinvestment_2023	Ratio of public interest payments to public health expenditure		Ratio	0 (less fiscal space to invest) - 100 (more fiscal space to invest)	Lowest/ Worst 2.5th percentile (Min/Worst, 4.4); 0 (Max/Best)	2020-2022	UN Trade & Development (UNCTAD)	https://unctad.org/publication/world-of-debt/dashboard	
Debt_B	Debt / GDP ratio (in %)	Desk research	Percentage	0 (higher debt/gdp) - 100 (lower debt/gdp)	Max (0%); Min (100%)	2015 (or closest)	International Monetary Fund (IMF)	https://www.imf.org/external/datamapper/datasets/GDD	

IndCode	Indicator	Imputation	Original unit	Final unit / direction	Normalization thresholds	Years	Source	Weblink	Note
Debt_2023	Debt / GDP ratio (in %)	Desk research	Percentage	0 (higher debt/gdp) - 100 (lower debt/gdp)	Max (0%); Min (100%)	2023 (or closest)	International Monetary Fund (IMF)	https://www.imf.org/external/datamapper/datasets/GDD	
MVI_Rescaled	Structural vulnerabilities (economic, development and environmental)	Average by income level, except SIDS	Score (0-100)	0 (more vulnerable) - 100 (less vulnerable)	na	2022	Massa et al. 2023	https://sdgtransformationcenter.org/reports/sustainable-development-report-for-small-island-developing-states-2023	
Population_2015	Population size in 2015	None	Total	Total	na	2015	World Bank (from multiple sources)	https://data.worldbank.org/indicator/SP.POP.TOTL	
Population_2023	Population size in 2015	None	Total	Total	na	2023	World Bank (from multiple sources)	https://data.worldbank.org/indicator/SP.POP.TOTL	
Other variables									
Spillovers	International spillovers embodied into trade, unsustainable consumption, tax evasion, profit shifting and other financing flows	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023	Sachs et al. 2024	https://dashboards.sdgindex.org/	
Trust_gvt	Share of respondents who answered "a lot" or "some" to the question: "How much do you trust your nationalgovernment?"	None	Percentage	0 (worst) - 100 (best)	not applicable	2020	Wellcome Global Monitor (2020), published in Our World in Data	https://ourworldindata.org/trust	

IndCode	Indicator	Imputation	Original unit	Final unit / direction	Normalization thresholds	Years	Source	Weblink	Note
Trust_others	Share of people agreeing with the statement "most people can be trusted", 2014 to 2022.	None	Percentage	0 (worst) - 100 (best)	not applicable	2022 (or closest)	World value Survey (integrated), published in Our World in data	https://ourworldindata.org/trust	Interpersonal trust reflects historical heritage of a given people, including economic, political, religious, and other factors (Inglehart, 2010).
SWB	Subjective well-being (average ladder score, worst 0-10 best)	None	0-10 point ladder	0 (worst) - 100 (best)	not applicable	2023	World Happinness Report, Gallup World Poll	https://worldhappiness.report/	
SDGIndex_2023	2023 SDG Index score	None	Score (0-100)	0 (worst) - 100 (best)	not applicable	2023	Sachs et al. 2024	https://dashboards.sdgindex.org/	
SDGIndex_Change	Change in SDG Index score 2015-2023	None	Percentage point change (2015-2023)	Percentage point change (2015-2023)	not applicable	2015-2023	Adapted from Sachs et al. 2024	https://dashboards.sdgindex.org/	
CumulativeCO2_total	Cumulative CO2 emissions (tonnes)	None	Tonnes	Tonnes	not applicable	1750-2023	Global Carbon Budget (2024) (accessed from Our World in data)	https://ourworldindata.org/grapher/cumulative-co-emissions?tab=table	
CumulativeCO2_pc	Cumulative CO2 emissions (per capita, 2023)	None	Tonnes/population	Tonnes/population	not applicable	1750-2023	Global Carbon Budget (2024) (Accessed from Our wWorld in data)	https://ourworldindata.org/grapher/cumulative-co-emissions?tab=table	

IndCode	Indicator	Imputation	Original unit	Final unit / direction	Normalization thresholds	Years	Source	Weblink	Note
Climatethreatcombined	Climate change is a serious threat (combined very and somewhat)		Percentage	Percentage	not applicable	2023	Lloyd's Register Foundation, World Risk Poll	https://lookerstudio.google.com/u/0/reporting/a83a8818-fe7f-46c6-b15a-3561e2a6d7d8/page/p_zwwhgtcnid?s=lhpSUtubqLw	
Gvtcares	Government cares about you and your well-being (combined a lot and somewhat)	None	Percentage	Percentage	not applicable	2023	Lloyd's Register Foundation, World Risk Poll	https://lookerstudio.google.com/u/0/reporting/a83a8818-fe7f-46c6-b15a-3561e2a6d7d8/page/p_zwwhgtcnid?s=lhpSUtubqLw	
TrustinUN_2022	Share of survey respondents stating that they trust the United Nations. Trust here corresponds to responding to have "a great deal of confidence" or "quite a lot of confidence".	None	Percentage	Percentage	not applicable	2022 (or closest)	Integrated Values Surveys (2022), extracted from Our World in Data	https://ourworldindata.org/grapher/confidence-in-un-wvs?tab=table&time=2014..latest	
Covidvaccine	Share of the population receiving a first COVID-19 vaccine dose as of January 2022	None	Percentage	Percentage	not applicable	2022	Official data collated by Our World in Data (2024); World Health Organisation (2024); Population based on various sources (2024)	https://ourworldindata.org/covid-vaccinations	

3.7.4 Pairwise correlation matrices

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
(1) SDGi_2023	1.000																								
(2) n_Change_SDGi	-0.019	1.000																							
(3) logGDP2023pc	0.857***	-0.229***	1.000																						
(4) SWB_raw_2023	0.752***	-0.082	0.806***	1.000																					
(5) n_WGI_GvtEf~2023	0.768***	0.055	0.822***	0.710***	1.000																				
(6) n_WGI_Rule2023	0.739***	0.012	0.794***	0.648***	0.955***	1.000																			
(7) Vdem_Electo~2023	0.599***	-0.024	0.499***	0.506***	0.613***	0.684***	1.000																		
(8) n_sdg10_gini	0.426***	-0.010	0.399***	0.325***	0.374***	0.376***	0.090	1.000																	
(9) Gvtcares	0.208**	0.244***	0.238***	0.282***	0.456***	0.384***	-0.054	0.169*	1.000																
(10) GII_Human2022	0.774***	-0.171**	0.839***	0.702***	0.819***	0.789***	0.527***	0.395***	0.342***	1.000															
(11) Infrastruc~2023	0.673***	-0.075	0.811***	0.675***	0.835***	0.826***	0.504***	0.293***	0.374***	0.819***	1.000														
(12) Doingbusin~2016	0.835***	-0.030	0.850***	0.715***	0.858***	0.847***	0.614***	0.339***	0.320***	0.810***	0.765***	1.000													
(13) n_InterestXIn~2	-0.080	0.163**	-0.099	-0.040	0.021	-0.001	-0.179**	0.085	0.202**	0.041	-0.013	-0.038	1.000												
(14) Multilater~2015	-0.027	0.248***	-0.072	0.055	0.116	0.078	0.115	-0.241***	0.002	-0.141*	-0.079	-0.014	0.096	1.000											
(15) VNR_VLR_Index	0.122	0.162*	0.070	0.127	0.164**	0.133	0.219***	-0.112	0.054	0.030	0.121	0.090	0.053	0.689***	1.000										
(16) UN_Mi	0.128	0.199**	0.014	0.130	0.161*	0.143*	0.207**	-0.176**	-0.005	-0.062	-0.103	0.118	-0.033	0.710***	0.342***	1.000									
(17) n_sanctions	-0.229***	0.183**	-0.194**	-0.089	-0.030	-0.061	-0.107	-0.227***	-0.039	-0.238***	-0.186**	-0.172**	0.146*	0.764***	0.158*	0.375***	1.000								
(18) Conflict2023	0.380***	0.148*	0.363***	0.343***	0.405***	0.402***	0.257***	0.130	0.143	0.240***	0.295***	0.385***	0.134*	0.177**	0.006	0.310***	0.127	1.000							
(19) n_wardeath~2023	0.365***	0.109	0.372***	0.391***	0.359***	0.332***	0.282***	0.028	0.120	0.275***	0.302***	0.379***	0.036	0.215***	0.109	0.332***	0.093	0.816***	1.000						
(20) n_ACLEDCon~2024	0.260***	0.134*	0.236***	0.175**	0.307***	0.328***	0.141*	0.184**	0.116	0.120	0.183**	0.253***	0.183**	0.077	-0.097	0.179**	0.115	0.825***	0.347***	1.000					
(21) MVI_Rescaled	0.361***	-0.072	0.452***	0.421***	0.357***	0.323***	0.263***	0.014	0.102	0.500***	0.460***	0.400***	0.134*	0.033	0.200**	-0.066	-0.075	0.093	0.183**	-0.027	1.000				
(22) Spillovers	-0.624***	0.189**	-0.769***	-0.623***	-0.746***	-0.767***	-0.455***	-0.449***	-0.322***	-0.745***	-0.790***	-0.687***	0.000	0.230***	0.019	0.231***	0.256***	-0.247***	-0.177**	-0.228***	-0.177**	1.000			
(23) logCumulative~c	0.828***	-0.281***	0.926***	0.748***	0.685***	0.658***	0.446***	0.424***	0.180**	0.800***	0.704***	0.794***	-0.112	-0.160*	-0.012	-0.018	-0.263***	0.324***	0.345***	0.189**	0.410***	-0.680***	1.000		
(24) logpop2023	-0.144*	0.081	-0.123	-0.124	-0.068	-0.119	-0.163**	-0.115	0.090	0.075	0.066	-0.104	-0.018	-0.027	0.125	-0.170**	-0.056	-0.360***	-0.220***	-0.369***	0.469***	0.237***	-0.151*	1.000	
(25) logdebt2023	0.057	-0.018	0.048	-0.019	0.093	0.121	0.183**	-0.060	-0.170*	0.092	0.103	0.021	-0.320***	0.059	0.071	0.133*	-0.036	0.124	0.224***	-0.019	0.093	-0.027	-0.012	0.101	1.000

*** p<0.01, ** p<0.05, * p<0.1

3.7.5 Factor Analysis (Principal Component)

```
Factor analysis/correlation                    Number of obs    =        172
    Method: principal-component factors        Retained factors =          2
    Rotation: orthogonal varimax (Kaiser off)  Number of params =          9
```

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.62656	0.14445	0.3253	0.3253
Factor2	1.48211	.	0.2964	0.6217

LR test: independent vs. saturated: chi2(10) = 112.11 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
n_Warde~2015	0.7884	0.2163	0.3317
n_ACLED~2024	0.8609	-0.0595	0.2554
UN_Mi	0.3515	0.7476	0.3175
VNR_VLR_In~x	-0.2871	0.7412	0.3682
n_sanctions	0.2408	0.5687	0.6185

3.7.6 Regression tables

Table 3.5 Governance augmented model: OLS regression between SDGi change (in p.p) and covariates, incorporating different governance indicators

	(1) Δ SDGi	(2) Δ SDGi	(3) Δ SDGi	(4) Δ SDGi	(5) Δ SDGi	(6) Δ SDGi	(7) Δ SDGi
SDGi_2015	-.267	-.262	-.282	-.321	-.213	-.212	-.179
	(.192)	(.193)	(.192)	(.199)	(.228)	(.224)	(.227)
Fiscal	**.137****	**.137****	**.147****	**.126***	.068	**.177***	.071
	(.065)	(.065)	(.065)	(.066)	(.08)	(.09)	(.08)
Multilateral	**.248****	**.239****	**.226***	**.269****	**.21***	**.244****	**.373****
	(.12)	(.12)	(.119)	(.12)	(.121)	(.121)	(.147)
Conflict	**.265****	**.261****	**.272****	**.267****	**.28****	**.228***	**.268****
	(.108)	(.107)	(.107)	(.107)	(.131)	(.131)	(.131)
Human capital	**-.341***	**-.376***	**-.366****	**-.375****	**-.441****	**-.392***	-.359
	(.191)	(.191)	(.171)	(.172)	(.202)	(.212)	(.218)
Doing business	**.594****	**.546****	**.534****	**.59*****	**.42***	**.428***	.284
	(.247)	(.239)	(.213)	(.21)	(.244)	(.241)	(.253)
MVI	**-.374***	**-.371***	**-.404***	-.331	-.247	-.342	-.278
	(.203)	(.204)	(.205)	(.208)	(.236)	(.235)	(.235)
logpop	**3.896*****	**3.944*****	**4.138*****	**3.809*****	2.402	2.392	2.261
	(1.404)	(1.416)	(1.42)	(1.402)	(1.644)	(1.664)	(1.685)
logdebt	3.248	3.104	2.72	3.278	.464	-.49	-.319
	(2.585)	(2.604)	(2.611)	(2.564)	(3.403)	(3.378)	(3.416)
WGI_Gvt Effective	-.026						
	(.186)						
WGI_Rule of Law		.041					
		(.156)					
Vdem_Electoral			.07				
			(.072)				
Fairness / GINI				.08			
				(.083)			
Gvtcares					**.229****	**.24****	**.264*****
					(.097)	(.095)	(.098)
Inc						**26.622****	**33.836***
						(11.681)	(17.853)
Fiscal*Inc						**-.345****	
						(.138)	
Multilateral*Inc							**-.553***
							(.283)
_cons	-57.632*	-56.666*	-57.225*	-62.139**	-26.429	-24.412	-27.109
	(30.268)	(29.777)	(29.67)	(30.179)	(33.821)	(33.341)	(33.695)
Observations	145	145	145	145	119	119	119
R-squared	.226	.227	.232	.231	.29	.329	.314

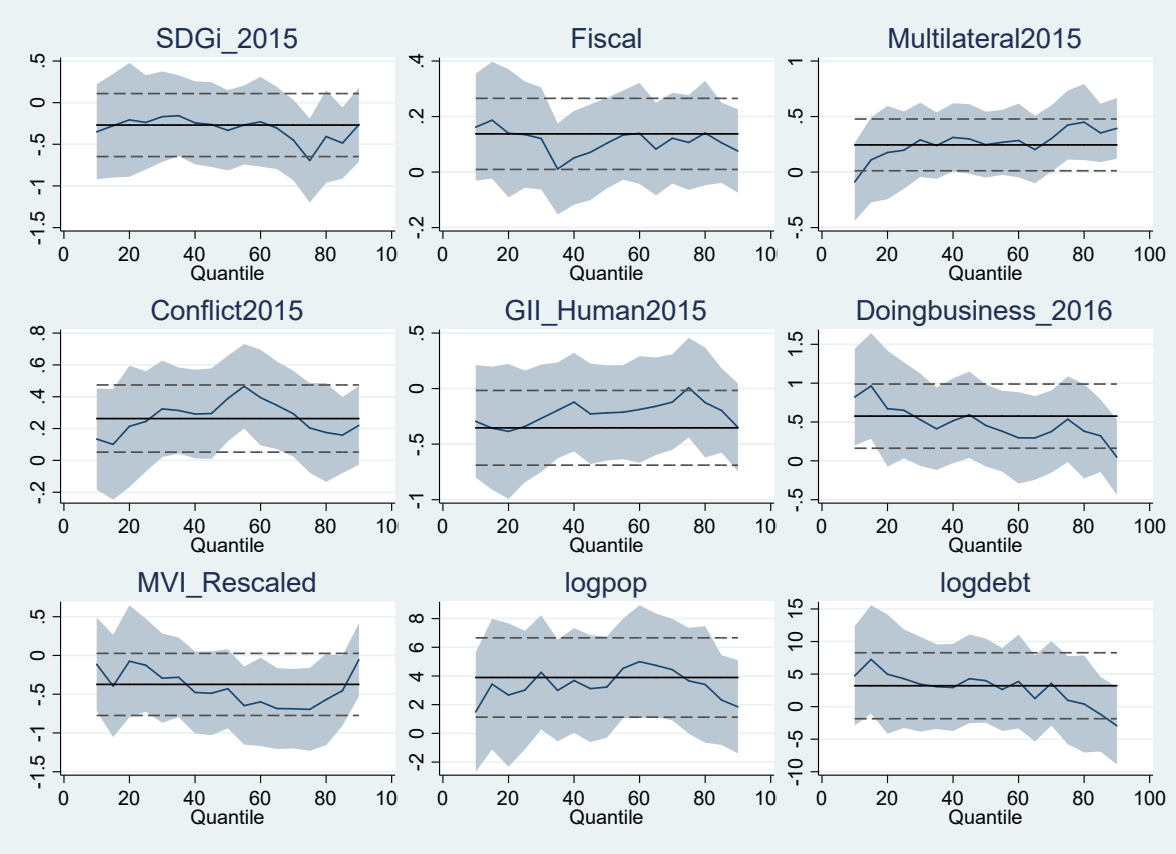
Standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

Table 3.6 Dependent variable: LNOBi (SDG1-9) and PLANETi (SDG11-15)

	(16) Δ LNOBi	(17) Δ LNOBi	(18) Δ LNOBi	(19) Δ LNOBi	(20) Δ PLANETi
SDGi_LNOB2015	-.139	-.123	-.123	-.081	
	(.15)	(.15)	(.151)	(.184)	
Fiscal	.129	**.197****	.128	.067	.036
	(.079)	(.09)	(.079)	(.1)	(.045)
Multilateral	**.403*****	**.403*****	**.487*****	**.316****	**-.149***
	(.141)	(.142)	(.171)	(.151)	(.083)
Conflict	**.35*****	**.338*****	**.343*****	**.35****	-.07
	(.128)	(.127)	(.128)	(.162)	(.075)
Human capital	**-.462****	**-.396***	**-.357**	**-.626****	**.225****
	(.209)	(.224)	(.228)	(.257)	(.111)
Doing business	**.561****	**.611****	**.517****	.363	-.006
	(.249)	(.25)	(.259)	(.301)	(.134)
MVI	**-.526****	**-.561****	**-.543****	-.32	.131
	(.243)	(.244)	(.245)	(.293)	(.141)
logpop	**5.446*****	**5.186*****	**4.972*****	**4.26****	-1.304
	(1.657)	(1.72)	(1.727)	(1.984)	(.959)
logdebt	2.653	2.157	2.06	.645	1.257
	(3.118)	(3.118)	(3.166)	(4.249)	(1.838)
Inc		12.645	16.372		
		(12.451)	(21.262)		
Fiscal*Inc		-.231			
		(.146)			
Multilateral*Inc			-.339		
			(.326)		
Gvtcares				**.254****	
				(.12)	
SDGi_Planet2015					**.207****
					(.089)
_cons	-90.694***	-90.783**	-84.292**	-65.841*	29.327
	(34.361)	(34.845)	(34.902)	(39.651)	(20.536)
Observations	145	145	145	119	145
R-squared	.262	.28	.272	.309	.19

Standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

Table 3.7 Quantile regression model (robustness test)



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Chapter 4 The *Steering Effect* of Goal-Based Development: An Empirical Global Assessment of SDG Commitment and Performance

Abstract

Since the Millennium Development Goals era, scholars have debated the *steering effect* of goal-based development on development outcomes. In this paper, we combine empirical analysis and detailed case studies to evaluate the SDG *steering effect* on discourse and government procedures, which are then compared with SDG performance over the period of 2015-2024. We also evaluate the evolution of the SDG discursive *steering effect* before and after the COVID-19 pandemic and rising geopolitical tensions in the G20 and European Union level. We confirm the findings from other scholars on the strong discursive effect of the SDGs in national speeches, declarations and high-level reviews but more limited "hard integration" of the SDGs, notably, into budget and audit functions. We also find that countries who care more about the SDGs, especially those that incorporated the SDGs into budgeting, monitoring, coordination, and audit mechanisms, tend to outperform other countries in SDG outcomes. We also explore the role of other factors that might represent necessary conditions to convert SDG commitment into SDG outcomes. Finally, we do not find evidence of a reduced discursive *steering effect* of the SDGs in G20 communiqués and declarations over time, however, we find that rising geopolitical tensions since 2022 might have negatively impacted the SDG *steering effect* on discourse and strategies in some countries and entities, including in historically highly committed places such as the European Union. Our paper provides a novel contribution to the literature on how various policy and statistical instruments, but also best practices, can be leveraged to strengthen the *steering effect* of goal-based development by 2030 and beyond.

Keywords: Institutions, Governance, Public Management, Steering Effect, Budgeting, Strategy, Monitoring, Subsidiarity

4.1 Introduction

Since the adoption of the Millennium Development Goals (MDGs) in 2000, there has been an important debate among scholars around the so-called *steering effect* of goal-based development on development outcomes (McArthur and Rasmussen 2018; Seyedsayamdost 2018), which has also been discussed in the context of the SDGs (Pradhan et al. 2022; Okitasari and Katramiz 2022). The theory of change, explicit or implicit in goal-based approaches and narratives such as Kennedy's Moonshot in the 1960s, or mission-driven approaches promoted by economists like Mariana Mazzucato, is that setting time-bound goals and aspirations helps galvanize energies, investment, and collective action, and accelerates progress toward that goal (Mazzucato 2021). According to the historian Yuval Noah Harrari, "Homo sapiens is an animal that likes stories, that thinks in terms of narratives, more than data and charts" (Harari 2018). He adds that "Human beings […] conquered the world thanks to our capacity to create narratives and to believe in them" (Ibid, 2018).

The question of whether goal-based development contributes to accelerating development outcomes (compared to, for instance, baseline projections) by galvanizing collective action to achieve a shared vision is an important yet very challenging question to answer empirically for at least three reasons. Firstly, due to the lack of counterfactual scenarios at the global level, it is difficult to unpack whether progress in outcomes and policies observed since 2015 globally and at the country-level, would have happened anyway without the adoption of the SDGs. Secondly, it is also challenging to determine whether progress in sustainable development can be attributed to targeted policy efforts or simply to underlying economic growth (or other factors). Thirdly, the SDGs are in place until 2030, and as such, any analysis conducted before the expiration of the goals can provide only partial and non-definitive answers regarding the *steering effect* of the SDGs.

At the same time, there is a clear interest from applied researchers and practitioners in understanding in real-time or near real-time country's policy landscape, which may or may not be conducive SDG outcomes in the future, notably to inform public and private investment decisions. A sudden change of government may have significant implications on the prospective capacity of a country to make progress on the SDGs in the short and medium run (1-7 years). This sudden change in policy landscape is typically not reflected in outcome-based assessments of progress towards the goals like the SDG Index or the UN SDG Report which are, by design, backward-looking (Sachs et al. 2024; UNSD 2024). As one example, the impact investment community (asset managers, impact investors and others) but also alternative sovereign risk rating agencies are particularly interested in understanding the "quality" of the policy landscape in countries to gauge the likelihood of generating financial but also societal and environmental returns on investments (Obenhuber 2018; Rahman et al. 2021). More broadly, citizens, governments and the UN system are also interested in comparative evidence about the discursive effect of the SDGs and their integration in public management practices and procedures for accountability, peer-to-peer learning and reform purposes.

According to Pradhan (2022): "The steering effects of the SDGs can be assessed in terms of their influence on political decision-making and discourse, on the one hand, and on the progress towards achieving the goals on the other". Pradhan and his co-authors use the image of a car and its steering wheel. The use of the SDGs in public policies represents the steering wheel, and the change in SDG outcomes represents the car's direction. Monitoring the car's direction alone does not allow for

demonstrating whether the car changed direction due to the steering wheel. Monitoring the steering wheel alone does not allow for evaluating whether the car is heading in the right direction. The combination of both types of information—capturing the change in the car's direction (SDG progress) and the position of the steering wheel (SDG commitment)—is more likely to provide a meaningful indication of the *steering effect* of goal-based development. In a context where the international community will shortly begin to negotiate a possible post-2030 agenda for sustainable development, including potentially new or adjusted sets of goals, understanding whether the SDGs had some impact on discourse, strategic orientations and outcomes is particularly relevant.

This paper builds on prior work conducted on the *steering effect* of goal-based development to analyze through quantitative and qualitative methods SDG Commitment over the period 2015-2025, and explores the links between SDG commitment and SDG performance at the country-level. We first provide a detailed literature review of analytical tools and methods used to gauge SDG commitment and progress at the country-level. We then describe our conceptual framework, research questions, hypotheses, methods and databases to analyze SDG penetration in public discourse, strategic orientations and public management practices. The results section is divided in two main parts. The empirical quantitative results present new comparative data for 75 countries and one entity (the European Union (EU)) on SDG Commitment at the central/federal level focusing on political leadership, bureaucratic leadership, engagement with the UN system and civil society engagement. Using the SDG Index, we then compare SDG Commitment between two groups: high SDG performers (at one point in time and over time) and other countries. The empirical section also discusses engagement with sustainable development before the adoption of the SDGs in 2015 by focusing on national constitutions and compares SDG penetration in G20 declaration and communiqués and in the EU's strategic orientations before and after 2020, which corresponds to the emergence of the COVID-19 pandemic followed by the acceleration of multiple geopolitical crises. The qualitative case studies complement the quantitative analysis and provide an in-depth understanding of SDG governance in four high-performing countries and entities from different geographic areas, namely Finland – number one on the SDGs Index (Sachs et al. 2025) – the EU (high static performers), the Republic of Benin in Sub-Saharan Africa, and Uzbekistan in Central Asia (highest dynamic performers).

The paper aims to provide four novel contributions to the literature. Firstly, to demonstrate that high SDG performers also tend to care about the SDGs and the 2030 Agenda as demonstrated by the high level of SDG integration in their public management practices and procedures. Secondly, to explore the impact of the COVID-19 pandemic and rising geopolitical tensions on the SDG discursive *steering effect* at the international and country-level. Thirdly, to identify the best practices that emerged over the period 2015-2025 on SDG governance in developed and developing countries, including SDG integration in budgeting and long-term investment frameworks, and some of the factors that might be necessary conditions that turn SDG commitments into SDG outcomes. Fourthly, to identify persisting data and knowledge gaps on the means for implementation for the SDGs and how emerging AI-trained tools and advanced text mining methods can help improve the understanding of SDG commitment and the policy landscape for sustainable development at multiple levels.

4.2 Literature review

Institutional economists study the role of public and private institutions and social patterns on economic outcomes (Hodgson 2000; Mayhew 2018). Economists have studied for a long time the relationship between governance systems, institutions and development (Acemoglu et al. 2014; Acemoglu and Robinson 2012; Collier and Rohner 2008; Shirley 2005). The World Bank and other organizations have analyzed empirically the relationship between good governance (or specific aspects such as corruption) and economic growth (Kaufmann 2005; Kaufmann et al. 2006). Yet, as argued by Gündoğdu and Aytekin (2022) the governance of sustainable development adds additional specificities and is based on "the joint and coordinated management of multidimensional variables" to promote "the effective and efficient planning of both present and future use of resources". The operationalization of the SDGs poses an unprecedented challenge for governments which need to balance more policy objectives (economic, social and environmental) and consider different time-horizons (Sachs, Schmidt-Traub, Mazzucato, et al. 2019).

To gauge the *steering effect* of the SDGs, (Pradhan et al. 2022) we distinguish between methods that aim to assess the impact of goals on decision-making (SDG Commitment) versus methods that gauge progress towards achieving the goals (SDG progress). Pradhan et al. (2022), identify five main methodologies that can be used to inform SDG penetration in decision-making and SDG progress (monitoring approaches, model-based scenario approaches, qualitative case studies, network analysis, and discourse and interpretative approaches). These can differ in terms of temporal perspective (retrospective or "backward-looking" versus prospective or "forward-looking"), scale (global, regional, national or local), goal coverage (the SDGs as a whole versus specific goal or target), and their ability to incorporate interactions and synergies across the goals.

For our purpose, and expanding from (Lafortune et al. 2022) we further simplify the classification provided by Pradhan et al. (2022) by describing three main categories of analytical instruments that have been used at the country level to gauge and support SDG commitment and progress:

1. Outcome-based instruments that evaluate SDG performance at the country or entity-level (status and trends).
2. Model-based scenarios to evaluate possible pathways and the level of ambition of existing and possible financial and policy pathways.
3. Instruments that aim to evaluate SDG commitments, institutionalization and policy landscape to achieve the goals.

Each of these analytical tools have advantages and limitations. The three categories of instruments can be used to evaluate SDG synergies and interactions (Kroll et al. 2019; Moreno et al. 2023) as well as international spillovers and policy coherence for sustainable development (Schmidt-Traub et al. 2019; Malik et al. 2021; 2024).

Outcome-based instruments help prioritize action based on performance gaps. At the international level, the "Sustainable Development Goals Report" prepared annually by UNDESA or the SDG Index are used extensively. Comparative assessments, for instance across countries and cities, may also help generate a race to the top (Schmidt-Traub et al. 2017; Espey et al. 2018). They also contribute to informing the

priorities of the statistical community and NSOs by mapping persisting issues related to data availability and timeliness. They also serve as accountability tools, promoting evidence-based dialogue with multiple stakeholders. As one example, in Europe, the SDSN has, since 2018, partnered with the EESC (which includes representatives from trade unions, business associations and NGOs) in the preparation of the SDG Index for Europe, the findings are discussed annually with EESC members and the European institutions (including the European Commission, Council of the EU and European Parliamentarians) (Lafortune et al. 2024). Finally, these instruments tend to attract the attention of mainstream media and the public and, as such, contribute to raising awareness about the SDGs as an integrated framework for sustainable development.

Yet, outcome-based assessments only partially capture efforts and commitments made by institutions to align their investment and policy frameworks with the SDGs. They have three major limitations. First, they are constrained by data availability and timeliness. At the global level, countries with weaker statistical capacities, such as Small Island Developing States (SIDS), do not have data to track accurately many of the SDG goals and targets. Second, they are by-design "backward-looking" and their ability to evaluate future trajectories is somewhat limited since they tend to rely on the extrapolation (often linear extrapolation) of past growth rates to evaluate progress made. These assessments do not capture well sudden changes in policy landscape, for instance, the arrival of a new government. Third, and related to the previous point, some outcome statistics might be "sticky", meaning that they may take time to reflect significant changes in policy interventions. For instance, the adoption of ambitious investment and policy frameworks to increase access to transport infrastructure or income equality, may take years to be reflected in outcome statistics, on user experience and access to key infrastructure, or the GINI coefficient and palma ratio.

More forward-looking model-based scenarios have been used to assess possible trajectories on the SDGs as a whole or specific goals and map out gaps in policy ambition and implementation (TWI2050 2018; Mosnier et al. 2022; Moreno et al. 2023). As argued in (Barbero et al. 2020) they are important tools for governing the complexity and interlinked nature of the SDGs. In their review of existing model-based scenarios for achieving SDGs, Orbons et al. (2024) identified 140 papers and instruments, most of them focusing on a subset of SDGs and not all 17 goals. The World in 2050 modeling project, led by the International Institute for Applied Systems Analysis (IIASA), is an example of a comprehensive global modeling exercise structured around key SDG transformations (TWI2050 2018). The European Commission Joint Research Centre identified 108 relevant models and related tools that can support SDG scenarios in Europe, with many of them focusing on SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action) (Barbero et al. 2020). The Food, Agriculture, Biodiversity, Land-Use and Energy (FABLE) Consortium provides pathways for sustainable agri-food systems – covering notably SDG 2 (Zero Hunger), SDG 13 (Climate Action), SDG 14 (Life Below water) and SDG 15 (Life on land) (Mosnier et al. 2022). The Deep Decarbonization Pathways Project (DDPP) focuses on model-based pathways for climate mitigation (SDSN et IDDRI 2015). The IMF's SDG-FiT provides a tool for countries to build "financing strategies for the SDGs in a macroeconomically-consistent way" based on baseline and policy scenarios and different growth projection assumptions (IMF 2024). The framework is supported by a dynamic model that covers a 30-year timespan (Gaspar et al. 2019; Benedek et al. 2021). The SDG-Fit focuses primarily on SDGs related to health, education, roads, electricity, water and sanitation.

Their main advantage is the ability to test different policy scenarios and their impact in the short, medium and longer run. FABLE for instance evaluates the impact on agri-food systems of three scenarios: "Current trends" (continuation of past policies), "National commitments" (where are we heading if commitments made are implemented) and "Global Sustainability" (how additional actions could potentially help to align national and regional pathways with global sustainability targets) (Mosnier et al. 2022; Lafortune et al. 2025). As such they can help manage synergies and trade-offs across sectors and increasingly also at low levels of resolution by incorporating geospatial information. They can also help identify technology and financing pathways to accelerate SDG implementation. In addition to the quantitative output, the process of building up assumptions, baselines and scenarios can also provide a platform for consensus building and collaborative action within and across countries.

Their main limitation is that they rely on highly complex models and data computations (often General or Partial Equilibrium Models and Integrated Assessment Models) and, as such, often remain quite opaque for decision makers and observers. Researchers and model developers have emphasized the importance of transparency (Süsser et al. 2021) but also of making the results easily accessible via interactive tools and platforms. In the area of sustainable development, they often require collaboration across organizations and teams to leverage diverse expertise and combine inputs from various models (for example, energy-food systems models; migration-climate-economy, etc.). Due to their level of complexity and the amount of data needed to compile, the pathways model-based scenarios tend to be applied primarily to specific SDGs or targets and for a subset of countries. Finally, models may not reflect well the legitimacy of certain policies, their fairness, and social and political acceptability (Kolkman et al. 2016).

The third category of analytical work on SDG commitments and efforts focuses on monitoring public discourse, existing policy and financing frameworks, and governments' engagement and intentions to advance sustainable development. They typically rely on case studies, expert judgement and qualitative surveys. Kanie and Biermann (2017), published an authoritative academic book on the concepts, past lessons, and operational challenges of governing through goals. Early efforts focused on conceptualizing what the SDGs meant for public governance. Meuleman and Niestroy (2015) proposed a framework on "Common but Differentiated Governance for the Sustainable Development Goals" incorporating the notion of subsidiarity in decision-making from global, regional, national and subnational / local. The principle of subsidiarity is commonly understood as the need for decisions to be taken at the lowest possible level or closest to where they will have their effect. In some cases, it can be the local or national level yet in the case of the management of Global Public Goods the appropriate level of action might be the global level via UN-based action and coordination.

A summary of key dimensions, scope and coverage of some of the main comparative studies of SDG Commitment is provided in Table 4.1. The SDSN pioneered in 2018 a global survey of "Government Efforts and Commitments for the SDGs," focusing on high-level public statements, strategic use of public management practices, and procedures and content of government strategies and policies collected from national experts and verified by national governments (Sachs et al. 2018; Sachs, Schmidt-Traub, Kroll, et al. 2019; Sachs et al. 2020; 2021; 2022; 2023). The (European Parliament 2019) issued an analysis comparing the SDG efforts of 28 European countries (27 EU Member States and the United-Kingdom) focusing on seven key governance principles (Niestroy et al. 2019). In their "Comparative analysis of SDGs implementation" in MENA countries, Issa and El-Fadel (2025) focus on six main dimensions, three internal dimensions (administrative, legal, and procedural structures) and three external dimensions (such as geopolitical challenges and funding levels). Hege and Bricmont (2018) used 11 criteria to gauge the

breadth and scope of SDG integration in the budgeting process. The European Commission and the Agence Française de Développement have used advanced text mining methods and AI-trained methods to evaluate respectively the alignment of the EU's and Public Development Banks' policies with the SDGs (Jacouton et al. 2022; Borchardt et al. 2023; 2024).

Scholars and practitioners have also analyzed in depth the integration of the SDGs in specific policy processes including monitoring systems (Lepenies et al. 2023), planning, and coordination mechanisms (Okitasari and Katramiz 2022), or public procurement (Manta et al. 2022) often focusing on one or a handful set of countries as well as ad hoc data collection methods. Some initiatives focused on policy effort and ambition in specific sectors or targets such as climate action (Climate Analytics and New Climate Institute 2020) or efforts to eradicate modern slavery as emphasized by SDG 8.7 (Walk Free Foundation 2018). UNSD and custodian organizations track official SDG indicators including means for implementation such as the use of sustainable public procurement (SDG 12.7.1) and mechanisms to foster policy coherence (SDG.17.14.1).

The main advantage of these instruments, compared with outcome-based instruments, is that they can provide more timely and forward-looking assessments of policy efforts and ambitions which may yield results in the future. As such they might better capture a significant change in policy landscape, for instance with the arrival of a new administration, whereas outcome statistics would not immediately change. Combined with outcome-data they help capture implementation gaps (Lafortune et al. 2022). The process of developing such tools, including VNRs and VLRs, can help stakeholders address policy siloes and map out institutional and policy gaps to achieving the SDGs. They can also serve as inputs in model-based scenarios to estimate the likely future impact of policy and investment frameworks.

They also have four major limitations. Firstly, they capture engagement, intentions or policy efforts which are, by design, different from actual implementation and observable results. Secondly, except for financial statistics, speech and policy trackers tend to rely on more qualitative and less structured and standardized data (compared with outcome-based statistics which have more clearly defined methodologies). They require a lot of investment upfront on conceptualizing the tools and often rely on expert judgement. Thirdly, while they tend to capture well SDG engagement and references in policy documents, evaluating the level of ambition of policy instruments and targets remains a challenge, including in recently developed AI and text-mining instruments (Borchardt et al. 2023). This is partly due to the challenge of developing methodologies that can apply across entities, regional, national, and local contexts. Fourthly, some of these instruments are available only for a subset of countries and entities and tend to be prepared on a more discontinued basis and are not systematically updated.

Despite the large amount of academic work conducted since 2015 on SDG Commitment at the country-level, we identify four important knowledge gaps. First, the absence of a comprehensive framework and global database at the country-level to compare SDG Commitment and the *steering effect,* considering efforts made by countries to mobilize the suite of tools and instruments available to advance SDG policies (including national monitoring frameworks and participation in collective modeling exercise and pathways' development). Second, the absence of rigorous assessments to evaluate the linkages between SDG commitment and SDG performance. Third, limited understanding of how SDG Commitment can vary over time, including in the context of major global events like the COVID-19 pandemic and rising geopolitical tensions. Fourth, how emerging tools and technologies, including AI-trained models, and advanced text mining techniques, can help gauge SDG commitment at multiple levels and over time.

Table 4.1 Overview of the scope and coverage of framework that aim to gauge SDG effort and commitment at the country level

Title	Government effort and commitments for the SDGs: Framework and Score	Europe's approach to implementing the Sustainable Development Goals: good practices and the way forward	Comparative analysis of SDGs implementation: Testing a novel assessment framework approach (SWOT Approach)	Checklist of the necessary conditions according to the case studies for successful SDG integration into the budgetary process	The national development plans after the SDGs: Steering implications of the global goals towards national development planning
Authors	Sachs et al. (2023); Lafortune et al. (2022)	Niestroy et al. 2019	Issa and Fadel (2025)	Hege and Brimont (2018)	Okitasari and Katramiz (2022)
Scope / Government Function	Comprehensive	Comprehensive	Comprehensive	Specific function (Budgeting)	Specific function (Planning)
Country coverage	74 countries (global)	28 European countries	17 MENA countries: Algeria, Bahrain, Egypt, Iraq, Israel, Saudi Arabia, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Syria, Tunisia, Turkey and UAE	7 entities: Assan (Indian Province), Afghanistan, Colombia, Finland, Mexico, Norway and Slovenia	5 countries (Bangladesh, Malaysia, Oman, Qatar and Tanzania)
Key Dimensions	Political leadership and institutional coordination (SDSN survey on SDG political statement, coordination unit, strategy, stakeholder engagement, monitoring system, budgeting)	Political leadership & Commitment	(Internal) Institutionalization of the SDGs (legal and administrative)	Extent to which the SDGs have been translated into the national context	Orientation and planning underpinning
	SDG integration in sectoral policies and long-term pathways (using Six Transformations Framework)	Horizontal coordination	(Internal) SDGs implementation process and monitoring	National Implementation Plan or Strategy	Public sector reforms
	Commitment to multilateralism under the UN Charter	Vertical coordination	(Internal) Procedural Structure	Nationally translated targets or priorities*	Multi-stakeholder engagement

Participation	(External) VNR Synthesis	Gap analysis to identify national challenges
Knowledge	(External) External Player	High level political support for the SDGs
Monitoring	(External) Funding level	Degree of involvement of Ministry of Finance
Long-term perspective		Exercise Initiated by Ministry of Finance
		Ministry of Finance piloting the approach
		Ministries use the SDGs as an argument for their budget proposal
		Extent to which the tool is used by different actors
		Parliamentarians use the SDGs in the budget debate
		NGOs use the SDGs for budget advocacy
		Supreme audit institutions use the SDGs in the budget oversight process

Source: Author

4.3 Research question, method and material

4.3.1 Research question and hypotheses

Our primary goal is to explore the SDG *steering effect* and, more specifically, whether there is compelling evidence to suggest that high SDG performers also care more about the SDGs and the 2030 Agenda. We define high SDG performers as countries that showcase high current levels of sustainability (high current performance) or rapid progress toward achieving the SDGs since 2015 (high dynamic performance). We use the SDG Index as the main outcome-based instrument used for establishing these performance categories because it provides clear quantitative country benchmarks and an indication of progress since 2015. It has been peer-reviewed on several occasions and statistically audited, it is accessible in open access and verified by experts and governments each year, and is used extensively in the literature. We define "high current performance" as being among the top 25 countries in the 2025 SDG Index (top 15% globally) and "high dynamic performance" as growth rates of the SDGi (headline SDG Index) equivalent to 6 p.p or more (after rounding) which is one full point above the world average SDGi progress. We complement this analysis with text-mining analysis of specific policy instruments, including national constitutions, G20 Communiqués and declarations, and the EU's strategic orientations (comparing the priorities of the European Commission and Council of the EU over the period 2019-2024 versus 2024-2029).

Our definition of SDG commitment corresponds to the definition provided by Kanie and Biermann (2017) of goal setting "outputs" which correspond to "the articulation of targets and indicators associated with specific goals as well as the establishment of organizational arrangements to oversee the efforts to attain the goals". Goal-setting outputs must be differentiated from goal setting "outcomes" and "impacts" which correspond respectively to behavioral change and progress towards achieving goals that can be attributed by the process of goal setting (Kanie and Biermann, 2017).

Our main research question is the following: **Do high SDG performers also showcase high SDG commitment?** We make three principal hypotheses:

- H1. High SDG performance also tends to be associated with stronger SDG commitment characterized by stronger integration of the SDGs in various public management practices and procedures.

- H2. The COVID-19 pandemic in 2020 and rising geopolitical tensions since 2022, including the war in Ukraine, led to a decline in the discursive *steering effect* of the SDGs in the G20 and in Europe.

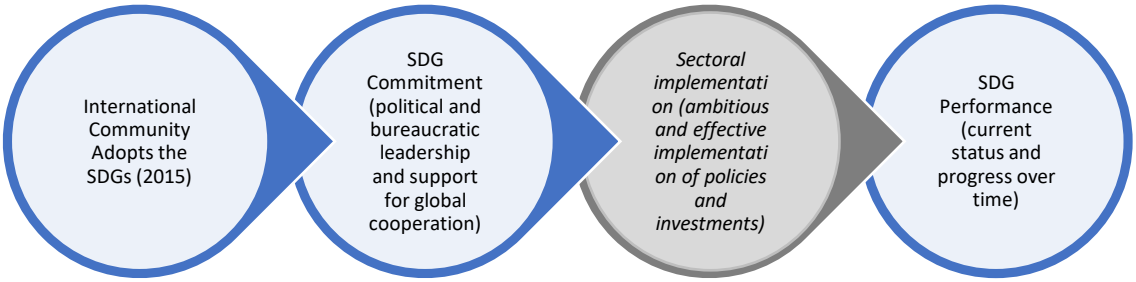
- H3. Emerging technologies (including Artificial Intelligence and advanced text-mining techniques) provide new opportunities to gauge the SDG *steering effect* on discourse and policies at one point in time and over time and can help fill persisting data gaps on the means for SDG implementation.

To answer our research questions and test our hypotheses, we rely on mixed research methods and five major steps. Firstly, we present a conceptual framework for measuring SDG commitments at the central/federal level in a structured and comprehensive way, which builds on the literature review discussed in the previous section. Secondly, building on this framework, we compile a database of indicators to measure the various dimensions of our conceptual framework. Thirdly, we compare the level of SDG commitment between high SDG performers and other countries using a sample of 75 countries with sufficient data plus the EU. Fourthly, we provide temporal analysis to evaluate, on one hand, whether countries that showcased high SDG Commitment after 2015 were already committed to the triple bottom line of sustainable development by on one hand analyzing national constitutions and, on the other hand, whether SDG Commitment and SDG use in public discourse and strategic orientation have declined in the aftermath of COVID-19, and the acceleration of geopolitical crises since 2020-21. Fifthly, we discuss in detail the SDG governance framework developed in four high performing countries – Benin and Uzbekistan (high dynamic performance) and Finland and the EU (high current performance). The qualitative analysis is structured around the pillars of the conceptual framework. The discussion and outlook sections to identify the theoretical and practical implications of our empirical and case study findings but also persisting data gaps and areas for future research.

4.3.2 Conceptual framework

Our conceptual framework builds and expands on the frameworks proposed by various scholars discussed in the previous section. Conceptually, our analysis focuses on linking SDG Commitment with SDG Performance and as such evaluate, on one hand, the *steering effect* of the SDGs on political and bureaucratic processes and, on the other hand, whether this political and bureaucratic leadership is associated with higher SDG performance (which would suggest potential *steering effect* also on performance). It is beyond the scope of our paper to evaluate the level of ambition and the effective implementation of policies, which tend to be even more context-specific and requires detailed and expert-based sectoral analyses of key SDG transformations (Sachs, Schmidt-Traub, Mazzucato, et al. 2019; Malekpour et al. 2023).

Table 4.2 Schematic representation of the theoretical steering effect of goal-based development at the central/federal level of Government

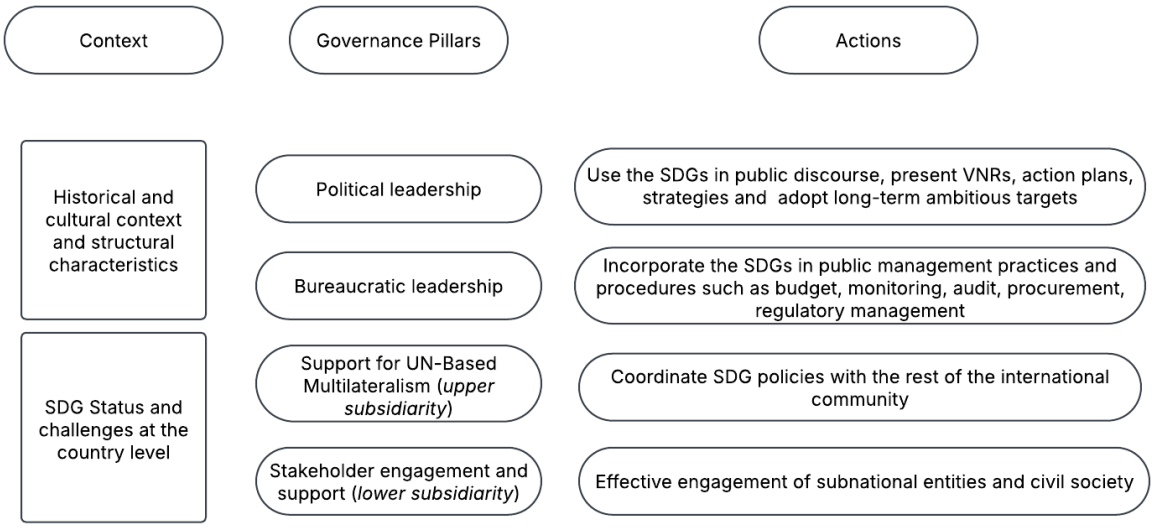


Note: In grey beyond the scope of this paper.
Source: Author.

To gauge countries' commitment to implement the SDGs at the central/federal level we propose a conceptual framework which emphasizes the importance of four different pillars. These four pillars must be analyzed considering two additional contextual pillars which are incorporated in the qualitative case studies' analysis. The conceptual framework was developed based on literature assessment, expert judgement and evaluated ex post via statistical analysis (Principal Component Analysis (PCA)). The three first pillars are directly under the responsibility of the central/federal government whereas the last one (stakeholder engagement) may or may not be driven by proactive action and initiatives coordinated by the central/federal government.

Pillar 1 emphasizes political and/or senior civil service leadership for the SDGs via for instance the decision to present a VNR at the United-Nations or making a bold commitment to achieve climate neutrality. Pillar 2 emphasizes bureaucratic leadership and the integration of the SDGs in various public management practices and procedures. Pillars 3 and 4 incorporate the notion of subsidiarity by focusing on countries' efforts to coordinate SDG commitment and implementation with the rest of the international community (Pillar 3, "upper subsidiarity") and promoting a whole-of-society approach to SDG implementation and the mobilization of subnational entities and civil society (Pillar 4, "lower subsidiarity"). The importance of coordinating policies at the global level and with local and regional authorities is recognized via SDG 17 (Partnerships for the Goals) and SDG 11 (Sustainable Cities and Communities) and in the literature (Long et al. 2022; Horan 2022; Mohieldin et al. 2023).

Table 4.3 Comprehensive Framework to Gauge SDG Commitment at the central/federal level of Government



Source: Author

The framework aims to gauge SDG commitment at the central/federal level and not the quality of governance or public administration as a whole. Other initiatives such as the World Bank's Worldwide Governance Indicators (WGI) (Kaufmann and Kraay 2022) capture various aspects of effective public governance systems. The Economist Intelligence Unit (EIU) and Varieties of Democracies (V-Dem) capture elements of what constitutes well-functioning democracies. Some of these other benchmarks are used and discussed as part of the qualitative case studies (EIU 2024; V-Dem 2025).

4.3.3 Material and approach

The next step involved the development of a database for the empirical quantitative analysis. Five criteria for indicator selection were retained: (1) Relevance for gauging government commitment to implementing the SDGs and Paris Climate Agreement. (2) Applicability across country contexts, geographical regions and income levels. (3) Quality data produced and verified by trusted sources such as the United Nations or academic networks. (4) Adequate scope of the data focused on the central/federal level of government (for pillar 1, 2 and 3). (5) Timeliness and data availability.

The overview of the indicators selected and their attribution across pillars as well as the full database with individual country data are available in the Annex. To our knowledge, the most comprehensive data collection, specifically focused on tracking SDG effort and commitment, was conducted by the SDSN in 2023. We rely extensively on this database for several indicators since the data have been verified by a global network of scientists devoted to the SDGs and verified in collaboration with national governments. The original SDSN database includes 74 countries. Through desk research and direct interactions with these administrations, we incorporated two additional observations for Uzbekistan and the EU. The total number of observations is therefore equivalent to 75 UN member states plus the EU.

In addition to the 2023 SDSN database on government effort for the SDGs, the database incorporates indicators from various other trusted sources. Under pillar 1, we incorporate global data collected from the Net Zero Tracker and the United Nations Framework Convention on Climate Change (UNFCCC) to capture respectively the adoption by central/federal governments of explicit quantitative and time-bound targets on climate mitigation, and the presentation of so-called Nationally Determined Contributions (NDCs) to achieve these targets. As emphasized by the IPCC, achieving net zero GHG emissions is among the international targets with the largest scientific consensus and as such the adoption of an explicit and bold commitment on climate mitigation efforts applies across countries and contexts (IPCC 2021). We do not evaluate the level of ambition of the central/federal government target but their existence via the Net Zero Tracker database. Similarly, we do not evaluate the ambition and effective implementation of NDCs, but efforts made by the central/federal government to engage with this process.

Under pillar 2, in addition to the SDSN survey data on budget, monitoring and coordination units for the SDGs we incorporate data related to the existence of a specific SDG audit led by the central/federal Supreme Audit Institution (SAI) based on the harmonized database compiled by INTOSAI. Two UN General Assembly Resolutions emphasize the critical role that SAIs can play to support the achievement of development goals and priorities (resolutions 66/209 and 69/228). We also incorporate two datasets compiled by UNEP and the OECD to gauge how public procurement systems and regulatory governance functions are mobilized for sustainable development. Due to data gaps these indicators are not used in the empirical analysis, yet they are discussed in the qualitative case studies section (4.7.4). The case studies also discuss SDG Commitment in Parliaments and legislative branches.

Pillar 3 is built around the 2025 Index of countries' support for UN-based multilateralism which tracks central/federal government efforts to ratify UN treaties, align their votes with the international majority, participate in the work of the main UN organizations, promote demilitarization, abstain from applying Unilateral Coercive Measures (UCMs), pay their UN dues on time and, for HICs, contribute their fair share of ODA as a share of GNI. It is the responsibility of the central/federal government executive and legislative branches to decide to support or undermine UN-based multilateralism necessary for coordinated and effective implementation of sustainable development, as emphasized under SDG 17 (Partnerships for the Goals).

Pillar 4, on stakeholder engagement, tracks whole-of-society engagement with the SDGs (by subnational entities, scientists and NGOs) including the effective right of association and assembly. To gauge the involvement of subnational entities we use the UN DESA database of 249 published Voluntary Local Reviews (VLRs) (as of March 2025). To gauge the engagement of universities and research centers we incorporate two data points related to the existence of an SDSN national or regional network – the largest network of researchers and scientists mobilized for the SDGs – and whether there is evidence that research institutions have contributed to global efforts to define national pathways compatible with global targets either in the field of deep decarbonization (Deep Decarbonization Pathway led by IDDRI) and/or sustainable agri-food systems (FABLE pathways led by FOLU). To gauge efforts made by the central/federal government to strengthen transparency and openness we track membership status of countries to the Open Government Partnership a global partnership created in 2011 to advance "transparent, participatory, inclusive and accountable governance" (OGP 2025). Finally, we calibrate our construct using the WJP indicator related to "Freedom of assembly and association is effectively guaranteed" (WJP 2024).

We then turned different types of data (quantitative and qualitative) and data with different units into harmonized scores from 0-100. Aggregate pillar scores to gauge central/federal SDG commitment were then compiled by computing the arithmetic average of each individual indicators under the respective pillar. The total score was compiled as the arithmetic average of the three pillars. We also compiled an SDG civil society engagement score, compiled as the arithmetic average of all indicators under this pillar, calibrated by the effective freedom of assembly and association (which represents 50% of the pillar weight considering its importance for the effective implementation of all the other variables incorporated within this pillar). Civil society engagement was excluded from the total central/federal government SDG commitment score for theoretical reasons, since the decision of subnational entities and civil society to engage with the SDGs may or may not depend on deliberate policies and practices initiated by the central/federal government. Statistically, it was confirmed ex post that the civil society pillar captures something different than what the three other pillars capture. We then contrast countries' SDG commitments' scores with their SDG Index performance.

The second part of the empirical analysis focuses on a dynamic analysis of SDG commitment before the SDGs were adopted and over time during the SDG period. The first objective of this dynamic analysis is to explore whether SDG Commitment after 2015 may be associated with the existence of national constitutions that do refer to the triple bottom line of sustainable development. We focus on four high SDG performers (our case study countries) which we benchmark against the three most populous countries: China, India and the United States (US) (used as comparators). The second objective is to explore whether the SDGs continued to have discursive *steering effect* after the COVID-19 pandemic and intensification of geopolitical tensions. At the global level, we focus on the G20 declarations and communiqués because these are comparable documents produced on a yearly basis. At the country or entity level, to isolate the effect of global events on SDG Commitment, we focus on the political guidelines and strategic orientations of the Council of the EU between the 2019 and 2024 European elections. Methodologically the case of the EU is interesting because the same candidate – Ursula von der Leyen (UvdL) ran and won both elections as President of the European Commission, and as such differences in political guidelines cannot be attributed to a change of candidate or elected political party. For this analysis we rely extensively on the SDG Prospector (AI-trained model developed by the AFD) and the JRC SDG Mapper (advanced text-mining tool developed by the European Commission Joint Research Centre) to gauge the SDG scope and coverage of various policy documents (Borchardt et al. 2023; Jacouton et al. 2022; Borchardt et al. 2024).

Finally, based on our direct interactions with countries and desk research we present and analyze the SDG commitment and governance framework in four high performing countries, namely Benin, Uzbekistan, Finland and the EU. Qualitative case studies are typically defined as "the intensive study of a particular case where the purpose of that study is – at least in part – to shed light on a larger class of cases" (Gerring 2006). This analysis follows strictly the key pillars identified in our conceptual framework and aims to demonstrate the analytical value of the framework not only from a comparative empirical perspective but also for researchers and practitioners interested to structure an analysis at the country level. By focusing on high SDG performers from three different geographical regions, covering both HICs and EMDEs, and with different political, legal, and historical traditions we hope to identify best practices, similarities but also differences in the way countries have incorporated the SDGs in their public

management systems since 2015. The contextual information incorporated in the case studies comes from multiple sources presented in the Annexes.

4.4 Results

4.4.1 SDG commitment and performance at the country-level

Overall, our findings confirm that most countries in our sample have shown some form of commitment to the SDGs, yet there is a gap between the use of the SDGs in public discourse and broad strategic orientations, versus integration in public management practices. We find, for instance, that all of the countries in our sample submitted a VNR (except the US), adopted a Net Zero commitment (except Bolivia and the US), that there is some form of SDG penetration in central/federal strategies in 83% of our sample and that almost two-thirds of the political leadership in our sample endorsed the SDGs in an official speech during the year 2022. However, the integration of the SDGs in bureaucratic processes is much weaker with only a third of the countries in our sample having incorporated the SDGs into the budget and audit functions ("hard SDG integration"). Integration in other government functions such as monitoring (68%) and coordination mechanisms (82%) is slightly higher ("soft SDG integration").

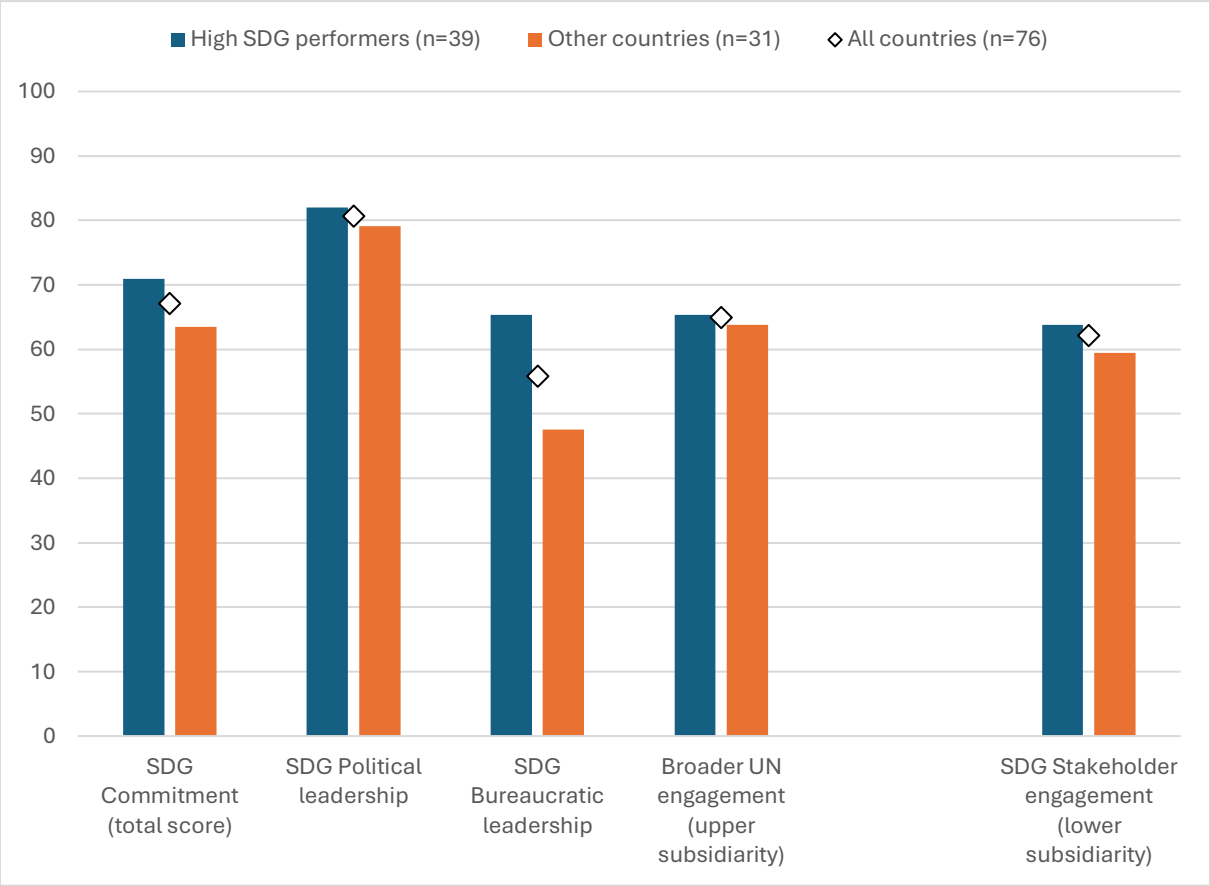
We find that high SDG performers tend to obtain higher SDG commitment scores overall. This is largely driven by a higher score on the "SDG bureaucracy" pillar, which is much higher in high SDG performers (65.4) compared with other countries (47.6). High SDG performers have incorporated to a larger extent the SDGs into budgets, monitoring, coordination and audit functions. T-tests suggest that differences in means for total scores and bureaucracy are statistically significant ($p<0.05$). By contrast differences in means are not statistically significant for political leadership, civil society and multilateralism. Interestingly, the scores between both groups on multilateralism and civil society engagement with the SDGs are almost equivalent.

The correlation and principal component analysis (available in the Annexes) confirm that political leadership, bureaucratic leadership and broader engagement with the UN load are statistically correlated and load statistically under a common factor which we call "SDG Commitment". By contrast, stakeholder engagement with the SDGs captures a different statistical phenomenon. As such, SDG stakeholder engagement was not incorporated in the total SDG Commitment score but treated separately. As one example, the US showcases very weak support or the SDGs at the central/federal level, but civil society is actively mobilized on sustainable development and action including US States, municipalities and the research community.

To elaborate on this, focusing on a subset of 39 countries in our sample with available data on public support for stronger climate action and global cooperation, we find limited evidence that would strongly link SDG Commitment at the central/federal level and societal support / public opinions for sustainable development. There is only a moderate statistically significant correlation between the percentage of people that believe that their country should "strengthen its commitments to address climate change" and SDG Commitment and no correlations between SDG Commitment (including the UN engagement pillar) and the share of people that believe that countries should "work together on climate change even if they

disagree on other issues, such as trade or security". This suggests that low central/federal commitment for the SDGs does not necessarily reflect societal support for climate action and global cooperation.

Table 4.4 SDG Commitment and Performance



Note: Total n=76 (including EU). Due to missing SDG Index ranking and/or SDGi progress scores the following six countries and entities could not be assigned to any of the two performance groups: Barbados, EU, New Zealand, Samoa, Seychelles and Ukraine. These countries and entities were included in all countries' averages. Averages are simple arithmetic averages (not population-weighted).

Source: Authors' elaboration. Detailed country data available in the Annex.

4.4.2 The SDG *steering effect* on discourse and strategic orientations over time

We now aim to explore whether prior support for the triple bottom line of sustainable development in the strategic vision and priorities of the central/federal government was conducive to stronger SDG commitment as of 2015. To assess prior country-level engagement with sustainable development we focus on one specific policy document available and comparable across all countries: their founding constitution. They are comparable across countries and represent fairly stable documents over time compared with action plans or strategies developed by specific administrations for a given period of time and as such are well suited to evaluate countries' long-term engagement with the triple bottom line of sustainable development. We focus on the four countries and entities identified in our case studies and the three countries with the largest population – China, India and the US – as comparators. This sample of seven countries and entities includes a mix of federal and unitary countries and countries from different

cultural and religious traditions. All the constitutions were adopted before 2015, although they were sometimes revised after 2015.

We find that all the seven national constitutions refer to the triple bottom line of sustainable development (including the protection of environmental and/or natural resources9) except the US. The average number of SDGs detected is 11 (median is 12). In all cases national constitutions refer primarily to the social dimension of the SDGs, especially SDG 16 (Peace, Justice and Strong Institutions). The US stands out as an outlier with only four SDGs detected in the US Federal Constitution. The US performs below its regional peers (OECD countries) in the SDG Index, showcased only limited SDG progress since 2015, and stands out as the country least committed to the SDGs. In 2025, for the first time, China and India respectively entered into the top 50 and top 100 countries in the SDG Index (Sachs et al. 2025). China and India also presented several VNRs.

Table 4.5 References to the triple bottom line of sustainable development in national constitutions

	Case Study Countries				Most populated countries (comparators)		
	Benin	Finland	Uzbekistan	European Union	China	India	United States
Year of adoption	1990 (rev 2019)	1999 (rev 2011)	1992 (rev 2023)	2007 (Lisbon Treaty)	1982 (rev 2019)	1950 (rev 2024)	1789 (rev 1992)
Explicit reference to the triple bottom line of sustainable development (social, economic and environmental)	Yes	Yes	Yes	Yes	Yes	Yes	No
Number of SDGs detected	13	7	13	10	13	17	4

Note: Explicit references to the triple bottom line of sustainable development correspond to references to the economy, social and environmental components of sustainable development. All constitutions make references to the social and economic components, which is also confirmed by the automated analysis of national constitutions based on the AFD and JRC tools. National constitutions may or may not refer to the protection of the environment and/or natural resources. The number of SDGs detected corresponds to the total number of SDGs detected based on the AFD SDG Prospector and JRC SDG Mapper tool.
Source: Author's elaboration, based on JRC SDG mapper and AFD SDG Prospector.

We then analyze the discursive penetration of the SDGs over time since 2015 both at the international level and more specifically at the EU level. Globally we focus on SDG penetration in the context of the G20. At the global level, the SDGs are of course at the heart of UN summits, conferences and processes

[9] Benin, see notably, Art 27 and Art 74: "droit à un environnement sain, satisfaisant et durable (Art 27 and Art 74)"; Art 98: "protection de l'environnement et conservation des ressources naturelles". Uzbekistan: Chapter II (Democracy), Article 14, establishes sustainable development as one of the core principles for the state's activities: "The state shall carry out its activity based on the principles of legality, social justice and solidarity, to ensure human well-being and sustainable development of society." Finland: Section 20. "Responsibility for the environment: Nature and its biodiversity, the environment and the national heritage are the responsibility of everyone. The public authorities shall endeavor to guarantee for everyone the right to a healthy environment and for everyone the possibility to influence the decisions that concern their own living environment.". European Union: Article 2, paragraph 3 of the Consolidated Version of the TEU: "The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance." China: Article 26: "The state shall protect and improve living environments and the ecological environment, and prevent and control pollution and other public hazards. The state shall organize and encourage afforestation and protect forests." India: Notably in Art 48A. "Protection and improvement of environment and safeguarding of forests and wild life" and 51A on "Fundamental Duties: (g) to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures."

including the HLPF and UNGA. Since 2017, between 36 and 47 UN member states have consistently presented VNRs each year at the UN HLPF. Yet, the penetration of the SDGs in other international fora like the G20, particularly important for the reform of the Global Financial Architecture (GFA), remains less documented. Since 2016, G20 leaders always managed to come up with a final communiqué or declaration. The G20 operates via a system of rotating Presidencies across its member countries and each Presidency team plays an important diplomatic role in coordinating and negotiating the final text (Downie and Crump 2017; Ali and M.Kamraju 2023). The G20 is at the heart of international negotiations on financial and trade-related issues (among others).

Interestingly, when we compare SDG penetration in G20 communiqués and declarations over the period 2016-2019 (before the COVID-19 pandemic and multiple geopolitical crises) versus the period 2021-2024, we find that the number of SDG references has increased over time. On average, the terms "Sustainable development Goals" and "2030 Agenda" were used seven times in declarations and communiqués over the period 2016-2019 against 18 times over the period 2021-2024. This is not driven by one specific outlier, since SDG references are consistently higher across all the years for the period 2021-2024 compared with the years 2016-2019. It is in the context of the two Asian Presidencies of Indonesia (2022) and India (2023) that the SDGs were most references in the G20 communiqués and declarations. Interestingly, this corresponds to the sharp acceleration of geopolitical tensions between members of the G20, notably in the context of the war in Ukraine. The G20 declarations and communiqués also stroke more balanced in terms of SDG coverage, with SDGs related to the environment, climate and biodiversity representing more than a quarter of total SDG references in 2021-2024 compared with less than 10% on average over the period 2016-2019. SDG 13 (Climate Action) was the second most referenced SDG in all G20 communiqués and declarations since the Italian Presidency in 2021, whereas it was not among the top 3 in all the previous years. One hypothesis is that having a universally accepted vision for sustainable development at the international level might have facilitated the negotiations on the final text and language used in the final common G20 communiqués and declarations in a context of high disruptions and geopolitical tensions after 2020 including among G20 members.

Table 4.6 SDG references and coverage in G20 Leaders' Communiqués and Declaration (2016-2024)

	China, 2016	Germany, 2017	Argentina, 2018	Japan, 2019	Saudi Arabia, 2020	Italy, 2021	Indonesia, 2022	India, 2023	Brazil, 2024	2016-2019	2021-2024
Explicit reference to the SDGs	5	12	2	10	3	14	17	27	14	7	18
Economy SDGs (%)	67%	56%	51%	57%	56%	39%	36%	38%	33%	57.8%	36.5%
Society SDGs (%)	24%	36%	45%	30%	30%	32%	40%	36%	39%	33.8%	36.8%
Environment SDGs (%)	9%	8%	4%	13%	14%	29%	24%	26%	28%	8.5%	26.8%
Top 3 most present SDGs	17,8,9	17,8,9	17,8,16	17,8,9	17,8,9	17,13,9	17,13,2	17,13,8	17,13,16	17,8,9	17,13

Note: Explicit references to the SDGs based on JRC SDG mapper. It corresponds to explicit references to ""Sustainable Development Goals" or "2030 Agenda" in the text. SDG coverage based on AFD SDG prospector. In AFD SDG prospector methodology "Economy" SDGs correspond to SDGs 1,7,8,9 and 12; "Society" SDGs to SDGs 2,3,4,5,10, 11 and 16 and "Environment" SDGs to SDGs 6, 13, 14 and 15. SDG 17 is not assigned to a cluster.

Source: Author's elaboration, based on European Commission (JRC) and AFD SDG Prospector.

Yet, at the country or entity level, we find that geopolitical and military tensions might affect the discursive *steering effect* of goal-based sustainable development. The EU had elections in May 2019 and in June 2024. Ahead of these elections, the elected candidate presented its Political Guidelines, and the Council of the EU presented its Strategic Agenda (a process led by the President of the Council in close coordination with representatives from each 27 EU member states). While the Council of the EU made an explicit reference to the SDGs both in 2019 and 2024, the Political Guidelines of the elected candidate did not make any reference to the SDGs in 2024 whereas it was the case in 2019. We also find that the share of the SDG references devoted to the environment dropped significantly in the Political Guidelines and Council priorities respectively from 21% and 25% in 2019 to 11% and 14% in 2024. This finding is corroborated by the fact that SDG 13 (Climate Action) was at the heart of the 2019 Political Guidelines and Council of the EU Priorities in 2019 and among the top 3 most referenced SDG whereas in 2024 the SDGs related to international partnerships (SDG 17), peace and security (SDG 16) and innovations (SDG 9) were the most referenced in both documents. While this may not reflect necessarily reduced ambition on climate action and the implementation of the European Green deal, it does suggest a discursive shift at the EU level in the context of rising geopolitical tensions and military conflicts with a less balanced discourse on sustainable development at the expense of the environmental dimension.

Table 4.7 SDG references and coverage in the EU's Strategic Orientations (European Commission and Council of the EU), 2019-2024 versus 2024-2029

	Ursula von der Leyen's Political guidelines		Consilium Strategic Priorities	
	2019-2024	2024-2029	2019-2024	2024-2029
Explicit reference to the SDGs	1	0	1	1
Economy SDGs (%)	38%	45%	29%	43%
Society SDGs (%)	41%	44%	46%	43%
Environment SDGs (%)	21%	11%	25%	14%
Top 3 most present SDGs	17, 16 and 13	17, 16 and 9	17, 16 and 13	16, 9, 17

Note: Explicit references to the SDGs based on JRC SDG mapper. It corresponds to explicit references to ""Sustainable Development Goals" or "2030 Agenda" in the text. SDG coverage based on AFD SDG prospector. In AFD SDG prospector methodology "Economy" SDGs correspond to SDGs 1,7,8,9 and 12; "Society" SDGs to SDGs 2,3,4,5,10, 11 and 16 and "Environment" SDGs to SDGs 6, 13, 14 and 15. SDG 17 is not assigned to a cluster.

Source: Author's elaboration, based on European Commission (JRC) and AFD SDG Prospector.

4.4.3 Detailed cases

We complement these empirical quantitative results with four qualitative case studies to provide more context and detailed information about SDG commitment among high SDG performers. We focus on four highly performing countries and entities from different geographic regions: Benin, Finland, Uzbekistan and the EU. The detailed information for the case studies is provided in the Annexes, including a summary table. These case studies are based on desk research, various public data sources and our direct interactions with each of these countries and entities between 2021 and 2025.

We find several similarities in the way these four countries and entities have incorporated the SDGs into their public governance frameworks. They have all presented multiple VNRs and SDG action plans, the EU being one of the few non-UN member states to have presented a Voluntary Review in 2023. They have also incorporated to a larger extent the SDGs in bureaucratic processes, including some level of "hard" SDG integration notably into budget and investment frameworks. For EMDEs like Benin and Uzbekistan this is characterized by the development of dedicated SDG bond frameworks issued in both cases in 2021 and the development of Integrated National Financial Frameworks (INFF) to mobilize and guide long-term investment for sustainable development. We note that sovereign bonds structured around the SDGs and INFFs did not exist before the adoption of the SDGs in 2015. In Finland, the SDGs have been explicitly mentioned and used in budget documents since their adoption in 2015. The EU has incorporated the SDGs in the context of the Recovery and Resilience Facility and in the European Semester (the lead mechanisms for macroeconomic coordination across member states). The lead SDG coordination unit was placed strategically under the authority of the Prime Minister (Finland), Deputy Prime Minister (Uzbekistan) or in a Central Ministry (Benin). They have also adopted national SDG indicator systems, although the number of indicators and frequency of monitoring can vary across countries and entities with Finland using 45 narrowly defined national SDG indicators, the EU 102 indicators (including some multipurpose indicators) and Benin and Uzbekistan more than 150 indicators.

We also note that in these four countries and entities the national constitutions cover the triple bottom line of sustainable development (economic, social and environment), including references to safeguarding

environmental and natural resources. Further research is needed, incorporating a larger sample of countries, to evaluate whether prior engagement with sustainable development, in policy and legal documents but also based on regional and local cultural and religious traditions, might be conducive to stronger engagement with globally agreed frameworks for sustainable development like the SDGs. We note for instance that, unlike other major powers like China and India, the Constitution of the US makes no references to safeguarding environmental and natural resources, and to global cooperation. In our analysis, the US stands out as the country least committed to the SDGs and UN-based multilateralism, and as one of the three countries that never took part in the VNR process (Lafortune and Sachs 2025).

Yet, even among countries that showcase high SDG commitments there can be noticeable differences in the governance frameworks, notably regarding approaches for stakeholder engagement. We find that countries like Finland and most EU countries have adopted "whole-of-society" approaches to SDG implementation characterized by the active mobilization of subnational entities and civil society. Finland for instance has a long tradition of relying on citizen panel to guide its sustainable development strategies, indicator systems and investments that pre-dates the adoption of the SDGs. The EU incorporated a civil society annex to its VNR. By contrasts, some countries such as Uzbekistan have adopted more "government-led" approaches to SDG implementation driven by strong commitment from the central/federal level but relatively weaker engagement or more temporary (one-off) engagement from subnational entities and civil society, for instance only in the context of VNR preparation. This can be due to the characteristics of the civil society ecosystem, capacity factors, governance traditions, structural characteristics (including country size) and other factors. In 2024, Uzbekistan started an innovative partnership with the SDSN to strengthen SDG localization.

Our framework and case studies emphasize the importance of considering contextual factors next to empirical quantitative evidence of SDG Commitment and progress. Based on IMF data and Article IV findings, we note that the high SDG progress and commitment in Benin and Uzbekistan (both EMDEs) was associated with relatively strong public finance baselines in 2015 (compared with regional and income level peers). Both countries benefited from relatively low debt-GDP ratio in 2015 and had relatively more fiscal space (measured by the ratio of interest payment to investment expenditure). We also note that both countries are not directly targeted by financial or trade-related UCMs (sanction regimes). These countries also benefited from relatively peaceful conditions since 2015. Interestingly, the Republic of Finland and Uzbekistan are two countries that adopted the concept of neutrality in military arrangements and foreign affairs for most of their recent history. We also note that both Benin and Uzbekistan have embraced multipolarity and have engaged with both the Chinese Belt and Road Initiative and the EU's Global Gateway infrastructure investment initiatives. These four elements (strong public finance, limited impact of UCMs, peaceful societies and global cooperation) may help - or even be decisive factors – to unlock the benefits from strong SDG commitments especially in EMDEs as also suggested by other studies (Sachs et al. 2023; Rima 2023; Ani 2016).

4.5 Discussion

Overall, ten years after their adoption, we find compelling quantitative and qualitative evidence about the *steering effect* of the SDGs on public discourse over the period 2015-2025. As of March 2025, 190 UN member states out of 193 have presented their SDG action plan in so-called VNR and most of the

countries covered in our sample have taken steps to incorporate the SDGs into national strategies, monitoring frameworks and coordination mechanisms although there are important variations across countries and government functions. This corroborates the findings from Biermann et al (2022) on the discursive *steering effects* of the SDGs. In turn, focusing on 75 countries and one entity (the EU), we find that high SDG performers (current and dynamic) also tend to be more committed to the SDGs which confirms our original hypothesis (H1). On average we find, however, more limited integration of the SDGs into highly strategic public management procedures including the budget process. Our detailed case studies further unpack the level of ambition of specific mechanisms and approaches put in place in high SDG performers namely Benin and Uzbekistan (high dynamic performers) and Finland and the EU (high current performers).

Our assessments of SDG penetration over time reveal that the SDG discursive *steering effect* in G20 leaders' communiqué and declarations did not decline over the period 2021-2024 compared with the period 2016-2019. This contradicts our second hypothesis (H2). Leaders' communiqués and declarations negotiated during the G20 Presidency of Italy (2021), Indonesia (2022), India (2023) and Brazil (2024) made more explicit references to the SDGs and stroke a better balance between the triple bottom line of sustainable development (economy, social and the environment) compared with declarations and communiqués adopted during the previous period (2016-2019). This suggests that, in a context of rising geopolitical tensions between G20 members, the universal SDG vision and framework might have contributed to consensus-building efforts. It also suggests that despite rising geopolitical tensions since 2022, the SDGs and the 2030 Agenda remain very much at the heart of public discourse in emerging economies in Asia and Latin America that held the G20 Presidency in 2022, 2023 and 2024. Interestingly, Brazil and Indonesia have both structured a sovereign financing instrument around the SDGs to mobilize financial capital in support of their sustainable development policies (World Bank 2024a; Government of the Republic of Indonesia 2024).

At the same time, we observe a decline in the scope and coverage of SDG penetration in the strategic orientations of the EU and the US in 2024 and 2025. We find no references to the SDGs or the 2030 Agenda in the Political Guidelines of Ursula von der Leyen in the run up to her second mandate as President of the European Commission (2024-2029) and the share of the text devoted to environmental SDGs in the political guidelines and priorities of the Council of the EU for 2024-2029 significantly declined suggesting a less balanced approach to sustainable development more oriented toward economic and social SDGs (including defense and security issues). Compared with the strategic orientations of the previous EU leadership (2019-2024), SDG 13 (Climate Action) is no longer one of the three SDGs most addressed in the strategic orientations of the European Commission and Council of the EU. In the case of the US, it became the first country to officially oppose publicly the SDGs and 2030 Agenda in March 2025 (US Mission to the United nations 2024). This decline in the discursive *steering effect* of the SDGs in Europe and the US due to, at least partially, to the intensification of conflicts, might prevent government planning and investments in the three critical areas of climate action: mitigation (the implementation of a zero-carbon energy system), adaptation (targeted investments to offset climate harms, such as flood and drought protection), and resilience (holistic investments in warning systems and capacity of human systems to bounce back from climate-related losses and damages.). As the world will soon begin negotiations for the post-2030 global framework for sustainable development this may impede trust and win-win global cooperation for sustainable development.

The US stands out as the country with the largest gap between civil society engagement with the SDGs and SDG commitment by the central/federal government. Although the US never presented a VNR, multiple subnational entities in the US have presented Voluntary Local Reviews, New York being among the first city in the world to present a VLR in 2018. The US central/federal government does not have a bold explicit net zero commitment, has not incorporated the SDGs in key public management practices and procedures (including budget, monitoring system, regulatory assessment) and shows weak support for UN-based multilateralism. Yet, 80% of the US population calls for global cooperation to tackle climate change and researchers and scientists are actively engaged in global SDG scientific networks and in the design of long-term decarbonization pathways and sustainable agri-food systems.

Our four case studies, focused on high SDG performers from different geographic regions (Benin, Uzbekistan, Finland and the EU), unpack in greater detail the public management practices and procedures mobilized in these countries to advance long-term policy and investment frameworks for the SDGs and mobilize societal support and actions. These four countries are either among the best current performers or fastest progressors on the SDG Index. The case studies suggest that in order to convert SDG commitment into SDG outcomes, especially in EMDEs, at least four elements might be necessary: strong public finance and access to capital, limited impact of international sanctions (UCMs), peaceful societies, and multilateral cooperation. These can be both pre-conditions for positive SDG outcomes as well as the result of sound SDG commitments and policies at the national and international level. Building on the findings of this study, future work could test quantitatively some of these assumptions.

From a methodological standpoint, we confirm that innovative AI-trained technologies and advanced text-mining methods provide new opportunities to gauge in real-time or near real-time SDG penetration in policy documents and as such to help track engagement over time and fill persisting data gaps. This confirms our third hypothesis (H3). The adoption of a universally agreed framework for sustainable development led to the emergence of standardized tools to gauge policy alignment, often leveraging new technologies, which can, in itself, be considered as a positive outcome of international goal-based development. At the same time, these tools do not evaluate the level of ambition of strategies, policies and targets included in policy documents and their effective implementation in practice which remain an important limitation of this study.

Also, we find persisting gaps in the availability and timeliness of data on the means for implementation of the SDGs. Ten years after their adoption, and despite being official SDG indicators, there are significant gaps in countries' efforts to promote sustainable procurement systems (SDG 12.7.1) and regarding the adoption of mechanisms to promote policy coherence for sustainable development (SDG.17.14.1). Further information would be needed to gauge, for instance, the awareness and skills of the civil service about sustainable development and how government Human Resource systems (such as senior civil service management and performance systems) can be further mobilized for the SDGs (GCPSE and UNDP 2015; OECD 2021) We also find few regular and comprehensive data collection of SDG commitment and efforts for the SDGs, apart from the SDSN survey collected annually from 2018 to 2023 but discontinued in 2024 and 2025. This is aligned with the findings from other scholars who have also emphasized persisting data gaps and labor-intensive nature of data collection that aim to evaluate SDG governance framework and *steering effects* (Biermann et al. 2022).

Our research has several other limitations. We focus on the existence of SDG mechanisms and not on their effectiveness and implementation in practice. The growing literature related to green and SDG "washing", primarily focused on private sector organizations, provides important insights on the effective and observable impacts of SDG discourse and policy at the corporate level (Heras-Saizarbitoria et al. 2022; Río et al. 2023; Costa et al. 2025). At the same time, our methodological approach promotes the use and triangulation of multiple types of information on SDG commitment, SDG performance, and contextual factors map out potential implementation gaps. Another important limitation is that our analysis finds a statistically significant difference in mean levels of SDG commitments between high SDG performers and other countries, yet this is not equivalent to a causal relationship. It is possible that high performing countries and countries that are already experiencing progress on the SDGs – possibly thanks to more favorable structural conditions, peaceful societies and/or more favorable public finance conditions – tend to also see a benefit in incorporating the SDGs in their public policy framework. This paper and the dataset provided can provide material and impetus for more econometric modeling to gauge the drivers of SDG progress over time (including government commitment and leadership as one possible explanatory variable).

Future research could build on, and expand on the findings from this paper in several ways. Firstly, the framework presented here could be used to collect information for a larger number of countries and evaluate trends in SDG commitment and *steering effect* over time. Notably the linkages between foundational documents such as national constitutions and SDG commitments and progress could be expanded ideally to all 193 UN member states. Secondly, assessments of SDG commitments at regular intervals, facilitated by emerging AI-trained methods and methods based on advanced text-mining techniques, may provide further evidence about the *steering effect* of goal-based development at multiple levels (including in provinces and municipalities) and over time. Eventually, these methods and information could be used more routinely by the financial industry, especially the ESG/SDG impact investment community. Thirdly, researchers could explore whether countries' commitment and outcomes during the MDG period 2000-2015 were conducive to stronger engagement and progress on the SDGs (2015-2030) which would suggest that the true comprehensive *steering effect* of goal-based development on policies and outcomes can only be evaluated over very long-time spans.

Our paper also provides an updated classification of SDG instruments available for policymaking and monitoring at various levels. We recognize how complex it is for governments to operationalize the SDGs despite the expanded suite of instruments, frameworks and data now available. We recall the citation attributed to John Maynard Keynes on information and government actions: "There is nothing a government hates more than to be well-informed; for it makes the process of arriving at decisions much more complicated and difficult." (Skidelsky 1992). We emphasize the importance of applied research and science combined with hands-on trainings so that academic research on sustainable development interventions can be relevant from a practical perspective and turned into actionable tools, narratives and eventually policy actions by decision-makers. As described in this paper, the efforts made over the last ten years by IOs and global consortiums to turn highly complex models and papers into actionable tools, such as the IMF SDG Financing Tool (SDG-Fit), the JRC and AFD SDG mappers and prospectors or FABLE Calculator (among others), go in the right direction. They might also be part of the SDG *steering effect* on strengthening and streamlining available tools for long-term investment and policy planning for sustainable development.

4.6 Outlook

The SDGs adopted by the international community in 2015 provide a shared vision to advance economic and social prosperity and environmental sustainability over a fifteen-year-period. Overall, ten years after their adoption by the international community the SDGs are not on track to be achieved by 2030, but we find overwhelming evidence of the discursive *steering effect* of the SDGs at the international and country-level. Yet, the effective penetration of the SDGs in national public management practices and procedures, including notably the budget and audit functions, remains more limited and varies across countries. Using a structured framework to gauge SDG commitment combined with the SDG Index, our quantitative analysis and qualitative case studies suggest that governments that perform best on the SDGs also tend to care more about the SDGs and 2030 Agenda. At the same time, to convert SDG commitment into SDG outcomes at the country-level, especially in EMDEs, we underline the potential role of four important elements which include strong public finance and access to capital, limited impact of international sanction regimes, peaceful societies and multilateral cooperation. Evidence from the EU and the US since 2024 suggests that rising geopolitical tensions and shifting priorities may have reduced the SDG *steering effect* on discourse and strategies in these countries and regions, including commitments to achieving the environmental goals. Overall, we hope that our paper provides useful methods and evidence to strengthen the *steering effect* of goal-based development by 2030 and beyond.

4.7 Annex

Table 4.8 Detailed monitoring framework to gauge SDG Commitment at the central/federal level

Pillar	Indicator	Question	Response options	Timeframe	Source	Hyperlink
1. SDG Commitment and planning (political leadership)	Voluntary National Reviews	How many VNRs were submitted to the UN HLPF?	0 (min) to 4 (max)	2016-2025	UNDESA	https://hlpf.un.org/vnrs
	High-Level Public Statements	Did the central/federal leader (e.g. President or Prime Minister) endorsed the SDGs in a public statement?	Yes / No	2022-23	SDSN 2023 Survey of government policy efforts for the SDGs	https://sdgtransformationcenter.org/reports/sustainable-development-report-2023
	Central/federal SDG strategy	Is there a central/federal SDG strategy or have the SDGs been integrated into sectoral action plans?	Yes / No	2022-23	SDSN 2023 Survey of government policy efforts for the SDGs	https://sdgtransformationcenter.org/reports/sustainable-development-report-2023
	Central/federal target for decarbonization	Did the central/federal government adopt a bold commitment on climate mitigation?	Yes / No	2025	Net Zero Tracker	https://zerotracker.net/
	Nationally Determined Contribution (NDC)	Has the central/federal government presented a recent Nationally Determined Contribution (NDC)?	Yes, recently updated (2023-2025) / Yes / No	2016-2025	UNFCCC	https://unfccc.int/NDCREG
2. SDG Integration in key central/federal Government functions (bureaucratic leadership)	Budget	Are the SDGs mentioned in the central/federal budget?	Yes / No	2023	SDSN 2023 Survey of government policy efforts for the SDGs	https://sdgtransformationcenter.org/reports/sustainable-development-report-2023
	Monitoring	Did the central/federal government adopt a national SDG indicator framework?	Yes / No	2023	SDSN 2023 Survey of government policy efforts for the SDGs	https://sdgtransformationcenter.org/reports/sustainable-development-report-2023
	Coordination	Is there a lead unit at the central/federal level of government for coordinating SDG implementation?	Yes / No	2023	SDSN 2023 Survey of government policy efforts for the SDGs	https://sdgtransformationcenter.org/reports/sustainable-development-report-2023
	Supreme Audit Institutions (SAI)	Has the central/federal Supreme Audit Institution conducted an SDG performance and / or preparedness audit?	Yes / No	2015-2023	INTOSAI	https://www.intosai.org/system/sdg-atlas
	Public Procurement	Has the central/federal government implemented sustainable public procurement policies and action plans? (SDG.12.7.1)	0 (min) to 1 (max)	2020 and 2022	UNEP	https://unstats.un.org/sdgs/dataportal
	Regulatory Management	When developing primary laws and subordinate regulations, are regulators required to include assessments of the impact on sustainable development?	For all / For major / For some / Never (Primary Laws and Subordinate Regulations)	2021	OECD	https://www.oecd.org/en/topics/official-development-assistance-oda.html

Pillar	Indicator	Question	Response options	Timeframe	Source	Hyperlink
	Policy Coherence for Sustainable Development (PCSD)	Are there mechanisms in place to enhance policy coherence for sustainable development (%) (SDF17.14.1)	Percent (from 0 poor to 100 strong mechanisms)	2020	UNEP	https://unstats.un.org/sdgs/dataportal
3. Broader engagement with UN-based multilateralism (international engagement, upper subsidiarity):	Treaty ratification	Has the country ratified major UN treaties? (using list of 59 treaties ratified by 50%+ of the international community excluding regional treaties and secondary agreements)	Percentage	2024	UN Treaty Database	https://treaties.un.org/
	UNGA votes (aligned with the majority)	Is the country's vote at UNGA aligned most of the time with the vote of the international majority at the UN General Assembly?	Percentage	2020-2024	UN Digital library, voting data	https://www.un.org/en/library/page/voting-information
	Membership in UN organizations and entities	What is a status of the country's membership for 24 UN organizations and entities?	Score	2024	UN dedicated web portal & desk research	Various UN websites
	Conflict and Militarization	Is the country contributing to conflicts and militarizing the world?	Score	2024	Institute for Economics & Peace	https://www.economicsandpeace.org/global-peace-index/
	Unilateral Coercive Measures	Is the country imposing UCMs against other countries without a UN mandate?	Number	2022	Global Sanctions Database, HTWG, Drexel University & WIFO	https://www.globalsanctionsdatabase.com/
	Delays in the Payment of dues to the UN	Is the country paying its dues to the UN on time?	Score	2020-2024	UN Committee on Contributions	https://www.un.org/en/ga/contributions/
	Official Development Assistance (only for OECD/DAC countries & HICs)	What is the share of Official Development Assistance as a % of GNI?	Percentage	2019-2023	Official Development Assistance Committee (OECD/DAC)	https://www.oecd.org/en/topics/oda-trends-and-statistics.html
4. Stakeholder engagement and participation (engagement of civil society, lower subsidiarity):	Voluntary Local reviews	How many VLRs have subnational entities submitted?	Number	2025 (April)	UN DESA	https://sdgs.un.org/topics/voluntary-local-reviews
	SDSN Membership	Is the country a member of the UN Sustainable Development Solutions Network (regional or national network) the largest global network of scientists devoted to the SDGs?	Yes / No	2025	SDSN	https://www.unsdsn.org/our-networks/#networks-and-members-map
	Participation in global pathways project (DDP and/or FABLE)	Does the country take part in international consortiums that aim to develop global and national pathways either for deep decarbonization or sustainable agri-food systems?	Yes / No	2025	IDDRI and FOLU	https://www.iddri.org/en/reseau/deep-decarbonization-pathways
	Freedom of assembly	Is freedom of assembly and association effectively guaranteed?	Score from 0 (low) to 100 high)	2024	World Justice project	https://worldjusticeproject.org/rule-of-law-index/
	Open Government Partnership Membership	Is the country a member of the Open Government Partnership?	Yes / No	2025	OGP	https://www.opengovpartnership.org/our-members/
	Public support for stronger climate action	Should your country strengthen or weaken its commitments to address climate change?	Percentage "strengthen"	2024	UNDP	https://www.undp.org/publications/peoples-climate-vote-2024
	Public support for global cooperation	Should countries work together on climate change even if they disagree on other issues, such as trade or security?	Percentage "Yes - they should work together despite their disagreements"	2024	UNDP	https://www.undp.org/publications/peoples-climate-vote-2024

Pillar	Indicator	Question	Response options	Timeframe	Source	Hyperlink
5. Contextual information (used for case studies)	Population	How populated is the country?	Number of inhabitants	2023 (annual)	United Nations	https://data.worldbank.org/indicator/SP.POP.TOTL
	Country size	What is the geographic area of the country?	Square kilometers	2024	CIA World Factbook	https://www.cia.gov/the-world-factbook/
	Income level	What is the income level of the country?	Current US$	2024 (annual)	World Bank	https://data.worldbank.org/indicator/NY.GDP.MKTP.CD
	Main religion / philosophy	What is the main religious or philosophical tradition?	Various (qualitative)	2024	PEW research Center	https://www.pewresearch.org/religion/feature/religious-composition-by-country-2010-2050/
	Debt level	What is the debt to GDP ratio?	Percentage	2024 (annual)	IMF, 2024	https://www.imf.org/external/datamapper/CG_DEBT_GDP@GDD/CHN/FRA/DEU/ITA/JPN/GBR/USA
	Debt burden	What is the ratio of public interest payments to investment expenditure?	Ratio (negative and positive values)	Estimates based on three-year averages for the periods of 2010-2012, 2014-2016 and 2019-2021.	UNCTAD, 2024; building on IMF Investment and Capital Stock Dataset and IMF World Economic Outlook (April 2024).	https://unctad.org/publication/world-of-debt
	Multidimensional Structural Vulnerability Index	How structurally vulnerable is a country? (development, economic and environmental vulnerabilities)	Score (reversed scale) from 0 (high vulnerabilities) to 100 (limited vulnerabilities)	2023	Massa et al. 2023	https://sdgtransformationcenter.org/reports/sustainable-development-report-for-small-island-developing-states-2023
	Government type	What is the type of government?	Various (e.g. Monarchy, Republic, Representative Democracy, other)	2024	CIA World Factbook	https://www.cia.gov/the-world-factbook/
	Legislature	What is the type of legislature?	Various (Unicameral, bicameral, other)	2024	CIA World Factbook	https://www.cia.gov/the-world-factbook/
	Democracy Index	How democratic or autocratic is a country? (electoral process, functioning of government, political participation, political culture, civil liberties)	Score from 0 (autocratic) to 10 (democratic)	2024	Economist Intelligence Unit, 2024	https://www.eiu.com/n/democracy-index-2024/
	Relationship with neighboring country	How peaceful or aggressive is the country's relationship with its neighbors?	From 1 (peaceful) to 5 (very aggressive)	2024	Institute for Economy and Peace (IEP)	https://www.economicsandpeace.org/global-peace-index/
6. SDG performance (static and dynamic)	SDG performance and current challenges	What are the specific SDG challenges faced by the country?	Score from 0 (poor performance) to 100 (best performance) and SDG dashboards	2024	Sachs, Lafortune and Fuller (2024)	https://dashboards.sdgindex.org/
	SDG progress	Has the country progressed toward the SDGs?	In percentage points (p.p)	2015-2024	Author's elaboration, based on Sachs, Lafortune and Fuller (2024)	https://dashboards.sdgindex.org/

Source: Author’s elaboration.

4.7.1 Full database

Table 4.9 Total scores and detailed pillar 1 (political leadership)

Country	Total_Commitment	Total_Political	Total_Bureaucracy	Total_Multilateral	SDG_AchievementStatus	VNR_Numb er	VNR_Score	Speech	Speech_Score	Strategy	Strategy_Score	NetZero_Score	NDC	NDC_Score
Albania	67	82	50	68	1	1	33	yes	100	yes	100	100	Yes	75
Algeria	68	82	50	72	0	1	33	yes	100	yes	100	100	Yes	75
Argentina	75	75	75	76	0	3	100	no	0	yes	100	100	Yes	75
Australia	33	42	0	56	0	1	33	no	0	no	0	100	Yes	75
Austria	87	88	100	73	1	2	67	yes	100	yes	100	100	Yes	75
Banglades h	64	95	25	73	1	3	100	yes	100	yes	100	100	Yes	75
Barbados	68	88	25	91		2	67	yes	100	yes	100	100	Yes	75
Belgium	77	93	75	64	1	2	67	yes	100	yes	100	100	Yes, recen t	100
Benin	78	95	75	64	1	3	100	yes	100	yes	100	100	Yes	75
Bolivia	55	42	50	74	0	1	33	no	0	yes	100	0	Yes	75
Bosnia and Herzegovi na	54	48	50	63	0	2	67	no	0	no	0	100	Yes	75
Brazil	57	93	0	79	0	2	67	no	100	yes	100	100	Yes, recen t	100
Bulgaria	58	88	25	62	0	2	67	yes	100	yes	100	100	Yes	75
Cameroon	50	68	25	57	1	2	67	no	0	yes	100	100	Yes	75
Canada	85	93	100	63	1	2	67	yes	100	yes	100	100	Yes, recen t	100
Chile	77	95	50	85	0	3	100	yes	100	yes	100	100	Yes	75
China	56	88	25	56	1	2	67	yes	100	yes	100	100	Yes	75
Colombia	83	95	75	78	0	4	100	yes	100	yes	100	100	Yes	75
Congo, Dem. Rep.	57	68	50	53	0	2	67	no	0	yes	100	100	Yes	75

Country	Total_Commitment	Total_Political	Total_Bureaucracy	Total_Multilateral	SDG_AchievementStatus	VNR_Number	VNR_Score	Speech	Speech_Score	Strategy	Strategy_Score	NetZero_Score	NDC	NDC_Score
Cyprus	77	93	75	62	0	2	67	yes	100	yes	100	100	Yes, recent	100
Czechia	63	80	50	60	1	3	100	no	0	yes	100	100	Yes, recent	100
Denmark	79	73	100	63	1	2	67	no	0	yes	100	100	Yes, recent	100
Ecuador	59	100	0	77	0	3	100	yes	100	yes	100	100	Yes, recent	100
Egypt, Arab Rep.	71	100	50	64	0	3	100	yes	100	yes	100	100	Yes, recent	100
Ethiopia	61	75	50	58	1	3	100	no	0	yes	100	100	Yes	75
European Union	71	100	50	62		1	100	yes (UvdL Mission Letters)	100	yes (EGD)	100	100	Yes, recent	100
Finland	87	100	100	61	1	3	100	yes	100	yes	100	100	Yes, recent	100
France	57	73	50	48	1	2	67	no	0	yes	100	100	Yes, recent	100
Georgia	69	95	50	63	1	3	100	yes	100	yes	100	100	Yes	75
Germany	81	100	75	69	1	3	100	yes	100	yes	100	100	Yes, recent	100
Ghana	89	95	100	72	1	3	100	yes	100	yes	100	100	Yes	75
Greece	75	93	75	56	0	2	67	yes	100	yes	100	100	Yes, recent	100
Hungary	55	47	50	67	1	1	33	no	0	no	0	100	Yes, recent	100
India	64	55	75	62	1	3	100	no	0	no	0	100	Yes	75
Indonesia	88	95	100	69	1	4	100	yes	100	yes	100	100	Yes	75
Ireland	64	93	25	73	0	2	67	yes	100	yes	100	100	Yes, recent	100
Israel	25	48	0	26	0	2	67	no	0	no	0	100	Yes	75

Country	**Total_Commitment**	**Total_Political**	**Total_Bureaucracy**	**Total_Multilateral**	SDG_AchievementStatus	VNR_Number	VNR_Score	Speech	Speech_Score	Strategy	Strategy_Score	NetZero_Score	NDC	NDC_Score
Italy	86	93	100	63	1	2	67	yes	100	yes	100	100	Yes, recent	100
Jamaica	83	88	75	87	0	2	67	yes	100	yes	100	100	Yes	75
Japan	81	100	75	68	1	3	100	yes	100	yes	100	100	Yes, recent	100
Kazakhstan	67	80	50	72	0	3	100	yes	100	no	0	100	Yes, recent	100
Kenya	70	95	50	65	0	3	100	yes	100	yes	100	100	Yes	75
Korea, Rep.	63	82	50	58	0	1	33	yes	100	yes	100	100	Yes	75
Malaysia	84	95	75	81	0	3	100	yes	100	yes	100	100	Yes	75
Mexico	84	75	100	77	1	4	100	no	0	yes	100	100	Yes	75
Morocco	61	88	25	70	1	2	67	yes	100	yes	100	100	Yes	75
Netherlands	87	93	100	68	1	2	67	yes	100	yes	100	100	Yes, recent	100
New Zealand	54	67	25	72		1	33	yes	100	no	0	100	Yes, recent	100
Nigeria	81	95	75	74	0	3	100	yes	100	yes	100	100	Yes	75
Norway	75	88	75	62	1	2	67	yes	100	yes	100	100	Yes	75
Pakistan	64	88	50	54	0	2	67	yes	100	yes	100	100	Yes	75
Peru	53	55	25	80	1	3	100	no	0	no	0	100	Yes	75
Philippines	78	75	75	84	1	4	100	no	0	yes	100	100	Yes	75
Poland	69	73	75	59	1	2	67	no	0	yes	100	100	Yes, recent	100
Portugal	86	93	100	65	1	2	67	yes	100	yes	100	100	Yes, recent	100
Romania	66	93	50	55	0	2	67	yes	100	yes	100	100	Yes, recent	100
Russian Federation	53	42	75	43	0	1	33	no	0	no	0	100	Yes	75
Rwanda	50	68	25	57	1	2	67	yes	100	no	0	100	Yes	75

Country	**Total_Commitment**	**Total_Political**	**Total_Bureaucracy**	**Total_Multilateral**	SDG_AchievementStatus	VNR_Number	VNR_Score	Speech	Speech_Score	Strategy	Strategy_Score	NetZero_Score	NDC	NDC_Score
Samoa	71	95	50	67		3	100	yes	100	yes	100	100	Yes	75
Saudi Arabia	49	68	25	54	1	2	67	no	0	yes	100	100	Yes	75
Senegal	74	68	75	80	1	2	67	no	0	yes	100	100	Yes	75
Serbia	55	82	25	57	0	1	33	yes	100	yes	100	100	Yes	75
Seychelles	63	88	25	76		2	67	yes	100	yes	100	100	Yes	75
Slovenia	62	73	50	64	1	2	67	no	0	yes	100	100	Yes, recent	100
South Africa	64	68	50	73	0	2	67	no	0	yes	100	100	Yes	75
Spain	80	100	75	66	1	3	100	yes	100	yes	100	100	Yes, recent	100
Sweden	76	93	75	59	1	2	67	yes	100	yes	100	100	Yes, recent	100
Switzerland	75	100	50	76	0	3	100	yes	100	yes	100	100	Yes, recent	100
Thailand	82	95	75	75	1	3	100	yes	100	yes	100	100	Yes	75
Türkiye	66	73	75	51	0	2	67	no	0	yes	100	100	Yes, recent	100
Uganda	79	95	75	68	0	3	100	yes	100	yes	100	100	Yes	75
Ukraine	47	42	50	50		1	33	no	0	no	0	100	Yes	75
United Kingdom	41	67	0	56	1	1	33	no	0	yes	100	100	Yes, recent	100
United States	8	20	0	5	0	0	0	no	0	no	0	0	Yes, recent	100
Uzbekistan	73	88	75	57	1	2	67	yes (constitution)	100	yes	100	100	Yes	75
Vietnam	57	48	50	72	1	2	67	no	0	no	0	100	Yes	75

Table 4.10 Pillar 2 (Bureaucratic integration)

Country	Budget	Budget_Score	Monitoring	Monitoring_Score	Coordinate	Coordinate_Score	Audit	Audit_Score	Proc_Score	Ria_Primary	Ria_Subordinate	PCSD
Albania	no	0	yes	100	yes	100	No	0				
Algeria	no	0	no	0	yes	100	Yes	100				
Argentina	yes	100	no	0	yes	100	Yes	100	1			
Australia	no	0	no	0	no	0	No	0		For some	For some	
Austria	yes	100	yes	100	yes	100	Yes	100	1	Never	Never	
Bangladesh	no	0	no	0	yes	100	No	0				
Barbados	no	0	no	0	yes	100	No	0				
Belgium	no	0	yes	100	yes	100	Yes	100	1	For all	For some	
Benin	yes	100	yes	100	yes	100	No	0				
Bolivia	no	0	yes	100	yes	100	No	0				76
Bosnia and Herzegovina	no	0	no	0	yes	100	Yes	100				
Brazil	no	0	no	0	no	0	No	0				
Bulgaria	no	0	yes	100	no	0	No	0	1	Never	Never	
Cameroon	no	0	no	0	yes	100	No	0				
Canada	yes	100	yes	100	yes	100	Yes	100	1	For all	For all	
Chile	no	0	yes	100	yes	100	No	0	1	For some	For some	
China	no	0	no	0	yes	100	No	0	1			
Colombia	yes	100	yes	100	no	0	Yes	100	1	Never	Never	88
Congo, Dem. Rep.	no	0	yes	100	yes	100	No	0				
Cyprus	yes	100	yes	100	yes	100	No	0	1			
Czechia	no	0	yes	100	yes	100	No	0	1	For some	For some	70

Country	Budget	Budget_Score	Monitoring	Monitoring_Score	Coordinate	Coordinate_Score	Audit	Audit_Score	Proc_Score	Ria_Primary	Ria_Subordinate	PCSD
Denmark	yes	100	yes	100	yes	100	Yes	100	1	For all	Never	
Ecuador	no	0	no	0	no	0	No	0				55
Egypt, Arab Rep.	no	0	yes	100	yes	100	No	0				
Ethiopia	yes	100	yes	100	no	0	No	0				
European Union	yes	100	yes	100	no	0	No	0		For major	For major	
Finland	yes	100	yes	100	yes	100	Yes	100	1	For major	For all	81
France	no	0	yes	100	yes	100	No	0	1	For all	For some	79
Georgia	no	0	yes	100	yes	100	No	0				
Germany	no	0	yes	100	yes	100	Yes	100	1	For all	For all	
Ghana	yes	100	yes	100	yes	100	Yes	100				
Greece	yes	100	yes	100	yes	100	No	0	1	For all	Never	
Hungary	no	0	yes	100	yes	100	No	0		For all	For all	43
India	no	0	yes	100	yes	100	Yes	100				
Indonesia	yes	100	yes	100	yes	100	Yes	100				
Ireland	no	0	no	0	yes	100	No	0	1	For all	For all	
Israel	no	0	no	0	no	0	No	0	1	For some	For some	
Italy	yes	100	yes	100	yes	100	Yes	100	1	For some	For some	60
Jamaica	no	0	yes	100	yes	100	Yes	100				
Japan	yes	100	yes	100	yes	100	No	0	1	For some	For some	
Kazakhstan	no	0	yes	100	yes	100	No	0				74
Kenya	no	0	yes	100	yes	100	No	0	1			
Korea, Rep.	no	0	yes	100	yes	100	No	0	1	For major	For major	
Malaysia	yes	100	no	0	yes	100	Yes	100	1			

Country	Budget	Budget_Score	Monitoring	Monitoring_Score	Coordinate	Coordinate_Score	Audit	Audit_Score	Proc_Score	Ria_Primary	Ria_Subordinate	PCSD
Mexico	yes	100	yes	100	yes	100	Yes	100		For some	For some	
Morocco	no	0	no	0	yes	100	No	0	1			
Netherlands	yes	100	yes	100	yes	100	Yes	100	1	For all	For all	
New Zealand	no	0	yes	100	no	0	No	0	1	For some	For some	
Nigeria	yes	100	yes	100	yes	100	No	0				
Norway	yes	100	no	0	yes	100	Yes	100	1	For some	For some	
Pakistan	yes	100	no	0	yes	100	No	0				93
Peru	no	0	no	0	no	0	Yes	100	1			69
Philippines	no	0	yes	100	yes	100	Yes	100	1			
Poland	no	0	yes	100	yes	100	Yes	100	1	For some	For some	90
Portugal	yes	100	yes	100	yes	100	Yes	100	1	Never	Never	
Romania	no	0	yes	100	yes	100	No	0		Never	Never	
Russian Federation	no	0	yes	100	yes	100	Yes	100				
Rwanda	no	0	no	0	yes	100	No	0				
Samoa	no	0	yes	100	yes	100	No	0				
Saudi Arabia	no	0	no	0	yes	100	No	0				
Senegal	yes	100	yes	100	yes	100	No	0				
Serbia	yes	100	no	0	no	0	No	0	1			76
Seychelles	no	0	no	0	no	0	Yes	100				
Slovenia	no	0	yes	100	yes	100	No	0	1	For all	For some	
South Africa	no	0	yes	100	yes	100	No	0				
Spain	yes	100	no	0	yes	100	Yes	100	1	For some	For some	
Sweden	yes	100	yes	100	yes	100	No	0	1	For all	For all	
Switzerland	no	0	yes	100	yes	100	No	0	1	For all	For all	

Country	Budget	Budget_Score	Monitoring	Monitoring_Score	Coordinate	Coordinate_Score	Audit	Audit_Score	Proc_Score	Ria_Primary	Ria_Subordinate	PCSD
Thailand	yes	100	yes	100	yes	100	No	0				
Türkiye	no	0	yes	100	yes	100	Yes	100			Never	75
Uganda	no	0	yes	100	yes	100	Yes	100	1			
Ukraine	no	0	yes	100	yes	100	No	0				
United Kingdom	no	0	no	0	no	0	No	0	1	For all	For all	69
United States	no	0	no	0	no	0	No	0	1	Not applicable	Never	
Uzbekistan	yes	100	yes	100	yes	100	No	0				
Vietnam	no	0	yes	100	yes	100	No	0				73

Table 4.11 Pillar 3 (Support for UN-based multilateralism)

Country	Treaties	UNGA	Membership	Conflicts	UCMs	PayDues	ODA
Albania	93	60	24	2	21	66	
Algeria	93	84	23	2	5	86	
Argentina	90	81	23	1	1	33	
Australia	97	55	21	2	11	60	0
Austria	98	67	24	1	46	40	0
Bangladesh	85	90	24	2	1	66	
Barbados	88	93	24		0	73	
Belgium	97	62	22	1	46	80	0
Benin	90	55	24	2	7	73	
Bolivia	87	84	24	2	0	59	
Bosnia and Herzegovina	93	64	23	2	13	53	
Brazil	92	80	24	1	0	53	
Bulgaria	95	61	23	2	46	80	0
Cameroon	88	65	24	2	2	40	
Canada	92	51	22	1	20	100	0
Chile	93	93	24	1	0	59	
China	77	73	24	2	4	66	
Colombia	87	92	24	2	0	59	
Congo, Dem. Rep.	87	49	24	2	1	53	
Cyprus	93	70	24	2	47	73	0
Czechia	95	57	23	2	47	53	0

Country	Treaties	UNGA	Membership	Conflicts	UCMs	PayDues	ODA
Denmark	97	60	22	2	47	100	1
Ecuador	93	90	24	2	0	33	
Egypt, Arab Rep.	78	82	24	2	4	66	
Ethiopia	77	83	23	2	1	59	
European Union	95	61	23	2	47	73	1
Finland	97	62	23	2	48	100	0
France	95	55	23	2	47	53	1
Georgia	88	54	24	2	10	73	
Germany	97	59	24	2	48	66	1
Ghana	90	86	24	2	6	40	
Greece	93	63	23	2	46	66	0
Hungary	98	55	24	1	46	73	0
India	80	71	24	2	0	87	
Indonesia	72	87	24	2	1	66	
Ireland	97	69	23	1	46	87	0
Israel	73	26	23	4	0	46	0
Italy	98	60	24	2	47	53	0
Jamaica	92	93	24	1	0	66	
Japan	92	66	24	2	4	66	0
Kazakhstan	83	84	24	2	3	86	0
Kenya	80	86	24	2	1	59	
Korea, Rep.	90	59	24	2	2	100	0
Malaysia	72	91	24	1	1	87	

Country	Treaties	UNGA	Membership	Conflicts	UCMs	PayDues	ODA
Mexico	93	89	24	2	0	40	
Morocco	85	88	24	2	4	53	
Netherlands	97	61	24	2	46	87	1
New Zealand	92	70	22	1	3	66	0
Nigeria	98	82	24	2	7	46	
Norway	95	64	23	2	20	87	1
Pakistan	82	72	24	3	1	33	
Peru	90	96	24	2	1	53	
Philippines	97	91	24	2	0	66	
Poland	92	58	24	2	46	73	0
Portugal	95	62	23	1	46	66	0
Romania	95	57	24	2	46	66	0
Russian Federation	87	58	23	4	10	73	
Rwanda	87	69	23	2	1	66	
Samoa	63	63	24		0	66	
Saudi Arabia	73	82	24	3	5	59	1
Senegal	93	89	24	2	7	73	
Serbia	97	59	22	2	16	66	
Seychelles	85	56	24		1	66	
Slovenia	93	62	23	1	46	59	0
South Africa	87	86	24	2	1	66	
Spain	98	63	24	2	47	53	0
Sweden	98	63	23	2	46	80	1
Switzerland	93	65	24	1	16	100	1

Country	Treaties	UNGA	Membership	Conflicts	UCMs	PayDues	ODA
Thailand	80	93	24	1	0	59	0
Türkiye	85	66	24	3	15	66	1
Uganda	92	81	24	2	2	53	
Ukraine	90	54	24	3	9	100	
United Kingdom	97	55	22	2	42	73	1
United States	58	30	21	3	171	33	0
Uzbekistan	70	80	22	2	3	66	
Vietnam	82	86	24	2	0	73	

Table 4.12 Civil society engagement

Country	Total_ Civil	VLRs	VLR_Score	SDSN	SDSN_Score	DDP	DDP_Score	Fable	Fable_Score	DDP_FABLE_Score	WJP_Freedom	WJP_Freedom_Score	OGP	OGP_Score	UNDP_Strongerpolicy	UNDP_Cooperation
Albania	54	1	25	Regional	100	No	0	No	0	0	1	51	Yes	100		
Algeria	33	0	0	Regional	100	No	0	No	0	0	0	41	No	0	75	85
Argentina	88	32	100	Regional	100	Yes	100	Yes	100	100	1	77	Yes	100	83	86
Australia	81	4	25	Regional	100	Yes	100	Yes	100	100	1	80	Yes	100	74	87
Austria	55	0	0	No	0	Yes	100	No	0	100	1	84	No	0		
Bangladesh	28	0	0	National	100	No	0	No	0	0	0	30	No	0	86	94
Barbados	53	0	0	Regional	100	No	0	No	0	0	1	81	No	0	89	95
Belgium	73	6	50	National	100	Yes	100	No	0	100	1	84	No	0		
Benin	68	0	0	National	100	No	0	Yes	100	100	1	60	Yes	100	97	92
Bolivia	44	4	25	National	100	No	0	No	0	0	1	56	No	0		
Bosnia and Herzegovina	53	0	0	Regional	100	No	0	No	0	0	1	55	Yes	100		
Brazil	77	16	75	National	100	Yes	100	Yes	100	100	1	60	Yes	100	85	90
Bulgaria	72	0	0	National	100	Yes	100	No	0	100	1	68	Yes	100		
Cameroon	35	0	0	National	100	No	0	No	0	0	0	45	No	0		
Canada	84	1	25	National	100	Yes	100	Yes	100	100	1	88	Yes	100	66	85
Chile	74	0	0	National	100	Yes	100	No	0	100	1	74	Yes	100		
China	37	6	50	Hub	100	Yes	100	Yes	100	100	0	11	No	0	73	85
Colombia	70	1	25	Regional	100	Yes	100	Yes	100	100	1	58	Yes	100	86	90
Congo, Dem. Rep.	37	0	0	Regional	100	No	0	No	0	0	0	49	No	0	81	86
Cyprus	62	0	0	National	100	Yes	100	No	0	100	1	74	No	0		
Czechia	77	0	0	National	100	Yes	100	No	0	100	1	79	Yes	100	64	93

Country	Total_ Civil	VLRs	VLR_Score	SDSN	SDSN_Score	DDP	DDP_Score	Fable	Fable_Score	DDP_FABLE_Score	WJP_Freedom	WJP_Freedom_Score	OGP	OGP_Score	UNDP_Strongerpolicy	UNDP_Cooperation
Denmark	75	4	25	Regional	100	Yes	100	Yes	100	100	1	93	No	0		
Ecuador	57	0	0	Regional	100	No	0	No	0	0	1	64	Yes	100	85	94
Egypt, Arab Rep.	26	3	25	Regional	100	No	0	No	0	0	0	21	No	0	97	85
Ethiopia	39	0	0	National	100	No	0	Yes	100	100	0	28	No	0	80	97
European Union	89	53	100	Regional	100	Yes	100	Not applicable	Not applicable	100	1	78	Not applicable	N/A		
Finland	92	13	75	Regional	100	Yes	100	Yes	100	100	1	90	Yes	100		
France	77	0	0	National	100	Yes	100	No	0	100	1	80	Yes	100	67	93
Georgia	58	0	0	Regional	100	No	0	No	0	0	1	66	Yes	100		
Germany	90	16	75	National	100	Yes	100	Yes	100	100	1	87	Yes	100	80	92
Ghana	61	0	0	National	100	No	0	No	0	0	1	72	Yes	100	89	77
Greece	77	2	25	National	100	Yes	100	Yes	100	100	1	73	Yes	100	77	94
Hungary	36	0	0	No	0	Yes	100	No	0	100	0	47	No	0		
India	52	0	0	Regional	100	Yes	100	Yes	100	100	1	53	No	0	86	79
Indonesia	74	5	50	National	100	Yes	100	Yes	100	100	1	61	Yes	100	93	77
Ireland	80	0	0	National	100	Yes	100	Yes	100	100	1	85	Yes	100		
Israel		0	0	Regional	100	No	0	No	0	0			Yes	100		
Italy	78	1	25	National	100	Yes	100	No	0	100	1	74	Yes	100	74	93
Jamaica	60	0	0	Regional	100	No	0	No	0	0	1	70	Yes	100		
Japan	68	8	50	National	100	Yes	100	No	0	100	1	73	No	0	88	87
Kazakhstan	48	1	25	National	100	Yes	100	No	0	100	0	40	No	0		
Kenya	56	0	0	National	100	No	0	No	0	0	1	62	Yes	100	88	96
Korea, Rep.	80	5	50	National	100	Yes	100	No	0	100	1	72	Yes	100	88	91
Malaysia	42	8	50	National	100	No	0	No	0	0	0	46	No	0		

Country	Total_ Civil	VLRs	VLR_Score	SDSN	SDSN_Score	DDP	DDP_Score	Fable	Fable_Score	DDP_FABLE_Score	WJP_Freedom	WJP_Freedom_Score	OGP	OGP_Score	UNDP_Strongerpolicy	UNDP_Cooperation
Mexico	79	32	100	National	100	Yes	100	Yes	100	100	1	58	Yes	100		
Morocco	52	1	25	Regional	100	No	0	No	0	0	0	47	Yes	100	80	89
Netherlands	81	2	25	National	100	Yes	100	No	0	100	1	81	Yes	100		
New Zealand	67	0	0	Regional	100	No	0	No	0	0	1	83	Yes	100		
Nigeria	66	0	0	National	100	Yes	100	No	0	100	1	57	Yes	100	85	83
Norway	91	6	50	Regional	100	No	0	Yes	100	100	1	95	Yes	100		
Pakistan	39	0	0	National	100	No	0	No	0	0	1	53	No	0	97	92
Peru	75	1	25	Regional	100	Yes	100	No	0	100	1	68	Yes	100	86	91
Philippines	54	1	25	National	100	No	0	No	0	0	1	52	Yes	100	74	93
Poland	48	0	0	No	0	Yes	100	No	0	100	1	70	No	0		
Portugal	83	6	50	National	100	Yes	100	No	0	100	1	79	Yes	100		
Romania	73	0	0	National	100	Yes	100	No	0	100	1	71	Yes	100	72	77
Russian Federation	41	0	0	National	100	Yes	100	Yes	100	100	0	33	No	0	66	87
Rwanda	53	0	0	Regional	100	No	0	Yes	100	100	1	56	No	0		
Samoa		0	0	Regional	100	No	0	No	0	0			No	0	74	90
Saudi Arabia		0	0	No	0	No	0	No	0	0			No	0	79	88
Senegal	72	0	0	Regional	100	Yes	100	No	0	100	1	68	Yes	100		
Serbia	52	0	0	Regional	100	No	0	No	0	0	1	54	Yes	100		
Seychelles		0	0	Regional	100	No	0	No	0	0			Yes	100		
Slovenia	62	0	0	Regional	100	Yes	100	No	0	100	1	75	No	0		
South Africa	80	9	50	National	100	Yes	100	Yes	100	100	1	73	Yes	100	77	82
Spain	86	12	75	National	100	Yes	100	No	0	100	1	77	Yes	100	86	95
Sweden	88	5	50	Regional	100	Yes	100	Yes	100	100	1	88	Yes	100		
Switzerland	55	1	25	National	100	No	0	No	0	0	1	78	No	0		

Country	Total_ Civil	VLRs	VLR_Score	SDSN	SDSN_Score	DDP	DDP_Score	Fable	Fable_Score	DDP_FABLE_Score	WJP_Freedom	WJP_Freedom_Score	OGP	OGP_Score	UNDP_Strongerpolicy	UNDP_Cooperation
Thailand	36	0	0	National	100	No	0	No	0	0	0	46	No	0		
Türkiye	43	4	25	National	100	Yes	100	Yes	100	100	0	30	No	0		
Uganda	34	0	0	National	100	No	0	No	0	0	0	44	No	0	90	93
Ukraine	59	1	25	Regional	100	No	0	No	0	0	1	62	Yes	100		
United Kingdom	84	3	25	National	100	Yes	100	Yes	100	100	1	87	Yes	100	84	90
United States	87	10	75	National	100	Yes	100	Yes	100	100	1	79	Yes	100	66	80
Uzbekistan	40	0	0	In development	100	Yes	100	Yes	100	100	0	30	No	0		
Vietnam	32	0	0	Regional	100	No	0	No	0	0	0	40	No	0		

4.7.2 Multivariate Analysis

Table 4.13 Pairwise correlations

Variables	-1	-2	-3	-4	-5
(1) SDG Commitment (total score)	1				
(2) SDG Political leadership	0.753*	1			
(3) SDG Bureaucratic leadership	0.833*	0.348*	1		
(4) UN Engagement (upper subsidiarity)	0.611*	0.454*	0.229*	1	
(5) SDG Stakeholder engagement (lower subsidiarity)	0.143	0.141	0.159	-0.067	1

Note: *Statistically significant p<0.005

4.7.2.1 Factor analysis (Principal Component Analysis) – Pillar level

Factor analysis/correlation Number of obs = 72
Method: principal-component factors Retained factors = 2
Rotation: orthogonal varimax (Kaiser off) Number of params = 6

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.567	0.415	0.392	0.392
Factor2	1.152	.	0.288	0.680

LR test: independent vs. saturated: chi2(6) = 24.48 Prob>chi2 = 0.0004

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
	"SDG Commitment at central/federal level"	"Civil society engagement"	
Political	**0.797**	0.222	0.315
Bureaucratic	**0.516**	0.496	0.488
UN engagement	**0.815**	-0.251	0.274
Stakeholder engagement	-0.047	**0.891**	0.204

4.7.2.2 Factor analysis (Principal Component Analysis) – Sub pillar level (Political leadership and Bureaucratic Integration)

Factor analysis/correlation Number of obs = 76
Method: principal-component factors Retained factors = 4
Rotation: orthogonal varimax (Kaiser off) Number of params = 30

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.894	0.438	0.21	0.21
Factor2	1.456	0.212	0.162	0.372
Factor3	1.244	0.054	0.138	0.51
Factor4	1.189	.	0.132	0.642

LR test: independent vs. saturated: chi2(36) = 79.61 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Uniqueness
	"Political leadership"	"Soft bureaucratic integration"	"Hard bureaucratic integration"	Undetermined	
VNR	**0.502**	0.292	0.235	0.421	0.43
Speech	**0.81**	-0.067	-0.078	-0.015	0.333
Strategy	**0.718**	0.207	0.061	-0.052	0.436
NetZero	0.398	0.175	0.064	0.561	0.493
NDC	0.193	0.175	-0.016	-0.751	0.367
Budget	0.515	0.016	**0.593**	-0.163	0.356
Monitoring	0.061	**0.807**	0.052	-0.241	0.284
Coordination	0.037	**0.778**	0.071	0.195	0.351
Audit	-0.061	0.073	**0.903**	0.085	0.169

4.7.3 Case studies summary tables

Table 4.14 SDG Commitment in Finland, Benin, Uzbekistan and the European Union

Official Country Name	Finland (Republic of)	Benin (Republic of)	Uzbekistan (Republic of)	European Union (EU27)
Context				
Government type (CIA Factbook)	Parliamentary Republic	Presidential Republic	Presidential Republic; Highly Authoritarian	Representative Democracy (Treaty of the European Union, Consolidated Version, 2012)
Legislature (CIA Factbook)	Unicameral	Unicameral	Bicameral	Bicameral
Income Level (World Bank)	High-income	Lower-middle-income	Lower-middle-income	High-income
World Bank Region	Europe and Central Asia	Sub-Saharan Africa	Europe and Central Asia	Europe and Central Asia
Main religion (PEW research Center)	Christianism (mostly Evangelical Lutheran Church)	Christianism (mostly Catholic)	Muslim (mostly Sunni)	Christianism
Democracy Index (EIU)	Full Democracy	Hybrid Regime	Authoritarian	*N/A*
Population (UN)	5,583.91	14,111.03	35,652.31	448,382,906
Geographic area (CIA Factbook)	338,145 sq km	112,622 sq km	447,400 sq km	4,233,255 sq km
GDP in 2023 (relative rank) and annual dollar value, million USD, Current	295,532.34	19,676.05	101,591.77	18,590,720,06
GDP growth (average, annual, 2015-2023)	1.0	5.3	5.8	1.7
Multidimensional Structural Vulnerability Index - From 0 highly vulnerable to 100 not vulnerable (Massa et al. 2023)	77.6 (21/193)	63.4 (115/193)	71.0 (54/193)	69.929 (66/193)
Relationship with neighboring countries (from 1 very good; to 5 very bad) (IEP, 2024)	3	2	3	2
Debt burden (net interest to investment ratio) (UNCTAD, 2015)	0.05	0.13	-0.03	0.6
Debt level (Debt to GDP Ratio) (IMF, 2015)	68.3	30.9	10	87.6 (Eurostat)
SDG Performance				
SDG Status (top 10%, middle of the pack, bottom 10%) *(Outcome)* (Sachs et al. 2024)	1/166 (Top 10% Global Performer)	139/166 (bottom 25%)	81/166 (middle of the pack)	16/166
SDGi Progress (rapid top 10%, stagnating, declining bottom 10%**)** (Sachs et al. 2024)	1.7	7.5	8.7	2.55 (at the top and progressing)
International Spillover Status (per capita) (large external impacts, moderate negative impacts, low external impacts) (Sachs et al. 2024)	139/166	19/166	62/166	144/166
Major SDG Challenges (Sachs et al. 2024)	SDG 2, 12 and 13	SDG 1, 2, 3, 4, 5, 6, 7, 11, 14 and 16	SDG 2, 3, 6, 7, 11, 15 and 16	SDG 12 and SDG 13[1]

SDG Commitment, Planning and Coordination				
SDG Engagement (Number of VNRs) *(Main Explanation)* (UN DESA, 2024)	2 (2025 list)	3	2	1
Constitution (references to "sustainable", "environment", "nature", "climate") (Various sources, 2024)	Yes (1999 rev 2011)	Yes (1990 rev 2019)	Yes (1992 rev 2023)	Yes (Lisbon Treaty, 2007)
__Number of SDGs covered in Constitution (JRC SDG Mapper and AFD SDG Prospector)	7	13	13	10
Main Strategic Development Plan (reference to SDGs) (various sources 2015-2024)	Yes (Strategy of the National Commission on Sustainable Development 2022–2030: A prosperous and globally responsible Finland that protects the carrying capacity of nature)	Yes (Plan National de Développement (PND) - 2018-2025)	Yes, Strategy "Uzbekistan - 2030"	Yes, European Green Deal
Net Zero Commitment (Net Zero Tracker, Feb 2025)	In the Law (Climate Neutral), by 2035	In Policy Document (Reduction vs BAU), by 2030	In Policy Document (Emissions Intensity Target), by 2030	In the Law (Climate Neutral), by 2050
Nationally Determined Contribution (SDG 13.2.1) (UNFCCC, Feb 2025)	3 (latest 2023)	2 (latest 2021)	2 (latest 2021)	3 (latest in 2023)
Government-initiated SDG consultation initiatives (example) (Various sources, 2015-2024)	Sustainability Expert Panel	Forum National sur les Objectifs de Développement Durable	Public Consultation During 2020 and 2023 VNR Process with Parliament, Private Sector and NGOs	Multistakeholder platform on the SDGs (2017-2019); EESC Consultation during 2023 VR
SDG integration in key central/federal government functions (coordination, budget, monitoring, audit, procurement and regulatory assessment)				
Lead SDG Coordinating Unit (SDSN Survey and Various sources, 2015-2024)	Finnish National Commission on Sustainable Development (Under PM Office)	Direction Générale de la Coordination et du Suivi des Objectifs de Développement Durable (DGCS-ODD), in Ministère du Développement et de la Coordination de l'action gouvernementale (MDC) (Central Ministry)	Coordination Council for the Implementation of the National Sustainable Development Goals and Targets of Uzbekistan until 2030 (under Deputy Prime Minister)	None, But Responsibility Assigned to College of Commissioners (as a whole)
SDG in National Budget (2022 SDSN Survey and Various sources, 2015-2024)	SDGs Mentioned in National Budget	INFF (2019) and SDG Bond (2021)	INFF (2023) and SDG Bond (2021)	SDGs references in RRF Facility; SDG Annex in European Semester Process for Macroeconomic Coordination
National SDG Indicator System (Various sources, 2015-2024)	45 (Statistics Finland, National Follow-Up System, 2020)	168 Indicators (INSAE)	190 Indicators (UZ Stat)	102 Indicators (34 multipurpose) (Eurostat)
Supreme Audit Institution and SDGs (Various sources, 2015-2024)	Performance Audit (2019) and Follow-up (2021) on "Promoting Sustainable	SDGs Covered in Annual Report by the Court of Auditors (Cour des	No stand-alone SDG review by Audit Chamber, but sustainable listed as a	No stand-alone SDG audit by European Court of Auditors (but audits

	Development" by National Audit Office	Comptes), but no stand-alone SDG audit	strategic priority for the period 2024-2026 in 2023 Annual Report	conducted on related themes)
Public Procurement (SDG 12.7.1): implementing sustainable public procurement policies and action plans (UNSD, 2022)	Yes (1)	Partially (MAPS Initiative, 2024), "le cadre légal permet la mise en œuvre des Achats publics durables (APD) mais il manque une stratégie nationale assortie d'un plan d'actions"	not available	not available
Policy Coherence for Sustainable Development (PCSD) SDG 17.14.1	81,25	not available	not available	not available
(OECD Only) When developing primary laws and subordinate regulations, are regulators required to include assessments of the following: Impact on sustainable development (never, for some, for major for all) (OECD, 2021)	For major primary laws and all subordinate regulations	not available	not available	For major primary laws and major subordinate regulations
Stakeholder Engagement and Participation				
SDG Localization (Number of VLRs) (UN DESA, July 2024)	10	0	0	53
Parliament and SDGs (Various sources, 2015-2024)	Finnish Parliament's Committee for the Future discusses and Issues Statement on the annual Government Report on the Implementation of the UN Agenda 2030	Trainings Provided by SDG Coordination Unit to Parliamentarians about 2030 Agenda	A special Parliamentary Commission has been established under the Parliament to monitor the implementation of the SDGs	Informal SDG Alliance at the EP; European Parliament SDG Opinions
Scientific participation (SDSN Network) (SDSN, 2025)	Yes	Yes	Yes (in development)	Yes
Deep Decarbonization Pathways (DDP) project (IDDRI, 2025)	*Yes*	*No*	*No*	*Long-term decarbonization pathways available*
Participation in FABLE Pathways project on sustainable agri-food system scenarios (FABLE, 2025)	*Yes*	*In development*	*In development*	*No*
Freedom of assembly and association is effectively guaranteed (WJP, 2024)	*0.9*	*0.6*	*0.3*	*0.78*
OGP Member (Open Government Partnership, 2025)	*Yes*	*Yes*	*No*	*Not applicable*
Should your country strengthen or weaken its commitments to address climate change? Strengthen (percent) world average 80% (UNDP, 2024)	*not available*	*88*	*not available*	*78.7***
Should countries work together on climate change even if they disagree on other issues, such as trade or security? (UNDP, 2024) – Yes, they should work together despite disagreements (percent) world average 86% (UNDP, 2024)	*not available*	*94*	*not available*	*91***
Broader central/federal government support for UN-based multilateralism				
Major UN treaties ratified (percent) (UN Treaty Database, 2024)	96.6	89.8	67.8	94.9
___Ratification of Core UN Human Rights' Treaties (number, max 9) (UN Treaty Database, 2024)	8.0	9.0	7.0	7.7
UNGA resolutions (percent with majority) (UN, 2018-2022)	63.1	68.9	77.4	61.8

Membership in UN organizations (max 24) (Various sources, 2024)	23.0	24.0	22.0	23.1
UCMs (initiated) (active in 2021) (GSD, 2023)	44.0	7.0	2.0	45.3
UCMS (impacted by) (active in 2021) (GSD, 2023)	4.0	0.0	0.0	4.4
Militarization (Score, 1 less militarized to 4 more militarized) (IEP, 2024)	1.6	1.9	1.7	1.7
Payment of dues to the UN (100 always on time; 50+ with delays; Below 50 significant delay or Article 19)	100	73	66	72.79
ODA/GNI (for OECD/DAC) (OECD, 2018-2022)	0.5	not applicable	not applicable	0.6

Note: **European Union: Arithmetic average of 27 EU member states (unless other source specified). Indicative color coding: Light blue (high commitment); darker blue (moderate commitment); purple (limited commitment)

Source: Author's elaboration, various sources

4.7.4 Detailed case studies (qualitative)

4.7.4.1 Benin (Republic of)

Context: Located in West Africa, the Republic of Benin is a relatively small country of approximately 14 million inhabitants and annual GDP per capita of $1,400 USD (current prices) in 2023. Until 2020, it was classified as a Low-income country (LICs) before transitioning for the first time in its history to Lower-Middle Income country (LMIC). Benin shares borders with Nigeria, Burkina Faso, Niger, and Togo and has direct access to the Atlantic Ocean. Formerly known as Dahomey, an overseas territory of France, it became an independent country in 1960. The most practiced religion in Benin is Christianism (Catholicism). Benin's debt-to-GDP ratio was equivalent in 2015, when the SDGs started, to around 30% of GDP. The sound and prudent budget management of Benin was recognized by the IMF on several occasions (IMF 2015a; 2025a)

SDG Status and Trends: Benin is among the countries that progressed the fastest on the SDGs since their adoption in 2015 (Sachs et al. 2024). In 2024**,** Benin ranks among the lowest 25% on the SDG Index globally but above its regional peers in ECOWAS (Massa et al. 2024). Benin faces major challenges notably in achieving socio-economic goals (SDG 1, 2, 3, 4, 5 and 11), goals related to access to clean energy and water (6 and 7) but also on marine biodiversity (SDG 14) and strong institutions (SDG 16).

SDG Commitment, Planning and Coordination: Since 2015, Benin presented three VNRs (2017, 2018 and 2020). Benin's constitution covers 13 SDGs and makes explicit references to sustainable development and related terms[10]. Benin has an explicit target on climate mitigation to be achieved by 2030 and prepared two NDCs (2017 and 2021). The Benin central government led the organization of large-scale SDG consultations with diverse stakeholders as part of its three VNRs but also organized in 2023 the first "Forum National sur les Objectifs de Développement Durable (FNOOD)" bringing together diverse stakeholders at the national and subnational level.

SDG Integration in Key Central Federal Government Functions: Benin has identified a lead coordinating agency for the SDGs – the Direction Générale de la Coordination et du Suivi des Objectifs de Développement Durable (DGCS-ODD) under a central Ministry the Ministère du Développement et de la Coordination de l'action gouvernementale (MDC) (first Protocol rank across all Ministries). Benin became in 2021 the first African country to issue an SDG Bond. The Bond mobilized €500 million with an average maturity of 12.5 years and came with a green premium (Natixis 2021). The Bond targeted notably investments in education and health, low-carbon energy and sustainable urban infrastructure as well as access to clean water (Republic du Bénin 2022; SDSN 2022). Benin also prepared an Integrated National Financing Framework (INFF) in 2019 in collaboration with UNDP and other local and international partners. Benin also pioneered other innovative sovereign instruments to advance long-term sustainable development. Benin has also adopted a national SDG monitoring framework with 168 relevant indicators coordinated by INSAE. The SDGs are covered in Annual Report by the Court of Auditors (Benin's SAI). While there is no reported data on the UNSD portal on sustainable procurement (SDG 12.7.1) the 2024

[10] See notably Art 27 and Art 74: "droit à un environnement sain, satisfaisant et durable (Art 27 and Art 74)"; Art 98: "protection de l'environnement et conservation des ressources naturelles".

MAPS assessment for Benin suggests that further efforts are needed to incorporate sustainable development in public procurement procedures (MAPS 2024)[11].

Broader engagement with UN-based multilateralism: Benin's 1990 Constitution makes numerous references to international cooperation, the UN Charter and International Law notably in the Preamble which reaffirms the countries commitments to the UN Charter[12]. Benin ratified close to 90% of major UN Treaties (including the nine core UN Human Rights' Treaties). Over the period 2018-2023, Benin's vote at UNGA in recent years was aligned more than two-thirds of the time (69%) with the majority vote of the international community. Benin is a member of all the main UN organizations and agencies and paid its contributions to the core budget of the UN without unreasonable delays over the period 2019-2024. Benin is not impacted by UCMs issued by other states and, as an ECOWAS member, initiated a handful set of UCMs which are still active notably against Burkina Faso, Guinea-Bissau, Mali and Niger. Benin is not a heavily militarized country according to the IEP. Benin benefited from partnerships as part of the EU's Global Gateway initiative (AFD 2024) and is a member of the Chinese Belt and Road Initiative (BRI).

Stakeholder Engagement and Participation: Although there are no VLRs reported on the UNDESA platform for Benin, the cities (communes) of Avrankou (south-east) and Nikki (north-east) presented VLRs in the context of the FN-OOD (République du Bénin 2022b; 2022a) and Benin made critical steps toward localizing the SDGs, notably by leveraging Gis technologies . Several trainings have been organized to raise awareness and knowledge about the SDGs among Parliamentarians (DGCS-ODD 2019). Finally, the scientific community has also been mobilized notably via the creation in 2022 of a national SDSN network co-hosted at the University of Abomey-Calavi and Directorate of Research and Strategic Studies of the Ministry of Economy and Finance. Benin is also in the process of getting involved in international pathways project, notably the FABLE pathways for long-term sustainable agri-food systems. Yet, according to the WJP Benin still faces significant challenges in ensuring that freedom of assembly and association is effectively guaranteed. Benin became a member of the OGP in 2024. Overall, according to UNDP, 88% of the population in Benin calls for strengthening commitments to address climate change and 94% believe countries should cooperate on climate change.

4.7.4.2 The Republic of Uzbekistan

Context: Located in Central Asia, the Republic of Uzbekistan is a medium size country with a population of approximately 36 million inhabitants and per capita GDP at around $2,800 USD (current prices) in 2023. It is classified by the World Bank as a Lower-Middle Income country (LMIC). In 2023, Uzbekistan adopted the National Development Strategy 2030 and aims to become an Upper-Middle-Income Country by 2030. With Liechtenstein, Uzbekistan is one of the two countries in the world which is double landlocked meaning that it is also surrounded only by landlocked countries. It is bordered by Kazakhstan, Kyrgyzstan, Tajikistan, Afghanistan and Turkmenistan. From the 19th century to the early 1990s, Uzbekistan was controlled by Russia and, as of 1922, the Union of Soviet Socialist Republics (USSR). It officially declared

[11] The MAPS Assessment notes for instance that: « Ce cadre légal permet la mise en œuvre des Achats publics durables (APD) mais il manque une stratégie nationale assortie d'un plan d'actions ».

[12] The Preamble notes that: « Nous, Peuple Béninois,[…] Réaffirmons notre attachement aux principes de la démocratie et des droits de l'homme tels qu'ils ont été définis par la Charte des Nations unies de 1945 et la Déclaration universelle des droits de l'homme de 1948, à la Charte africaine des droits de l'homme et des peuples adoptée en 1981 par l'Organisation de l'unité africaine, ratifiée par le Bénin le 20 janvier 1986 et dont les dispositions font partie intégrante de la présente Constitution et du droit béninois et ont une valeur supérieure à la loi interne »

its independence from the USSR in 1991 and became officially a UN member state and a member of the IMF in 1992. Neutrality has been at the heart of Uzbekistan's foreign policy and military agreements (Toshbekov 2022; Toktogulov 2022). The President is elected for a five-years mandate, and it has a bicameral legislature (lower and upper chamber). Most of the population in Uzbekistan is Muslim (Sunni tradition). On the public finance side, as recognized in the IMF's Article IV Consultation (IMF 2015b), Uzbekistan entered the SDGs with low debt-to-GDP ratio (10%) and low burden from debt service payments.

SDG Status and Trends: Uzbekistan is among the countries that progressed the fastest on the SDGs since their adoption in 2015. It ranks among the 50% top performers in the world and on par with its regional peers in Central Asia (Sachs et al. 2024). It faces significant challenges in achieving SDG 2, 3, 6, 7, 11, 15 and 16.

SDG Commitment, Planning and Coordination: Since 2015, Uzbekistan presented two VNRs (in 2020 and 2023). In 2023, Uzbekistan adopted via referendum a new Constitution which makes references to 13 SDGs and explicit references to "sustainable development" (notably under Articles 14, 49, 103, and 115[13]). Uzbekistan has adopted an official emissions intensity target in policy document to be achieved by 2030. It submitted an INDC in 2017 and updated NDC in 2021.

SDG Integration in Key Central Federal Government Functions: The coordination of SDG implementation is led by the "Coordination Council for the Implementation of the National Sustainable Development Goals and Targets of Uzbekistan until 2030" under the authority of the Deputy Prime Minister. Uzbekistan was among the first country in the world (the first in Central Asia) to issue an SDG Bond in 2021 worth of $235 million USD (nominated in Uzbek sum (UZS)), with a 14% coupon rate, for a period of three years. The SDG bond targeted more specifically SDG 4 (Quality Education), SDG 6 (Clean Water and Sanitation), SDG 3 (Good Health and Well-Being), SDG 7 (Affordable and Clean Energy), SDG 11 (Sustainable Cities and Communities) and SDG 15 (Life on Land). In the first SDG Bond allocation and impact report published at the end of 2022, the UNDP and Bankers without Boundaries praised the Ministry of Finance of Uzbekistan for its innovative and transparent approach to financing sustainable development investments[14]. In October 2023 Uzbekistan issued its first Green Sovereign Bond denominated in Euros with the support of UNDP, the EU and AFD. This was achieved in a context where Uzbekistan developed its INFF, its long-term investment framework for SDG implementation. An initial list of national SDG indicators developed by UZ Stat (the NSO) was approved in 2019 by the Council and has been revised and improved notably to ensure alignment with the GIF. In 2024, there are 190 indicators national SDG indicators in Uzbekistan. So far there is no evidence that the Audit Chamber (Uzbekistan's SAI) has been involved in sustainable development audits, yet the 2023 Annual Report of the Audit Chamber identifies sustainable development as strategic priority for the period 2024-2026 (Chamber of Auditors of Uzbekistan: 2024) There is no comparative data available on Uzbekistan's use of public procurement and regulatory assessments for sustainable development.

[13] Chapter II (Democracy), Article 14, establishes sustainable development as one of the core principles for the state's activities: "The state shall carry out its activity based on the principles of legality, social justice and solidarity, to ensure human well-being and sustainable development of society."

[14] UNDP: "We praise the government's commitment to transparency and accountability in relation to the allocation of proceeds, and the continuous monitoring of project implementation. BWB: "BwB recognises Uzbekistan's ambitious sustainable development targets, and is pleased to have helped facilitate this innovative bond issuance"

Broader engagement with UN-based multilateralism: The Preamble of the 2023 Constitution of Uzbekistan makes explicit references to "universal values", "solidarity", "future generations", "peace" and the "world community" (Republic of Uzbekistan 2023). Uzbekistan ratified around 70% of all major UN treaties (including 7 of the 9 core UN Human Rights' Treaties). Uzbekistan is not a member two important UN organizations and agencies namely the International Maritime Organization (IMO) and the World Trade Organization (WTO). Regarding the WTO, Uzbekistan aims to become a member of the organization by 2026 (WTO 2024). Uzbekistan's vote at UNGA between 2018 and 2023 was aligned more than three-quarters of the time with the rest of the international majority. As a member of the OSCE and OIC Uzbekistan has initiated three UCM sanction regimes which are still active in 2023 against Armenia, Azerbaijan and Syria. It is not directly impacted by UCMs issued by other Nation-States. Uzbekistan pays its dues to the core UN budget without unreasonable delays. Uzbekistan is not a heavily militarized country according to the IEP. Uzbekistan benefited from partnerships as part of the EU's Global Gateway initiative (European Commission 2025) and is a member of the Chinese BRI.

Stakeholder Engagement and Participation: While there is no VLRs reported on the UN DESA portal, the 2024 SDG report prepared by UZ Stat does analyze the performance of Uzbekistan's subnational entities, including the 12 regions (National Statistics Committee of the Republic of Uzbekistan 2024). As part of the development of the "New Uzbekistan 2030 Strategy" formal consultations were organized involving international and local partners (United Nations 2023). A special Parliamentary Commission comprised of representatives from both chambers was established in February 2020 to monitor the implementation of the SDGs and make recommendations, notably in the context of the VNR (IPU 2024). Uzbekistan is currently developing a national SDSN network to be hosted in one of the leading research institutions in the country and is also getting trained and involved in the FABLE global pathways initiative. According to the WJP, Uzbekistan performs poorly compared with 142 countries (bottom 10%) on the effective implementation of freedom of assembly and associations. Uzbekistan is not an OGP member.

4.7.4.3 Finland (Republic of)

Context: Finland is a parliamentary Republic located in Northern Europe. It is a high-income country with a population of around 5.5 million inhabitants and per capita GDP at $52,926 USD (current $US). Finland shares a border with three countries: Norway, Sweden and the Russian federation. From the 12th century to the early 20th century, with varying levels of autonomy, Finland was part of the Kingdom of Sweden (until 1809) and then Russia until its dependence in 1917 (NCEE 2021). The term "Finlandization" has been used to define the neutralist foreign policy conducted by Finland during most of the second half of the 20th century notably vis a vis the Russian federation (Trapara 2016). Finland joined the United Nations in 1955, the EU in 1995, the Euro zone in 1999 and NATO in 2023. The modern Constitution of Finland was adopted in 1999 and revised the last time in 2011. Finland has a unicameral system with a national Parliament (*Suomen eduskunta*), and the Prime Minister is elected for mandates of four years. The most practiced religion in Finland is Christianism (mostly Evangelical Lutheran Church).

SDG Status and Trends: Finland tops the global SDG Index since 2021 (Sachs et al. 2021, 2022, 2023, 2024) and continues to make progress on the SDGs. Finland is also the happiest country in the world according to the World Happiness Report (Helliwell et al. 2024). Finland faces its largest SDG challenges on sustainable agri-food systems and diets (SDG 2), responsible consumption and production (SDG 12)

and climate action (SDG 13) partially driven by large negative international environmental spillovers embodied into trade as in other EU and OECD countries.

SDG Commitment, Planning and Coordination: Since, 2015 Finland presented two VNRs (the latest one in 2020) and is on the list to present its third VNR in 2025. In 2020, Finland was among the first country to include a dedicated section in its VNR focusing on international spillovers (Republic of Finland 2020)[15]. Finland's constitution, adopted in 1999 and revised the last time in 2011, covers 7 SDGs and has a dedicated section devoted to "Responsibility for the environment"[16]. The "Strategy of the National Commission on Sustainable Development 2022–2030: A prosperous and globally responsible Finland that protects the carrying capacity of nature" is the cornerstone of Finland's efforts to implement the SDGs. Finland made an explicit commitment to become climate neutral by 2035 and presented 3 NDCs the latest one in 2023. The National Commission on Sustainable Development (NCSD) has been in place in Finland since 1993 and is supported by an Expert Panel on Sustainable Development and the 2030 Agenda Youth Group. These various bodies have coordinated and led stakeholder consultation in Finland on the SDGs, including in the context of the VNR preparations.

SDG Integration in Key Central Federal Government Functions: The Finnish National Commission on Sustainable Development coordinates implementation effort under the PM Office. Finland's national budget refers to sustainable development and sustainable growth (Sachs et al. 2022), including the 2019 budget proposal which included a section 6 specifically on "sustainable development" (von Knorring 2019) but also more recently as part of the 2025 summary of budget proposal which mentions sustainable growth (Ministry of Finance of Finland 2025). Under the leadership of Statistics Finland, the country adopted a national follow-up system for the SDGs and monitors specifically 45 relevant SDG indicators for Finland. The National Audit Office (Finland's SAI) conducted a performance audit (2019) and follow-up (2021) on "Promoting Sustainable Development". Finland implements sustainable procurement policies and action plans and conduct RIA include impact on sustainable development for major primary laws and all subordinate regulations.

Broader engagement with UN-based multilateralism: Section 1 of Finland's Constitution states that "Finland participates in international cooperation for the protection of peace and human rights and for the development of society" (Republic of Finland 2012). Finland has ratified almost all major UN treaties (97%), including eight out of nine core human rights' treaties. Finland's vote at UNGA was aligned with the international majority a bit less than two-thirds of the time (63%) over the period 2018-2022. Finland is a member of almost all major UN organizations and agencies, except the UN World Tourism Organization (UNWTO). As an EU member, Finland has initiated more than 40 UCM sanction regimes against other Nation-States which are still currently active, targeting mainly countries such as Afghanistan, Iran, the Russian federation and Turkey. Finland is impacted by UCMs initiated by China, Iran and the Russian federation. Finland stands out as one of the few countries in the world that systematically pays its due to the UN core budget in full and on time. It also devoted 0,5% of its GNI on ODA on average over

[15] See section 6.4: "Externalities and spillovers".
[16] Section 20. Responsibility for the environment: Nature and its biodiversity, the environment and the national heritage are the responsibility of everyone. The public authorities shall endeavor to guarantee for everyone the right to a healthy environment and for everyone the possibility to influence the decisions that concern their own living environment.

the period 2018-2022 (close to the 0,7% OECD/DAC target). Finland does not stand out as particularly militarized country according to the IEP.

Stakeholder Engagement and Participation: As of July 2024, UNDESA listed 10 VLRs led by Finnish subnational entities including Helsinki, Espoo, Turku, Tampere and Vantaa. The Finnish Parliament's Committee for the Future discusses and issues Statement on the annual Government Report on the Implementation of the UN Agenda 2030 (IPU 2025). Under the umbrella of SDSN Northern Europe, 10 Finish research centers contribute to collaborative applied research to advance sustainable development in Finland and the region. Finland is involved in the DDP and FABLE pathways work. According to the WJP Finland is among the countries where freedom of association and assembly is the most effectively guaranteed in the world. Finland is a member of the OGP. Finland was not included in the 2024 Climate Vote survey by UNDP.

4.7.4.4 The European Union

Context: The European Union (EU) is a unique partnership between 27 European countries with a total population of 449 million inhabitants and annual per capita GDP of around $41,423 USD (current prices) in 2023 (World Bank 2024b). Following several waves of enlargement, the EU went from six founding members at the time of Treaty of Rome (1957) to 27 EU member states since 2020 (after the withdrawal of the United-Kingdom). The Lisbon Treaty (2007) describes the role, mandate and functioning of the EU. The governance of the EU is structured around three main bodies: The European Commission (the executive arm), the European Parliament (legislative body) and the European Council (which brings together representatives from each EU member states to define the general political direction and priorities of the EU). The leadership of the EU is renewed every five years after the European elections. The current leadership has been appointed over the period 2024-2029. Together, the Parliament and the Council determine the composition of the European Commission, including the President of the European Commission. In the aftermath of the COVID-19 pandemic, the European Commission was entrusted by its member states to issue debt in higher volumes to finance the €750 EUR billion for the Next Generation EU recovery program that spans until 2026. The most practiced religion in the EU is Christianism (various traditions).

SDG Status and Trends: Out of the top 20 countries in the 2024 SDG Index, 19 are in Europe and 16 are EU member states. On average, most EU countries continue to make progress, although SDG progress slowed down since 2020 (Lafortune and Fuller 2025). The EU faces its major challenges in achieving SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action), partially driven by large absolute and per capita international spillover effects from consumption and trade (Malik et al. 2021; 2023).

SDG Integration in Key Central Federal Government Functions: Although the EU is not a UN member state, the EU presented a Union-wide Voluntary Review (VR) at the United Nations in 2023. The Consolidated version of the Treaty on European Union (TEU) - including the amendments introduced by the Treaty of Lisbon in 2007 – covers 10 SDGs and makes several explicit references to sustainable development notably in Article 3[17] (e.g. Article 2). The EU became the first continent in 2019 to adopt a

[17] Article 2, paragraph 3 of the Consolidated Version of the TEU: "The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive

bold commitment toward climate-neutrality by mid-century via the European Green Deal (EGD) and presented three NDCs (the latest one in 2023). The EGD makes explicit references to the SDGs and 2030 Agenda[18]. The mission letters issued by the President of the European Commission (both for the 2019-2024 and 2024-2029 College of Commissioners) make references to the SDGs.

SDG Integration in Key Central/Federal Government Functions: The responsibility to implement the SDGs is assigned to the College of Commissioners as a whole (not to one single entity or coordinating unit). The SDGs were explicitly mentioned in the recovery and Resilience Facility (RRF), the key instrument of the NextGenerationEU large-scale investment program adopted in the aftermath of the COVID-19 pandemic. The EU has also incorporated an SDG Annex as part of member states' reports in the European Semester Process for Macroeconomic Coordination (European Commission 2020b; 2020a). Before the adoption of the SDGs, Eurostat was already involved in monitoring the progress made by the EU toward sustainable development. Starting in 2017, Eurostat identified a list of EU-specific SDG indicators and publishes an annual assessment of the Eu's progress toward the SDGs. The 2024 edition includes 102 indicators (with 34 indicators being so-called multipurpose indicators used across several SDGs). The European Court of Auditors (EU's SAI) did not conduct an SDG specific audit yet it has conducted performance audits on related themes such as climate adaptation covered under SDG 13 (ECA 2024a) urban pollution covered under SDG 11 (ECA 2025) and financial secrecy and spillovers covered under SDG 16 and 17 (ECA 2024b). The EU regulators are required to incorporate sustainability analyses for major primary laws and major subordinate regulations.

Broader engagement with UN-based multilateralism: The EU is not a UN member states and as such the Union only ratifies certain UN treaties where it has competence and does not vote at UNGA. Therefore, this analysis corresponds to the unweighted average results across the 27 EU member States and not the support of the EU institutions for UN-based multilateralism. On average, EU member states ratified the vast majority of UN treaties (95%) and vote 62% of the time with the rest of the international majority at UNGA. Most EU member states are members of all UN institutions, although some EU member states withdrew their membership from UNIDO mainly between 2014 and 2017 including Belgium, Denmark, France, Greece, Lithuania, Portugal and Slovakia (Latvia and Estonia have never been members of UNIDO). The EU and its member countries have put in place more than 40 active UCM sanction regimes primarily targeting Afghanistan, China, Iran, the Russian federation and Turkey and are directly impacted by a handful of sanction regimes issued notably by China, Iran and the Russian federation. As of 2024, and in the preceding years, on average EU member states were not considered to be particularly militarized countries and were not directly engaged in any major international military conflict. EU member states tend to pay their contributions to the core UN budget without unreasonable delays and devoted in 2023 close to 0.6% of the EU's GNI to ODA (close to the internationally agreed target of 0.7%). The EU also launched a major international investment program which aims to mobilize €300 EUR billion between 2021 and 2027 to invest for sustainable and high-quality projects globally. The Joint Communication made by the European Parliament, the Council, the EESC, the European Committee of the Regions and the

social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance."

[18] P.2. "The Green Deal is an integral part of this Commission's strategy to implement the United Nation's 2030 Agenda and the sustainable development goals," https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF.

European Investment Bank explicitly states that the Global Gateway initiative is “fully aligned with the UN’s 2030 Agenda and its Sustainable Development Goals” (European Commission 2021)

Stakeholder Engagement and Participation: The Juncker Commission set up right after the adoption of the SDGs, a multistakeholder platform on the SDGs (2017-2019) which was not renewed by the von der Leyen Commission. Yet, the European Economic and Social Committee was mandated in 2023 to coordinate large-scale consultations in the context of the EU VR. As of July 2024, a total of 53 VLRs were issued by subnational entities inside the EU. Since 2016, SDG Watch Europe and the EESC have actively mobilized civil society organizations to advance SDG implementation in the EU and were actively involved in the multistakeholder platform whose mandate was discontinued after 2019 (Lafortune et al. 2024). In the context of the EU VR in 2023, the results of the formal public consultations led by the EESC with trade unions, business associations, NGOs and other stakeholders were presented in a stand-alone report Annex to the EU VR summarizing collective views from civil society on achievements and challenges in SDG implementation at EU level (European Union 2023). The European Parliament has issued multiple reviews of SDG implementation efforts in the EU (European Parliament 2022; 2023). An informal SDG Alliance was also set up inside the Parliament in 2021 (SDG Watch Europe 2022) Other technical departments of the European Commission, including the Joint Research Centre (JRC), have also been actively mobilized to provide technical support for SDG implementation efforts (Barbero et al. 2020; Borchardt et al. 2023). While the DDP and FABLE networks primarily work with country partners, a 2020 study by the JRC analyzed the linkages between 108 modelling tools listed in the European Commission Modeling Inventory and Knowledge Management System (MIDAS) and the SDGs (Barbero et al. 2020) which suggests that the European Commission has multiple tools and networks of experts available to define long-term policy and financing frameworks for sustainable development. The EU is the continent where, on average, freedom of assembly and association is the most effectively guaranteed according to the WJP, yet there are variations with Bulgaria and Hungary performing below EU standards. On average there is overwhelming public support in the EU for strengthening climate policies (79%) and international cooperation on climate issues (91%) (UNDP 2024).

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Chapter 5 Sustainable Development and the IMF Surveillance System: An Analysis Over Time

Abstract

The International Monetary Fund (IMF) is responsible for monitoring, each year, the state of the global economy and evaluating global macroeconomic risks. Over the past two decades, the guidelines for the IMF's multilateral and bilateral surveillance system have been revised on several occasions to expand the scope of the analysis to emerging challenges, including climate change. For the first time, this paper evaluates whether the IMF's surveillance mechanism has increased its focus on a broader set of long-term sustainable development issues and macro-critical risks, including climate and nature-related risks, using the Sustainable Development Goals (SDGs) as an overarching framework. We employ a novel approach that incorporates advanced text mining and natural language processing techniques to analyze over 1,300 documents, comprising more than 100,000 pages, published between 2015 and 2024. Our findings suggest that the IMF surveillance system fails to meaningfully incorporate important dimensions that matter for long-term sustainable development, macroeconomic stability, and coherence, particularly in the context of nature-related risks. Our results suggest that the COVID-19 pandemic and rising geopolitical tensions since 2020 have led to a decrease in explicit references to the SDGs in the IMF's surveillance instruments. We identify some variations in SDG detections across the IMF's surveillance instruments and countries. We propose a set of headline SDG Indicators, which could be systematically incorporated in Article IV Consultations, the main annual process and report of the IMF bilateral country-level surveillance, to harness over time, the focus on long-term sustainable development issues.

Keywords: IMF, Surveillance Mechanism, Article IV, Indicators, Systemic Risks, Climate Nature, Biodiversity

5.1 Introduction

The Sustainable Development Goals (SDGs) adopted by the world community in 2015 are often considered as an investment agenda, notably in human capital (education, health, social protection), and infrastructure (renewable energy, resilient building, digital technologies) (Sachs et al. 2019; UNSDG 2023). Most developing countries lack access to the financial capital needed to invest in the SDGs (UNCTAD 2023). Fiscal space issues were aggravated by the COVID-19 pandemic and other crises (Sachs et al. 2022). The global SDG financing gap is estimated at $4 trillion USD annually (UNDESA 2024). The International Monetary Fund (IMF) plays an important role, at the global and national level, in providing policy advice and technical support to promote sustainable economic growth and macroeconomic stability. As laid out in its Articles of Agreement, the original mandate of the IMF is to promote international monetary cooperation, balanced growth of international trade, and a stable system of exchange rates (IMF 1944). To do so, the IMF focuses on three main activities: economic surveillance, lending, and technical assistance.

In the aftermath of the Global Financial Crisis (GFC) and particularly since the adoption of the SDGs, 2030 Agenda, and the Paris Climate Agreement in 2015, a growing body of scholarly and policy commentary has emphasized the need for the IMF to adapt its mandate and practices in order to address emerging systemic risks, enhance its contribution to long-term sustainable development, and incorporate climate-related considerations more explicitly into its policy instruments and operational frameworks. In the wake of the COVID-19 pandemic and its profound effects on macroeconomic stability, IMF country teams have increasingly focused on health expenditure issues within the context of both surveillance activities and program engagement (Soto et al. 2023).

Similarly, there is growing evidence that environmental degradation and risks can destabilize the global and national economies. Climate-related risks can pose serious threat to macroeconomic stability and the global financial system (Battiston, Dafermos, and Monasterolo 2021; DeMenno 2023). Over the past twenty years, climate-vulnerable emerging market and developing economies (EMDEs) have lost an estimated $525 billion to extreme weather events, around one-fifth of their collective GDP (V20 2022). There is a growing literature on nature related financial risks (Kedward, Ryan-Collins, and Chenet 2020; Svartzman et al. 2021; Ranger et al. 2024). Terrestrial and marine biodiversity loss threatens ecosystems that are vital for human well-being, including food systems and carbon capture, and interlinkages between climate change and nature loss can exacerbate threats to the global economy and financial system (Gardes-Landolfini et al. 2024; Schmidt-Traub, Haagh, and Sappany 2024).

In March 2023 the current Managing Director of the IMF, Kristalina Georgieva, stated the following (Georgieva and Weeks-Brown 2023):

> "The Fund's purposes and broad powers (together, the Fund's 'mandate') have not changed significantly over the past few decades. However, the substantive issues on which the IMF engages more systematically with its member countries in carrying out this mandate have evolved in important respects. […]. Areas of enhanced focus, sometimes described as 'emerging' issues for the Fund, now include topics such as governance and anti-corruption, climate change, gender, fintech and the digitalization of finance, inequality, and social protection, among others."

Since 2015, the IMF has published thematic research papers and developed new lending tools to support long-term sustainable development. In 2019, the Fiscal Affairs department published the first-of-its kind SDG costing study focusing on 155 countries to estimate the SDG financing gap (Gaspar et al. 2019). In 2022, the IMF introduced the Resilience and Sustainability Facility (RSF) with 20-year maturity and a 10½ -year grace period during which no principal is repaid to provide "affordable long-term financing to countries undertaking reforms to reduce risks to prospective balance of payments stability, including those related to climate change and pandemic preparedness" (IMF 2022b). In 2023, the IMF published a set of guidance for the issuance of sovereign ESG Bonds focusing on green, social and sustainability-linked bonds (Lindner and Chung 2023). In April 2024 the IMF released a set of guidelines on how to use its SDG Financing Tool (SDG-FiT) to assess the macroeconomic coherence of countries' SDG financing plans (IMF 2024a).

Yet the integration of broader sustainable development issues in the IMF's formal surveillance mechanisms remains largely undocumented. Each year, the IMF ensures multilateral surveillance of the global economic system via the World Economic Outlook (WEO), the Global Financial Stability Report (GFSR), and the Fiscal Monitor. The IMF also provides bilateral surveillance and policy advice to its member countries primarily via the Article IV consultations and via the Financial Sector Assessment Program (FSAP). The IMF surveillance processes can significantly influence countries' macroeconomic policies, including fiscal and tax policy, debt management and public sector provision of key services (Hopkins 2018). Some scholars analyzed the integration of climate risks in the IMF's surveillance mechanisms (mainly Article IV and FSAP) (Volz and Jane Ahmed 2020; Ramos et al. 2021; Plant, Palmer, and Dileimy 2022). In 2021, the IMF concluded a comprehensive review of its surveillance system which notably called for stronger integration of sustainable development in the IMF's surveillance system to including the impact non-economic developments on stability" (IMF 2021a).

For the first time, this paper evaluates whether the IMF surveillance mechanism has increased its focus on long-term sustainable development issues using the SDGs as an overarching framework. We focus on both multilateral and bilateral surveillance over the period 2015-2024. To our knowledge, it is the first time that a systematic assessment of SDG integration in the IMF's surveillance system is conducted focusing on the economic and climate dimensions of the SDGs but also on social, institutional and nature-related risks. The study uses advanced text mining techniques to analyze more than 1300 IMF documents (representing more than 100 000 pages). It also provides specific recommendations to strengthen the SDG integration notably in the indicator framework used in Article IV consultations. This analysis aims to provide a new theoretical and practical contribution to strengthen the surveillance of systemic risks at the global and national level.

5.2 Literature review

The Inclusive Wealth (IW) theory emphasizes the importance of various forms of capital to support intergenerational well-being (Arrow et al. 2012; Duraiappah and Muñoz 2012; Arrow et al. 2013). The IW literature tends to focus on three main capital assets: natural capital, human capital and productive capital but authors have also extended the framework to consider social and financial capital and other forms of capital (Cheng et al. 2022; UNEP 2023). IW was introduced before the adoption of the SDGs in 2015. Authors have proposed to use the IW framework as an all-encompassing measure of SDG progress (Dasgupta, Managi, and Kumar 2022). Yet there are persisting measurement challenges notably related

to the computation of shadow prices to estimate various forms of capital, including natural capital (Polasky et al. 2015). Despite the large literature on and applications of IW, there is limited understanding about how International Financial Institutions consider various forms of capital in their analytical and policy mechanisms. This study aims to use the universally adopted SDG framework reduced in sub-categories (or forms of capital) to evaluate how the IMF incorporated sustainable development in its surveillance mechanism.

The IMF was set up in 1945 to support a stable and cooperative international monetary system and prevent economic instability. The IMF's detailed mandate is specified in Article I of its Articles of Agreement. Over time, the IMF's role evolved to provide financial assistance, policy advice, and technical assistance to its member countries on various economic and financial issues. The IMF has been an object of academic study for decades. Scholars and practitioners have studied the determinants and effects of IMF lending program (Conway 1994; Dicks-Mireaux, Mecagni, and Schadler 2000; Dreher 2006; Dreher and Walter 2010) and technical assistance (Nsouli 2006; Schwarzer 2015; Lamdany 2022; De Lannoy 2022; Towe 2022). There is a large body of literature on the IMF's politicization (Barro and Lee 2005; Dreher 2006; Lipscy and Lee 2019; Guimaraes and Ladeira 2021). More specifically, on surveillance mechanisms, there is also a large literature on the IMF's instruments and mechanisms, including on the engagement and coordination processes (Johnson 1985; Lombardi and Woods 2008; Lavigne, Maier, and Santor 2009; Fratzscher and Reynaud 2011) as well as on surveillance reforms and evolving areas of focus (Mussa 1997; Lamdany and Martinez-Diaz 2009; Moschella 2012).

The IMF's surveillance mandate was significantly amended in 2012 in the aftermath of the (GFC) and again in 2021. Traditionally, the IMF's surveillance mechanism has concentrated on four major policy areas: exchange rate, monetary, fiscal, and financial sector (IMF 2024b). In 2012, the Integrated Surveillance Decision (ISD) allowed the IMF to engage in a wide range of newer policy areas that can affect balance of payments or domestic stability. The 2021 comprehensive review sets out four priorities to help strengthen systems' stability and coherence "as climate change, digital technology, inequality, and global events like the pandemic shape a changing world" (IMF 2021a). Priority 3 emphasizes the need to foster "economic sustainability: a broader understanding of sustainability to better account for the impact of economic and non-economic developments on stability". The Review also recognizes that "Climate change is a potentially existential threat with significant macroeconomic and financial implications". A study published in 2024 by the Independent Evaluation Office (IEO) of the IMF underlines the challenges posed by the evolving mandate of the IMF since 2012 (IMF 2024b). In 2021, the IMF also adopted a climate strategy which specified that Article IV consultations and FSAPs should cover more systematically climate-related policies (IMF 2021b).

There is a growing literature on the integration of climate-related risks in the IMF surveillance system. A 2020 report by the Vulnerable Twenty group (V20) called for better integration of climate risk analysis in the IMF surveillance activities, including Article IV consultations as well as FSAPs and Debt Sustainability Framework (DSF) analysis conducted with the World Bank (Volz and Jane Ahmed 2020). Ramos et al (2021) provide a method and a baseline to evaluate the integration of climate-related risks into the IMF's bilateral surveillance toolkit, specifically Article IV consultations and FSAP. They find that while climate change poses macro-critical risks, including the spillover and cross-border consequences of climate change, the IMF falls short compared for instance with Central Banks in incorporating climate change in its economic surveillance system. They also find that climate surveillance has gained more traction in Article IV consultations than in FSAPs. There are important variations across countries, with small states

receiving more attention to climate change in 2017 and 2019. Also, Plant et al. (2022), discuss how the integration of climate-related risks in the IMF surveillance system is associated with significant operational challenges since it will require new skills, approaches, models and forms of collaborations.

Yet, to our knowledge, there are no systematic analysis that aims to understand whether the IMF surveillance system has shifted toward looking at macro-systemic risks via the broader lens of sustainable development, epitomized by the SDGs. A study conducted during the Millennium Development Goals (MDG) period by (Iyanatul et al. 2012) focusing on 50 low-income and middle-income countries, found that Article IV consultations tend to focus extensively on fiscal adjustments and inflation targets while far less attention was given to employment generation, poverty reduction and expansion of social protection including MDG Target 1b ("Achieve full and productive employment and decent work for all, including women and young people") and progress towards a social protection floor.

Our study aims to provide a contribution to the growing literature on SDG integration by public and private actors including national governments (Biermann et al. 2022; 2023), Central Banks and commercial banks (Lagoarde-Segot 2020; Dikau and Volz 2021; EBF and KPMG 2021) and Public Development Banks (Jacouton, Régis, and Laulanié 2022). A study conducted by the Agence Française de Development (AFD) focusing on the activity reports published by 237 Public Development Banks (PDBs) over the period 2016-2020 using advanced natural language processing techniques showed that the strategic and operational narrative of PDBs is mainly structured around SDG 8 (Decent Work and Economic growth) and SDG 9 (Industry, Innovation and Infrastructure). The same study finds that SDG 13 (Climate Action) is increasingly considered by PDBs. Yet, nature-related goals and social goals represent a more negligible part of PDB's narrative.

5.3 Methodology

This paper provides a method, an evaluation and some recommendations to integrate sustainable development in the IMF surveillance mechanisms in order to strengthen system cohesion and consider a larger set of macro-critical risks. The SDGs are the only global set of goals covering all the dimensions of sustainable development agreed among all 193 UN member states. We consider both the IMF's instruments for multilateral surveillance (the World Economic Outlook, the Global Financial Stability Report, and the Fiscal Monitor) and IMF's instruments for bilateral surveillance & policy advice (Article IV consultations and FSAPs). The documents were extracted in September 2024. We focus on the period 2015-2024, although for FSAPs which are more unevenly produced we compare the pre-SDG adoption period (2000-2015) and post-SDG adoption period (2016-2024).

Table 5.1 Overview of IMF's documents analyzed for this study – Multilateral and bilateral surveillance instruments

	Multilateral surveillance (FM, WEO and GFSR)	Article IV Consultations	FSAPs	Total
Documents	57	1,046	260	1,363
Pages	8,825	88,661	16,630	114,116

Source: Author.

Our goal is to evaluate whether the adoption of the SDGs and Paris Climate Agreement in 2015 is associated with a stronger focus on the various dimensions of sustainable development in the IMF surveillance instruments. We also aim to evaluate whether SDG integration varies across surveillance instruments and whether certain goals (or clusters of goals) are more often considered than others. In total, for the IMF multilateral surveillance system, we focus on 57 documents (8825 pages) over the period 2015-2024. Our sample covers the main reports published twice a year in April and October but excludes the updates (typically shorter documents published during the year with adjusted and updated findings). Regarding bilateral surveillance, we focus on 1306 reports (more than 105 000 pages), 1046 Article IV Consultations and 260 FSAPS. Documents were combined by year to generate an analysis over time. To evaluate the degree of SDG alignment, we rely on a three-step process:

1. Count explicit references to "Sustainable Development Goal"; "SDG" and "2030 Agenda" in IMF's surveillance instruments.

2. Conduct an SDG mapping of each document using the SDG Mapper tool developed by the European Commission Joint Research Center and DG INTPA (Borchardt et al. 2023)

3. Review the indicator framework used in Article IV consultations

Step 1 provides an overview of explicit references to the internationally agreed agenda for sustainable development. Analyses of explicit references to the SDGs (and related terms) have been used widely in the literature to gauge organizations' commitments to the SDGs (Lafortune et al. 2021; Bordignon 2021; Jacouton, Régis, and Laulanié 2022; Borchardt et al. 2023). The Index score corresponds to the total number of references to the SDGs (or related terms) divided by the number of pages of all Article IV consultation documents per year (multiplied by 100).

Step 2 relies on the SDG Mapper, a web-based application on the KnowSDGs platform (https://knowsdgs.jrc.ec.europa.eu) developed by Borchardt et al (2023) to automate the analysis of large documents using text mining and natural language processing techniques. The use of automatic text classification is on the rise, including via the use of Artificial Intelligence (AI) and Machine Learning (ML) solutions, with a growing number of methods, tools, and fields of application (Nosratabadi et al. 2020; Hu et al. 2023). Borchardt et al (2023) developed an online tool to evaluate SDG mainstreaming in large documents. The tool builds on "classic text mining and natural language processing techniques (Bird, Klein, et Loper 2009) by utilizing complex keywords embedded within a specifically designed SDG text

classification workflow" (Borchardt et al. 2023). Final results are available at the SDG goal, target indicator levels.

There are several SDG classification initiatives and methods that have emerged (Lafleur 2023), yet the method and tool proposed by Borchardt et al (2023) have several advantages. Firstly, the methodology is tailored to the SDGs and very comprehensive. It includes the analysis of SDG mainstreaming for each 17 goals and 169 targets, as well as for specific SDG indicators. The final set of keywords considered comprises more than 3,398 keywords. It is widely applicable across all regions and various types of organizations. Secondly, the SDG mapper can process multiple and large documents in relatively limited amount of time. This is not the case for instance of the main web-based application of the SDG prospector developed by the AFD using AI-based language models to evaluate SDG mainstreaming which cannot process large documents. Thirdly, based on the limited number of comparative studies, there is some evidence that suggests relatively high convergence between the results obtained via the SDG Mapper and other SDG classification tool (SDG Classification Expert Group [2024] 2024; Borchardt et al. 2024). Fourthly, the SDG mapper was developed via a participative and iterative process involving numerous experts from different fields to define the methodology and keywords. Fifthly, compared with other methods such as AI-based language models which can be more opaque, the SDG mapper provides a very transparent methodology including access to the keywords and detection methodology (Borchardt et al. 2024). The SDG mapper is free of charge, and the detailed results are downloadable in table format.

Unlike other SDG classification studies (Jacouton, Régis, and Laulanié 2022; Borchardt et al. 2024), we decided to retain SDG 17 (Partnerships for the Goals) in our analysis. Firstly, because the international community adopted seventeen SDGs and our objective is to stick to the agreed set of goals without truncation. Secondly, SDG 17 (Partnerships for the Goals) covers relevant aspects for the analysis of the IMF surveillance documents including those related to SDG financing such as targets "17.1 Strengthen domestic resource mobilization", "17.3 Mobilize additional financial resources for developing countries from multiple sources" and "17.4 Assist developing countries in attaining long-term debt sustainability" or 17.13 "Enhance global macroeconomic stability". Considering the type of documents analyzed in this study, excluding SDG 17 (Partnerships for the Goals) might have significantly affected our results by ignoring numerous SDG references in the IMF surveillance documents.

To simplify the interpretation of the results we present results clustered in five major categories or forms of capital (adapted from the classification used in Jacouton et al. 2022): Economy, finance & infrastructure (SDG 8,9,10); Social (SDG 1,2,3,4,5,7,11); Climate (SDG 12 and 13), Nature (SDG 6, 14 and 15) and Institutions and Partnerships (SDG 16 and 17). The Annex (5.7) provides detailed results structured around the 17 SDGs. The main text describes and contrasts findings across years, SDG goals, targets, indicators and countries. The results correspond to respective shares as the total number of SDG references detected which may or may not fully reflect the evolution in the absolute number of references to specific clusters of goals.

We test the consistency of our results against the SDG Prospector, developed by the French Development Agency (AFD), which uses deep learning techniques to analyze the information contained in any written document. This consistency check focuses on 20 IMF surveillance instruments (7 multilateral instruments, 11 Article IV Consultations and 2 FSAPs) covering the whole suite of instruments, different years and countries from different regions, income level and structural characteristics. The detailed results are presented in the Annex, section 5.7.3.

Finally, step 3, provides a deep dive into the indicator framework of Article IV consultations. Article IV consultations is often considered as "the principal tool of bilateral surveillance" (Ramlogan and Fritz-Krockow 2007). Financial markets also tend to react to the release of Article IV consultations (Fratzscher and Reynaud 2011). Article IV consultations systematically include a summary table of "Selected Economic Indicators" usually complemented by other summary tables with headline indicators for the balance of payment and from the monetary survey. Considering the strategic importance of Article IV consultations, we analyzed more specifically the indicator frameworks retained and make recommendations in the discussion section to strengthen the integration of SDG considerations in Article IV's consultation indicator frameworks.

5.4 Results

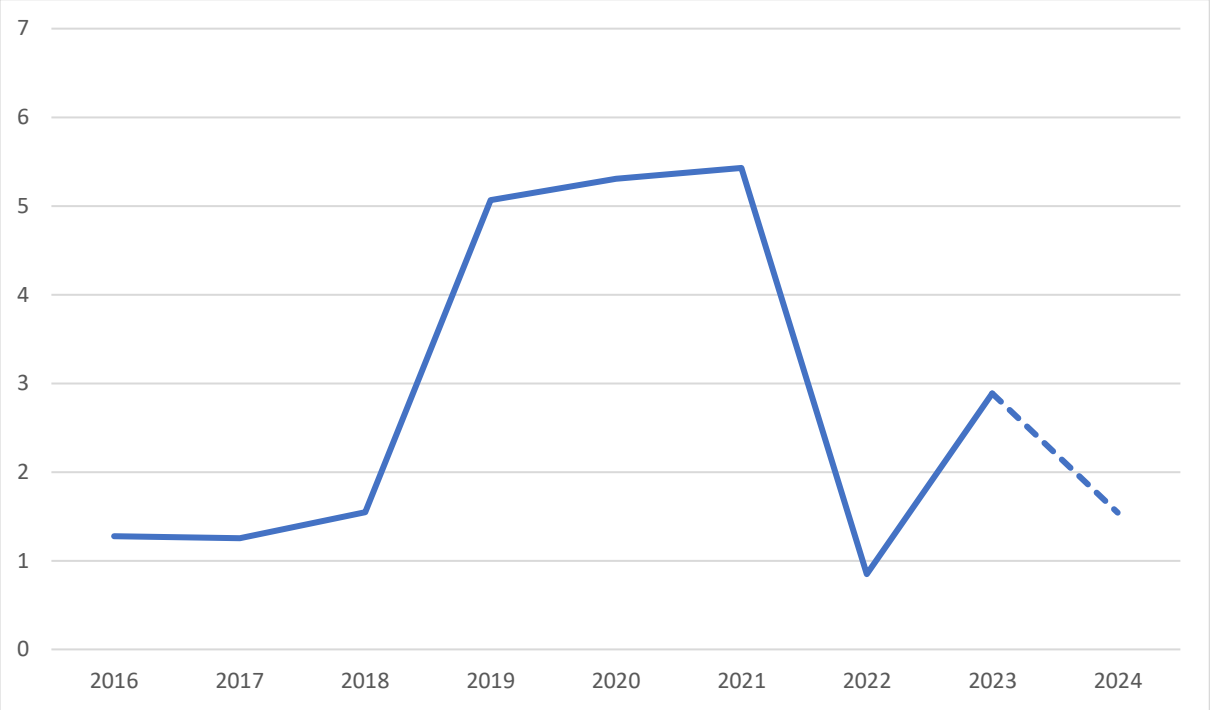
5.4.1 Multilateral surveillance mechanisms

Our analysis covers the 57 IMF multilateral surveillance reports (Fiscal Monitor, World Economic Outlook and Global Financial Stability Report) published twice a year (in April and October) over ten years (from April 2015 to April 2024). This represents more than 8,800 pages.

We find a sharp acceleration of SDG references in the IMF's multilateral surveillance instruments as of 2019, moving from one SDG reference per 80 pages in 2018, to one reference per 20 pages in 2019. Interestingly, this also corresponds to the release of the IMF's flagship costing exercise (Gaspar et al. 2019). Most SDG references are found in the Fiscal Monitor, which is also reflected in the titles of these reports such as "Now is the time: Fiscal policies for sustainable growth (April 2015)", "How to mitigate climate change (October 2019)" or "Helping people bounce back (October 2022)". By contrast we find much fewer explicit references to the SDGs in the GFSR. The number of explicit references to the SDGs in the IMF's multilateral surveillance instruments declined sharply in 2022 and remained around two times lower than the number of explicit references in the years 2019 - 2021.

Together, the SDGs related to the economy, infrastructure and finance (SDG 8,9,10) and to strong institutions and partnerships (SDG 16 and 17) – which capture issues related to domestic resource mobilization, tax collection and illicit financial flows (among others) – represent the lion's share of all the references to the SDGs, although this share went down from more than 80% in 2015 to 40% in 2023 (latest year with complete data). The goals related to climate change, especially SDG 13, represent a growing focus of attention in the IMF's surveillance instruments since 2019. A quarter of all references to the SDGs are linked with socioeconomic goals in 2023, which is almost two-times more than in 2016. References to socio-economic SDGs in the IMF's surveillance instruments increased since the COVID-19 outbreak and during the recovery phase in 2020 and 2021. By contrast, references to nature-related goals (SDG 6, 14 and 15) remain almost nonexistent in the IMF's surveillance instruments (below 1% of all SDG references for most years).

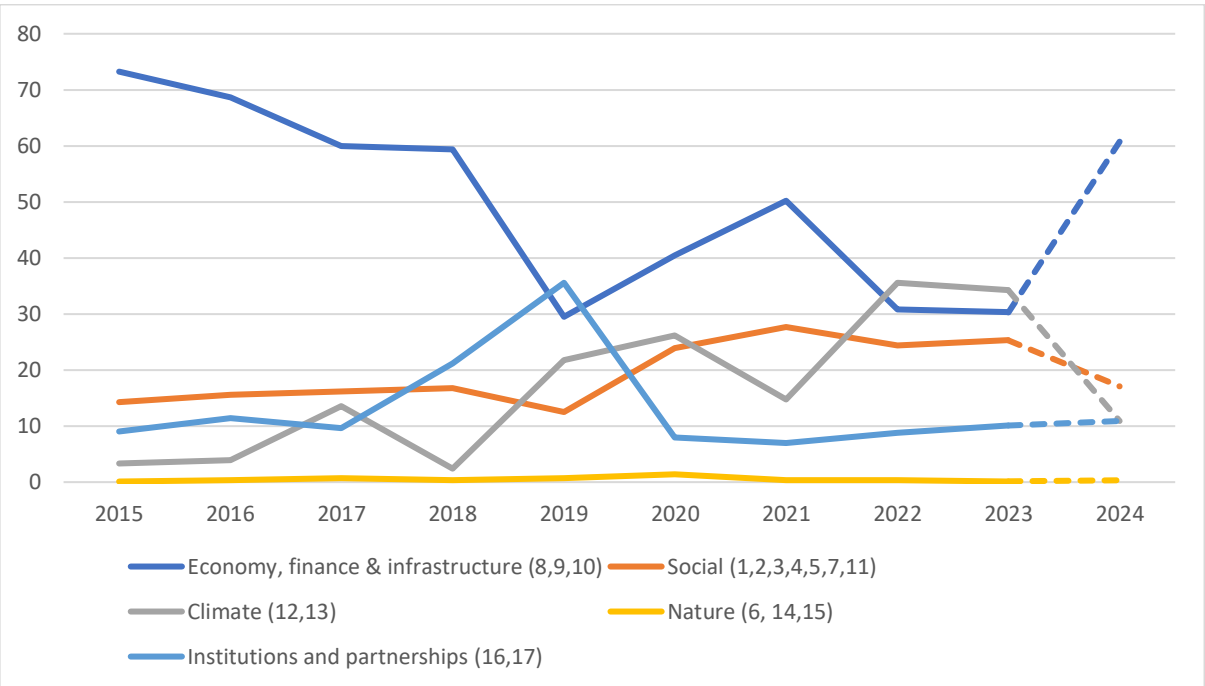
Figure 5.1 SDG references in the IMF's multilateral surveillance instruments, 2016-2024



Note: The Index corresponds to the sum of references to "SDG" "Sustainable Development Goal" and "2030 Agenda" divided by the number of pages of all the IMF's Multilateral surveillance reports (FM, WEO and GFSR) (multiplied by 100).
2024: Partial results (only April releases).

Source: Author.

Figure 5.2 References to specific clusters of SDGs in the IMF's multilateral surveillance instruments, shares (%), 2015-2024



Note: The percentages are calculated out of the total number of references to the SDGs in each document applying the SDG mapper methodology described in Borchardt et al. 2023.
2024: Partial results (only April releases).

Source: Author.

5.4.2 Bilateral surveillance mechanisms

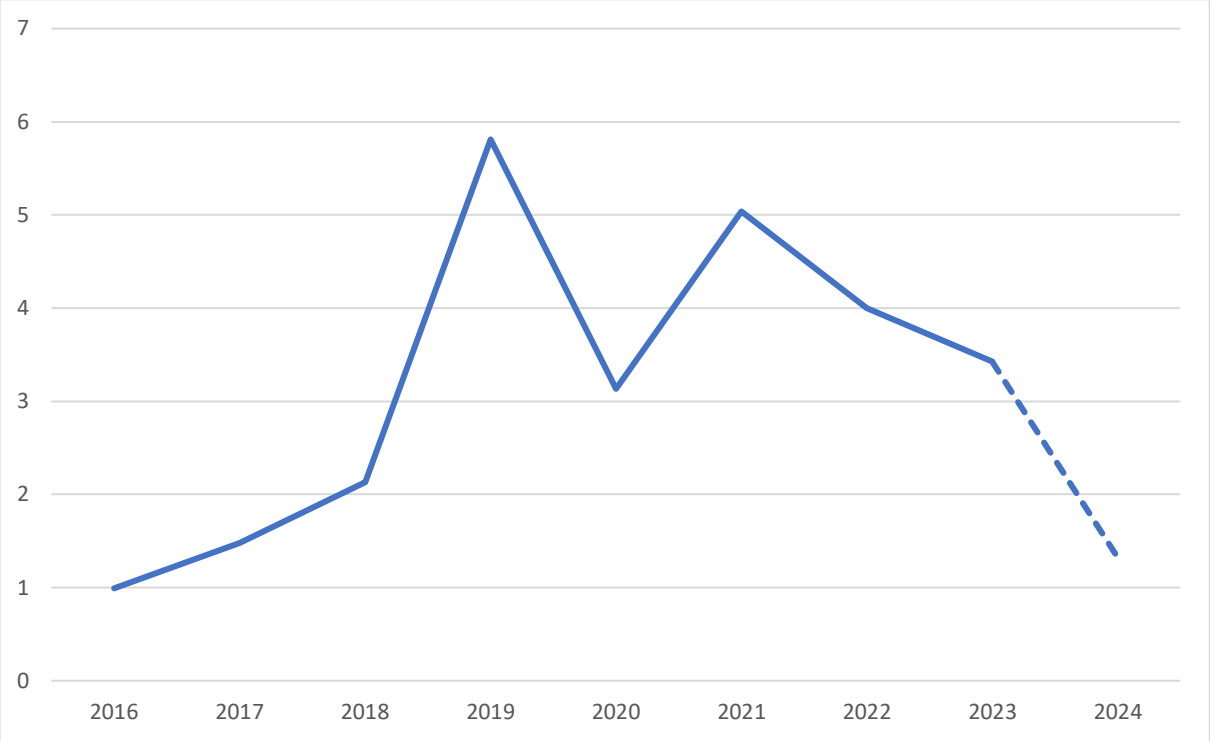
5.4.2.1 Article IV consultations

Overall, the number of explicit references to the SDGs (or related terms) in Article IV consultations has increased compared with the 2016 baseline year. The Index more than tripled compared to the baseline year, moving from a score of 1 in 2016 (95 references in 9579 pages) to 3.4 in 2023, the latest year with complete data available (397 references in 11,592 pages). As of the time of extraction in September 2024, based only on a partial list of Article IV consultations, there are indications that in 2024, the Index score might have declined, but remains above the baseline year. The results suggest a sharp increase in SDG references between 2016 and 2019 (especially between 2018 and 2019). The Index score was multiplied by almost 6 over that period. Yet, the trend was discontinued as of 2020, which corresponds to the outbreak of the COVID-19 pandemic before picking up again in 2021. The COVID-19 pandemic led to a temporary postponement of staff's work on Article IV consultations and mandatory FSAPs (IMF 2020). Overall, the number of explicit references to the SDGs in Article IV tends to be rather comparable in magnitude to the number of SDG references in the IMF's surveillance instruments (after controlling for the size of documents).

The analysis by clusters of SDGs reveals three main findings. First, our analysis confirms that the narrative in SDG IV consultations primarily focuses on the SDGs related to the economy, finance, and infrastructure (SDG 8, 9 and 10). In most years, these three SDGs capture more than 50% of all SDG references. Together with the two SDGs related to strong institutions and partnerships (SDG 16 and 17) – which include issues such as domestic resource mobilization, tax collection, financial transparency, money laundering, and strong and transparent public institutions – they capture on average throughout all the years two-thirds of all SDG references. Secondly, there has been a sharp increase in references to the SDGs related to climate action and the circular economy (SDG 12 and 13) between 2015 and 2024 and a minor increase of references to social SDGs. Compared with the baseline, references to climate action in Article IV consultations was multiplied by 10 in 2023 and 2024. In the latest years, climate-related SDGs capture more than 15% of all SDG references in Article IV consultations. References to social SDGs represent around a quarter of all SDG references in Article IV consultations (+ 3 p.p compared with the baseline year). Thirdly, references to nature-related risks (such as natural capital, resource depletion and biodiversity) are almost absent from the Article IV narrative and discussion across all years. SDG targets 8.1 on per capita economic growth[19] and SDG target 17.1[20] on domestic resource mobilization are the most often referenced SDG targets in the 2023 Article IV Consultations. By contrast, in 2023, we find no meaningful references to SDG 6 (Clean Water and Sanitation) and SDG 14 (Life Below water), respectively in 75 and 97 Article IV Consultations.

[19] "Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries"
[20] Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection

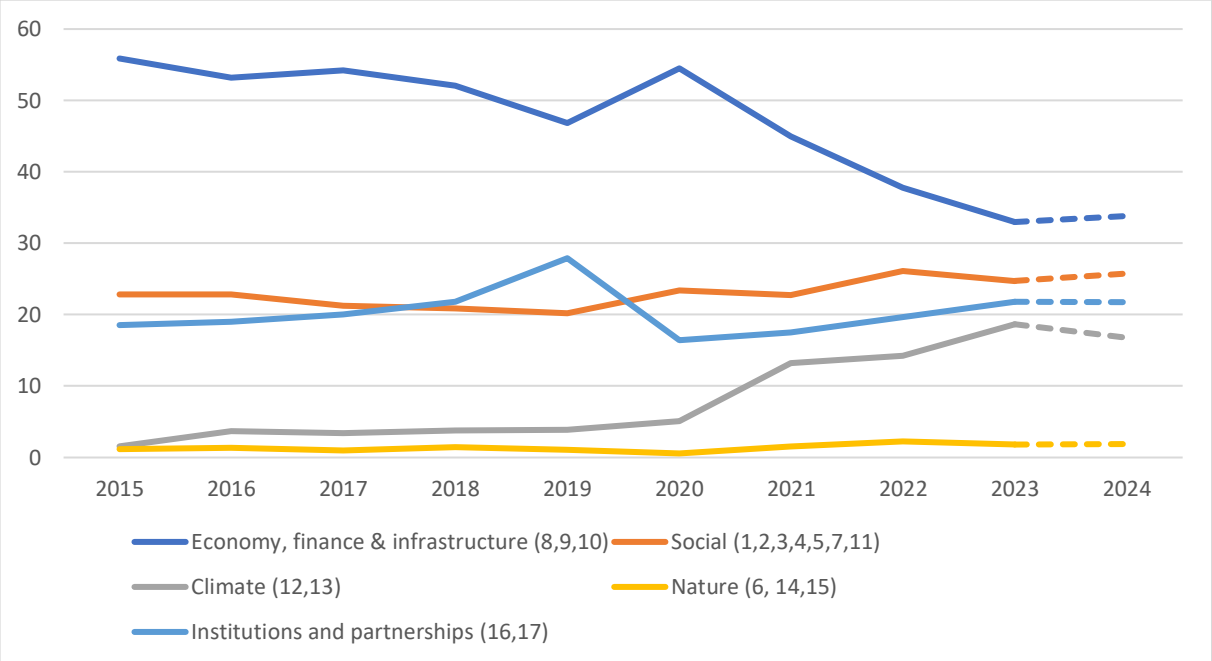
Figure 5.3 SDG references over time (general, index line chart)



Note: The Index corresponds to the sum of references to "SDG" "Sustainable Development Goal" and "2030 Agenda" divided by the number of pages of all Article IV consultation documents per year (multiplied by 100). 2024: Partial results.

Source: Author.

Figure 5.4 References to specific clusters of SDGs in Article IV consultation, shares (%), 2015-2024



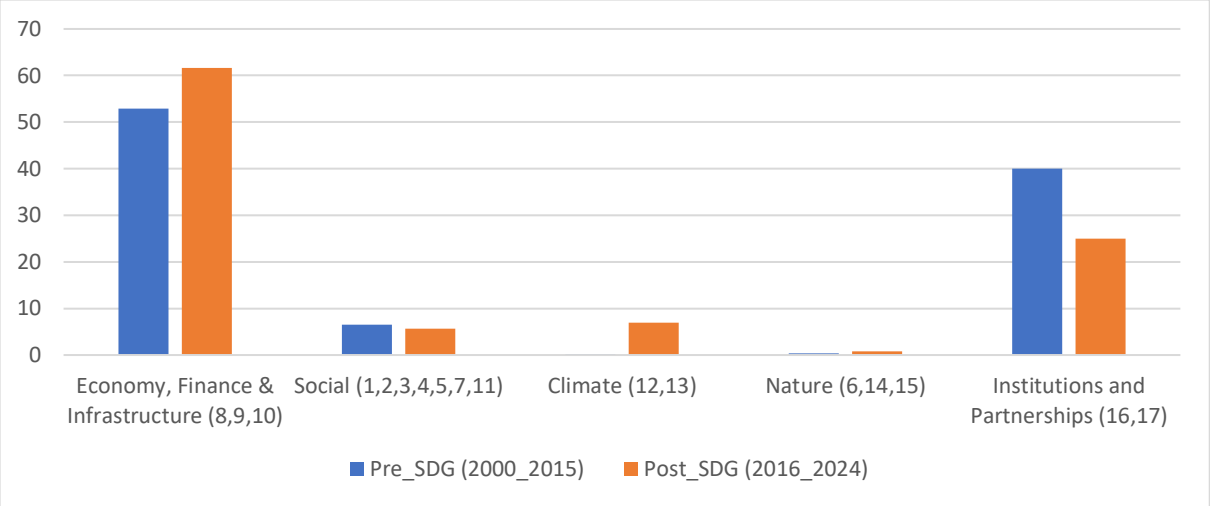
Note: The percentages are calculated out of the total number of references to the SDGs in each document applying the SDG mapper methodology described in Borchardt et al. 2023. 2024: Partial results.

Source: Author.

5.4.2.2 Financial Sector Assessment Program (FSAP)

By design, the Financial Sector Assessment Program (FSAP) is very much focused on countries' financial sector. We find no explicit references to the SDGs in FSAPs conducted over the period 2016-2024. Similar to the Article IV consultations, the SDGs related to the economy, finance and infrastructure and SDGs related to strong institutions and partnerships capture the lion's share of all SDG-related references in FSAPs. Yet, this share went down from more than 93% in the pre-SDG period to less than 87% in the post-SDG period which suggests a slight expansion in focus areas of FSAPs after 2015. Compared with the pre-SDG period, we find that references to climate-related SDGs in FSAPs have increased since 2016 and now surpass references to social SDGs. References to nature-related SDGs represent less than 1% of all SDG references in the post SDG period. Interestingly we find almost no references to SDG 5 (Gender Equality) and SDG 14 (Life Below Water) in FSAPs conducted after 2016. Around 50% of FSAPs conducted since 2016 make no references to climate and nature-related SDGs (SDG 6, 12, 13, 14 and 15).

Figure 5.5 References to specific clusters of SDGs in FSAPs, shares (%), pre-SDG period (2000-2015) versus post-SDG period (2016-2024)



Source: Author.

5.5 Discussion

- *The IMF surveillance system misses important elements that matter for long-term sustainable development, macroeconomic stability and coherence*

Overall, our main finding is that the IMF surveillance mechanisms still largely fail to meaningfully integrate all the dimensions of long-term sustainable development into the analysis of macro-critical risks. Our analysis confirms that the coverage of climate-change related issues in both bilateral and multilateral surveillance has expanded since 2015 – both in relative and absolute terms – perhaps boosted by the 2021 Comprehensive Review and other reforms at the IMF as also suggested in Ramos et al. (2021; IMF 2024c). Yet, references to climate-related SDGs and, even more so, nature-related SDGs still represent marginal focus areas in the IMF's surveillance mechanisms. This is also reflected in the indicators considered in Article IV consultations, which still very much focus on macro-economic fundamentals and

short-term economic and financial risks with limited consideration of long-term sustainable development perspectives.

Global shocks since 2020, including the COVID-19 pandemic and rising geopolitical tensions, might have impacted the narrative and focus of the IMF's surveillance instruments. Explicit references to the SDGs in the IMF's Article IV consultations peaked in 2019 before declining in the following years. While the sharp increase in explicit references to the SDGs in the IMF's multilateral surveillance observed in 2019 was maintained in 2020 and 2021, largely driven by the narrative in the IMF Fiscal Monitor around green and sustainable recovery, explicit references to the SDGs declined significantly as of 2022.

The absence of focus on nature-related risks across all the IMF surveillance instruments analyzed is particularly striking. For the first time in 2024, the IMF published a conceptual framework to assess nature-related macroeconomic and financial risks. This might pave the way for further integration of nature-related risks by policymakers and supervisors in their policy frameworks, as a complement to global efforts to strengthen the climate–nature nexus (Gardes-Landolfini et al. 2024). The same IMF note emphasizes the importance of strengthening the evidence-based system to address nature-related risks and policies.

- *The results are fairly stable across methodologies but can vary significantly across surveillance instruments and country*

Overall, the results are fairly robust across methodologies applied. When comparing the findings for 20 documents covering multilateral and bilateral surveillance, both the SDG Mapper and the AFD Prospector lead to the same results in terms of clusters of SDGs most often mentioned in that order: (1) Economy, finance and infrastructure; (2) Institutions and Partnerships; (3) Social ; (4) Climate and well below (5) Nature. When comparing the number of SDGs detected at least once across each document both methods also lead to very similar results (r=0,78), which confirms the findings obtained in Borchardt et al (2024). At the SDG level, the percentages of coverage obtained are very comparable (median difference in percentage points < 3) for SDG 2-6 and SDG 9-15. The SDG Mapper tends to find relatively more references to SDG 1 (No Poverty) which was also identified in Borchardt et al (2024). The SDG Mapper also shows higher detection for SDG 8 (Decent Work and Economic Growth) and SDG 16 (Peace, Justice and Strong Institutions) and fewer detections for SDG 7 (Affordable and Clean Energy) and SDG 17 (Partnerships for the Goals). The major difference between both methods is related to detections for SDG 17 (Partnerships for the Goals) with the SDG Prospector systematically over-detecting references to SDG 17 compared with the SDG Mapper. In our study, most references to SDG 17 are related to the detection of terms such as "improve tax collection, public financial management, macroeconomic stability, domestic revenues ad budget transparency" and as such SDG 17 tends to be in the top 5 of the SDGs most often detected in the IMF surveillance instruments across all years. As also emphasized in Borchardt et al (2024) further research might be needed to better understand divergence in detections for SDG 17 (Partnerships for the Goals) between the SDG Mapper and AI-trained models like the SDG Prospector in order to clarify concepts and models used to detect references to this goal.

There are important differences across the various IMF surveillance instruments. In general, the Fiscal Monitor and Article IV consultations tend to incorporate more explicit references to the SDGs and cover a wider set of goals compared with the World Economic Outlook, Global Financial Stability Report and the FSAPs. Yet, there are also significant variations over time depending on the thematic focus retained and global trends. For instance, the 2019 April Fiscal Monitor "Curbing Corruption" has a very strong focus on SDG 16 (Peace, Justice and Strong Institutions) whereas the 2023 April Fiscal Monitor "Toward Policy

Normalization" is much stronger on socio-economic goals, including SDG 1 (No Poverty), SDG 2 (Zero Hunger) and SDG 7 (Affordable and Clean Energy).

There are also important differences across country and over time which should be further understood and analyzed. Focusing on bilateral surveillance, we notice for instance, in the 2023 Article IV Consultations far more references to SDG 13 (Climate Action) in Barbados, the Republic of Moldova, Kenya, Rwanda, Costa Rica and Bangladesh compared to Libya, Luxembourg, Nicaragua and Colombia. Similarly, while SDG 15 (Life on Land) tends to be poorly covered across all IMF Article IV Consultations, there are relatively more references to this goal for Peru, Kenya, Rwanda, Costa Rica and Brazil. Interestingly, a country like Benin that has issued a sovereign financing instrument structured around the SDGs in 2021 (SDG bond) has seen a sharp increase in SDG coverage and references between its 2017 and 2022 Article IV Consultation. In comparison with other countries, the 2021 FSAP of Philippines and the 2024 FSAP of Indonesia make more references to climate and nature-related SDGs. While this is beyond the scope of this study, future studies could explore in greater detail the linkages between countries' characteristics (including structural characteristics, geographic location and income level among others) and SDG coverage in their Article IV consultations and FSAPs.

- *Toward the systematic inclusion of an SDG Indicator Annex in Article IV consultations?*

Data adequacy and quality is critical for effective surveillance for formulating policy advice. The 2022 Guidance Note for Surveillance under Article IV Consultations identifies fourteen elements which represent formal requirements for Article IV Staff Reports. These include "An assessment and classification of data adequacy for surveillance" and "A Statistical Issues Appendix, including a Table of Common Indicators Required for Surveillance" and a "A set of tables, including tables on selected economic indicators (SEI), fiscal, monetary, and Balance Of Payment, with recent developments and medium-term projections, and a table of Financial Soundness Indicators"(IMF 2022a). The 2021 CSR background paper (Box 2 in the paper) lists indicators related to "demographics, technology, inequality, and climate change that are available from existing internal and external sources", including those contained in the official SDGs indicator list (IMF 2022a). The IMF has a dedicated policy on the use of third-party data (IMF 2018). The IMF also explicitly encourages staff to include a table on SDGs when appropriate in Article IV Consultations (IMF 2022a), yet there are no detailed guidance to promote the systematic inclusion of an SDG Indicator table in Article IV Consultations.

Our proposal would be to incorporate systematically an indicator table and discussion on SDG progress and efforts across all Article IV Consultations. We would propose for this SDG indicator table to be included as an Annex. It could include seventeen headline SDG indicators (one per SDG). We propose the following seventeen indicators which together are very highly correlated with the overall SDG Index published by Sachs, Lafortune and Fuller (2024) (which includes 98 global indicators) (Annex section 5.7.2). These seventeen headline indicators have universal (or near universal) country coverage, tend to be available for multiple years and are collected and compiled by reputable organizations. By doing so, the IMF would mirror the example of the European Commission which has incorporated the SDGs since 2020 in the European Semester (the lead instrument for Union wide macroeconomic coordination) by including systematically a summary assessment of countries' progress on the SDGs and a dedicated SDG indicator annex (European Commission 2020).

Table 5.2 Proposed Headline Indicator for Inclusion in Article IV Consultations

SDG	Proposed Indicator	Source
SDG 1: No Poverty	Poverty headcount ratio at US$2.15/day	World Bank
SDG 2: Zero Hunger	Prevalence of undernourishment	Food and Agriculture Organization of the United Nations (FAO)
SDG 3: Good Health and Well Being	Life expectancy at birth	World Health Organization (WHO)
SDG 4: Quality Education	Lower secondary completion rate	United Nations Educational, Scientific and Cultural Organization (UNESCO)
SDG 5: Gender Equality	Share of women parliamentarians	Inter-Parliamentary Union (IPU)
SDG 6: Clean water and Sanitation	Population using at least basic sanitation services	WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply
SDG 7: Affordable and Clean Energy	Population with access to electricity	IEA, IRENA, UNSD, WB, WHO
SDG 8: Decent Work and Economic Growth	Adults with an account at a bank or other financial institution or with a mobile-money-service provider	Global Findex Database
SDG 9: Industry, Innovation and Infrastructure	Population using the internet	International Telecommunication Union (ITU)
SDG 10: Reduced Inequalities	GINI coefficient	World Bank
SDG 11: Sustainable Cities and Communities	Annual mean concentration of particulate matter of less than 2.5 microns in diameter	Washington University in St Louis
SDG 12: Responsible Consumption and Production	Production-based nitrogen emissions	United Nations Environment Programme (UNEP)
SDG 13: Climate Action	CO_2 emissions from fossil fuel combustion and cement production	Global Carbon Project
SDG 14: Life Below water	Protected marine Areas	Birdlife International et al.
SDG 15: Life on land	Red List Index of species survival	International Union for Conservation of Nature (IUCN) and Birdlife International
SDG 16: Peace, Justice and Strong Institutions	Corruption perception index	Transparency International
SDG 17: Partnerships for the Goals	Number of SDG Voluntary National Reviews presented at the United Nations	United Nations Economic and Social Council (ECOSOC)

Source: Author.

5.6 Concluding remarks

Our paper provides a methodology, detailed results and an analysis of the integration of the SDGs into the IMF surveillance system over the period 2015-2024. Our analysis suggests that the IMF surveillance system still largely focuses on short and medium term macro-critical risks and fails to meaningfully and systematically integrate long-term sustainable considerations, in particular nature-related risks. We do underscore, however, progress made by the IMF and member countries to monitor climate-related risks in the multilateral and bilateral surveillance system. Yet, in the context of multiple global crises and emergencies, it might be challenging for the IMF to sustain and even increase its focus on a wider range of long-term issues including the climate and biodiversity crises. To deepen the integration of sustainable development and long-term risks in the IMF's surveillance instrument, we recommend the systematic inclusion of an SDG Indicator Annex in all Article IV consultations as a complement to the indicators used currently to evaluate macroeconomic fundamentals and financial stability.

The approach and method described in this paper can hopefully be applied and adapted by scholars to systematically evaluate SDG alignment across a variety of organizations, public and private alike, in the coming years. Our proposed method suggests that the SDG framework and tools can be used to evaluate the integration of various forms of capital assets (natural, economic, social, and others) in policy mechanisms of International Financial Institutions and as such contributes to the broader efforts to promote inclusive wealth and intergenerational well-being. Future studies could analyze in greater detail the interlinkages between countries' characteristics and vulnerabilities and the scope and depth of SDG coverage in Article IV consultations and FSAPs. As the IMF surveillance mandate expands, new approaches, models and skills might be needed within the Fund as well as new forms of cooperation with scientific networks to monitor a wider range of macro-critical risks and provide effective policy advice to member countries and world leaders.

5.7 Annex

5.7.1 Detailed tables by SDG for Figures 5.2, 5.4 and 5.5

Table 5.3 Additional information *for Figure 5.2, References to specific clusters of SDGs in the IMF's Multilateral Surveillance instruments, shares (%), 2015-2024*

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SDG 1	8.6	5.5	5.3	7.2	5.2	7.9	9.8	8.9	6.6	8.0
SDG 2	0.8	3.6	2.2	0.8	0.4	0.5	4.4	2.9	4.4	0.7
SDG 3	3.1	1.4	4.8	1.9	1.1	5.5	7.4	2.9	1.6	1.8
SDG 4	0.7	0.8	2.7	3.2	2.3	1.2	3.5	0.8	0.2	1.3
SDG 5	0.0	0.0	0.7	0.3	0.0	0.3	0.4	0.1	0.2	0.2
SDG 6	0.0	0.0	0.4	0.2	0.1	0.6	0.1	0.2	0.0	0.0
SDG 7	1.0	4.1	0.4	3.1	3.3	7.5	2.0	8.3	12.4	4.1
SDG 8	65.4	39.1	45.3	37.3	23.2	28.2	37.7	23.7	24.7	30.6
SDG 9	4.9	19.5	2.9	15.9	3.5	5.1	6.3	2.8	3.6	24.8
SDG 10	3.0	10.0	11.7	6.2	2.8	7.2	6.2	4.3	2.0	5.4
SDG 11	0.1	0.1	0.0	0.3	0.2	1.0	0.2	0.5	0.1	1.1
SDG 12	1.1	0.8	1.0	0.5	6.7	3.3	1.6	6.4	3.8	0.8
SDG 13	2.2	3.2	12.6	1.9	15.1	22.9	13.2	29.2	30.4	10.1
SDG 14	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
SDG 15	0.1	0.4	0.2	0.2	0.6	0.7	0.3	0.1	0.2	0.3
SDG 16	2.8	2.4	1.7	7.9	27.0	3.7	3.1	2.5	2.7	3.1
SDG 17	6.2	9.1	7.9	13.2	8.6	4.3	3.9	6.3	7.4	7.8

Table 5.4 Additional information *for Figure 5.4, References to specific clusters of SDGs in Article IV consultation, shares (%), 2015-2024*

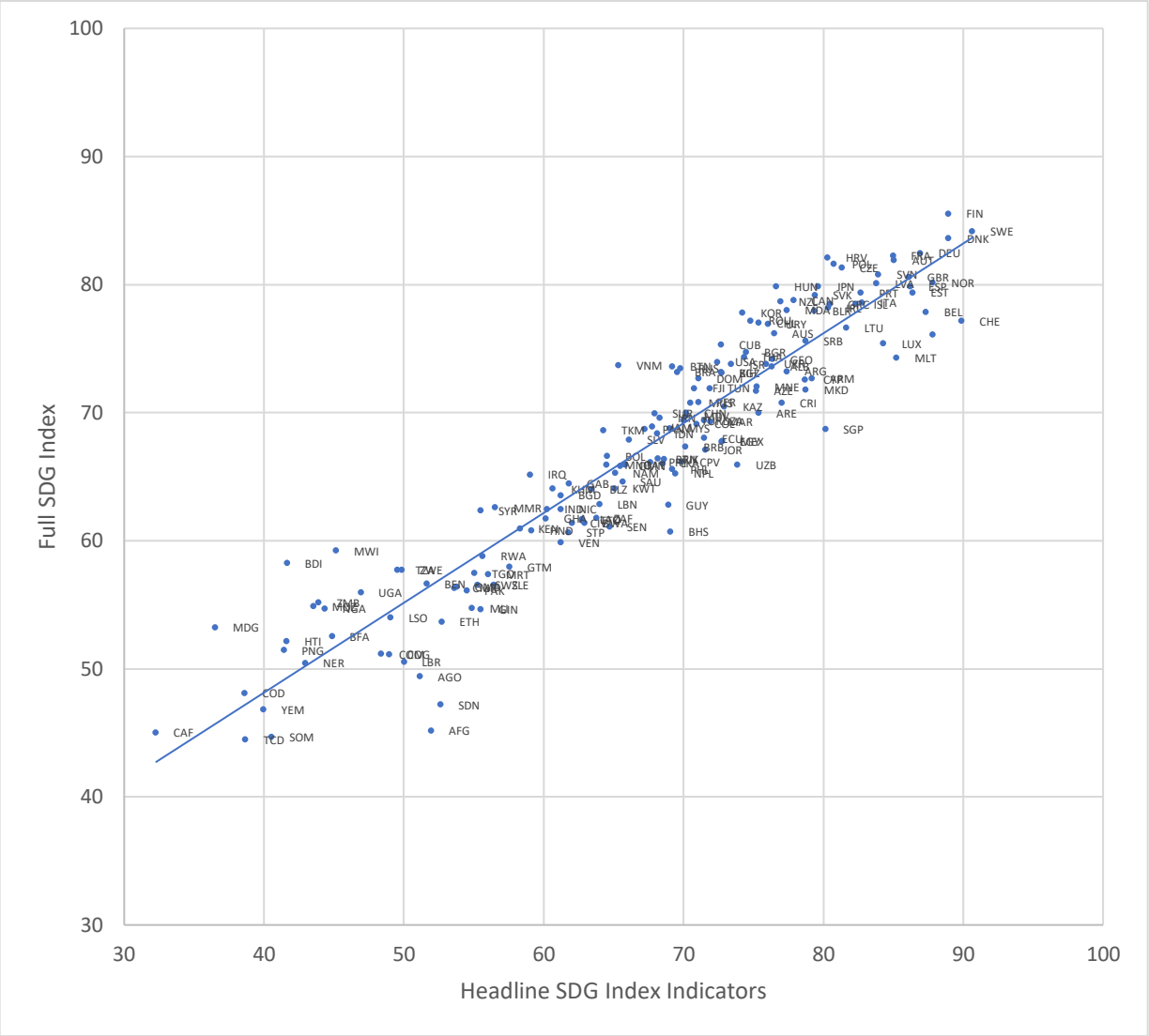
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SDG 1	10.1	10.5	10.2	9.4	10.2	12.3	10.2	9.4	10.0	11.1
SDG 2	1.7	1.9	1.4	1.2	1.6	0.6	1.2	3.7	2.2	2.3
SDG 3	3.7	2.8	2.5	2.0	1.7	4.5	2.9	2.1	1.2	1.4
SDG 4	2.7	2.9	2.7	3.1	2.9	2.6	3.2	2.7	2.9	2.9
SDG 5	0.8	0.7	0.6	1.2	0.8	0.6	0.5	0.5	1.1	1.3
SDG 6	0.5	0.6	0.5	0.5	0.5	0.2	0.5	0.6	0.5	0.5
SDG 7	2.4	2.6	2.5	2.3	1.6	1.7	3.3	6.3	5.7	5.3
SDG 8	47.9	43.3	45.0	43.3	39.1	44.8	37.0	30.2	25.3	26.3
SDG 9	2.2	2.9	2.9	3.1	2.8	4.0	3.7	2.8	2.9	3.0
SDG 10	5.9	7.1	6.3	5.7	5.0	5.8	4.2	4.8	4.8	4.5
SDG 11	1.5	1.3	1.3	1.7	1.4	1.0	1.4	1.3	1.6	1.5
SDG 12	0.5	0.5	0.5	0.4	0.7	0.7	1.3	1.5	1.4	1.5
SDG 13	1.0	3.2	2.9	3.4	3.2	4.4	12.0	12.8	17.3	15.3
SDG 14	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.2	0.2	0.2
SDG 15	0.5	0.6	0.5	0.7	0.5	0.4	1.0	1.5	1.2	1.2
SDG 16	4.9	5.9	7.0	8.7	14.2	8.2	8.0	9.5	10.5	11.2
SDG 17	13.6	13.0	13.0	13.1	13.7	8.2	9.5	10.2	11.3	10.6

Table 5.5 ***Additional information for Figure 5.5, References to specific clusters of SDGs in FSAPs, shares (%), pre-SDG period (2000-2015) versus post-SDG period (2016-2024)***

Goal	Pre_SDG	Post_SDG
SDG 1	3.8	2.8
SDG 2	0.5	0.6
SDG 3	0.7	0.9
SDG 4	0.6	0.3
SDG 5	0.0	0.0
SDG 6	0.0	0.2
SDG 7	0.0	0.3
SDG 8	41.0	49.1
SDG 9	1.5	2.0
SDG 10	10.4	10.4
SDG 11	0.9	0.7
SDG 12	0.2	0.9
SDG 13	0.0	6.0
SDG 14	0.0	0.0
SDG 15	0.4	0.7
SDG 16	35.0	21.2
SDG 17	5.0	3.7

5.7.2 Correlation Matrix (headline SDG indicators and SDG Index)

Figure 5.6 Correlation between the full SDG Index and the reduced SDG Index using the 17 headline indicators



Note: Full SDG Index scores exclude the 17 headline indicators. Detailed methodology available in (Sachs, Lafortune, and Fuller 2024). Coefficient of correlation = 0.94.

Source: Author.

5.7.3 Sensitivity analysis – against AFD Prospector

	Article IV Consultations																				FSAPS				Multilateral											
	2023		2023		2023		2017		2022		2016		2023		2018		2022		2016		2023		2018		2023		2016		2023		2016		2019		2023		2016		2023	
	Angola		Albania		Australia		Benin		Benin		Mexico		Mexico		Uzbekistan		Uzbekistan		Indonesia		Indonesia		Brazil		Maldives		WEO		WEO		Monitor		Monitor		Monitor		Stability		Stability	
SDGs	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.	AFD	Borchardt et al.
1. No poverty	1.0	7.3	1.4	11.6	0.0	4.6	7.7	8.9	3.6	15.1	4.9	19.3	1.1	4.0	0.0	2.8	1.9	9.9	0.0	6.7	0.0	7.6	1.4	8.0	1.0	1.3	0.2	4.7	0.6	4.8	0.0	6.2	0.5	5.2	4.1	22.0	0.0	3.2	0.0	2.8
2. Zero hunger	2.6	3.0	0.0	0.0	0.0	0.5	9.5	3.9	6.2	5.3	0.7	0.7	0.3	0.3	3.0	2.1	2.4	2.8	0.5	0.0	0.8	1.7	1.4	0.0	0.0	1.5	0.6	0.4	2.0	3.6	0.0	0.0	0.5	0.0	3.3	8.9	0.0	0.0	0.0	2.8
3. Good health and well being	1.3	0.0	1.1	0.0	2.3	2.0	1.1	0.4	4.8	8.5	2.1	3.3	0.8	1.6	1.8	0.7	1.0	0.7	2.2	2.5	0.4	0.0	1.4	1.3	0.0	0.0	0.3	1.1	0.3	1.2	0.3	1.3	2.0	1.1	1.2	4.7	2.0	1.6	0.0	0.0
4. Quality education	1.3	1.3	2.2	8.8	1.9	1.0	2.6	3.1	2.6	2.8	3.5	0.0	1.6	0.8	1.8	0.7	1.4	0.7	1.1	5.8	1.2	4.6	2.7	0.0	1.0	0.0	0.0	0.2	0.3	0.4	0.3	0.4	1.8	2.7	0.0	0.0	0.0	0.0	0.0	0.0
5. Gender equality	1.3	2.6	7.9	0.0	0.4	0.0	0.7	0.0	0.2	0.0	4.9	0.0	2.6	1.6	0.6	1.4	0.5	2.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
6. Clean water and sanitation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.1	1.3	1.4	0.0	0.0	0.3	1.2	2.1	1.0	2.1	0.0	0.8	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
7. Affordable and clean energy	15.5	0.4	6.8	2.7	3.8	2.5	1.1	0.8	8.0	1.7	17.5	2.7	13.5	4.6	7.7	0.7	10.0	2.8	11.8	1.7	16.2	2.9	2.7	0.0	1.0	0.0	16.4	14.9	14.9	4.4	4.4	0.6	5.6	0.2	19.6	13.6	15.7	0.0	15.1	16.7
8. Decent work and economic growth	17.5	24.5	40.9	32.0	34.0	20.7	29.7	42.5	15.6	26.1	37.1	44.0	24.0	17.4	45.0	57.9	27.1	44.0	43.0	42.5	36.4	34.9	47.3	61.3	26.5	41.2	54.8	56.9	36.6	50.8	40.5	18.4	13.5	7.4	11.0	14.1	53.6	58.7	29.1	34.7
9. Industry, innovation and infrastructure	8.9	1.7	1.8	7.5	6.4	7.1	3.7	3.1	3.9	1.5	4.9	1.3	3.4	0.3	1.8	3.5	1.9	1.4	7.5	0.0	5.1	2.1	5.4	5.3	6.1	0.0	3.0	3.0	7.0	3.2	12.2	61.3	5.4	1.3	0.8	2.1	2.6	0.0	0.6	2.8
10. Reduced inequalities	2.0	5.2	13.6	4.8	4.5	4.6	4.4	5.8	2.8	2.8	4.9	10.0	1.6	2.9	7.7	5.5	7.1	5.7	1.6	9.2	1.6	5.0	1.4	4.0	2.0	7.4	3.9	4.7	2.8	1.2	6.1	6.0	4.5	2.2	16.3	4.2	0.7	14.3	6.1	13.9
11. Sustainable cities and communities	1.0	0.4	0.0	0.7	5.3	4.6	0.0	0.0	0.7	0.9	0.7	1.3	0.0	0.8	0.0	1.4	0.0	0.7	0.0	0.0	0.0	0.8	0.0	0.0	1.0	2.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0
12. Responsible consumption and production	0.3	0.0	0.0	0.0	3.4	0.5	1.5	0.0	1.0	0.9	0.0	2.0	4.7	4.3	1.8	0.7	0.5	0.7	1.6	0.0	3.6	1.7	0.0	2.7	4.1	0.0	4.5	1.7	3.4	4.0	1.4	0.6	2.0	0.4	3.3	1.6	0.7	0.0	0.6	0.0
13. Climate action	15.8	18.5	5.0	10.9	9.4	14.7	0.4	0.0	7.6	13.8	0.0	0.0	14.5	15.5	3.0	0.7	2.9	5.0	1.1	0.0	10.7	22.3	0.0	0.0	24.5	16.2	5.4	8.1	6.2	10.8	1.7	0.4	2.5	2.1	6.1	6.8	1.3	3.2	5.6	12.5
14. Life below water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15. Life on land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	1.5	0.0	0.7	0.5	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16. Peace, justice and strong institutions	8.6	13.3	5.4	15.7	15.5	29.8	8.8	11.6	13.5	7.4	4.2	11.3	24.0	39.3	5.9	4.1	15.2	14.9	0.5	1.7	2.8	2.5	16.2	14.7	20.4	29.4	1.5	1.1	2.5	3.6	1.7	1.3	36.3	70.5	1.2	4.7	0.7	11.1	11.2	5.6
17. Partnerships for the goals	22.8	21.9	14.0	5.4	13.2	7.6	28.9	18.9	27.3	10.6	13.3	3.3	7.4	4.0	18.9	15.9	27.1	5.7	29.0	28.3	20.6	8.8	18.9	2.7	12.2	0.0	9.2	3.0	22.8	12.0	31.1	3.6	25.1	6.9	33.1	16.8	22.9	7.9	28.5	8.3
Number of SDGs detected	*14*	*12*	*11*	*10*	*12*	*13*	*13*	*12*	*16*	*15*	*13*	*12*	*14*	*16*	*13*	*15*	*14*	*15*	*11*	*10*	*12*	*13*	*11*	*8*	*11*	*7*	*12*	*13*	*14*	*12*	*11*	*11*	*13*	*12*	*11*	*12*	*9*	*7*	*9*	*9*

Source: Author, based on Borchardt et al. 2023 and Jacouton et al. 2022 and IMF website.

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Chapter 6 Synthesis, Policy Implications and Future Research

> "The crisis consists precisely in the fact that the old is dying and the new cannot be born; in this interregnum a great variety of morbid symptoms appear."
>
> **Antonio Gramsci**, Italian philosopher and politician, in "Letters from prison", 1929.

> "[…] the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back. […] But, soon or late, it is ideas, not vested interests, which are dangerous for good or evil."
>
> **John Maynard Keynes**, "The General Theory of Employment, Interest, and Money" (final paragraph), 1936

6.1 General synthesis

6.1.1 Main conclusion

The overarching objective of this Ph.D. dissertation was to understand the successes and failures of the adoption of the SDGs in 2015, at the national and global level. We recall our original main research question: Why do most Nation-States individually and collectively have so far failed to implement the Sustainable Development Goals?

Although notable progress has been made in certain countries, regions, and specific SDGs, this research was driven by a widely shared concern that, a decade after their adoption, the world remains significantly off track in achieving the SDGs by 2030. As outlined in the introduction, the adoption of the SDGs in 2015, which include 169 targets and over 240 indicators spanning socio-economic development, and environmental sustainability, represented a critical milestone for the international community. It also represented an exceptionally complex governance challenge for policymakers at all levels. Surely, the COVID-19 pandemic and various geopolitical crises impacted negatively progress toward the SDGs and some goals, such as SDG 13 (Climate Action), need longer timeframes as recognized in the Paris Climate Agreement oriented towards mid-century. Still the existing literature reflects a strong consensus that the realization of the SDGs is both financially viable and technologically achievable on a global scale. This

Ph.D. dissertation is grounded in the hypothesis that the lack of progress on the SDGs is not primarily due to financial constraints and the lack of available technologies at the global level, but it is rather due to deficiencies in global cooperation for sustainable development and the lack of political leadership from certain influential UN member states to mobilize and share resources in pursuit of collective objectives.

To answer our original research question and test our hypothesis we used primarily empirical research methods, mainly statistical and quantitative approaches, complemented by case studies and direct observations over the period 2016-2025. This empirical research leveraged and expanded on two economic theories, notably by the Inclusive Wealth (IW) and Global Public Goods (GPGs) theory, that emphasize respectively the importance of long-term investments in various forms of capital (via so-called genuine saving rates) and the role of collective action to finance and safeguard GPGs and address negative externalities (or so-called negative spillover effects). Our research adopted the vision and proposition made by the multilateralist theory in the field of geopolitics and international relations, which focuses on the set of international norms, rules, mechanisms and organizations that can promote effective global cooperation and geopolitical stability. In each of our four chapters we described our empirical and theoretical contributions to these theories. Our contribution to the literature is threefold:

(i) we present new *empirical evidence* on global cooperation for sustainable development, covered across all chapters;
(ii) we develop novel *conceptual frameworks* to assess countries' support for UN-based multilateralism and the SDGs (Chapters 2 and 4); and
(iii) we provide new open-access *databases* to track countries' engagement with UN-based multilateralism (Chapter 2) and their commitment to the SDGs (Chapter 4).

The principal conclusion of this Ph.D. dissertation is that the world has not achieved as much progress in implementing the SDGs as it could have achieved due in large part to failures in global governance systems, which support our original hypothesis. A key observation is the persistent lack of sustained leadership and insufficient support for UN-based multilateralism and the SDGs by the United States (US) federal government, which continues to hold a uniquely influential position in the global economic and political system. This inconsistency and preference for unilateral policy approaches have substantially weakened collective international efforts to advance sustainable development. These dynamics undermined the trust and multilateral cooperation necessary for achieving the SDGs, promoting global peace and security, and facilitating the negotiation and implementation of coordinated and ambitious actions for sustainable development.

Our analysis finds that, especially since the early 1990s, successive US federal administrations have systematically eroded the legitimacy and effectiveness of UN-based multilateralism. In contrast to other major powers (including China, the EU, and India), the US has demonstrated weaker leadership since 2015 in advancing the implementation of the universally endorsed SDGs. This trend has culminated in explicit and open opposition to both the SDG agenda and the Paris Climate Agreement in the first half of 2025. This position is in stark contrast to the historical role played by the US in the establishment of the United Nations system after World War II (WWII). It is also in stark contrast with the strong support for the SDGs expressed by subnational governments, civil society, and other non-state actors within the US, which suggests a growing disconnect between federal policy orientations and broader societal commitments to sustainable development.

We reject the hypotheses that failures to implement the SDGs would be primarily due to low public support for global cooperation and sustainable development, limited engagement of most Nation-States with the SDGs, or a fundamental lack of available technologies or financing at the global level to achieve sustainable development. We find that ten years after their adoption, commitment for the SDGs remains high with 190 countries out of 193 having submitted their action plans for sustainable development via so-called Voluntary National Reviews (VNRs). Multiple subnational entities (regions, provinces and cities) also submitted Voluntary Local reviews (VLRs). East and South Asia stand out as the region that progressed the most on the SDGs since 2015.

We, however, identify persisting gaps related to the integration of the SDGs into the operations of national governments (Chapter 4) and international organizations, focusing on the IMF as a critical actor for financial stability, debt sustainability, and policy advice for inclusive and sustainable economic growth (Chapter 5). In the short term, we acknowledge that sustaining progress and cooperation may be especially challenging, particularly in light of the explicit opposition to the 2030 Agenda and the SDGs expressed by the US in March 2025. This situation may call for innovative approaches by the international community to maintain momentum toward sustainable development.

6.1.2 Key findings by chapter

Chapter 2 presents a new database and Index of countries' support for UN-based multilateralism using six headline indicators and concludes that a few powerful and influential UN member states (notably the US and some of its allies) showcase low and declining support for global cooperation. We find that most of the 193 UN member states are committed to UN-based multilateralism, including some of the countries that are most vulnerable to collective inaction on mitigating and adapting to climate change such as Small Island Developing States (SIDS). By contrast, the fact that the US and some of its allies rank last suggests that the concept of "rules-based international order" promoted by the US administration has a different meaning and perhaps even an opposite meaning to the concept of "UN-based multilateralism" and raises the fundamental question of whom sets the rule and how (through what process, unilateral or multi-lateral).

We find that the US support for UN-based multilateralism declined throughout the second half of the 20th century and this decline further accelerated in the late 1980s and early 1990s with the increased use of Unilateral Coercive Measures (UCMs) and permanent or temporary withdrawal from UN organizations. The US vote at the UN General Assembly in the 1950s used to be aligned more than 80% of the time with the international community; this rate has dropped to less than 25% in recent years. As of 2025, ten years after the adoption of the SDGs, the US is one of only three UN member states with Haiti and Myanmar that never contributed to the UN VNR process, the formal UN process whereby countries present their action plans and progress on the SDGs to the international community. While the US had been dragging its feet on the implementation of the SDGs since 2015, it officially became the first country in the world in March 2025 to oppose the 2030 Agenda and the SDGs at the United Nations. By contrast, our findings suggest that other major powers, including China, Brazil, and India, demonstrated much stronger leadership for the SDGs and UN-based multilateralism.

Chapter 3 investigates countries' performance on the SDGs both cross-sectionally and over time, with a particular focus on identifying the key statistical drivers of SDG progress between 2015 and 2024 at the national level. The analysis reveals that while high-income countries tend to perform better on socio-

economic goals and those related to strong institutions, they also generated disproportionately large negative international spillovers notably through unsustainable patterns of consumption. Despite global trends indicating that the world is not on track to meet the SDGs by 2030, especially the goals related to climate action and biodiversity, our findings highlight that countries in ASEAN, South Asia, the BRICS, lower-middle-income countries (LMICs), and the East Asia and Pacific region (including China) have achieved the most rapid progress on the SDGs since 2015.

The econometric analysis identifies five statistically significant factors correlated with SDG progress, after controlling for baseline SDG performance in 2015: (1) the presence of peaceful societies (absence of major military conflicts); (2) countries' willingness and capacity to engage constructively with the multilateral system, proxied by a composite indicator capturing participation in VNRs, support for UN-based multilateralism and the absence of unilateral sanctions targeting them (financial, trade-related, or otherwise); (3) fiscal space for investment in sustainable development, measured by the ratio of public interest payments to investment expenditure; (4) institutional factors including public perceptions of governmental commitment to citizen well-being and the business environment; and (5) structural characteristics such as large internal markets, captured through population size. Importantly, the first three of these factors are, at least in part, shaped by the quality of global cooperation, underscoring the centrality of international governance and solidarity in driving national-level SDG outcomes.

Chapter 4 explores national commitment to the SDGs and the extent to which the SDGs had a *steering effect* on both public discourse and policy formulation. Drawing on an analysis of 75 countries and one regional entity (the EU), the chapter provides robust evidence that goal-based development, as a complement to rules-based development, has a significant influence on national narratives and policy agendas. On average, countries demonstrating stronger political and rhetorical commitment to the SDGs also tend to exhibit higher performance on the SDG Index.

Our trend analysis reveals that, compared to the early implementation phase of the SDGs (2016–2019), the discursive *steering effect* of the goals has increased in G20 declarations and communiqués in the period following the COVID-19 pandemic and amidst intensifying geopolitical tensions, including the 2022 war in Ukraine. This was particularly the case during the G20 Presidencies of Indonesia (2022) and India (2023). These findings contradict our initial hypothesis because we anticipated a decline in the discursive effect of long-term development goals such as the SDGs as the attention of policymakers was shifting toward urgent health and security challenges. However, we did observe a decline in the SDGs' discursive prominence within the EU's political priorities and strategic orientations for the 2024–2029 period (as compared to 2019–2024), a shift likely attributable to the EU's growing focus on security, defense, economic competitiveness and strategic autonomy in the aftermath of the war in Ukraine.

At the national level, the analysis shows that rhetorical commitment to the SDGs does not always translate into "hard integration" of the goals into public sector management systems, including budgetary frameworks, sovereign financing instruments, audit mechanisms, and monitoring and evaluation practices. The chapter identifies a set of emerging best practices in SDG governance among high-performing countries, notably in the areas of long-term investment planning and stakeholder engagement. These are further illustrated through detailed case studies of Benin, Finland, Uzbekistan, and the EU.

Chapter 5 discusses the role of international organizations in facilitating collective action toward the achievement of the SDGs, with a particular emphasis on the International Monetary Fund (IMF). The

chapter underlines the IMF's critical role in safeguarding global financial stability, promoting debt sustainability, and providing policy advice that supports inclusive and sustainable development pathways. Since the adoption of the SDGs in 2015, the IMF has gradually incorporated SDG-related considerations into a range of instruments and analytical outputs, including its assessments of SDG financing gaps in developing countries and other instruments and analytical papers.

This chapter focuses on one specific institutional mechanism, the IMF's multilateral and bilateral surveillance, as a central tool for monitoring and providing both global and country-specific policy guidance to manage systemic macroeconomic risks. Building on advanced text-mining techniques, our analysis reveals a significant increase in the IMF's attention to climate-related macroeconomic risks within its surveillance processes. However, nature-related risks, including biodiversity loss and the degradation of natural ecosystems, remain largely unaddressed in the IMF's surveillance mechanisms. This gap persists despite growing evidence that biodiversity and nature-related risks can pose significant threats to macroeconomic stability at both national and global levels.

The limited integration of nature-related risks might be explained by the fact it is only recently that scholars and practitioners have argued that they should be considered in macroeconomic policy frameworks, as well as to existing institutional capacity constraints, including the need for broader expertise in environmental economics and interdisciplinary risk assessment within international financial institutions, including the IMF. Based on these findings, the chapter recommends the systematic inclusion of an "SDG Indicator Annex" in all Article IV bilateral consultations. Such an annex would ensure that surveillance mechanisms incorporate a more comprehensive set of systemic risks, including risks related to the degradation of terrestrial and marine ecosystems, using the universally endorsed SDGs as a normative and analytical framework for policy evaluation and advice. Also, the IMF should continue to broaden the scope of its expertise internally and foster cooperation with biodiversity scientists and experts at all levels.

6.2 An overarching framework for achieving sustainable development in the 21st century

The following sections use essential research from this Ph.D. dissertation to develop both theoretical insights and practical recommendations for strengthening global cooperation for sustainable development by 2030 and beyond. We argue that the disciplines of economics, but also political economy and international relations must not only provide accurate diagnoses of systemic challenges ("positive" contributions) but also develop prescriptive frameworks and actionable pathways conducive to peace and effective multilateral cooperation ("normative" contributions). In the field of economics, Ricardo Hausmann (Cambridge University) recently argued that economists became over time "auditors", due to the overwhelming trust within the field on the ability of markets to lead to efficient outcomes and should instead aim to become "architects" capable to solve complex contemporary problems (Hausmann, 2025). We echo this concern and argue that economists and IR specialists should aim to mirror the logic of other applied disciplines, such as public health, where diagnosis is intrinsically linked to treatment and improved outcomes.

As of 2025, UN-based multilateralism faces a profound crisis and stands at a potential turning point. The international community is facing multiple crises including military and security crises; the acceleration of

climate change and the degradation of critical ecosystems and new technologies disrupt social processes in many parts of the world. These challenges cannot be addressed without robust global collaboration and shared solutions. We start by outlining the principal factors that have contributed to what we view as a missed opportunity over the past 35 years to establish a more effective and equitable global order which is an essential precondition for realizing the SDGs. Building on this analysis, we then present a series of theoretical and operational proposals aimed at fostering sustainable development in an increasingly multipolar world.

6.2.1 Thirty-five years (1990-2025) of missed opportunities to advance goal-based development and build an effective world order

The ongoing transition from a unipolar to a multipolar international system is fundamentally reshaping global dynamics. The unipolar order in place since the end of the Cold War, with the US and its allies at the center, is gradually transitioning to a multipolar configuration characterized by the emergence of multiple centers of economic and geopolitical powers. As discussed in the Introduction Chapter, the increasing shares of global output accounted for by China, India, and, to a growing extent, regions such as Africa and Latin America, lead to a reconfiguration of the global balance of power and geopolitical influence (Sachs, 2024). As John Mearsheimer predicted in the early 2000s, such systemic rebalancing away from hegemonic dominance leads to increased instability and systemic risk (Mearsheimer 2001).

Throughout history, periods of major upheaval, such as the one we argue defines the current era, have often been followed by brief windows of plasticity, during which societal structures and institutional arrangements can be meaningfully reformed or reshaped, before settling once again into patterns of rigidity or ossification (MacAskill 2022). This was surely the case in 1648 with the “Peace of Westphalia” which ended the Thirty-Years War in Europe and established the Nation-States at the center of decision making and international relations (Croxton 1999). This was also the case in 1920 and 1944 when the League of Nations and systems of the United Nations were established in the aftermath of World War I (WWI) and WWII. In the aftermath of WWII, US President Roosevelt and his wife Eleanor Roosevelt, who was elected Chair of the Commission on Human Rights in 1946, played a leadership role in establishing the UN system and preparing the 1948 Universal Declaration of Human Rights. Our findings suggest that gradually the US started acting against the system it helped to set up in the aftermath of WWII, particularly since the introduction in the 1970s of the New International Economic Order (NIEO) promoted by developing countries and even more so after the collapse of the Soviet Union in the early 1990s.

The early 1990s, marked by the dissolution of the Soviet Union and the end of the bipolar order, offered a historic opportunity to profoundly reshape the international system. In retrospect, however, this moment was largely a missed opportunity. At the time, Francis Fukuyama (1989) famously argued that this might be the “End of History,” while Samuel Huntington (1993) warned of an impending “Clash of Civilizations”. Later Mearsheimer (2001) presented his theory of the “Tragedy of Great Power Politics,” anticipating that the rise of China would not happen peacefully. Mearsheimer’s argument builds on and expands upon the concept of the “Thucydides Trap,” (named after the Greek historian Thucydides) who argued in his account of the Peloponnesian War that the war was triggered by Sparta’s fear of Athens’ growing power. The concept emphasizes the increased likelihood of tensions and conflicts when a rising power challenges an established hegemon.

Considering the current state of global affairs, Huntington's and Mearsheimer's perspectives appear to have offered more accurate predictions of the trajectory of international relations over the past three and a half decades. As of 2025, the Bulletin of Atomic Scientists' Doomsday Clock stands closer to midnight than at any point since WWII, underscoring the direct and indirect threats to sustainable development examined throughout this dissertation. Yet, despite their explanatory power, neither Huntington's nor Mearsheimer's frameworks provide a compelling theory for advancing lasting peace in the nuclear era or fostering effective global cooperation on sustainable development in the era of the Anthropocene. As for other theories, the realist theory can become a self-fulfilling prophecy when endorsed by political and technical elites (Vasquez 1993; Houghton 2009; Kliem 2021).

Our assessment, presented notably in Chapter 2, demonstrates that since the 1990s the US, as the international hegemon, has pursued a strategy oriented toward comprehensive military and economic dominance. This strategy has been characterized by direct military interventions, a sharp escalation in the use of unilateral coercive measures (UCMs), the weaponization of the US dollar, and systematic resistance to UN-based multilateralism and sustainable development initiatives. The record of approximately seventy covert and overt regime-change operations during the Cold War is well documented (O'Rourke 2018). Following the end of the Cold War, the US embarked on a series of direct military interventions that violated international law and the UN Charter, particularly the principle of non-interference in the domestic affairs of sovereign states (as famously reported by General Wesley Clark in 2021[21]). In 2002, the Bush Administration unilaterally withdrew from the Anti-Ballistic Missile (ABM) Treaty, which was an important cornerstone of strategic stability since the 1970s by constraining the deployment of long-range missile systems near rival powers' borders.

Although the US federal government argues that it promotes a "rules-based international order," our analysis suggests that it is in fact the least aligned with UN-based multilateralism, as reflected in indicators such as treaty ratification, UN membership practices, and voting behavior in the UN General Assembly. By 2015, scholars estimated that the US maintained nearly 800 overseas military bases across more than 70 countries and territories (Vine 2017; 2020), which is more than any other great powers. In comparison, the combined total number of foreign military bases operated by the United Kingdom, France, and the Russian Federation was fewer than 30 (Vine 2017). In 2024, US military expenditure was equivalent to the combined defense spending of the next nine highest-spending countries (SIPRI 2024). Accordingly, we adopt a more cautious position than scholars such as Ikenberry in asserting a systematic relationship between liberal-democratic governance at the domestic level and a strong commitment to multilateralism, especially UN-based multilateralism.

This US-led strategy undermined the trust needed between Nation-States to build a just and effective world order conducive to achieving sustainable development. The US opposition to the first set of international goals for development, the Millennium Development Goals (MDGs) (2000-2015), is well documented notably after the appointment by President Bush of John Bolton as US Ambassador to the UN in 2005 (Hulme 2010; McArthur 2013). Since 2015, the US dragged its feet on the implementation of the SDGs before becoming in 2025 the first country to officially oppose the universally agreed 2030 Agenda (Lafortune and Sachs 2025). It also withdrew from the Paris Climate Agreement for the second

[21] General Wesley Clark in an interview with Amy Goodman*, Democracy Now!,* in 2007. Also reported in Alfred de Zayas, Building a Just World Order (2021): "I just got this down from upstairs [the Secretary of Defense's office] … This is a memo that describes how we're going to take out seven countries in five years, starting with Iraq, and then Syria, Lebanon, Libya, Somalia, Sudan and finishing off Iran".

time in 2025 and pulled out once again from UNESCO. It is worth quoting the press release issued to announce the US decision to withdraw from UNESCO in July 2025 which is directly linked to UNESCO's pursuit of sustainable development:

> "UNESCO works to advance divisive social and cultural causes and maintains an outsized focus on the UN's Sustainable Development Goals, a globalist, ideological agenda for international development at odds with our America First foreign policy." (United States Department of State 2025)

On global economic and financial matters, the US has opposed major reforms of the Global Financial Architecture (GFA) over the last decades which aimed to align global financial flows with the achievement of sustainable development. The politicization and powerful influence of the US at the IMF and World Bank, both based in the US capital Washington D.C. very close geographically to the White House, is well documented (Barro and Lee 2005; Guimaraes and Ladeira 2021; Clark and Dolan 2021). The US withdrew from the negotiations in 2025 of the 4th International Conference on Financing for Development (FfD4) which led to the adoption of the "Sevilla Commitment". A few months earlier, in April 2025, the US left the negotiations and threatened reciprocal measures after the adoption at the International Maritime Organization (IMO) of an international agreement which aims at pricing carbon emissions of the shipping industry (IMO 2025). The US opposition to UN-led reforms of global financial organizations but also to basic principles established in paragraph 30 of the 2030 Agenda on the use of unilateral sanctions was well summarized in a note issued by the US Mission to the UN in 2024 to explain its position on the draft FfD4 outcome document (US Mission to the United Nations 2024). Here also it is worth quoting at length:

> "Economic sanctions are an important, appropriate, and effective tool for responding to malign activity and addressing threats to peace and security"… "[…] it is inappropriate – and [it] potentially undermines the intended function of these entities – for the UN to seek to directly influence or to make specific recommendations targeting the MDBs, the IMF, and the OECD."

As discussed in Chapter 1 and 3, thirty-five years later, this strategy of total US domination and systematic opposition to transforming global cooperation for sustainable development failed to make the world a safer place and slowed down progress toward sustainable development. In 2025, the world is currently facing unprecedented risks of self-destruction (Bulletin of Atomic Scientists 2025). The world is not on track to achieve the SDGs and Paris Climate Agreement. This strategy also failed to make the US more prosperous. The US is the largest economy in the world but ranks 24th on life satisfaction with a declining trend since 2012 (Helliwell et al. 2025). Gains in life expectancy in the US have been much slower than in other countries over the past 35 years, so much so that the US ranked 48 in 2023 compared to 26 in 1990, and is now well below the average life expectancy in OECD countries (OECD 2023). The US ranks 46 on the 2024 SDG Index which captures broader measures of sustainable development (including education, health, poverty, inequalities, environmental action and institutions) also well below most other OECD countries (Sachs et al. 2024). The US spends billions of dollars each year to deal with the consequences of climate change, including increased natural disasters (Bhola et al. 2023).

6.2.2 The positive contributions of emerging powers, especially China, to global cooperation for sustainable development

This Ph.D. dissertation underlined the strong economic growth and progress made by various emerging powers, including members of the BRICS, on sustainable development. For the first time in 2025, China and India respectively entered the top 50 and 100 countries on the SDG Index (Sachs et al. 2025) and they both participated on several occasions to the UN VNR process. According to our assessment, Brazil is the G20 country most committed to UN-based multilateralism. As discussed in Chapter 1, 2 and 4, we do not find conclusive evidence that would suggest that other major blocs (including China, India, the EU, Africa or Latin America) are less committed to UN-based multilateralism and sustainable development than the US. In fact, our empirical findings but also recent declarations made by the BRICS suggest quite the opposite. The BRICS' Rio de Janeiro declaration "Strengthening Global South Cooperation for a More Inclusive and Sustainable Governance" adopted in July 2025 makes 74 explicit references to the term "sustainable" and several references to the SDGs, Summit of the Future and 2030 Agenda (BRICS 2025). The joint declaration includes the following paragraph:

> "We reiterate our commitment to reforming and improving global governance by promoting a more just, equitable, agile, effective, efficient, responsive, representative, legitimate, democratic and accountable international and multilateral system in the spirit of extensive consultation, joint contribution and shared benefits. […] Bearing in mind the need to adapt the current architecture of international relations to better reflect the contemporary realities, we reaffirm our commitment to multilateralism and upholding the international law, including the Purposes and Principles enshrined in the Charter of the United Nations (UN), in their entirety and interconnectedness as its indispensable cornerstone, and the central role of the UN in the international system, in which sovereign states cooperate to maintain international peace and security, advance sustainable development, ensure the promotion and protection of democracy, human rights and fundamental freedoms for all as well as cooperation based on solidarity, mutual respect, justice and equality."

Our Ph.D. dissertation underlined the stark contrast between the US and China regarding their support for UN-based multilateralism and the SDGs. As described in Chapter 2, 3 and 4 China was far more committed and made far more progress on the SDGs than the US over the period 2015-2025. It is also more committed to UN-based multilateralism according to the framework and data presented in Chapter 2. While this dissertation is not primarily about China, we present some of the arguments put forward by other scholars and practitioners to explain the specificities of China's leadership and statecraft on sustainable development and building a just world order.

Some historians and philosophers have argued that from the founding of the Ming dynasty (1368) to the first opium war (1839-41), even during periods when China was the regional hegemon, the Chinese statecraft was never centered around the idea of territorial expansion and foreign military interventions in East Asia (despite some conflicts with neighbors including Korea, Viet Nam, or Japan) which is very different from European statecraft over that period (Kang 2007; Xiang 2023). More broadly, China did not engage in foreign miliary interventions in the past four decades (Kishore Mahbubani 2020) and, according to some scholars, over the last two thousand years, with the exception of the dynasties led by the Mongolians (1271-1368) and Manchurians (1636-1911), China never implemented an expansionary foreign policy (Li, 2024). Diplomatically, China has put forward several proposals recently to advance

global security including the Global Development Initiative (GDI), the Global Security Initiative (GSI), and the Global Civilization Initiative (GCI), which refer to the SDGs and the UN Charter. The GCI is framed as a response to Huntington's "Clash of Civilization" and advocates for respect for the diversity of civilizations and for promoting dialogue, mutual understanding and cooperation across civilizations (MOFA 2025).

To explain these trends, scholars have highlighted the priority traditionally given by China to managing domestic affairs in a large and complex territory rather than on conquering and expanding to new territories (Kissinger 2012; Li 2024) but also the influence of Confucius philosophy which emphasizes notably concepts such as peaceful coexistence and respect-centered interactions (Li 2024; Sachs 2024). Keyu Jin (London School of Economics) has also discussed at length the links between Confucianism and Chinese statecraft in economic and global affairs (Jin 2023b; 2023a). In particular, Jin argues that the rise of China is driven by a fundamentally different economic model, historical perspective, and developmental priorities, rather than by an ambition to dominate or export its system globally. Zhao (2019) argues that, in a highly interconnected and globalized world, the ancient Chinese concept of Tianxia or "All-Under-Heaven" which emphasizes inclusiveness, harmony, the common good and co-existence can provide a useful compass for the 21st century world order. While the leadership of Eleanor Roosevelt was critical, as the first chair of the UN Commission on Human Rights, in the preparatory work that led to the adoption of the Universal Declaration of Human Rights in 1948, Chinese philosophers and diplomats such as Peng Chun Chang also played an important role in the drafting process. Chang notably pushed for incorporating the notion of brotherhood in Article 1 and for emphasizing the need to consider both rights and duties to advance human rights at the global level (Roth 2016).

Confucius philosophy is of course very different from the libertarian, utilitarian, and Darwinist philosophies that became very prominent in the 19th century in the Anglo-Saxon world in the context of the Industrial Revolution and imperial expansion which gave a central role to markets, innovation and private property, and tend to emphasize zero-sum games in the conduct of international affairs (Sachs 2023). Peretz and Rapnouil (2008) argue that the US administrations struggle to consider a world where values other than their own could be opposed to them and often consider it pointless to do so. Interestingly, the UNGA adopted a resolution in 2024, championed by China and supported by more than 80 Nation-States nations, to make June 10th the "International Day for Dialogue Among Civilisations". It is in the context of international negotiations at the UN about making the 28th of January as the "International day of peaceful coexistence", at the initiative of the Kingdom of Bahrain, that the US stated publicly and officially for the first time its opposition to the universal 2030 Agenda and SDGs.

Essentially, based on the findings of our dissertation, we do not find compelling evidence to suggest that the rise of China poses a threat for the advancement of global cooperation for sustainable development. In fact, the rise of China might represent an opportunity for at least two reasons. Firstly, because China can share its experience with long-term planning and in maintaining consistency toward the achievement of ambitious public policy objectives. China eradicated extreme poverty in forty years. As discussed in this dissertation, since 2015, China consistently demonstrated strong commitment to internationally agreed long-term goals for sustainable development and climate action, notably by presenting two VNRs and by recommitting in 2025 to the Paris Climate Agreement and NDC process.

Future research on the governance of sustainable development could for instance explore how the functioning of Chinese institutions such as the "State Supervisory Commission" can be adapted to other contexts to ensure continuity in public policies even in governance systems with different election cycles

(Li, 2024). Similarly, the Chinese strategy related to "Ecological red lines (ERL)" promoted since 2011 as a way to balance ecological protection and development of human society might be helpful in other contexts to define ecological bottom lines for societies' to flourish (Weiguo and Axmacher 2016; Bai et al. 2016; Xu et al. 2018).

Secondly, China can continue to help roll out access to low-cost renewable energy globally. This can be achieved notably by pursuing investments and pro-innovation policies in China in renewable energy to continue to lower the cost notably of solar and wind energy and electric vehicles for the world (Black and Yang 2024) but also by pursuing efforts to "green" the Belt and Road Initiative (China's large scale investment program into infrastructure in developing countries) (Wang et al. 2023; China Council for International Cooperation on Environment and Development 2019). Of course, China and other major powers will compete economically for market shares in the green and digital technologies of the future (among others), yet we do not find compelling evidence that would suggest that as China continues to rise it will start acting against UN-based multilateralism and the achievement of sustainable development.

6.2.3 Short-term perspectives on global cooperation for sustainable development

In the short run, the transition from a hegemonic US-led world to a new multipolar world and the explicit opposition of the US to the 2030 Agenda and the SDGs will continue to pose major challenges for global stability and cooperation. The main priority today, in a nuclear world, is to move away from the "Thucydides' trap" and "Tragedy of Great Power Politics" (Mearsheimer 2001) which are zero-sum games, very dangerous for mankind and slow down progress on sustainable development as highlighted in Chapter 3. As argued by Li (2024) the "Thucydides' trap" and the idea that major powers cannot co-exist peacefully is largely a Western concept which is not shared universally.

We recall the words of John F. Kennedy, bringing an adversary to the choice between a "humiliating retreat or a nuclear war" should be seen as "evidence only of the bankruptcy of our policy or of a collective death-wish for the world" (Kennedy 1963). As such, the de-escalation of tensions between nuclear powers and members of the UN Security Council, and over time nuclear disarmament and non-proliferation, should remain an important priority of the UN system, General Assembly and Security Council over the next decades as argued by other scholars (Sachs et al. 2024). This would also support the climate agenda by redirecting political attention and financial resources to sustainable development. Globally, the total military carbon footprint is estimated to approximately 5.5% of global emissions (Parkinson and Cottrell 2022). Peace is a pre-condition for sustainable development.

Another short-term consideration for UN-based multilateralism relates to the role of consensus-driven decision-making in advancing sustainable development and climate governance. In international relations theory, consensus is often understood as a mechanism for generating legitimacy and ownership of multilateral outcomes (Claude 1966; Hurd 1999). Unlike unanimity, consensus does not require full agreement on every provision, but it rather reflects a pragmatic form of collective accommodation in which states may express reservations but refrain from blocking adoption because these reservations do not represent fundamental disagreements to the spirit, purpose or general vision put forward by the draft resolution or agreement. Many UN resolutions are adopted by consensus each year. This provides more flexibility to maintain inclusiveness while avoiding paralysis often associated with unanimity rules.

However, when powerful states explicitly oppose entirely certain normative agendas, as in the case of current US opposition to the whole concept of sustainable development, the reliance on consensus can also constrain collective action and be conducive to "watering down" draft agreements and resolutions. In such contexts, "coalitions of the willing" may emerge as alternative ways to advance new norms and maintain or even increase ambitions (Ruggie 1992; Finnemore and Sikkink 1998). Recent examples, such as the adoption of the International Maritime Organization's treaty establishing a global carbon levy on shipping (April 2025) and the "Sevilla Commitment" on financing for development (June 2025), exemplify this dynamic. In the case of the "Sevilla Commitment", the US took part initially in the negotiations but requested the systematic replacement of the term "sustainable" by the term "responsible". Eventually the US withdrew from the discussions and the term "sustainable" was kept in the final agreement. It is possible that a similar dynamic would underpin the negotiations on the extension of the SDGs beyond 2030 and other multilateral agreements in the short term, perhaps even until 2030.

6.2.4 The SDGs as an infinite game: Medium and long-run perspectives to advance sustainable development by 2030 and beyond

The historian James P. Carse (1986), distinguishes between two major types of games: infinite and finite games. Essentially, finite games have a preset timeframe, clearly identified players, set rules and a winner and a loser. An infinite game, by contrast, has infinite time horizon, no finishing line and is therefore played with the single purpose of perpetuating the game and "continuing to play" (Carse 1986). There are known and unknown players in the infinite game. There are general conventions and laws to govern how players can behave, but these can change and evolve over time. There can be multiple finite games within an infinite game. To take a concrete real-life example, applying to a job can be conceived as a finite game (with a winner and a loser and a pre-defined time horizon), whereas building a successful and fulfilling career would be an infinite game. The concept of finite and infinite games has been applied for instance to the field of business management (Sinek 2019), psychology and education (Harré et al. 2017; Stan 2024). To sum up, the finite mindset focuses on beating competitors and achieving short-term gains. The infinite mindset focuses on long-term sustainability, trust, cooperation and innovation.

Our fundamental conceptual proposition is that *sustainable development should be conceived as the infinite game to perpetuate life on earth*. The concept of sustainable development, which builds on successive rounds of international negotiations since 1945 (described in Chapter 1), remains the right vision for international cooperation, development and global stability in the 21st century. Compared with the past, humanity currently faces systemic risks that can lead to its self-destruction, notably due to nuclear Armageddon, climate change and the collapse of biodiversity, and as such this fight for survival should be reflected in the principles and ethics that underpin the discipline of economics and the practice of international relations and diplomacy. This has several implications for building an effective world order and policymaking at all levels.

6.2.4.1 Implementing the principle of subsidiarity

First, applying the principle of *subsidiarity* is essential for advancing sustainable development. The principle of subsidiarity, discussed notably in Chapter 4, is commonly understood as the need for decisions to be taken at the lowest possible level or closest to where they will have their effect. The principle of subsidiarity may offer a more effective framework than concepts such as global governance,

global government, or international world order. These terms are sometimes (perhaps inaccurately) perceived as efforts to centralize and globalize all policy decisions. Subsidiarity acknowledges the critical role of Nation-States, as well as regional and local authorities, in driving specific policy actions and investments. Clearly defining the respective responsibilities across these different levels of governance could contribute to a broader dialogue on enhancing the means of implementation for the SDGs by 2030 and beyond.

This Ph.D. dissertation has discussed at length the importance of global cooperation for sustainable development but also the role of national authorities (Chapter 3) and regional and subnational entities (Chapter 4). Nation-States remain since the Treaty of Westphalia in 1648 the central decision-makers and actors in international relations. The SDGs were developed and adopted by sovereign Nation-States. Yet, certain policy interventions might be better implemented by a "super authority" (global, continental authorities) or "sub-authority" (regional, local authorities). The decarbonization of energy systems or large-scale investments in digital infrastructure and connectivity might benefit from economies of scale when carried out at the continental level (for instance at the EU level, or perhaps African or Central Asia level). By contrast, there is obviously no point in managing local housing or public transport systems via continental or global authorities. Dani Rodrik's work, particularly his concept of a meta-regime for shaping the world order, offers valuable insights for organizing policy interventions across different governance levels (global, continental, national, and subnational) based on the scale of potential spillovers and systemic risks (Rodrik 2024; Rodrik and Walt 2024).

At the same time, the principle of *subsidiarity* can also be used to justify a stronger role for the UN to address issues that are truly of a global nature. According to the literature, for a central authority to claim competence over certain policy interventions it must demonstrate its comparative efficiency over other "super" or "sub" authorities (Follesdal 1998). Two fundamental conditions are typically considered in the literature to claim *comparative efficiency* (Schilling 1995; Follesdal 2008): (1) Effectiveness & efficiency; and (2) Necessity (permitting action by the central authority only in cases where lower-level units lack the capacity to achieve the desired outcome independently). In economics, the principle of subsidiarity typically means that "the production of public goods should be attributed to the level of government that has jurisdiction over the area in which that good is "public" (Padoa-Schioppa 2007).

Practically speaking, we argue that the time has come for a supra-national authority such as the UN to acquire the capacity to generate its own revenues to address challenges that are truly global in scope. As discussed throughout this Ph.D. dissertation, the alignment of international financial flows with the safeguarding of GPGs is increasingly undermined by the decline in ODA and by the recurrent delays in member state contributions to the UN budget that constrain the multilateral system's ability to respond effectively to global crises. The UN's annual operational budget amounts to approximately $3.7 billion USD which is thirty times smaller than the annual budget of New York City (around $116 billion USD). Establishing an agreement or a set of agreements that would introduce global taxation and levies to support the provision of GPGs, to cover losses and damages linked to human-induced climate change, and to sustain the functioning of the UN would significantly strengthen the effectiveness of the international order in advancing sustainable development. Such measures can be justified through the principle of subsidiarity, while also ensuring greater predictability in year-to-year planning and continuity in implementation of UN programs and initiatives.

There are several promising initiatives and options on the table. These global levies could for instance be based on current and historical GHG emissions (Sachs et al. 2022). The Global Solidarity Levies Task Force is exploring other options focusing on aviation (e.g. jet fuel levy, frequent flyer levy), shipping (e.g. carbon levy), fossil fuels (e.g., extraction levy, profits levy), financial transactions (e.g. on stocks and bonds), cryptocurrency energy usage, plastics production and ultra-high-net-worth individuals (e.g. a global minimum wealth levy). In addition, this dissertation emphasizes the critical importance of UN member states meeting their financial commitments by paying their contributions in full and on time in order to guarantee the effective functioning of the UN system.

6.2.4.2 Three strategic priorities for the United Nations

The UN should continue to serve as the central pillar of the multilateral system, while also collaborating and coexisting with other multilateral frameworks and arrangements. The opening section of this Ph.D. dissertation introduced the "4C" typology of multilateral arrangements; *Charter*-based multilateralism, *Clubs* (of like-minded countries), *Concert* (of major powers) and ad hoc *Coalitions* (to advance specific policy priorities). Our Ph.D. dissertation provided new insights and metrics on countries' support for UN *Charter*-based multilateralism which we argue should continue to play a critical role to advance sustainable development, respond to emerging global challenges (misuse of new technologies, climate change, pandemics, and others) and to safeguard stability and peace in a multipolar world. Building on our findings, we underline three important practical priorities for the UN system to play the infinite game of sustainable development:

Firstly, at this point in time, the most important priority for the UN is to uphold the principles enshrined in the Charter especially the implementation of Article 1.1: "To maintain international peace and security". Our dissertation underlines the importance of peace as a precondition to advance sustainable development. Chapter 3 underlines how countries facing various forms of conflicts tend to progress slower toward the SDGs but also that conflicts in neighboring regions can lead to significant shifts in policy discourse and investments at the expense of sustainable development as observed in the EU.

Although developing a comprehensive proposal for collective security is beyond the scope of this dissertation, it is important to underscore the importance and centrality of reforming the UN Security Council, which is the principal organ responsible to maintain international peace and security. The basic fact is that the UN Security Council no longer serves its purpose, imagined by the founders of the UN in 1945, because it is paralyzed by the veto system in a context of high tensions between permanent members (P5 countries).

There are two possible paths forward. The first would require a significant improvement in relations among major powers, achieved through diplomacy and the peaceful resolution of conflicts. Such a path has more to do with political leadership than a specific technical design or mechanism. Historical precedents illustrate that periods of acute crisis have at times been followed by phases of de-escalation and accommodation. For instance, the Cuban Missile Crisis of 1962 was succeeded by efforts at rapprochement under the leadership of President Kennedy and Premier Khrushchev, which led to the establishment of the Washington–Moscow hotline and the signing of the Limited Nuclear Test Ban Treaty in 1963. More recently, the rapprochement between China and India in 2025, in the context of the US-led tariff war, was widely considered highly improbable only a few years or even months earlier. Within the framework of sustainable development understood as an 'infinite game,' great powers could acknowledge

their common exposure not only to the risks of military and nuclear escalation, but also to global challenges such as climate change and pitfalls from runaway technologies (including biotechnologies that can create new pathogens or AI) and thus find incentives for collaboration. As emphasized throughout this dissertation, there is broad popular support for increased cooperation among great powers.

The second path would be to reform the UN Charter so that the UNGA could override vetoes at the Security Council in cases where there is a near universal consensus on certain issues. Conceptually, this would represent a step towards a multilateral system which would be more *Charter*-based (with an increased role of the international community via the General Assembly) and less *Concert*-based (with the possibility to override the veto of one of the five permanent members of the UN). The adoption of the resolution put forward by Liechtenstein in 2022 titled "Standing mandate for a General Assembly debate when a veto is cast in the Security Council" represents a small step toward greater scrutiny by the UNGA by forcing within 10 working days of the casting of a veto the country to justify its decision in a formal meeting. Arguably, the reform of the Security Council could also incorporate a stronger mandate to address the vicious cycle between the environment and conflicts but also increase representation. In practical terms, this would require opening up a process to reform the UN Charter which under article 109 can be done with two-thirds vote of the members of the UNGA and by a vote of any seven members of the Security Council. The alteration of the Charter can only come into force with the support of the P5s which explains why amending the Charter and reforming the Security Council is very difficult and perhaps even unlikely in the current context.

Similar to the way in which economic crises often necessitate fiscal or monetary stimulus, the current geopolitical crisis calls for a corresponding "geopolitical stimulus". While the pursuit of the two pathways described above for reforming the Security Council remains fraught with difficulty, it is important to underscore that such a stimulus may also emerge through other parts of the UN system including UNGA or the International Court of Justice (ICJ) among others. In particular, this can occur through the regular adoption of clear and ambitious resolutions, including 'Uniting for Peace'-type resolutions, which stipulates that the UNGA can recommend peace operations when the Security Council "fails to exercise its primary responsibility for the maintenance of international peace and security" (UNGA 1950; Sfeir 2023; Scharf 2023). Also, the jurisprudence of the ICJ plays a critical role in holding states accountable for implementing the principles of the UN Charter.

Secondly, there is a clear need to strengthen the integration of sustainable development principles into the operations of international organizations, and potentially to establish new institutions better suited to address today's global challenges. Throughout this Ph.D. dissertation we underlined the persistent gap between the commitments of certain national governments to UN-based multilateralism and the broader support among civil society for global cooperation and sustainable development. In this context, our findings support efforts to further strengthen the foundational principle of "We the Peoples" within the United Nations system. This principle is prominently featured in the Preamble of the UN Charter and emphasizes that the UN's legitimacy derives from the collective will of the world's population.

Our findings align with long-standing proposals by scholars and practitioners, including Leinen and Bummel (2024), to reform the UN Charter by establishing a UN Parliamentary Assembly (UNPA). This body would serve as a complement (not as a replacement) to the UNGA, which is composed of representatives from the executive branches of member states. In practical terms, the UNPA could initially be created as a subsidiary organ of the UNGA, under Article 22 of the UN Charter, with membership

which would be drawn from national parliaments relative to their populations. The UNPA could convene annually in person alongside the UNGA in September and hold virtual sessions throughout the year. It would be entrusted with specific functions, such as providing oversight of the UN budget and contributing to deliberations on international taxation, among other areas.

Also, this Ph.D. dissertation highlights both notable progress and persisting gaps in the integration of the SDGs into the operations of international organizations. Our analysis specifically focused on the IMF and its surveillance mechanisms. In this specific case, we recommend the systematic inclusion of an "SDG Annex" covering all 17 Goals in Article IV bilateral consultations. This would help ensure that such consultations provide a platform to address a comprehensive set of systemic risks related to sustainable development and for policy advice that incorporate all of the dimensions of sustainable development. Additionally, we advocate for the stronger incorporation of nature-related risks into the IMF's global and bilateral surveillance processes, including in key instruments such as the World Economic Outlook (WEO) and the Financial Sector Assessment Program (FSAP). More broadly, UN agencies and the Bretton Woods Institutions should continue expanding the use of the SDGs in their operational frameworks and develop tools and instruments that support long-term pathways toward sustainable development at global, regional, and national levels.

The third set of priorities concerns the UN's role in shaping the future of global goal setting. The UN should continue to lead periodic goal-setting processes and strengthen mechanisms for accountability as a vital complement to rules-based multilateralism. As discussed in Chapter 4, this dissertation emphasizes the *steering effect* of the SDGs in shaping public discourse and national narratives, as well as their influence on efforts by some countries around the world to establish robust policy, investment, and monitoring frameworks aligned with the Goals.

Sustainable development, while inherently an infinite game, must still be pursued with finite resources and a sense of urgency which would justify the continued use of universally agreed goal-based development frameworks to sustain momentum, awareness and joint action. The adoption of the 2030 Agenda and the UN Secretary-General's 2019 call for a "Decade of Action" were both supported by scientific evidence which emphasized the need for immediate and decisive action to prevent irreversible damage to Earth's systems (UN Secretary-General 2019). Within this overarching vision of sustainable development as the long-term challenge of the 21st century, time-bound and goal-oriented frameworks beyond 2030 can continue to serve as powerful tools to galvanize collective efforts and maintain momentum perhaps through recurring cycles of 15 or 20 years.

From a practical standpoint, by the time of the next SDG Summit at the Heads of State level in 2027, countries committed to international, goal-based sustainable development should present clear conceptual and operational proposals either to support the adoption of a new global framework or, alternatively, to extend the current SDGs for an additional 15 to 20 years, with only marginal adjustments. Extending the SDGs might make it easier to secure broad international consensus, would preserve the relevance of existing policy tools and frameworks developed under the current agenda, and would avoid the need for an entirely new branding and institutional architecture. However, this approach may lack the symbolic momentum and political visibility that a new set of goals might help generate. It might also give the impression that the international community is simply extending the deadline for submitting its homework.

We argue that both conceptually, given the continued relevance of the 17 Goals, and practically, considering the current fragmentation of the international system, the extension of the SDGs, with targeted specific updates and adjustments, is likely the most feasible and effective path forward for the broad coalition of countries still deeply committed to sustainable development. The lead up to and outcome of the next goal-setting exercise should surely be used as an opportunity to strengthen the means for implementation at all levels including financing, governance systems, data and statistics and the science-policy interface (among others).

6.2.4.3 Regional cooperation and coalitions

While this Ph.D. dissertation focused primarily on UN-based multilateralism, we recognize the role of other forms of multilateral arrangements to advance global stability and sustainable development. Especially in a context where major reforms of the UN, especially the Security Council, are rather unlikely in the short-term considering the geopolitical tensions among great powers, other forms of multilateral arrangements will therefore continue to exist and perhaps even gain traction due to the failures to reform the UN processes to increase its relevance and effectiveness. Using the "4C" classification we make a few general observations about the future of multilateral arrangements to advance global stability and sustainable development:

- *Concert*-types of arrangements among major powers will remain critical for advancing collective security and support major reforms of the GFA. In a multipolar world, the G20 will remain a very useful format for global cooperation on issues related to global finance and security. For consistency, the G20 should officially be relabeled as G21 (the former G20 plus the newest permanent member, the African Union) considering that the EU is considered a G20 member (the G20 comprises 19 individual countries plus the EU).

- As discussed earlier in this section, considering the US explicit opposition to the principle of sustainable development, *Coalition*-types of multilateral arrangements will likely prevail in the short and medium term on various issues related to climate action and sustainable development, including on solidarity levies and financing for development (among others). New coalitions recently emerged for instance on issues related to global levies for sustainable development. Coalitions, such as the BRICS, are likely to continue collaborating on shared policy priorities, including efforts toward the de-dollarization of the global economy and large-scale public and private investments notably via the New Development Bank, among other issues.

- In our view, *Club-type* arrangements should primarily emphasize the advantages of continental and regional cooperation in promoting infrastructure investments notably in green and digital technologies and transport systems, which can yield significant economies of scale when implemented at the continental level (e.g., the EU, AU, ASEAN, CELAC, CAREC, etc.). Regional development banks (ADB, IDB, IsDB and others) will continue to play a crucial role in advancing large-scale infrastructure investments and other forms of investments at the continental and regional level. These multilateral development banks typically obtain borrowing terms and conditions that are more advantageous than those accessible to their individual member states which underlines the power of collective regional action.

As discussed in Chapter 2, this dissertation considers the UN Charter as the universally accepted foundation of principles and values adopted by all 193 UN member states. As such, Ikenberry's proposal to divide the world into a struggle between clubs of "liberal democracies" and "illiberal regimes" fighting for the support of a loosely defined "Global South" is not a constructive framework for promoting mutual understanding, global stability and sustainable development in a multipolar world because it adopts a Western-centric vision of values and governance systems which is not shared universally. Also, the concept of "liberal democracies" remains heavily debated and we find no definitive evidence that being a "liberal democracy" always guarantees stronger commitment to UN-based multilateralism and sustainable development, as discussed in Chapter 2.

We therefore argue that organizations such as the G7, which represent a small proportion of the global population, lack clear legitimacy, and face increasing internal divisions, are likely to play a diminishing role in advancing global cooperation for sustainable development, particularly in the context of growing trends of US isolationism. Countries or groups of countries, including the EU and its member states, should increase their collaboration with other large powers and operate within the framework of the UN, the G20 and other forums more conducive to driving collective action for sustainable development.

6.2.4.4 Building long-term policy and investment frameworks at all levels

An infinite mindset calls for long-term policy, investment, and monitoring frameworks to effectively advance sustainable development. As outlined in Chapter 4, some of the world's leading countries in sustainable development have adopted long-term strategies, pathways, and financing mechanisms aligned with the SDGs. These countries have also begun integrating the principle of sustainable development across various policy domains, including regulatory governance, public procurement, stakeholder engagement, statistical systems, and audit mechanisms. Increasingly, scientific networks are supporting governments at all levels in designing investment and policy pathways, including for deep decarbonization (led for instance by IDDRI or the Global Climate Hub) and sustainable land use (led for instance by the FABLE consortium).

However, substantial gaps persist in the integration of sustainable development into national policy processes, as well as in the availability of comparative evidence to assess progress. This dissertation documents these shortcomings and highlights the importance of addressing them by drawing on successful national experiences and strengthening international cooperation particularly in the areas of data systems, statistical capacity, and survey-based instruments to assess policy coherence and governance frameworks for the SDGs.

This effort must go hand-in-hand with a significant reform of the GFA to increase access to long-term and affordable financing for sustainable development. Chapter 3 suggests that the lack of fiscal space is a barrier for accelerating SDG progress especially in developing countries. This is because the SDGs are largely an investment agenda into physical infrastructure and human capital. As such the implementation of the "Sevilla Commitment" is critical. More specifically, and as argued by others, the reform of the credit risk rating system and debt sustainability frameworks is critical to account not only for short-term liquidity risks but also for long-term growth potential of developing and emerging economies and recognize ambitious and credible policy frameworks for sustainable development. These priorities are recognized in the "Sevilla Commitment" notably under paragraph 51.b.

The G20, working closely with the IMF and the World Bank, could take the lead, for instance, in setting up a new and improved credit-rating system that accounts for each country's growth prospects and long-term debt sustainability. Scaling-up the disbursements of the MDBs and Public Development Banks (PDBs) and aligning their portfolio and monitoring frameworks to sustainable development are also important priorities to increase access to long-term and affordable financing for the SDGs, including at the continental and subnational levels as emphasized for instance by the SDSN Commission on Urban SDG Financing. As such, the Finance in Common initiative, spearheaded notably by the Agence Française de development (AFD), provides a useful platform and network for PDBs to coordinate, share best practices and align their investment portfolio to support patient and affordable financing for the achievement of the SDGs.

6.2.4.5 Neutrality and sustainable development

The findings presented in this Ph.D. dissertation suggest that for small and medium-sized countries adopting a posture of moderation and neutrality in international relations does not inherently impede progress toward sustainable development. Chapter 4 discusses the case of Finland and Uzbekistan; two countries, which for a large part of their recent history adopted a posture of moderation and neutrality vis á vis surrounding major powers. Finland ranks first in both the World Happiness Report (which measures self-reported life satisfaction) and the Sustainable Development Report. Located between the EU and the Russian Federation, Finland maintained a policy of strict neutrality in the conduct of international affairs from 1949 to 2022 which gave birth to the term "Finlandization." Although the term tends to be used pejoratively and interpreted as a lack of agency, Finland's experience illustrates how a neutral foreign policy can coexist with, and perhaps even support, high levels of societal well-being and sustainable development.

Uzbekistan is another interesting case. Since gaining independence from the Soviet Union in 1991, the country has pursued a neutral foreign policy. This commitment to neutrality was reaffirmed by President Mirziyoyev in June 2025. Despite being one of only two double landlocked countries globally (the other one being Liechtenstein), Uzbekistan is among the five fastest-advancing nations on the SDGs since 2015. Although we haven't focused on these countries in this Ph.D. dissertation, countries such as Austria and Costa Rica might provide other examples of countries which have achieved relatively high levels of happiness and sustainable development compared with their regional peers and globally while at the same time, maintaining a strong neutrality stance in international affairs in their modern history.

These examples do not establish a definitive and clear-cut causal link between neutrality and positive societal outcomes, yet they suggest that alternative approaches can be considered by small and medium-sized countries to achieve stability, cooperation, and long-term development objectives (other than military build-up and alliances). Depending on context, alternative foreign policy strategies oriented toward moderation, non-alignment and multiple partnerships might represent viable pathways for these countries.

6.2.4.6 Training and education for sustainable development

Finally, we emphasize the critical role of education, training, and ancient wisdom as key enablers of sustainable development and social cohesion in the 21st century. As highlighted in the general introduction, scholars have traced the roots of sustainable development to all major religious and philosophical traditions. The Greek notion of virtue ethics, an ethical framework emphasizing the

cultivation of moral character and virtues to live a meaningful life, together with Confucian philosophy, indigenous cultural practices, and other intellectual traditions, all provide valuable insights for fostering global cooperation, mutual respect, and intercultural understanding in an increasingly multipolar world.

In a period marked by profound global divisions, both formal and informal education initiatives can play an important role in promoting the values and historical foundations of sustainable development as well as the promotion of peace and stability. In a globalized context characterized by rapid technological changes and innovations, it is paramount to provide access to lifelong learning opportunities including technical but also ethical training. From a policy perspective, this underscores the urgency of accelerating the implementation of SDG 4.7, which calls for ensuring that all learners acquire the knowledge and skills needed to promote sustainable development:

> "4.7 By 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development"

We highlight two key practical priorities for advancing education in support of sustainable development. First, as emphasized by UNESCO, closing the estimated $100 billion USD annual financing gap required to achieve universal access to basic education must remain a central priority for the international community by 2030 and beyond (UNESCO 2023). Second, innovative pedagogical approaches such as experimental peace games and climate games can serve as valuable experiences and tools to help students grasp the dynamics of multilateral processes, understand better the national and regional dynamics, and interests at play, and most importantly define collective pathways to address complex global challenges. Building on successful initiatives worldwide, including the Model United Nations and the recent Peace Games organized at Columbia University in September 2025 (which focused on collective problem-solving using a scenario of rising political and military tensions in Taiwan), such approaches could be scaled up to foster dialogue, strengthen understanding of international negotiations and UN processes, and ultimately support the development of cooperative solutions to advance sustainable development.

The table below summarizes some of the key findings from this Ph.D. dissertation and practical recommendations. The recommendations are addressed *inter alia* to the UN leadership and to individual member states. They also build on contributions from other scholars and practitioners.

Table 6.1 Summary of key findings and practical recommendations

	Key findings	Practical recommendations
1	The US government explicitly opposes the SDGs and showcases low and declining support for UN-based multilateralism.	Countries should operate, at least temporarily, in "Coalitions of the willing" to advance new norms and forms of cooperation for sustainable development and climate action.
2	There is a gap between, on one side, civil society support for global cooperation on sustainable development and, on the other side, government action at the national and international level.	Use Article 22 of the Charter to set up a UN Parliamentary Assembly to increase the representation of "We the People" at the United Nations as a complement to the UN General Assembly.
3	The lack of fiscal space remains an important barrier for SDG progress especially in developing countries; The SDGs require long-term policy and investment framework backed by affordable and long-term financing.	Implement the "Sevilla Commitment" including paragraph 51.b. on reforming the credit rating system to better recognize long-term sustainable growth potential and establish global levies to finance the functioning of the UN and other global initiatives to safeguard GPGs.
4	There is limited integration of nature-related macroeconomic risks in the IMF's global and bilateral surveillance mechanisms.	Incorporate an SDG Annex systematically in all Article IV consultations to ensure that all the dimensions of sustainable development, including nature and biodiversity, are covered in the IMF's monitoring of systemic risks and in policy guidance.
5	The SDGs had some *steering effect* on discourse and policies at the national and international level and promising policy tools and frameworks were developed under the current agenda at all levels; they will expire by 2030.	Extend the SDGs by 15 or 20 years with a strong focus on the means for implementation (financing, governance systems, subsidiarity and levels of intervention, science-policy interface, data and statistics, others).

6.3 Limitations and suggestions for future research

6.3.1 Main limitations

We underline several limitations in our research and areas which would require further research.

Perhaps the most prominent limitation of our research is that considering its scope (i.e. global cooperation for sustainable development) we do not reflect much on other forms of regional and bilateral forms of cooperation and more sectoral policy commitments and efforts. On the former, our research does not reflect much on whether countries' actions support or undermine regional stability and positive relationships with neighboring countries. We also do not discuss in detail efforts to promote international cooperation via other institutions than the UN, for instance in the G7, G20, OECD, or BRICS. While the empirical analysis covers in most parts the majority of UN member states, the discussion especially in Chapter 2 and in the conclusion tends to focus on the two most influential countries in the world from an economic and geopolitical perspective, which contribute the largest share (by far) of the UN budget:

namely the US and China. This leaves out a more comprehensive discussion, which would cover, for example, all the G7 or G20 countries.

Our construct in Chapter 2 aggregates across a wide range of treaties, UNGA votes and UN organizations covering security, trade, economic development and environmental cooperation (among others) and our constructs in Chapter 3 and 4 focus on the SDGs as a whole and less on performance and commitments in specific dimensions of the SDGs (for instance each of the 5Ps, peace, prosperity, planet, people and partnerships or for each of the 17 individual SDGs). More granular analysis might yield different results across specific dimensions. At the same time, we argue that a knowledge gap existed regarding the quantitative analysis of overall support for UN-based multilateralism, and that there is value in using the universally agreed-upon SDGs as a whole as an object of empirical analysis to move beyond specific and/or anecdotal evidence. By providing novel and detailed granular databases, we enable researchers to refine their analysis, focusing on more specific policy areas related to UN-based multilateralism and sustainable development.

Another important limitation is that commitment or intentions (to engage with the UN system or implement the SDGs) do not necessarily reflect effective implementation. As such, the ratification of UN treaties does not mean implementation in practice. Membership in UN organization does not necessarily mean constructive engagement. Similarly, the adoption of SDG strategies, monitoring frameworks and budget tools may or may not be used and implemented in practice. More work is needed to evaluate potential "implementation gaps" and the gap between rhetoric and action. At the same time, we have also shown how different databases can be triangulated to provide a more complete picture of commitment, intentions, implementation and outcomes. This is at the heart of Chapter 4, which brings into perspective and connects SDG commitments, public management practices, and SDG outcomes. Ultimately, quantitative and empirical analysis may not be sufficient to evaluate implementation gaps. Qualitative analysis and case studies are particularly helpful to provide more context-based analysis, nuances and understand in depth the dynamics of SDG commitment, policies and outcomes at multiple levels.

6.3.2 Future research

New technologies and research methods (including web scraping, advanced text-mining and AI-trained models, geospatial technologies) can support more timely assessments of SDG performance and commitments but also help support more targeted policy interventions and investments. More specifically, in a context where narratives often frame the public debate on countries' compliance with UN-based multilateralism and international law, we argue that systematic monitoring of countries' support for UN-based multilateralism (treaty ratification, UNGA votes, membership in UN organizations, financial data) should continue and be used by various stakeholders for evidence-based dialogue on multilateralism and, hopefully, generate some form of race to the top.

Overall, our Ph.D. thesis underlines the importance of interdisciplinary research that focuses on the triple bottom line of sustainable development (economic, social and environmental) beyond siloed approaches. Ultimately, in a highly interconnected but also fragmented world, the transformation towards sustainable development needs to consider not only the specific technical solutions or policy intervention needed to advance climate mitigation (for instance a carbon tax, or biofuel strategy) but also to understand the potential impacts of these policies internationally (so-called spillover effects) and on economic, social and

institutional outcomes at the global, national and subnational level. The fairness and acceptability of policies must also be carefully understood. The reverse is also true. We must continue to increase our collective understanding of the impact of economic, social and institutional structures, reforms and tools on tackling the environmental crisis, including climate change and the destruction of biodiversity. Strengthening interdisciplinary research and programs structured around the concept of sustainable development will be critical, and these should of course build on the methods and evidence produced by various disciplines (including labor economics, behavioral economics, earth science, climate science, natural science, among others).

Throughout this Ph.D. research we have also emphasized the importance of applied research focusing notably on policy and investment pathways for achieving the SDGs. Since 2015, a large literature emerged on SDG synergies and trade-offs and the governance of sustainable development. There has also been a lot of effort to track systematically SDG outcomes at various levels. In the coming years, this wealth of knowledge should continue to be incorporated into long-term policy and investment pathways to achieve the SDGs (as a whole) and specific SDG transformations using frameworks developed by scholars such as the six entry points (IGS 2023) or six SDG transformations (Sachs et al. 2019). Increasingly, initiatives such as DDP (deep decarbonization) or FABLE (sustainable agri-food systems) are being used to enable national and global conversations on integrated pathways to achieve multiple objectives with multiple stakeholders, including development agencies and financial institutions.

Considering the urgency to act but also the highly complex nature of this work and the wealth of information in the hands of governments and decision-makers it is very important that these pathways and models are turned into actionable interactive web-based information. We have highlighted throughout our research efforts made by the IMF, European Commission, SDSN and FABLE Consortium (among others) to make their SDG research more accessible and usable. Scientists should also pursue their efforts to train citizens and decision-makers (public and private) and engage with them on solutions to achieve sustainable development. Interestingly, in a context of rising distrust, a 68-country survey of 71,922 respondents found that in most countries, most people trust scientists and agree that scientists should engage more in society and policymaking (Cologna et al. 2025).

Building on Chapter 2 (support for UN-based multilateralism), future research could expand the analysis by exploring whether other countries' characteristics and social drivers might explain support for UN-based multilateralism. These could include legislative power structure (unicameral vs bicameral), religious and philosophical traditions, perhaps controlling or testing the influence of foreign military bases and other forms of external influence. Further research is also needed to refine the indicator set notably with universal and sound measures of cyberwarfare and non-military interference on other countries' affairs, as well as to understand the drivers of countries' support for UN-based multilateralism over different time periods, for instance the type of political leadership in place (e.g. conservative, liberal, independent, labor etc.). Scholars could also explore how economic, military and policy alliances have evolved over time and how certain factors might drive stronger alignment between major powers and other countries.

As a follow-up to Chapter 3 (drivers of SDG progress), further research is needed in high-income countries (HICs) to explore and structure the policy interventions that might allow these countries to maintain high SDG performance and even continue to improve while, at the same time, reducing negative international spillover effects including those embodied into trade and unsustainable consumption. More data is needed to understand Policy Coherence for Sustainable Development (PCSD) mechanisms at the central/federal

level and learn from best practices. The statistical analysis over the period 2015-2024, could be expanded over a longer time span which would perhaps help identify long-term drivers of SDG progress including human capital and technology. Perhaps future models could also incorporate more control variables related to history and culture, building on the literature related to colonialism and development (Acemoglu et al. 2001) but also as a way to explore whether investments and efforts during the MDG period (2000-2015) were conducive to progress during the SDG period (2015-2030).

When it comes to Chapter 4 (*steering effect* of the SDGs), the database should be expanded to a larger range of countries and entities, and more data is needed internationally to track the means for implementation (including SDG integration in public procurement and regulatory functions among others). Researchers could further explore differences across countries and regions in the discursive, policy and performance *steering effect* of the SDGs. We see tremendous potential in scaling-up systematic analysis of the SDG-alignment of policy documents leveraging SDG specific advanced text mining methods and AI-trained models including private and public investors interested in understanding the policy landscape. Building on recent studies for instance conducted by the IMF (Lindner and Chung 2023) further work is also needed to understand the true added value of thematic bonds (compared with other financing instruments), including SDG bonds, on access to long-term and affordable funding, sustainable development outcomes and how scientific institutions and networks can help in the design of the bond framework (*ex-ante*), for instance in setting up targets, KPIs and sound governance around the bond and in monitoring impacts (*ex post*). We note that large private investment companies recently unveiled new research centers and partnerships with scientists to strengthen sustainable finance (Mirova 2024).

Chapter 5 (IMF surveillance mechanism and the SDGs) largely focused on proposing a methodology and presenting highly aggregated results of SDG coverage in the IMF's global and bilateral surveillance mechanisms over the period 2015-2024. Future studies could explore in greater detail the linkages between countries' characteristics (including structural characteristics, geographic location and income level among others) and SDG coverage in their IMF Article IV consultations and Financial Sector Assessment Program (FSAPs). It is possible that the coverage of climate mitigation and adaptation as well as of systemic risks related to natural ecosystems in bilateral Article IV consultations are more significant in highly impacted countries, including SIDS for instance. As emphasized in Borchardt et al (2024), further research might also be needed to better understand divergence in detections for SDG 17 (Partnerships for the Goals) between the European Commission SDG Mapper and AI-trained models like the AFD's SDG Prospector to clarify concepts and models used to detect references to this goal.

Finally, further research will be needed on the vicious cycle between conflicts, sustainable development and the environment (Ide et al. 2023). Without intervening actions, the world will experience the dual disasters of rising violent conflicts and intensifying climate and biodiversity disasters. Violent conflicts and military operations more generally are directly responsible for massive humanitarian and environmental harm but also may represent major distractions for advancing sustainable development policies and investments. Building on some of the methods described in Chapter 4 and 5, further research could explore how conflicts impact discourse, policies and investments into various SDGs and the inter-state trust needed for global cooperation on sustainable development. The emerging literature on "Agenda-Keeping" (Maertens 2018; Louis and Maertens 2021; Ide et al. 2023; Aykut and Maertens 2023) should be scaled-up to understand how to keep sustainable development and climate action at the heart of international politics when conflicts are raging. This is particularly relevant since the climate and biodiversity crises are also conducive to increasing various forms of conflicts in various ways. Global

warming is opening the Arctic region for shipping, mining, and other economic development, thereby increasing strategic competition and possibly conflicts among the major powers. As conflicts and geopolitical tensions are on the rise, further research will be needed to better understand the vicious circle between peace and sustainable development (both ways) and how to stop this vicious circle via diplomacy and new forms of inter-state partnerships.

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