



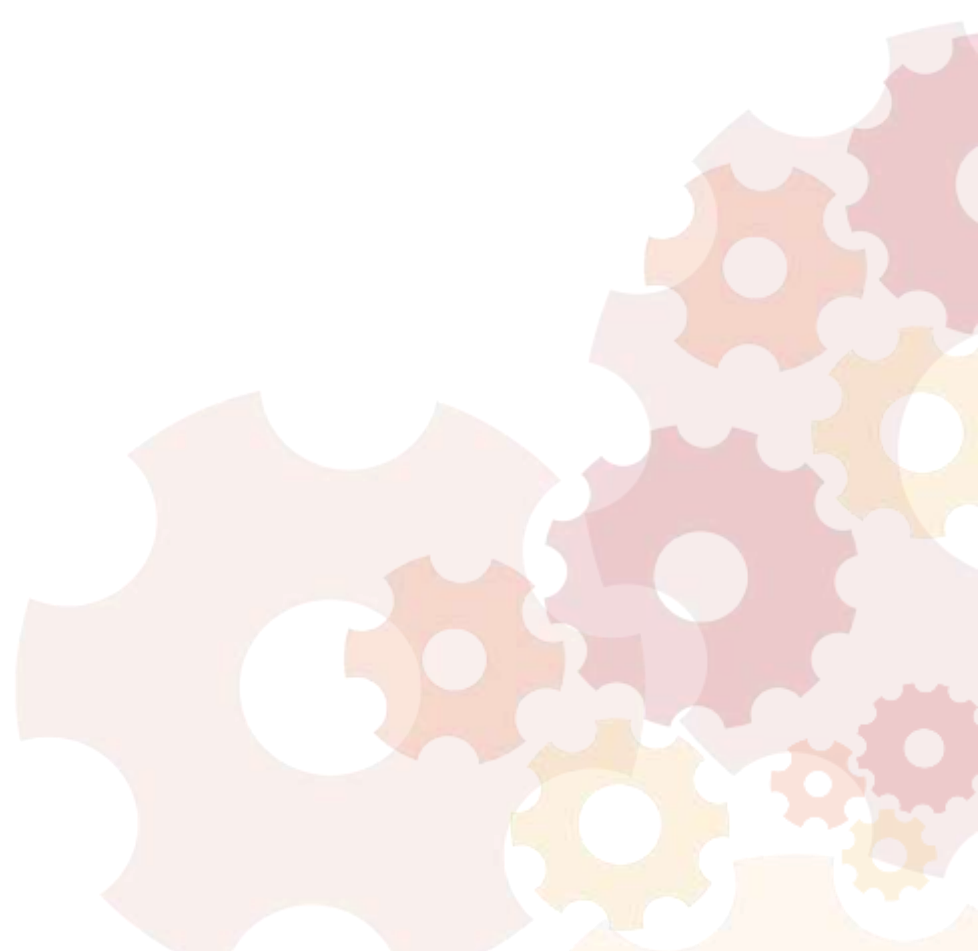
**Centre for Sustainable
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SOAS UNIVERSITY OF LONDON

Powering Ahead or Falling Behind: Can Developing Countries Build a Just and Sustainable Energy Future on a Warming Planet?

Richard Kozul-Wright

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Centre for Sustainable Structural Transformation

SOAS University of London

Thornhaugh Street, Russell Square, London WC1H 0XG, UK

E-mail: csst@soas.ac.uk

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Powering Ahead or Falling Behind: Can Developing Countries Build a Just and Sustainable Energy Future on a Warming Planet?

Richard Kozul - Wright¹

Abstract: The urgency of transitioning to a low carbon world is accepted wisdom. That the transition must be managed in a way that ameliorates existing inequalities and insecurities has begun to enter discussions, with the call for a “just transition” a growing refrain amongst policy makers and a part of the work programme of the UNFCCC. But this is contested terrain, seen by some narrowly as an extension of the energy transition, by others as a way to bring human rights into the climate discussions and by yet others as a complement to a degrowth agenda. This paper argues that a just transition should be framed as a development challenge. Doing so puts an onus on developing countries to rethink their macro-financial, industrial and infrastructure policies to advance just transitions and to develop effective state institutions to animate and coordinate the process. But in a global economy marked by deeply entrenched asymmetries and biases that constrain growth prospects in developing countries, distort their efforts to restructure the economy and hamper catching up, climate goals cannot be met simply by countries putting their own house in order. Effective governance of the international financial and trade systems is essential to ensure climate and development goals are mutually reinforcing. The current arrangements are not, in this respect, fit for purpose. The paper examines these challenges and sets out a reform agenda that could help promote just transitions.

Keywords: just transition, climate change, structural transformation, developmental state, global governance, international trade and finance.

JEL codes: O20, F13, F33

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¹ Professor of Sustainable Structural Transformation, Centre for Sustainable Structural Transformation, Department of Economics, SOAS University of London.

1. Introduction: Stylized facts

The global economy is characterized in its more developed regions by a combustible mix of private waste (particularly of food and energy), public decay (in social services and housing) and socio-economic polarization (against a backdrop, in many countries, of mismanaged deindustrialization). Across developing regions, deep economic insecurity, systemic underinvestment and footloose elites stymie development prospects, with billions of people facing unmet basic food and energy needs, lacking decent employment opportunities and suffering from repeated climate shocks, while billions of dollars flow out to wealthy asset holders abroad. These features of uneven development are unavoidably and increasingly intertwined with mounting environmental pressures and stresses, not least those caused by rising global temperatures.

Since 1750, around two-thirds of cumulative anthropogenic greenhouse gas emissions (GHGE) have come from today's developed countries which account for just a sixth of the world's population. With as little as 250 GT left in the world's carbon budget (Lamboll et al., 2023), there appears little hope of holding the average global temperature rise below 1.5 degrees, with the current trajectory on target for 2.7 degrees above the pre-industrial level.

Many developing countries, and those in Africa in particular, which have contributed the least to GHGE relative to their population, are already experiencing widespread loss and damage from climate events including biodiversity loss, water shortages, reduced food production, loss of lives and reduced growth prospects. Over three quarters of a billion people in these countries remain without access to electricity and some 3 billion people do not have access to clean fuels for cooking (IPCC 2022). Uneven development has a stark energy profile.

After four decades of hyperglobalization, the promise of catching up continues to elude most developing countries (Figure 1) leaving persistent wealth and income gaps with advanced economies (Freeman, 2024). Over half are still classified as commodity dependent, where raw materials account for 60 per cent or more of export earnings. These sectors, particularly those producing agricultural products, are more sensitive to climate change. But even when an industrial transition is underway, the turning point at which the manufacturing sector loses steam appears to arrive sooner than was previously the case for advanced economies. As a result of these structural weaknesses, informal activity accounts for between 25 and 40 per cent of national income in most developing regions but rises to over 50 per cent in some countries, particularly in Africa, where close to 90 per cent of workers are informal.²

Absent a strong investment drive, catching up over the coming century faces an uphill battle. But since the global financial crisis, only a small number of developing countries have been able to raise investment shares above 25 per cent of their national income on a sustained basis and even fewer have gone over 30 per cent even as their access to international capital markets has notionally improved.

In many cases, external debt has risen sharply with over 3 billion people living in countries where interest payments on external debt are greater than spending on education or health and in some cases on both (UNCTAD, 2023a).

² <https://ilostat.ilo.org/topics/informality/>

Accordingly, the climate challenge is inseparable from these systemic asymmetries. This paper sets out to examine how to meet these compounding challenges together through the lens of just transitions. The next section reviews competing notions of a just transition and calls for a more developmental perspective. Section 3 places a big investment push at the centre of any such transition and maps out the key policy measures that this requires. Section 4 argues that for just transitions to emerge, states will have to have greater room to implement proactive public policies to boost investment, establish greener activities and raise living standards in line with local circumstances. Section 5 acknowledges that for most developing countries domestic efforts cannot deliver the needed resources without international support and outlines a series of reforms to the existing financial architecture to make this happen. Section 6 argues that even deeper reforms will be needed to the trade architecture if it is to play a constructive role in supporting just transitions. Section 7 concludes.

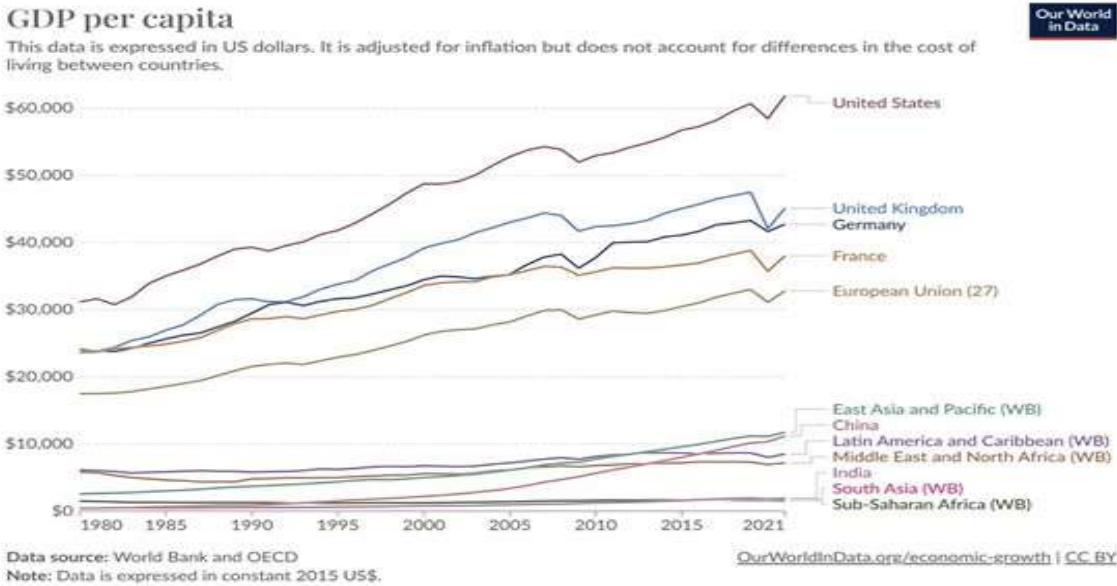


Figure 1. Catching up is hard to do
 Source: Roser et al (2023)

2. Defining a just transition

The concept of a ‘just transition’ describes the framework of norms, rules and policies required to reduce GHGE while simultaneously tackling existing inequalities and insecurities in a way that ensures a fair distribution of the costs and benefits resulting from the shift to a low carbon future.

In advanced economies, the policy community has put emissions reduction firmly in the centre of the transition challenge, hoping to rapidly “decarbonize” the economy by crowding-in private capital to infrastructure investments, primarily in the energy sector, using a mixture of public subsidies and innovative financial instruments. Adhering to an idealized notion of market efficiency, financial market actors have acquired a vaunted status as the go-to experts to make

this happen, thanks to their presumed grasp of managing risk (Carney, 2018).³ On this basis, and acknowledging the extent of energy poverty across the developing world, advanced economies proposed Just Energy Transition Partnerships (JETPs) at COP26 as a climate justice blueprint, with South Africa (literally and metaphorically) the canary in the coal mine (UNRISD, 2023). With a growing recognition that more carbon intensive activities and sectors will have to be downsized to hit global emissions targets, policy discussions have begun to incorporate job creation and retraining as a central component of a just transition (ILO, 2015) along with the management of related socio-technological shifts (Wang and Lo, 2021).

Civil society groups, in both the North and South, have adopted a more transformative view of a 'just transition' by focusing on a broader set of planetary boundaries under threat from destructive environmental practices⁴ and advancing a rights-based approach which calls for the inclusion of appropriate norms and legislation in the climate agenda (Amnesty International 2024). This approach moves the discussion beyond decarbonization, raises concerns about the adverse impact on more marginal sections of society and introduces the need for redistributive measures. A sense of excessive and wasteful use of natural resources in support of current production practices and consumption habits is often highlighted in this approach and carries an implicit challenge to growth as a desirable policy objective, with some committing explicitly to a "degrowth" agenda as part of a just transition (Schmelzer et al, 2022).

Both these approaches to a 'just transition' tend to focus the challenge (and policy responses) around "failures" -- in policies and markets -- at the national level. However, the presence of structural imbalances in the international division of labour, asymmetries in the rules and norms governing the global economy and adverse spillovers from policies adopted in developed countries have raised concerns, particularly among developing country policy makers and climate negotiators, about whether prioritising climate goals risks reinforcing these asymmetries and biases. Their worry is that by downplaying, or ignoring altogether, the particular conditions facing developing countries, the transition away from reliance on fossil fuels will be reduced to a series of top-down technocratic solutions that lack inclusivity and fail to deliver resources at the scale, speed and price necessary to allow developing countries to close the gap with those at the top of the development ladder.⁵

In response, developing countries have begun to call for an understanding of 'just transition,' that addresses the structural, socio-economic and technological inequalities between developed and developing countries.⁶ From this perspective, a just transition must do more than support developing country efforts to attract private financial resources for the energy transition, alleviate extreme poverty (whether defined in terms of incomes or energy) or develop responsible business practices. It should instead enable new pathways of sustainable industrialization for developing countries which favor and nurture new 'green entrants' and the absorption of emerging green

³ Whether the notion of risk employed by financial actors is appropriate for framing the climate challenge is open to question, see for example Ackerman (2017); Sissoko (2023).

⁴ These include the exhaustion of non-renewable resources, the over-exploitation of renewable resources, and the excessive use of natural resources in production processes more generally.

⁵ Some proponents of "degrowth" do acknowledge the asymmetrical relations between the North and South, including excessive consumption in the former, and accept that faster growth remains a goal for developing countries, see Hickel (2021).

⁶ Decision 3/CMA5 at COP 28 elaborated the scope of the Work Programme on Just Transition Pathways to discuss both national and global dimensions of pathways to achieving the goals of the PA outlined in Article 2, including energy, workforce and job creation, social protection, poverty eradication, resilience and adaptation, inclusivity, and international cooperation such as the urgent delivery of means of implementation (capacity-building, climate finance, and technology development and transfer) to facilitate just transition pathways, especially for developing country Parties.

technologies, while at the same time managing the write down of brown technologies and the exit of 'brown' sectors and firms. This will require a 'deep industrial ecosystem restructuring,' involving a significant mobilization of resources and coordinated changes within firms, across sectors and amongst different regions and communities (Andreoni, 2022).

Such a restructuring will need policies that go beyond market-based incentives, such as carbon taxes and pricing, given their limits in internalizing environmental costs and mobilizing resources at the scale and the speed required. Instead, a more strategic and developmental focus will be needed, with a whole of economy approach to help strengthen the requisite productive and technological capabilities, actively manage the necessary linkages across sectors and locations, steer the transition in the desired direction and overcome bottlenecks (and resistance) which inevitably accompany an ambitious restructuring programme.

Moreover, with the carbon footprint of most developing countries still significantly lighter than that of developed countries in per capita terms (and even more so if, as it should be, the historical record is included) it is important that the idea of just transition accommodates their full use of the remaining carbon budget. Carbon usage will, in particular, have to increase in those countries whose inhabitants do not yet have any (or only limited) access to electricity while advanced economies have a responsibility to accelerate their shift to renewable energy sources. Critically, the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) assumes a central role in framing 'just transitions' with implications, (discussed further below), for governance reform at the global as much as at the national level.

3. Investing in transitions

Every transition will necessarily be context-specific since every country faces its own particular economic, social and environmental conditions and challenges.⁷ However, from a development perspective, common constraints and stresses frame the possibilities and pitfalls facing policy makers along any desirable transition pathway.

Structural transformation has always been particularly challenging for developing countries in the context of the asymmetries they suffer in an interdependent global economy shaped primarily by, and in the interest of, the early industrial economies. The countries that have made up ground have found ways to bend the prevailing "rules of the game" to increase resource mobilization; guide those resources into activities that support a virtuous economic circle of expanding production, jobs and incomes; and devise innovative policy solutions to address the gaps and bottlenecks that could potentially block their efforts to catch-up.

An extensive body of empirical research has shown that not all economic sectors have the same potential for raising productivity growth and catching up.⁸ The positive development experiences of the early post-war decades, including the success stories in East Asia, but also more recent research on the arrested development caused by "premature deindustrialization" have confirmed the critical role of the industrial sector, particularly manufacturing, given its extensive linkages to

⁷ See for example Gallagher et al (2023) who usefully distinguish 5 transition types: first movers, new winners, large emitters, fossil fuel extractors and climate vulnerable economies; and Roberts and Park (2007) chapter 5.

⁸ There is a vast literature on the links between industrialization and development rooted in post-second world war development debates, for useful surveys see Toner (1999), Reinert (2007).

the rest of the economy and because of its tendency to attract investment opportunities and foster innovation in progressively value-adding and productivity-driven activities.⁹

Developing this sector remains a key policy challenge for many developing countries aiming to establish a sustained process of economic diversification and technological upgrading. Doing so is even more difficult in today's climate-constrained world where efforts to promote structural transformation must deal not only with the legacy of past policy failures to promote industrial development but include the added goal of building a low-emissions industrial system and, crucially, exiting those carbon-heavy sectors that have developed in as orderly a manner as possible, in line with nationally-determined climate commitments.

Developing countries can still industrialize without duplicating the carbon intensity of today's advanced economies. Moreover, moving an economy from high-emitting to low-emitting sectors can push up the long-term growth trajectory, increase total productivity, employment and real wages while decreasing inequality (UNCTAD, 2019). However, adding decarbonization and dematerialization to the longer diversification challenge – the three basic elements of sustainable structural transformation – raises a range of design, implementation and governance issues that will require alignment and coordination across multiple policy threads (Chang et al, 2024). Three in particular will be key to any successful just transition programme: macro-financial policy; industrial policy; and infrastructure policy.

Whatever the specific set of industries and activities involved in the process of shifting an economy onto a more sustainable growth path, climate-aligned structural transformation requires a massive surge of investment, reinventing energy and other GHG-emitting sectors and ensuring the resilience of other activities against climate shocks (Steffen et al., 2018). There are certainly numerous opportunities for investment in energy efficiency and renewable energy supply, many of them already cost-effective at today's prices and many that have not been commercialized yet but are equally necessary for a deeper restructuring to advance. There are also potential advantages to developing countries in the process of building their energy systems from not being locked into carbon-based energy sources. Still, low-GHG technologies must be installed across a range of activities with the likelihood, given that these technologies will have to be imported, of added pressures on their balance of payments.

Any big investment push behind a just transition must involve both the public and private sectors. A significant, well-planned and stable pattern of public expenditure can exert a lasting and positive effect on private investment (crowding-in), support employment creation, decent work conditions and wages, and trigger technological advances for a "green" productive transformation (UNCTAD, 2019). This will not happen under conditions of austerity and its achievement on a global scale will depend, critically, on systemically important economies reversing the current trend of fiscal retrenchment and tight monetary policy (UNCTAD, 2021).

What is more, an effective public sector can help lift supply constraints, especially in developing economies, and ensure that credit creation and financial conditions serve the real economy, rather than the other way around. Establishing financing options that are conducive to long-term, innovative and productive investment involves regulating interest rates, the allocation of credit and the flow of foreign direct investment (FDI), all of which will require some degree of management of capital flows and exchange rates (Adrian et al 2022)

⁹ See Chang (1994); UNCTAD (2003); Rodrik (2016); Cherif and Hasanov (2019).

Within a more stable financial framework, the state can manage credit in a variety of ways. Incentives (e.g. placing government deposits) and disincentives (e.g. portfolio restrictions) can be effective in steering credit to the most productive investment opportunities. Governments can achieve this even more directly through their own development banks, which have a greater capacity than either retail banks or non-bank financial actors for “patient lending”, as demonstrated during the pandemic (Barrowclough et al., 2020). Complementary macroeconomic policies can help boost aggregate investment by driving up aggregate income and profits, and therefore saving. While structural transformation is not, therefore, constrained by the existing flow of saving in the economy, it does require that future savings are made available ex ante through credit creation or other forms of financing. Managing credit creation and allocation is therefore important to establishing the right kind of enabling environment.

The intent of reviving the public finance option is not to extinguish a role for private finance, but rather to find pragmatic ways to make it once again serve the wider public interest. This is not the current state of affairs in most countries, both developed and developing, where financialization has enabled an unhealthy mix of footloose capital and increased corporate power and control. The current landscape of bank and non-bank financial institutions has, in particular, helped create a high debt environment with a panoply of available financial instruments. This may well have improved the management of risk attached to asset accumulation, but it has not helped boost productive investment due to a mixture of demand-side deficiencies and financial uncertainties (Akyuz, 2018; Durand, 2017). Re-regulating private financial flows will therefore be key to crowding in private investment to productive activities, including in the green economy. Appropriate support from international financial institutions (IFIs) will, however, be critical to help developing countries deal with the fiscal and payment imbalances that are likely to arise as an investment programme takes off (see section 5).

Different industrialization episodes have highlighted the role of active industrial policies to overcome a range of obstacles – externalities, waste, knowledge gaps, uncertainty, etc -- that can block a successful process of structural transformation, as well as the variety of instruments – tax credits, subsidies, tariff measures, public procurement, state ownership, etc – that make up the industrial policy tool kit (Storm and Naastepad, 2005; UNCTAD, 2016). But at the heart of any successful active industrial policy is a flourishing ecology of linkages and capabilities, within and across firms and sectors, that can sustain rapid productivity growth and create higher paying jobs (UNCTAD, 2016). In essence, industrial policy works when it helps build those linkages and effectively manages the rents that accompany targeted state support.¹⁰ Moreover, and perhaps even more than in the past given the pressures of a new technological age, structural transformation is unlikely to be a success in the absence of a dedicated innovation-based strategy.¹¹

Adding the climate constraint does not change the role or aims of industrial policy although the added urgency attached to decarbonization and dematerialization goals places a greater emphasis on divestment (exiting dirty industries) and an even bigger onus on “transition planning” (Brusseler, 2023).¹²

¹⁰ On the history, conceptualisation and practice of industrial policy see Oqubay et al (2020). On the distinction between active and passive industrial policies, see Schneider (2013).

¹¹ This is the central theme in the important body of work by Marianna Mazzucato on the “entrepreneurial state”, see for example, Mazzucato and Penna (2016).

¹² Given the specific challenges around divesting from fossil fuels a case can be made for a dedicated financial institution to undertake this challenge.

While job creation must be an integral part of any just transition in developing countries, estimates of the employment impact of greening industrialisation can vary considerably given that job destruction as well as creation will be involved.¹³ However, as clean energy initiatives can clearly lead to job creation, it is tempting to see them as potential foundations for local industrial development (Pollin, 2018a; IRENA, 2018b). Both China and Korea have approached the energy transition from this angle with a clear focus on locally manufactured green energy and related technologies and products (Thurbon et al, 2023). India also embraced the solar industry in 2011 and set up incentives for domestic production with jobs in mind. However, this ran afoul of World Trade Organization (WTO) rules, and they were challenged on the domestic content requirements that were central to its strategy, indicating the restrictions existing rules and norms place on developing countries' policy space.

Recent initiatives in major advanced economies like the United States and the European Union to stimulate domestic green energy supply chains have stressed both their employment and technological potential. They have also indicated their willingness to circumvent trade rules that restrict green industrial policy (Sullivan, 2023). However, as discussed further below, it remains to be seen whether this will substantively change the policy space afforded to developing countries.

Securing sufficient policy space is, however, only part of the challenge. While many developing countries have clear potential for producing renewable energy and diversifying into new areas of green industrialization, they will be unable to realize this as long as they are constrained by lack of access to green technologies. Without access to environmentally sound technologies, developing countries will be forced to continue using carbon-intensive technologies for much longer than is sustainable, leaving them with stranded assets in the process. Transfer of green technologies on commercial terms works well between developed countries, however, between countries at different development levels this is less feasible. Adoption of green technologies is difficult even when they are in the public domain due to challenges in absorption capacity. Green technology transfer to developing countries thus has to be a deliberate process of removing IP barriers and sharing knowledge based on the principle of CBDR-RC (UNCTAD, 2023b). In addition, developing countries need enabling conditions to produce endogenous green technologies as part of their just transition and economic diversification strategies.

What is certain is that these new technologies, along with those linked to the emerging digital economy, will require secure access to critical minerals. This will create new opportunities for some developing countries, including LDCs, to build their industrialization on the advantage offered by their ownership of these minerals, creating new sustainable value chains, as well as contributing to new sources of renewable energy (Lebdioui, 2024).

If history is any guide, however, natural resources can be a curse as much as an opportunity with outcomes hinging on the kind of political alliances that emerge around their exploitation (Haslam and Heidrich, 2016; UNCTAD, 2023c). Additionally, the exploration, extraction, and processing of these critical minerals will have significant negative environmental, economic and social impacts on local communities and countries where they are found.

¹³ Whether green energy jobs are inherently “good” jobs remains a point of contention, see Chen and Li (2021).

Averting and addressing such negative impacts will require approaches that take into account local community concerns to ensure that fair and equitable access and benefit sharing arrangements are put in place and implemented.¹⁴

As well as expanding renewable energy and capitalizing on the advantage of critical minerals, agriculture must also be included under transition planning. Considering recent geopolitical tensions and accompanying market pressures, including recent spikes in food prices (UNCTAD, 2022), mitigation and adaptation challenges extend to agricultural systems, particularly in developing countries with large agricultural labour forces. This gives land use a crucial role in almost every country's just transition pathway (Shukla et al, 2019).

Countries whose main exports are fossil fuels are faced with additional challenges. As the transition to a low-carbon economy progresses, demand for oil, gas and coal will diminish, and these countries will likely be left with stranded assets. This would have catastrophic effects if the global energy transition is not accompanied by rapid economic diversification in these countries.¹⁵

Whatever the particular strategic mix of investment and divestment, any transition strategy must include a strong infrastructure programme, involving both physical and social infrastructure. Whether and how such programmes can help trigger and sustain economic growth and structural transformation has been a perennial feature of development policy debates, with renewed interest derived from their role in China's remarkable development trajectory (UNCTAD, 2018). Still, the empirical evidence is ambiguous, suggesting that the growth impact of infrastructure programmes is contingent and non-linear while their strategic role and social (and environmental) impacts add further layers of uncertainty to any overall assessment.

What is more certain is that free-riding and other market failures mean that revenues from infrastructure programmes can be hard to appropriate fully for individual investors, so government involvement is often necessary for it to take place on the desired scale (Aghion and Howitt 2006).¹⁶ While that involvement can occur with varying degrees of state ownership and regulatory oversight, potential cost advantages and the patience that comes from diminished shareholder pressure has meant that public investment has often played an important role particularly in the context of efforts to implement and accelerate a broad-based investment push. The climate challenge only reinforces this conclusion (IMF, 2020) and especially so in those countries where adaptation is a priority (UNCTAD, 2021).

Over recent decades, however, infrastructure spending has been insufficient in many countries,¹⁷ with negative consequences not only on the pace of emissions reduction but also the capacity of governments to achieve adaptation and resilience goals, which in themselves are crucial to just transition pathways in developing countries. Climate adaptation in agriculture, for example, requires not only the building of hard infrastructure to support agricultural production and trade, but also ecological infrastructure to protect biodiversity systems. Scaled-up investment in climate

¹⁴ See the recent Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances: "The toxic impacts of some proposed climate change solutions" at: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G23/132/58/PDF/G2313258.pdf?OpenElement>

¹⁵ For more details see UNCTAD (2023).

¹⁶ The tendency to identify infrastructure programmes with "public goods" can be misleading as many such services are both rivalrous in consumption and excludable in access. However, a variety of "externalities" surround the provision of traditional utilities such as energy, water, transportation and telecommunications. These "networked" infrastructure services can be delivered through an exclusive public provision, market arrangements or hybrid systems. This makes their provision a question of political priorities and policy choices.

¹⁷ See UNCTAD (2018): McKinzie (2017). China is the notable exception to this story.

adaptation-aligned infrastructure can therefore play a unique and additive role to affect the transition to a lower emissions and more resilient global economy.

Efforts to expand infrastructure programmes in the context of the climate challenge inevitably raise the issues of development planning, sequencing, coordination and experimentation in making such programmes a long-term success (Hiirschman, 1957). Strengthening these capabilities is an urgent task in both developed and developing countries. The renewable energy challenge, in particular, needs much closer scrutiny with this in mind. Christophers (2024) has helped kick off a debate by raising questions about how far and how fast, the (to date unsatisfactory) mix of government support, price regulation and profit-seeking business can deliver the required investments in the renewable energy sector. But he also recognises that bringing in the state as a more active investor in the sector, including through direct public ownership of renewable energy assets, will require a range of financial, administrative and planning capabilities that many are lacking. While Christophers' focus is mainly on advanced economies, it is the Chinese developmental state that has made real strides in building renewable energy capacity and where lessons need to be drawn for meeting that challenge in other developing countries.¹⁸

4. Managing transitions: states of play

The whole of economy approach, accelerated pace of change and disruptive forces accompanying a just transition imply that market forces – prices and competition – cannot be left to lead the process. Nor will the profit motive suffice to drive a big investment push into greener industries and renewable energy (Christophers, 2024).

The scale, speed and political settlement required of a sustainable and inclusive structural transformation demands, as was suggested in the previous section, a vanguard role for public investment. In this approach the state will have to do more than correct market failures or derisk private investment but must instead actively shape the desired development path through public policies and deliberate planning (Gabor, 2023).

This alternative to a market-led (or liberal) approach enjoins a climate-conscious developmental state to manage the transition process (UNCTAD, 2021). There is, consequently, an unavoidable political dimension to the just transition, and one that must go beyond the technocratic arrogance and aspirational pleading of the liberal approach (Wainwright and Mann, 2018). This political challenge is not unique to developing countries, however, the focus is different from developed countries where contesting the power and political influence of fossil capital is a political priority.¹⁹ Instead, as suggested in the previous section, the challenge in developing countries is less about the configuration of existing resources and more the mobilization of additional resources, both domestic and foreign, to advance a big investment push into new and cleaner sectors that can offer increased growth potential with respect to productivity, jobs and incomes. In this respect, industrial production, or the expansion of society's productive capacities more generally, requires

¹⁸ Christophers' brief discussion of the Chinese experience makes it clear that this was pursued less through a public private partnerships approach and more using public public partnerships. See also Hameiri and Jones (2023) for a discussion of the different state-society relations underpinning the scaling up of infrastructure spending in China and its watering down in the United States over the past 40 years: and Vaheesan (2024) on the case for the public provision of renewables in the United States drawing lessons from its own history of energy supply. There are other successful decarbonisation episodes – including France, Brazil and South Korea – which should also be drawn into this discussion (McBride, 2018).

¹⁹ On the challenge to a just transition posed by fossil capital see Malm (2016); Oatley and Blyth (2021) and Taiwo (2024).

a great deal of coordination and cooperation amongst many different social actors and across multiple economic activities.²⁰

Common to both groups of countries, however, is repairing the damage to state capacity over the past four decades from the corrosive and corrupting influence of neo-liberalism. In particular, confronting financialized capital – the leading champion and beneficiary of this shift, an incubator of rent-seeking behaviour with particularly close links to fossil capital, and a champion of austerity politics – will be key to building a state fit for the purposes of a just transition (Gabor 2021; Standing 2023).

Repurposing the state to manage a just transition is not a new challenge. This was after all the central issue during the interwar years when the damage from the Great Depression forced policy makers, led by the Roosevelt administration in the United States, to rethink the interrelationship between the economic and political spheres and to reconfigure the social contract to deliver on the hopes and aspirations of a fearful and dispirited population.

Key to the success of the original New Deal was rethinking how the state should respond to systemic breakdown, achieve a sustainable recovery and build a new (and fairer) growth regime. This required the creation of new administrative capacities to implement and coordinate more active measures around the recovery, redistributive and regulatory ambitions that defined the New Deal agenda. It also required policy makers to experiment in the face of difficult trade-offs, to plan in the face of uncertainty, and to discipline in the face of divergent interests. Moreover, and lest it be forgotten, responding to environmental shocks figured prominently in the New Deal with the Tennessee Valley Authority epitomizing the building of state capacities needed to manage a multi-pronged transition path (Hart-Landsberg, 2022; Stafford, 2022).

While climate adaptation is a priority for many developing countries (UNCTAD, 2021), mitigation remains a necessary part of their just transition strategy. Properly managed, this can, as discussed above, have large positive impacts in terms of economic development and bring co-benefits such as an improving public health that could outweigh the costs incurred. However, without a climate-conscious developmental state tasked with simultaneously delivering climate and development goals, realizing these benefits will be extremely difficult.

There are some important lessons and insights already available for developing countries from ongoing efforts to transition to a low-carbon economy, not least with the sequencing of the creative and destructive processes this involves. In particular, a useful distinction can be drawn between a fast-track development of the green economy, which implies the installation of the greatest number of renewable power installations in the shortest possible time through the imports of wholly assembled wind turbines and solar PV panels, and a slow-track development of the green economy, which seeks to develop a domestic manufacturing capability base (Anzolin and Lebdioui 2021). China, for example, initially adopted a fast-track development approach, but later switched and began to build its own technological capabilities by adopting local content requirements and other demand and supply side policies to encourage domestic production of renewable technology.

²⁰ Mason (2022); Chang et al (2024).

While there are important lessons to be learnt from the failures of state action in developing countries, successful developmental states do appear to exhibit certain common characteristics.²¹ These include: strong administrative and institutional capacities for the planning, design, coordination and implementation of active policy measures and regulatory reforms in support of structural transformation; a close relationship between industrial firms and government officials that can ensure a mutual exchange of information and common understandings of the policy challenges involved; effective mechanisms of accountability of policymakers and implementation agencies; robust disciplining devices to sanction abuse of state support and to discontinue failing projects and activities.

In the face of a climate emergency, developmental states will need to revive these core elements of earlier successful models, including a commitment to longer-term targeting for industrial, strategic integration into the global economy and a capacity to incentivize and discipline private capital. But there are also important departures that come with the simultaneous task of building up green industrial activities while winding down fossil fuel-intensive activities, including the sequencing and targeting of investment, democratic accountability and pace of transition, and sensitivity to the delicate trade-off between economic and environmental goals (Aranoff, 2024). As discussed by Thurbon et al (2023), the developmental states of East Asia (particularly China and South Korea) offer instructive lessons, for both developed and developing countries, in the management of both the creative and destructive processes that will accompany a just transition, stressing, in particular, the embrace of a “developmental environmentalist” mindset by political and industrial elites.

Policymakers will, however, require societal support that goes beyond the interests of the elite to affect a successful transition. The combination of the constructive and the destructive elements accompanying transition to a low-carbon economy requires an alliance between the state and society that includes workers and that pays greater attention to the spatial dimension of development, including, in particular, rural communities in the developing world. Only with more encompassing socio-economic alliances can the influence of interest groups that are heavily linked to carbon-intensive growth be countered (Oatley and Blyth, 2021).

To affect a just transition, developmental states will have to have greater room to implement proactive public policies to boost investment, reconfigure production activities and raise living standards in line with local needs and circumstances. Such policy space is also a prerequisite for encouraging those states to cede, where appropriate, sovereignty to international bodies to establish international regulations and forge collective action in support of the global commons. After four decades of shrinking the space for public action, restoring “the balance between government, markets and civil society based on a new social contract between voters and elected officials, between workers and companies, and between rich and poor” will require abandoning the ideological shibboleths of the neo-liberal era and adopting a more pragmatic approach to policy making (Stiglitz, 2019).²²

²¹ In some respects, the Rooseveltian state shared important characteristics with later “developmental states” that helped accelerate industrial development after the Second World War in developing countries, notably in East Asia; see Kozul-Wright (1997) and Cohen and DeLong (2016). There is a vast literature on the developmental state concept, see Haggard (2018) for a useful survey.

²² The idea of policy space is an old one but was reintroduced into development discourse by UNCTAD at its 11th Conference in Sao Paulo in 2004.

5. Financing transitions

Although the investment targets required to build climate-resilient development paths are not unprecedented, indeed in many respects are similar to those that were commonplace in the decades following the Second World War and below those achieved by some developmental states in East Asia, it would be a mistake to diminish the policy challenge this poses in the contemporary global setting.

The record of financial deregulation and liberalization over recent decades should stand as a warning against simplistic calls to put private finance at the centre of a just transition (Storm, 2018; Gabor, 2021). Despite the increased flow of cross-border capital, the loose regulatory environment and heightened exposure to short-term market pressures has generated an unstable economic environment prone to boom-bust cycles and contagion effects, with a reluctance to make long-term commitments, including for public goods, which is a defining feature of any healthy investment climate. Moreover, the bailouts that tend to follow financial crises, besides putting pressure on government budgets, have had perverse distributional impacts that belie talk of delivering inclusive outcomes. Reversing the economic inequalities and degradation of the public sector that has accompanied more financialized economies must be a prerequisite for any move towards a just transition.

There was much talk of the need for systemic reform following the Global Financial Crisis and again with the Covid-19 pandemic. This has not materialized. Instead, a variety of ad hoc measures have proliferated consisting of self-insurance mechanisms, currency swaps and liquidity provision leaving growth dependent on high levels of indebtedness and rising asset prices, with monopoly and 'zero-sum' activities still firmly in place (Wolf, 2018). However, the hyperglobalized world of financialized capitalism is not an inevitable product of technological progress or disembodied market forces, but of chosen policies, norms and values and adopted institutional reforms. It is these same levers of change that must now be used to roll back financialization, in order to forge a "new deal" to halt environmental breakdown, reverse economic polarization and establish a social contract with sustainable development at its core.

In today's world of highly mobile capital, financial bolt-holes and pernicious investment treaties, many countries will be reluctant to adopt a bold strategy to boost public investment, jobs and income on their own, out of fear that the gains from higher demand will leak to other countries, or that it will cause capital flight and currency depreciations. It is therefore imperative that the international governance system encourages domestic mobilization efforts, including through measures to reduce fiscal leakage, expand fiscal space and provide the financial stability needed to bend investment decisions to a longer time horizon. For most developing countries, it will also require significant direct financial support from the international community through a mix of grant-based instruments, concessional lending and guarantees.

Reviving multilateralism

The international financial institutions established at the end of the Second World War were tasked precisely with delivering financial stability in support of government efforts to recover from the ravages of war, achieve full employment and raise living standards. Mitigating unforeseen shocks and disciplining finance capital, blamed for the economic turbulence of the inter-war years, were seen by the architects of the Bretton Woods system as key to post-war stability (Gallagher and Kozul-Wright, 2022).

Exactly when, to what extent, and why these institutions drifted away from their original purpose remains a point of discussion (and contention) among practitioners and scholars of the

international financial order. What is less disputable is that beyond intermittent surges of emergency finance, the lending power of the IFIs has been on a declining trend with the drop in World Bank lending since the mid-1980s only partly, and unevenly, compensated for by other international development banks (Figure 2). The “Maximizing Finance for Development” agenda led by the World Bank, which has structured lending operations since 2015 (AFDB, et al, 2015), has, moreover, clearly failed to deliver the envisaged trillions of dollars from private institutional investors (Kenny, 2024).

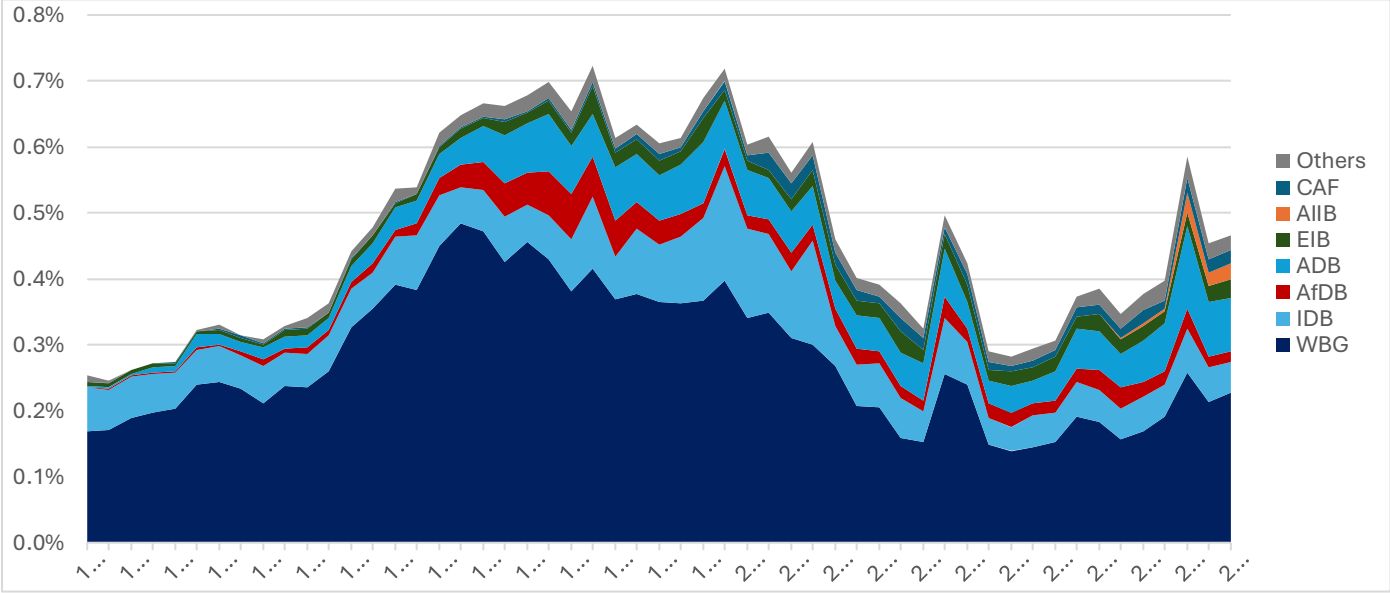


Figure 2. International Development Bank Lending, 1970-2022 (percent global GDP)
 Source: Gallagher et al (2023).

Even with the post-pandemic lending surge, the funds that have been harnessed have rested on governments sweetening deals with private investors in ways that leave too much of the risk on their books, with too little of the gains and, in many cases, growing levels of debt distress (Gabor, 2021; UNCTAD, 2022). Meanwhile, the policy advice attached to lending programmes, even when given a green coating, remains at odds with just transitions (Merling, 2024). Ensuring that international public finance is provided on the requisite scale and with the appropriate instruments will require significant reforms to the international financial architecture.

Expanding fiscal space and delivering financial stability

Developing countries need multiple policy instruments to integrate effectively into the global economy, and without undue preconditions on their effective use. The mix should include macroeconomic policies that secure economic growth and generate jobs, prudential financial regulations (including for shadow banks), comprehensive and lasting capital controls, and other regulatory measures that insulate domestic conditions from externally generated destabilizing pressures. These will need to be country-specific, determined by the nature and degree of a country’s financial openness and by the institutional set-up of its financial system, and should be kept out of the purview of regional and bilateral trade and investment agreements. For most developing countries progress along these lines requires effective multilateral support.

The glaring gaps and asymmetries in the global financial safety net call out for urgent action. A combination of increased IMF quotas, more regular allocations of special drawing rights (SDRs), a multilateral currency swap facility and abandonment of counter-cyclical country lending programmes, combined with a more representative governance structure would all help to recover a more inclusive and stable financial system. But the IMF will also need to improve its surveillance and advice on capital flow volatility, including much closer scrutiny of the shadow banking system. A more active stance on managing global capital flows at both ends, that is, in both sending and receiving countries, is also a prerequisite for greater stability. The absence of such protections has left many developing countries with few tools to manage the shocks from the pandemic as well as the more recent monetary tightening actions in advanced economies (UNCTAD, 2022). As a minimum, the IFIs need to develop and deploy price- and quantity-based measures that ensure that finance flows towards productive transformation (Gallagher and Kozul-Wright, 2022).

Rules to limit speculation, counter-cyclical financing facilities that can mitigate price shocks as well as stabilization funds could also be used in support of a more stable investment climate for developing countries. Combating tax evasion, tax avoidance and illicit financial flows through better international cooperation and greater regulation of transnational capital flows would also help to bolster fiscal space.

Extending grant-based finance

A good deal of the investment needed to build resilience against climate shocks in developing countries will not generate the reliable income flows needed to attract private capital. Combined with the fact that those investments are, in large part, a response to changes in the climate brought about by the carbon-heavy growth paths adopted by today's advanced economies, much of the required financing should come from international public sources and include a large grant component. This is even more true for funding the loss and damage many developing countries are already experiencing from a changing climate. Recent efforts point to a change of mind, in the sense of finally acknowledging the challenges around adaptation financing, but less a change of heart, in the sense that recent initiatives such as doubling adaptation financing are a fraction of the hundreds of billions needed by developing countries to adapt to climate change (UNCTAD, 2022).

If the generosity of the United States, in response to the catastrophic damage of the war in Europe more than 70 years ago, is too ambitious a target, it should not be too much to expect the donor community to finally meet the 0.7 per cent ODA target for the next several years.²³ Doing so would generate something in the order of an additional \$380 billion annually. This should be taken as the starting point. Additional international finance for adaptation purposes will have to be mobilized through a mixture of multilateral and regional financing institutions and international taxation with the aim of completing a \$600 billion annual support package. Discussions around repurposing Special Drawing Rights (SDRs), which have some of the characteristics of grant-based finance, to meet climate financing needs (UNCTAD, 2021) are a tentative step in the right direction.

Scaling-up long-term concessional finance

Alongside the need to provide a stable international monetary system, steer private capital flows away from fuelling speculative asset positions and implement an adequately financed resilience

²³ Deese (2024) has recently evoked the Marshall Plan as the framework to support clean energy transitions in developing countries. On his own admission, however, the proposal expunges the key financial features of the original model.

programme, increased long-term international finance is critical to meeting a big investment push around development and climate goals. In this regard, reviving international public finance will be fundamental.

The system of development finance institutions (DFIs) has grown considerably since 1945, including a number of new development banks from the South (Barrowclough et al., 2022). These lending institutions have a record of counter-cyclical lending and are, in principle, less susceptible to the vagaries of financial markets. Yet, the current system suffers from several limitations: first, they lack the scale and geographic coverage needed to play a catalysing role; second, there is a lack of coordination across the myriad climate and development goals; third, lending in reserve currencies without the instruments to monitor debt sustainability or the capacity to manage the finance and the projects themselves, has fostered financial instability; finally, there is a disconnect between membership and governance of many of these institutions.

A stepwise expansion and optimization of the balance sheet of the DFIs to meet combined climate and development goals can be accomplished by increasing their base capital, expanding their lending headroom, and mobilizing additional capital from the commercial sector on slightly riskier terms.

Since the Global Financial Crisis, some progress has been made on these fronts, including agreement on increased quotas at the IMF and World Bank and through the establishment of two new MDBs: the Asian Infrastructure Investment Bank and the New Development Bank. In addition to further capital increases, some DFIs have significant “lending headroom” to provide more financing while continuing to maintain strong credit ratings. Recent studies, including by rating agencies, suggest that MDBs could increase their lending headroom by \$598 billion to \$1.9 trillion under various scenarios (Humphrey, 2018; Munir and Gallagher, 2020). Other sources of finance that could be aligned to public banking include sovereign wealth funds (SWFs), which are nationally owned public assets, holding at least \$8 trillion and seldom directed towards developmental, green or regional investments.

Better coordination across the array of domestic and international financing institutions (public-public partnerships) will, no doubt, raise governance challenges not least in the leadership arrangements and voting procedures of the Washington based multilateral bodies.

A Global debt deal

A restructured multilateral system in support of climate resilient development would be incomplete without a fit-for-purpose sovereign debt architecture. While sovereign debt crises emerged at the end of the Bretton Woods era, the failure to develop a functional framework, as the volume and complexity of borrowing (by both the public and private sectors) exploded under financialized globalization, is looking like an increasingly costly omission. Even absent a worst-case default scenario, servicing existing debt will make it impossible for many developing countries to mobilize domestic resources for investing in climate mitigation and adaptation.

The faltering efforts by the international community to provide adequate and timely debt relief in the wake of the Covid-19 crisis are only the latest manifestation of gaps and shortcomings in a system that has favoured creditors (Barr et al, 2014), delivers “too little support, too late”, favours pro-cyclical austerity policies, encourages repeat offending (on both the borrowing and lending sides) and prolongs restructuring episodes (Guzman et al., 2016).

A comprehensive and transparent framework for orderly, balanced and fair sovereign debt workouts is the only solution consistent with a just transition (UNCTAD, 1986, 2015). The required steps are by now familiar: a temporary standstill on debt payments and an automatic stay on

creditor litigation; the adoption of exchange controls; provision for debtor in possession financing and IMF lending into arrears. However, given the intertwining of debt and climate crises, a global debt authority or standing body, besides being independent of creditor as well as debtor interests, would have to adopt a broader mandate including with respect to data collection, the design of bond contracts with a climate dimension, debt for nature swap arrangements, etc. (Blankenburg and Kozul-Wright 2016).

A different kind of credit rating agency (CRA) is also required (UNCTAD, 2015; Griffith-Jones and Kraemer, 2021), operating with a more sophisticated framework of risk assessment which acknowledges the specific constraints and growth opportunities facing developing country borrowers including those linked to climate change. One bias that requires urgent correction is ratings agencies, like banks, act in a pro-cyclical manner that not only limits the catalytic potential of SWFs and public banks, but also accentuates broader financial sector vulnerabilities. Another is that the world's largest CRAs continue to hold a de facto role of arbiters of responsible financial behaviour even when they are also players in the same markets they help regulate (UNCTAD, 2019).

6. A trade regime for climate-resilient development

A big 'green' investment push managed by a climate conscious developmental state offers an opportunity to build just transition pathways tailored to local conditions. This would include diversifying and upgrading economic activity, generating income and employment growth, and climate stabilization, cleaner air, and other environmental benefits.

As discussed in previous sections, to be able to increase the value of their production and diversify out of low value-added commodity production, developing countries need sufficient policy space to advance their industrial capacity. Discussions of a 'middle income trap' have raised concerns that even for countries that have successfully entered the lower ends of global value chains in manufactured goods, the challenge of further diversification and upgrading remains difficult (UNCTAD, 2016; World Bank, 2024). A just transition must, for the reasons identified earlier, include an active, strategic and developmental industrial policy, including support for adversely affected communities, to manage social impacts, steer and diversify the economy, and convert these transition pathways into a basis for climate resilient development.

Doing so requires a supportive multilateral system, particularly with respect to mobilizing finance for investment in developing countries. Although, as discussed in the previous section, some progress has been made in recent years, international financial institutions have not proved fit for purpose. The situation is even more troubling with respect to the international trading system.

The General Agreement on Trade and Tariffs (GATT) which emerged from the difficult discussions on international trade during and immediately after the Second World War, established a treaty-based regime tasked with balancing moves towards a more open global trading system with national economic goals. This was done through several rounds of negotiated tariff reductions which mainly involved advanced economies. Although developing country concerns were largely absent from these negotiations, in practice GATT did leave room for countries to tailor economic policies to local circumstances (Rodrik, 2020). That room narrowed with the negotiations launched under the Uruguay Round (in 1986) which pushed for faster and deeper integration with a distinct legal framework and disciplines that restricted the ability of governments to manage their integration into the global economy.

The gains from “free trade” have been a good deal smaller and more unevenly distributed than its advocates promised or have acknowledged. Developing countries have learnt that the expected spillovers from participating in the low-value added links in global value chains have not materialized and that the rules they signed up to don’t allow them the policy space to diversify and upgrade their economies. Many have, as noted earlier, been stuck with a narrow economic base and in some cases have experienced “premature deindustrialization”.

Against this backdrop, developing countries have expressed growing concerns that the climate constraint is being used by advanced economies to lock them into a highly skewed international division of labour and block their development ambitions. For example, developed economies are introducing (or considering) trade restrictions through Carbon Adjustment Border Mechanisms (CBAMs) against select imports deemed carbon heavy. As currently conceived, these mechanisms are neither fair – transferring financial resources from poorer to wealthier parts of the world -- nor effective – in terms of reducing emissions (UNCTAD, 2021, 2022).

There is an urgent need to shift from a coercive to an enabling trade agenda that can instead support and assist developing countries to implement their mitigation commitments and implement more climate-resilient development strategies. Several proposals have already been made to reform the trade regime to widen the available policy space and support just transitions but a more concerted effort is urgently needed.²⁴

An obvious link between the trade and climate regime could be established through formal recognition of the analogous principles of Special and Differential Treatment (SDT) and CBDR-RC as agreed in various WTO agreements and the UNFCCC and the PA. With these as guiding principles, all trade-related climate agreements negotiated multilaterally should provide adequate policy and fiscal space to developing countries to design integrated trade-environment-development strategies that advance just transitions.

Specifically at the WTO, emerging efforts on trade and climate ideally should remain inclusive and multilateral, rather than exclusive and plurilateral (UNCTAD 2021). The last WTO ministerial in February 2024 failed to follow the example of the Doha Ministerial Declaration on the TRIPS Agreement and Public Health (WT/MIN(01)/DEC/2) and expand TRIPS flexibilities – including through waiver clauses -- for developing countries in relation to climate-related goods and services to enable technology transfer, as committed by developed country Parties in the UNFCCC and Paris Agreement. This will need to be revived in subsequent negotiations. Increased effort will also be needed to provide financing and address structural and policy restrictions that impact adversely on the ability of developing countries to produce and export environmentally sound and climate-friendly technologies. Without these preconditions, many transitions will never get off the ground: for those economies where the cost threshold for low-carbon technologies is too high, their course of action may be to avoid a “green” agenda, putting global achievement of climate goals at risk.

7. Conclusion

In today’s hierarchical, uneven and interdependent world, the multiple challenges around decarbonizing the production and consumption of goods and services to maintain a livable planet is inseparable from tackling the deep economic and technological asymmetries that separate developed and developing countries. This paper has argued that the idea of a just transition, with

²⁴ In March and again in May 2023 the African Group in the WTO called for discussions on existing trade rules to allow for expanded policy space to support structural transformation and strengthen resilience.

structural transformation at its centre, provides a framework to tackle these challenges in a fairer and more holistic manner. Doing so requires putting investment at the centre of an integrated development strategy that can better coordinate macro-financial, industrial and infrastructure policies. Pursuing such a strategy rests, in turn on the effective role of a climate conscious developmental state. The paper suggests there are lessons to draw from the experience of successful developmental states, particularly in East Asia, but also recognises that the urgent challenge of exiting carbon-dependent industries brings its own specific challenges and will require innovative approaches.

Given the external constraints and biases that restrict developing country efforts to mobilise domestic resources, a more supportive international environment, aligned with their needs and aspirations, is key to just transitions. This is particularly true of the international financial system that since its establishment at the end of the second world war, and even more so since its embrace of private capital flows, has had a poor record of delivering appropriate support to developing country efforts to raise their levels of investment and diversify their economies. This paper has suggested a series of reforms that would make the system fit for this purpose by expanding the role of public finance and reducing the burden of sovereign indebtedness. As debates around reform of the International Financial Architecture gather pace, it is crucial that policy makers, organized labour and civil society grasp the opportunity to push for such a pro-development agenda that can overcome the constraints facing structural transformation in the South and allow all countries to achieve climate-resilient development.

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**Centre for Sustainable
Structural Transformation**
SOAS UNIVERSITY OF LONDON

SOAS University of London
Thornhaugh Street, Russell Square, London WC1H 0XG, UK
E-mail: csst@soas.ac.uk

www.soas.ac.uk/research/research-centres/centre-sustainable-structural-transformation