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Towards a sustainable, resilient and prosperous future for India: investment, innovation and collaboration in a changing world

Amar Bhattacharya and Nicholas Stern

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About the authors

Amar Bhattacharya is Senior Fellow – Global Economy and Development, Center for Sustainable Development at Brookings and a Visiting Professor in Practice at the Grantham Research Institute on Climate Change and the Environment.

Nicholas Stern is IG Patel Professor of Economics and Government at the London School of Economics and Political Science and Chair of the Grantham Research Institute.

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1. Vision and strategy

Introduction

India now has in its hands an opportunity to chart and deliver a new path for development and growth over the next three decades: growth that is sustainable, resilient and inclusive. India can leapfrog the dirty, destructive and fragile phases of the older paths followed by current developed countries to build a stronger, more productive and healthier economy and infrastructure. This is the growth story of the 21st century.

Charting and fostering this new path will involve a strong and purposive transition driven by investment and innovation. It will require deep structural reforms, including fundamental change in the key economic systems of energy, transport, cities, and land and the natural environment. The potential returns, in terms of productivity, incomes and, crucially, living standards and broader wellbeing, could be powerful and widely shared. Such a transition for India would also be pivotal to global action on climate change and biodiversity, and would therefore fundamentally reduce the immense dangers from weak or delayed action, to which India is particularly vulnerable.

The dangers of unmanaged climate change for the world and India

As we recognise the great development potential of the new story of growth, let us also be clear on the huge magnitudes of the risks from unmanaged or weakly-managed climate change. Each of the six *Assessment Reports* from the Intergovernmental Panel on Climate Change (IPCC) since its first in 1990 has demonstrated threats more severe, and has been more definite in its conclusions, than its predecessors; the science has become ever clearer. And the IPCC's *Special Report on Global Warming of 1.5°C*, published in 2018, showed how much more dangerous 2°C of warming would be than 1.5°C. For example, 2°C would expose 37% of the world's population to extreme heat at least once every five years; at 1.5°C, 14% would be affected. At current levels, the world's governments' commitments on greenhouse gases generate serious probabilities of global temperature rise in excess of 3°C in a century or so, to levels not seen for around three million years. Remember that *Homo sapiens* is only around 300,000 years old. These temperatures would be far outside human experience. A temperature rise of 3°C – or even an increase of less than that – could result in hundreds of millions, perhaps billions, of people moving to survive, with grave risk of widespread and long-lasting conflict.

The dangers for India are especially severe. Northern India's water systems depend fundamentally on flows from the Himalayas and the pattern of melting of snows and glaciers can cause uncontrollable torrents in some parts of the year and droughts in others. The monsoons could be interrupted in critical and unpredictable ways. Much of India's coastline and many of its cities are exposed to tropical cyclones which could become much more intense, with storm surges made more damaging by sea level rise. And in just a few decades from now, major and densely populated parts of India could become exposed to temperatures in which human beings could not survive outside for more than a few hours. The spring and summer of 2022 foreshadowed these impacts as India experienced both unprecedented heat conditions, putting lives at risk on a large scale, and severe flooding. Additionally, the old, dirty model of growth based on fossil fuels gives rise to the associated impact of air pollution, which kills millions of people a year in India and damages the health of many more.

In the future, major population movements and migrations across South Asia could be triggered; and there is significant danger of conflict occurring over water and space. Action on climate change must be strong and urgent if these threats are to be reduced and managed.

The opportunity and advantage in India

Fortunately, there is ever-growing understanding of the great potential posed by a new, cleaner and more efficient form of development. The rewards to India – and beyond – from the successful creation of this new path would range across all dimensions of development and all parts of society. The attractiveness of, and rewards from, this transformation do not imply that it will be easy. It will require strong investment, innovation and systemic change. The scale of necessary investments to deliver this new form of development will be large and global, as we shall show. It must be investment in all forms of capital, including human and natural, as well as physical.

The transformation will involve dislocations, the management of which will necessitate investment in people and places. Systematic change of this scale and nature requires close attention to social cohesion: in other words, a just transition.

The longer decarbonisation is delayed, the more disorderly future shocks will be and the greater the stranded assets in the polluting sectors. While the investment requirements and pace of change might look daunting – and we shall offer an analysis – India has some real potential advantages relative to other countries, and it can effectively realise its potential:

- First, relative to other countries, its infrastructure and urbanisation is less developed. Eighty per cent of its likely infrastructure in 2050 is yet to be built, so by acting now India can avoid the lock-in of outdated dirty capital.
- Second, it has an entrepreneurial private sector, and capital markets that are better developed than other countries.
- Third, it has technical skills in its people and firms.
- Fourth, there is a lively democracy where decision-making can, at least in principle, reflect reasoned discussion and sustain strategic commitment across successive governments.
- Fifth, it has a growing workforce due to its young population.

Of course, these are advantages only if India makes them so. Prime Minister Modi's important speech in November 2021 at COP26 in Glasgow indicated a clear vision and a commitment for India, which could both chart a course and make the most of these advantages. This paper is about *how* to realise the new form of growth and, in particular, *how the necessary investments can be drawn through and financed*. Success will not only radically reduce climate risk but also produce cities where residents can breathe and move. Ecosystems that are robust and fruitful must be central to this model, both as a route to the new approach and as a consequence. Natural capital in land, water and forests is a crucial part of the whole story. In large measure, it is valuable infrastructure, which requires investment and protection.

Acting urgently to reduce emissions, adapt and invest in net zero

Alongside and within this vision for the next three decades, there must also be a sense of urgency and decision-making now. For India and the rest of the world, the next decade is decisive in that it will profoundly shape those that follow and the future of climate and environment on the planet. World emissions must be cut by 40 to 50 per cent in this decade to keep 1.5°C in reach. Much bigger emitters than India must lead on this, but India too has its role to play, particularly as crucial infrastructure decisions and investments will be made in this decade with powerful consequences for the decades that follow.

The climate impacts experienced round the world and in India make it clear that adaptation is critical, and resilience must be designed and built into all investments. Global temperatures will rise still further, and impacts become more severe. India has taken an important initiative through the creation of the Coalition for Disaster Resilient Infrastructure. In building resilience into all investments, we should recognise that in many activities, adaptation, mitigation and development come together. Examples are everywhere: mangroves, restoring degraded land, public transport systems, and decentralised solar power.

COP26 in November 2021 built on the landmark Paris Agreement brokered at COP21 in 2015 to create new opportunities to achieve this new form of development. The private sector has shown a clear understanding of the opportunities and there are commitments of assets under management of around $150 trillion to the drive to net-zero emissions (made through the Glasgow Financial Alliance for Net Zero, or GFANZ). However, this will not flow without a much stronger investment climate and a realistic country platform (whereby all stakeholders can come together behind a clear strategic objective set by the country). For the necessary investment climate and platform to be created in India, strong institutional reform will be necessary alongside policies. This is of special importance in the energy sector, and particularly the power sector. At the same time it will be crucial to make strong improvements in domestic resource mobilisation as some of the investments will need to come from the public sector and this decade will also be critical for advancing India's human capital, in health and education.

The role of developed countries and multilateral development banks

The richer world has not only a clear moral obligation but also a self-interest incentive to support India's transformation. On the former, its dirty development history and accumulated past emissions have been central to the creation of the problems of climate change and biodiversity loss; the responsibility this implies has been recognised in the crucial United Nations Framework Convention on Climate Change at Rio in 1992 and the annual sessions of its Conference of the Parties (COP). And as part of our common humanity, there is a shared responsibility to fight poverty and promote development, as recognised in the Sustainable Development Goals agreed at the UN in 2015. Supporting India's new path is a matter of self-interest for the richer countries since India's economy and emissions are potentially very large. That self-interest motive is enhanced because India is likely to be seen as a leader and a model by other developing countries. This obligation of the rich countries should be acted on and delivered via both international institutions and bilateral support.

The multilateral development banks (MDBs) and development finance institutions (DFIs) were established, or have taken on the objective, to promote development and fight poverty. These institutions have, as we shall argue, powerful advantages in promoting this new form of development. In particular, by focusing strongly on the enabling environment and by helping in the assessment, management, reduction and sharing of risk they can foster investment and enable private finance on a much greater scale.

Aim, approach and structure of the paper

This paper is about how to realise the new model of development, as described, for example, in Prime Minister Modi's speech at COP26. The logic of the paper follows from the argument around the centrality of investment and innovation in this new form of growth and what is involved in delivering it.

Section 2 sets out the scale and nature of investment and innovation which can drive, and is needed for, the new path. Like the rest of the paper, it focuses on India, but we emphasise that India's strategy and action is set in a global context where change and investment are required everywhere and where big past and current emitters must move strongly and rapidly along their new paths. In Section 3 we examine policies and institutional changes in India that could draw through this investment and necessary systemic change. Section 4 is devoted to fostering and scaling up both private finance and international public finance; the role of international public finance in reducing, sharing and managing risk to unlock private finance on a large scale and at a cost low enough to enable the investment. At the same time the risk-reward structure to suppliers of private finance must be strong enough to support the finance itself. The combination and complementarity of finance, both public–private and domestic–international, will be crucial.

This whole approach involves three interrelated and mutually supportive strategic objectives: first, a path to net-zero emissions by 2050 for the world as a whole and a 1.5°C goal; second, much stronger action on resilience and adaptation in the face of ever rising climate change impacts; and third, protecting and restoring the natural capital that is vital to human and planetary security.

Section 5, the final section, argues that realising this new approach to development in India could be at the heart of making this India's century through India's own development, and could propel India to world leadership. This century may yet become still more fractious and difficult. Taking a new path will not only have immense returns for India but also for the whole world.

2. The investment imperative

A global agenda

A major, rapid and sustained investment push is needed to drive a strong and sustainable recovery out of the COVID-19 crisis and disruption from war in Ukraine, to transform economic growth so that it can deliver on development and poverty reduction, and to respond to the growing threat of climate change and environmental degradation.

Emerging markets and developing economies (EMDEs) saw investment decline by 12–15% in 2020–21, following a decade of slowing investment growth. There is an urgent need to boost investment in all forms of capital – human, physical, natural and social. Everywhere there is an opportunity to 'build back better', to replace aging and polluting capital with better capital and to build all new capital so that it is sustainable, inclusive and resilient.

In a report that was prepared for the UK G7 Presidency, we concluded that "to both raise growth and accelerate the drive to a net-zero emissions and climate-resilient economy, global investment needs to be increased and sustained above pre-pandemic levels by around 2% of GDP p.a." over this decade and beyond (Stern, 2021). The scale of the challenge is even greater in EMDEs other than China, given the large deficits in human capital and infrastructure investments in relation to what will be required to support sustainable development, resilience and structural change. Investments in sustainable infrastructure in the developing world will be particularly important in managing the key system transformations – in energy, transport, water, digital, urban and food and land use.

A subsequent report that we prepared argues that EMDEs other than China will need to invest an additional $1.3 trillion by 2025 and an additional $3.5 trillion by 2030 – in human capital, sustainable infrastructure, adaptation and resilience, and natural capital – to deliver on development and climate goals (Bhattacharya et al., 2022). This scale of investment will be challenging but feasible.

If delivered well, these investments can unlock growth, create a better quality of life and ensure a sustainable future for the planet. If these investments are made on the same patterns as the past, then growth will become progressively unsustainable.

The window for making these choices is uncomfortably narrow because of the dangers of technological lock-in and because the world is rapidly exhausting the global carbon budget. Infrastructure projects last for decades and 70% of the increase in emissions from developing countries is expected to be associated with infrastructure yet to be built (UNOPS, UNEP and the University of Oxford, 2021).

On the other hand, there are extraordinary opportunities to get things right. Most of the infrastructure that developing countries will need by 2050 will be constructed over the next three decades, and there is a tremendous opportunity to leapfrog and avoid the mistakes of the past.

The development of new and more cost-effective technologies – from large-scale solar to mass transit and techniques to use energy much more efficiently – are transforming opportunities to build more sustainable infrastructure. There is great potential to tap the dynamism of the private sector. And there is a large and growing pool of private savings looking for predictable returns.

India's investment imperative

The National Infrastructure Pipeline

India epitomises the challenges and opportunities of scaling up investments to drive development transitions and pursue a more sustainable growth path. The National Infrastructure Pipeline that was launched by Prime Minister Modi in September 2019 explicitly recognises the need for a major investment push to respond to the demographic and environmental challenges that India faces and to enable it to grow at pace to become a $5 trillion economy by 2025. The taskforce that was subsequently established (Department of Economic Affairs, GOI, 2020) sets out a vision and strategy for infrastructure development to deliver on several strategic objectives: affordable and clean energy; convenient and efficient transportation and logistics; housing and water supply for all; digital services for all; quality education; doubling of farmers' income; good health and wellbeing; sustainable and smart cities; disaster resilience and leveraging technology for public good. Based on a whole-of-government exercise, the taskforce identified a programme and pipelines of projects encompassing key economic and social infrastructure sectors totalling $1.4 trillion over 2019-2024, around 7% of GDP. The major sectors of planned investment include energy (24%), transport (33%), urban (17%) and irrigation and rural infrastructure (15%).

Several studies have attempted to assess the investment requirements for India to meet its net-zero emission targets. These suggest that additional investment requirements could be on the order of 3% of India's GDP. This additional spending has to be treated as an investment rather than a cost. India currently spends more than 20% of GDP on fossil fuels, which it could save in a decarbonised economy. There would also be substantial co-benefits to decarbonisation, including less pollution, better health, more livable cities, and higher productivity and competitiveness.

Energy transition

Ahluwalia and Patel (2022) assess the implications of India's COP26 targets for the country's decarbonisation strategy and the likely investment requirements. In particular, they examine the decarbonisation options for the major prospective sectors – power, transport, industry and expanded urbanisation. As they show, a successful decarbonisation strategy would entail shifting progressively to renewables to meet all electricity demand, switching from direct use of fossil fuels to electricity wherever possible (i.e. electrification), and concerted actions to improve energy efficiency.

An important feature of the prospective energy transition is that a majority of the investments can be undertaken by the private sector. This includes renewable energy generation, building a production base for renewables, developing the potential for green hydrogen, electrifying and restructuring road transport, the decarbonisation of industry, and improving efficiency and cutting emissions in commercial and domestic energy use.

The public sector will nevertheless have an important investment role to play. It will need to invest especially in expanding and upgrading the power grid, including to handle the intermittency of renewable energy generation, and in the shift to more efficient and low-carbon modes of transport, including rail, inland water and mass transit. These priorities appear to be well reflected in the National Infrastructure Pipeline; the scale of investment will need to expand beyond 2024 given India's development transition needs and decarbonisation potential.

A particular challenge for India in decarbonising the power sector is the phase-out of coal. India has the second largest number of coal-fired plants in the world, roughly the same as the United States. Around a quarter are old and inefficient, but most are relatively young. India is also a major coal producer. Altogether India employs 1.2 million people in the coal economy, mostly in the poorer parts of the country (most coal mines are located in the East). The transportation of coal is also a major source of revenue for the railways. An accelerated phase-out of coal will therefore entail significant financial and transition costs that will have to be carefully managed and that will warrant commensurate international support.

Climate change adaptation

Much greater attention will need to be given to adaptation requirements in a world of accelerating climate change. While the evidence on physical risks and their incidence is growing, there are not as yet comparable assessments of adaptation requirements as there are for mitigation. As more detailed country assessments are undertaken, it is clear that investment requirements for adaptation are likely to be significant and increase over time – in the range of 1–2% of GDP for a country like India. Actions on adaptation must encompass all levels of government and also strongly anchored in local communities.

The same is true of environmental awareness more generally. Recognising this imperative, Prime Minister Modi launched a global initiative 'Lifestyle for the Environment - LiFE Movement' on 5 June 2022. First proposed at COP26, the aim is to rise to planetary challenges using human-centric, collective efforts and robust action that further sustainable development. The initiative calls for ideas and suggestions from across the world to promote an environment-conscious lifestyle.

3. Policies, institutions and the role of government

Policies and institutions for change

India is embarking on a new strategy, as we described in Section 1. It is a new approach to development and growth, and embodies fundamental transition, particularly around energy but also across the whole economy. Many other countries are embarking on a similar transition, and there is a growing recognition both of the opportunities in these new paths and of the urgency of action at a global scale. While every country is different, many challenges are shared. In this section we examine the policies and institutions that can foster and drive this new approach, taking India's special circumstances carefully into account.

We must always keep in mind that this decade is decisive: for India and for the world. Locking in dirty capital and infrastructure in the coming years would be immensely dangerous. And this is a decade when infrastructure investment must be strong across the world, particularly in EMDEs as they grow and urbanise.

The necessary transformation cannot happen with the pace, structure and nature required without strong public policy. It must be public policy for rapid and fundamental structural change. We emphasise this because many analyses of public funding entail simple comparisons of one-off shifts in equilibrium, rather than processes of change. This dynamic approach carries questions and challenges way beyond those associated with approaches focused on pursuing or modifying standard processes and policies. How can government and institutions in India both change themselves and create the policies that can deliver this change? The responses to these challenges must embody a recognition of the scale and pace of investment and innovation and systemic change described in Section 2.

In terms of strategy and action, the challenges involve a sprint, middle distance race and marathon. A fast start, and great speed and strength, are needed for this decade but changing the economy to largely eliminate fossil fuels and change industrial methods and structures must continue over three decades, with decarbonisation achieved close to, or soon after, 2050. Investments, innovation, policies and structures for this decade must be the first part of a longer and sustained strategic story of action. Thus the task is to start a 'virtuous cycle', or a dynamic process of change, now, which not only produces results but also leads to institutions, processes and systems that can sustain future change. Investment depends crucially on expectations and confidence, and government must act both to promote strong investment of the right kind now – investment that is sustainable, resilient and inclusive – and to build systems that can drive future investment and innovation.

Investment strategy, investment climate and strong country platforms

It follows that a sensible place to start the analyses of policies and institutions for change is the shaping of an investment strategy and a focus on the 'investment climate'. The development transitions that India is facing in key interlocking systems – energy, transport, cities, water, digital, food and land-use – call for long-term vision and investment strategies anchored in a whole-of-economy approach. India's long-standing capabilities in investment strategies, now embodied in Niti Aayog, are a strength that it can draw on. These capabilities need to be developed and adapted to shape long-term strategies in a world of climate change as well as rapid structural and technological change.

Investment climate refers to: the factors that shape confidence in feasibility: the ability to get things done; the possibility of realising returns of acceptable or manageable risk; and the ability to control and manage costs or events that could derail.

A useful way of thinking about how to create a positive investment climate, and to kick-start the dynamics of change, is to focus on the building of a strong 'country platform'. This refers to the whole set of structures in place that:

i) shape the investment climate and the risks (both positive and negative) it embodies;
ii) give some clarity on the medium- and long-term sense of direction for the economy and society (shaping expectations) and the main sectors;
iii) guide how decisions can be taken, collaborations created, and problems solved; and
iv) provide effective links to sources of finance.

By focusing on building a country platform in a systematic way, problems can be identified and future policies and institutions shaped in ways that promote and reinforce change: this is the virtuous circle that we seek.

Some special challenges for India

For each country, the challenge of building a favourable investment climate and a strong country platform will be different: it will depend on its history, culture, economic and social characteristics, and levels of development. That is true of India, although in broad and basic terms some of the challenges around investor confidence and public action are faced by all countries.

The investment climate, and the country platform that can foster it, is in large measure about the role and functioning of the state. It is about good governance and functioning markets, plus, in this context and as we emphasised in Section 1, a clear strategic sense of direction, particularly around sustainable investments and infrastructure. That sense of direction, covering the next two to three decades, will be crucial to both investment and innovation. The time horizon means that it is important, in a democracy, that the strategic direction is broadly shared across the political spectrum. That, in turn, will depend on public action, including through non-governmental organisations, academic institutions, media, think tanks and beyond. One advantage here is that the younger generation, in India as elsewhere, is in large measure thoughtful, clear and insistent on these issues.

India's administrative capabilities are strong compared with many EMDEs, but those capabilities should be strengthened and still more clearly focused on facilitating and removing bureaucratic barriers to sustainable investment and innovation. The emphasis should be on the fostering, and not the hindering, of investments. Policies in institutions and administrations should show that investing in, and taking care of, the environment and natural capital is core to growth and development, and that new, clean technologies and infrastructure can drive growth. That perspective must come both from political leadership and from the internal leadership, standards and training of the civil service itself.

This new approach requires the involvement and leadership of the private sector as well. All too often, lobbying of government is about the seeking of special privilege or rents for a particular firm or sector, rather than a whole new approach to development, environment and technologies. As governance refocuses and improves, so too should private sector behaviour. There are really positive signs here as major parts of the private sector in India are already embracing new approaches in power, steel, cement, vehicles and so on. While in its early stages, momentum is building. Both government and the private sector should help the competitive processes to foster the transition from the brown to the green, while helping to manage the inevitable dislocation along the way. This will be particularly important with regard to the reallocation of capital and labour, and especially in relation to the accelerated phase out of coal.

The transition to a low-carbon, resilient future has many dimensions, from macroeconomic to structural to micro. The scale and nature of the investments that have to be undertaken, against a backdrop of limited fiscal space, inevitably raises issues of debt and fiscal sustainability. The path to macroeconomic sustainability is not through limiting the pace of investment. Instead there has to be a strong focus on quality of investment to foster strong growth dividends, together with ensuring that the financing is of a long-term nature and at reasonable cost of capital.

The transition also calls for an enhanced focus on two aspects of fiscal policy that we discuss below briefly: public finance foundations; and centre–state relations. The extremely valuable report of the Fifteenth Finance Commission assesses these issues in great detail and sets out an ambitious and comprehensive agenda.

Public finance foundations

A substantial part of the required investment will necessarily be undertaken by the public sector, even though the majority will be private, as we saw in Section 2. Much of human capital, education and health will have to be financed from the public revenues; so too a 'just transition' and the necessary investment in people and places to manage dislocation. Much of the investment in natural capital will also have to come from the public sector, and so too that for resilience or defence against some of the impacts of climate change that will occur. While there are potential sources of revenue in all of the above, and social incentive structures will involve some pricing, the demands on the public revenues in realising the new approach to development and growth will be strong.

India's tax revenues at around 12 percent of GDP (state and union) are well below what they should be, given its income levels and economic structures; and demand for those revenues will rise, as we have argued. Thus 'domestic resource mobilisation' (DRM) will be a crucial part of this new growth story. There are ways forward now that recent reforms, particularly the goods and services tax (GST), have made possible. This reform has reduced the problems of overlapping bases across states and federal structures and potentially opened up new sources of information, and thus revenue, for income tax. The GST (insofar as it is a value-added tax system) also carries some incentives to join the more formal tax-paying sector. Urbanisation carries possibilities for an expansion and reform of property taxation. India should build on these advantages.

Centre–state relations

An economy and society of India's size inevitably has multi-level governments, where lower levels, particularly the states, are crucial to the investment climate. The way in which powers are delegated and shared, some of this specified in the constitution, and how the centre and states in the federation behave in relation to each other, can make life difficult for potential investors who have to deal with uncertainties and credibility at both levels of government. This is the case in cities too. In India centre–state relations are of special importance in the power sector, which is, under the constitution, in large measure a matter for the states.

State governments will often try to curry favour in the population by offering cheap or even free power, for example to rural areas and farmers. That can undermine the returns to investment and thus the level and nature of investment itself. Reform of the power sector will be a crucial part of enabling the investment that will be at the heart of the whole energy transition. The necessary reforms will have to cover the whole of the sector, including generation, transmission and distribution. They must enable both decentralisation to lower levels, such as household or firm generation via solar power, for example, and at the same time create transmission systems that enable, particularly in the context of renewables, the linking of demand and supply across big geographical regions to handle peaks, troughs and intermittencies in supply and demand. Finally, at the distribution stage, there are real problems of pricing, revenue collection, and allocation of supply which, as we have emphasised, can be the subject of corruption and populism, destroying incentives to invest.

4. Fostering and scaling up private and international public finance

While a strong public finance foundation is key to a big-push investment strategy, the scale of the investment and the growing opportunity for private investment mean that private finance can and must play a much larger role. So too must international public finance, both to catalyse private finance and to meet priority needs that require concessional or low-cost finance.

Mobilising private finance at scale

There is great potential and need to increase private sector investment and finance, given the binding constraints on fiscal space and the dynamism that the private sector can bring to the transformation agenda. A growing proportion of investments can now be undertaken by the private sector. The private sector has come together on a strong commitment both to sustainability and to enhancing the flow of finance to emerging markets and developing economies. In particular, GFANZ has brought together all segments of the private sector and made a commitment to work towards mobilising $1 trillion per year for green investments in EMDEs. The MDBs and the development community more broadly are also now strongly focused on how to improve their private finance multipliers. And the G20 has put green investments and sustainable finance at the centre of its work programme through the different working groups. We have the possibility of making a major breakthrough in the mobilisation of private finance.

For this, the private sector must work together with countries and international financial institutions (IFIs) in a concerted way to identify and tackle constraints to private investment and finance in specific countries in priority sectors that are key to the green transition and climate resilience. That is what the Climate Finance Leadership Initiative (CFLI) and Global Infrastructure Facility (GIF) are attempting to do in India by bringing together the international and domestic private sector in identifying opportunities and constraints in key sub-sectors related to the energy transition. There is also a need to strengthen the preparation of projects that can attract the private sector and build capacity in both the public and private sectors, for example for renewables, energy storage and green hydrogen. It will be important to identify and tackle risks that impede the scaling up of private finance. This will require country-specific assessments and solutions but two common risks that are likely to face private investors in relation to green investments are exchange rate risk at the macroeconomic level and policy-induced risks at the sector level, including offtake risk for renewables. In India, tackling the financial health of the distribution companies and ensuring a pricing policy that provides adequate returns will be crucial for the massive scale-up needed in private investment.

Country-owned and country-led platforms can be used to launch ambitious investment programmes that can mobilise finance at scale, including private finance. The Just Energy Transition Partnership that was launched by South Africa with the G7, and in which the private sector is expected to play a major role, is now seen as a pioneering example that can be extended to other countries, based on their specific circumstances, to establish a mutual accountability mechanism with long-term commitment from the country and commensurate support from donors, IFIs and the private sector.

The success of these country-based efforts requires support from an enhanced and structured partnership between the private and public sectors, and in particular between GFANZ and the MDBs, to ensure close cooperation at the country-level and the strengthening of the international architecture to foster scalable approaches. The G20 can play an important role in fostering such an enhanced partnership.

Unleashing the potential of the multilateral development banks

MDBs and DFIs have a crucial role in supporting a big-push investment strategy. Investment and its finance require the management of risk and confidence in revenue flows. In particular, MDBs can help countries to scale-up high-quality investment programmes and translate them into concrete project pipelines that can attract private investors. In addition to financing priority public investments, they need to greatly bolster the mobilisation of private finance through better country and sector platforms, financing instruments and fiscal incentives. They are uniquely placed to help with reducing, managing and sharing risk. We have argued that if countries succeed in putting in place the scale of investment programmes needed for development and climate transformation, MDBs may need to triple their level of financing by 2025 (Bhattacharya and Stern, 2021).

At the April 2022 Spring Meetings of the International Monetary Fund and World Bank, US Treasury Secretary Janet Yellen made the case for a major revamp of the MDBs so that they are able to respond to the urgent and multiple challenges now confronting developing countries, including the imperatives of investment for sustainable development and climate change mitigation and adaptation. At its recently concluded Summit, the G7 acknowledged the need for a major push on infrastructure investment that would require a step up in the role of the MDBs and other DFIs. The G20 has also commissioned a taskforce to look into options on the capital adequacy framework of the MDBs, which will present its report at the G20 Finance Ministers meeting in July 2022.

These developments provide a welcome opening for all shareholders to come together in setting an updated mandate for the MDBs and ensuring that they are equipped to fulfil that mandate. The starting point must be the scale, urgency and composition of the investment challenge and the unique strengths of the MDBs in helping to unlock the investment opportunities and mobilising the right mix of finance at reasonable cost.

In the case of India, the present level of support from the MDBs for the key development transitions that India is facing is small in relation to the challenge. In the case of the World Bank, the scale of support is constrained by the single borrower limit. The Indian G20 Presidency could provide an important platform to reach agreement on a substantial revamping of the MDB system that can deliver on both development and climate goals for all developing countries.

5. India and the world

This can be India's century. Creating a new form of sustainable, resilient and inclusive development will be at the heart of that story. In this paper we have attempted to set out how this can be achieved, particularly the centrality of structural reforms, raising the rate of investment, and focusing on sustainability and resilience in so doing. The need for action is intensely urgent and the time and circumstances for acting are now, in many ways, favourable for India. This new approach to development, far more attractive than the dirty and destructive paths followed by rich countries in the past, is in India's hands.

That new path will, first and foremost, be vital to India's development and a sustainable reduction in poverty. It will also be crucial for steering the world towards a new and sustainable path, and for *India's leadership role in the 21st century*. There are five reasons for India's importance and potential influence here: its size; state of development; geopolitics, culture and history; capacity to act as an example; and its role in international fora and institutions.

India's size makes it of immense importance. It has the second largest population in the world, soon to be the largest. It is likely to be the fastest growing of the major economies in the next two to three decades. It has a high fraction of the world's poor people. Its size, growth and state of development – with so much of its infrastructure yet to be built – imply that its decisions are vital to the future of greenhouse gas emissions. Its next phase of growth, especially in relation to its energy and transport, infrastructure and natural capital, will directly influence the future climate for its own people and the world.

India occupies a special place in the world's geopolitics as a result of its history, geography and culture. In a fractious world, it is independent of the major blocs or alliances and has a long history of being so. It is an outstanding democracy, the world's largest. Its history is one of a country with deep traditions and talents, which gain it respect and strength internationally. It was among the first to achieve independence in the closing years of the colonial age. It has shown how to grow on the basis of the skills and talents of its own people. And it is situated at the heart of the most populous continent.

Because of its size, state of development, talents and history, and the continuing poverty of many of its citizens, India is seen as a key source of learning and an example for many countries in the developing world.

Finally, because of all these features and strengths, India has a special role and respect in international fora and institutions. We would suggest that India could have played a stronger role in these institutions in the past. It has often waited for others to take initiatives or make proposals and then reacted.

That role is changing. India was vital to getting the Paris Agreement signed at COP21 and to the proceedings at COP26. Its industries and industrialists are becoming a force for innovation in the world economy. Its economy is becoming an important part of the engine of world growth. All this, and its strong independence, is behind India's growing role on the world stage. India could play a key part in demanding and shaping the reform and expansion of the world's IFIs, particularly of the MDBs.

Finally, India is about to take on the Presidency of the G20. That is an opportunity that comes once every two decades. Preparations are advanced and advancing. Now is the time to place the new path of growth and development at centre stage, to insist on its urgency, and to show that, with the right kind of cooperation and policies, the necessary investment can be realised. And, crucially, it can insist that, for the transition to net-zero and for the new path of sustainable and resilient growth to be realised, the international finance must be forthcoming. India is well placed to propose, and achieve agreement on, a universal agenda that meets the needs of all developing countries, middle income and low income, large emitters and vulnerable countries. It can set out a new vision for climate justice, one that delivers on the global collective ambition to limit global warming to the 1.5°C target, and ensures that all developing countries are able to realise their development goals. It can demonstrate the growth story of the 21st century, for itself and for the world.

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