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**GREEN STIMULUS: DRIVING PUBLIC INVESTMENTS TOWARDS A  
SUSTAINABLE FUTURE FOR ALL**

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**ABSTRACT**

There has been a renewed vigour for governments across the world to drive public investments towards a path of economic recovery that is sustainable and tackles the looming effects of climate change. Research shows that public investments have a large potential for financing green initiatives and provide incentives across the value chain. In countries like India and other developing countries, public investment has proven to be successful in encouraging sustainable development and conservation of resources, as well as increasing the use of green technologies and renewable energy. However, there are limitations to the extent that public financing can achieve the sustainable goals that are required for lasting social, economic, and environmental impact. This paper examines the benefits of public investment and adopts a critical approach to examine the pitfalls that currently exist within the system of green financing. This paper further explores opportunities for multi sectoral collaboration, and advocates for the creation of a holistic investment environment. The paper poses policy recommendations for future research in the field, emphasizing the need for better data collection, creation of targeted budgets, and capacity building to improve efficiencies.

**Introduction**

It is clear that climate change and environmental damage is a cause for concern for the world as a whole. In 2020, the earth's surface temperature was around 0.98 Celsius degrees warmer than the 20th-century average (Jaganmohan, 2021). In the last few years, global temperatures have been consistently among the hottest on record. The global anomaly in surface temperature might cause an increase in sea level, a decrease in arctic ice, and a growing number of weather-related catastrophes, including storms, floods, and droughts (Jaganmohan, 2021). These climate related disasters have also caused significant economic damage and led to a drain in public finances in countries the world over. Given this looming threat of climate related disasters and devastations,

international organisations and governments the world over have recognised the pressing need to mobilise investment towards the empowerment sustainability initiatives by the government, corporations and by civil society.

With the advent of the COVID-19 pandemic, there has been renewed attention given to targeted investments in the public sector given the need to be implementing sustainable practices to improve the quality of the environment and destruction of green areas, which also has massive implications for public health and the possibility of future pandemics. In several countries, a key priority has been the targeting of green stimulus to ensure that the economic recovery from covid-19 is done so in a more sustainable direction (Mazzucato et al, 2020). Data shows that public investment in green technologies and infrastructure will be greatly beneficial for the state of the economy. According to the IMF World Economic, a coordinated greener and resilient infrastructure push, supported by other mitigation policy measures to reduce greenhouse gas emissions, could boost annual average global GDP by 0.7 percent growth between 2020 and 2035 (IMF, 2021). Data further suggests that In the long term, environmentally sustainable investment and other mitigation policies would result in needed emission reduction and place the global economy on a stronger and more sustainable path (IMF, 2021).

Therefore, it is key to explore paths toward improving policy measures to better implement public investment into sustainable measures, technology and infrastructure. This paper will examine public stimulus measures and options that are being implemented in India and globally and evaluate public finance as a mode for sustainable development through case studies and critical approaches. The paper will conclude with policy recommendations for future research in the field to implement such programs more effectively.

## **Background**

Several types of public investments and modes of sustainable investing have been explored in India and globally. It is a trend for government and civil society organisations to explore green and environment-friendly stimulus options. The term 'impact investment' has gained currency in the last decade, for both the government and private players to target investment towards initiatives that create social value (D'Souza, 2020). The United Nations Environment Program has been collaborating with governments the world over in key areas for green financing and public investment into sustainability, such as Supporting public sector on creating enabling environment, Promoting public-private partnerships on financing mechanisms such as green bonds, and capacity building of community enterprises on micro-credit (UNEP, 2021).

Countries such as Canada are providing leadership in implementing policy regimes that empower sustainable public investments. In Canada, a green growth strategy is being discussed with the

aim of linking digital technology via smart infrastructure, similar to the ‘twin pillars’ of digital and green approaches in the European Union’s NextGeneration EU package, the European Green Deal, and the bloc’s new Industrial Strategy (Mazzucato, 2020). One of the most promising strategies for advancing sustainability objectives is through new technologies of particular benefit to poorer and lower income populations (IFC, 2013). In selling to poor populations, financing initial equipment cost is often a critical barrier, even if the new technology replaces a more expensive and intermittent service, as with improved cookstoves that reduce fuel costs, or solar lanterns that replace kerosene lamps. These initiatives and measures have had particular success in developing nations, particularly in South Asia and Sub-Saharan Africa (IFC, 2013).

In India as well, investments in energy and particularly renewable energy are growing at among the fastest rates in the world (Aggarwal, 2020). From 2015-2018, for the first time, public and private investment in renewable energy spending exceeded the investments in fossil-fuel-based power generation as strong solar PV and onshore wind power more than compensated for the decrease in new coal plant installations (Aggarwal, 2020). However, reports have noted that both in India and globally, there is an opportunity for significant improvements in the sphere of public investment into sustainability initiatives. Statistics showing a geography wise breakup of flows of both public and private finance reveals a strong domestic preference (Sinha and Chandra, 2020). 72 percent of climate related finance was raised and spent domestically in 2018. The statistics highlight the need to establish better enabling environments for climate finance, and enhance international cooperation to facilitate flow of funds across countries and regions (Sinha and Chandra, 2020).

The opportunity for improvement in the area of public investment for sustainable development measures are crucial to examine for further policy makers. The following section of this paper will evaluate these critical approaches and highlight case studies of success to further probe the issue.

## **Discussion**

There are benefits to using public finance as a mode to facilitate large-scale sustainable development and environmental conservation practices. Both developing and developed countries, in collaboration with international bodies, have committed to an increase in the investments in green technology to achieve the United Nations-mandated Sustainable Development Goals (SDG) (Bajaj and Jha, 2021). Beyond domestic public finance, other important sources of financing for inclusive green economies include international finance, private investment and blended finance mechanisms such as Green Credit Funds, which provide a risk-sharing facility for participating banks and support sustainable development projects that align with government goals (UNEP, n.d). There are also various green financial instruments

such as climate-aligned/green bonds that can offer a new and growing source of funding for an inclusive green economy transition (UNEP, n.d).

For example, the efforts of the government in issuing green bonds have proven to be successful and effectively aided in raising funding, as well as supporting future public investment in conservation and sustainable development. Several government agencies have contributed to this issuance including Indian Renewable Energy Development Agency and Indian Railway Finance Corporation. In 2018, the State Bank of India entered the green market with a \$650 million certified climate bond (Bajaj and Jha, 2021). To scale up environmentally sustainable investments, India joined the International Platform on Sustainable Finance (IPSF) in October 2019 (Bajaj and Jha, 2021). Partnerships like these have allowed India to improve its environment by using this capital; and further increase research and development efforts. The benefits of green bonds are tangible, especially in India to finance the transition of economic recovery to one that is more sustainable. Other initiatives in this sector have included promoting domestic and foreign investment in sectors that are particularly relevant for the sustainable development goals, investing in a startup ecosystem which supports sustainable projects, and investing in state level projects and technologies (Invest India, n.d).

Despite the success of using public finance and investment as a catalyst for sustainable development, there are certain limitations which governments and policy makers must take cognisance of in order to ensure that the investment achieves the desired effect. Studies have shown that the tracked green finance from both the public and private sector, despite the large number of government schemes, and institutional frameworks such as that of the Bureau of Energy Efficiency, Energy Efficiency Services Limited, and National Thermal Power Corporation (CPI, 2020). This is because of a lack of data and a lack of monitoring or tracking once the investment is made. There is a requirement for a comprehensive climate budget tagging framework to track climate-related expenditures in national budget systems (CPI, 2020). Reports have also suggested that India needs an integrated domestic measurement, reporting and verification (MRV) system to streamline green finance attributes, identify financial constraints and enhance transparency (Aggarwal, 2020).

In addition, the focus on public investment and stimulus cannot absolve the private sector of responsibility, being the largest contributors of pollutants and environmental damage. Governments must provide the appropriate incentives to encourage greener and resilient private sector investment. It is also important to address the challenges created by the COVID-19 pandemic for private investment in infrastructure, such as supply chain disruptions and heightened macroeconomic turbulence, especially in developing and emerging markets (IMF, 2021). In addition, the effects of public investment must overcome inefficiencies to create lasting social and economic impact. The IMF estimates that on average, over one-third of public

investment value is lost due to inefficiencies, and better public investment management—that is strong public sector institutions that effectively plan, allocate, and implement public investment—can reduce losses by more than half (IMF, 2021). Strengthening the management of public investments is crucial, including capacity building, upskilling, and targeting local communities, especially in low income and developing countries such as India.

### **Conclusion**

From the above, it can be concluded that public expenditure plays a key role, especially in providing public goods and essential social services. Research conducted in the global context shows that direct public investments in green projects are one of the most effective ways to mobilize additional private co-investments, with investments in green innovation promising some of the largest fiscal multipliers (Mazzucato et al, 2020). It accounts for the largest source of development financing in developing countries and is the most sustainable source of investment in national development priorities over the long term (UNEP, n.d). Future researchers must focus on the aspects of improving the data collection process through greater stakeholder engagement and devising ways to overcome the methodological challenges faced in this phase of the study for both public and private sources of financing and building a framework for a climate budgeting exercise that is standardized across the state and national government budgets (CPI, 2020).

In addition, it is important for future research to assess and evaluate public investment management, to ensure that the capital infusion leads to tangible benefit. Incorporating and integrating climate change perspectives in public investment management would enable countries to better implement environmentally sustainable infrastructure (IMF, 2021). Taking from the Indian context of dedicated Public Sector Units for green financing and conservation, it is important for future research to better examine the modes to build a strong framework with dedicated institutions which assume a greater role in advancing the case for green investments. Moreover, it is especially crucial in the context of developing and low income nations that there is availability of good data on the disbursement of funds at multiple levels within the value chain, standardised reporting of data and the development of a green finance taxonomy, and mandating climate related financial disclosures (CPI, 2021).

In addition, ensuring incentives for the private sector, startups and the creation of social enterprises and impact investment has a role to play in supplementing the role of public finance. Relying solely on public investment may put stress on the government machinery, especially in developing nations (D'Souza, 2020). Building a framework of international cooperation and strengthening the impact investment sector will enable the impact investment sector and social

enterprises to play a complementary role to that of the government in reaching the SDG milestones and achieving balanced regional development in countries (D'Souza, 2020).

In conclusion, while considering the role of public investment in sustainable development, it is also crucial for governments, policy makers and researchers to focus not only on spending more, about spending available resources in the most efficient manner (UNEP, n.d). Beyond mobilising additional resources towards the SDGs, there is also a need to ensure the efficient and equitable allocation of these resources in national budget planning and expenditure frameworks (UNEP, n.d). A mix of effective and coherent fiscal policy, investment management, and offering different financial mechanisms is essential to the creation of a robust and holistic investment framework which is focused towards economic recovery that is sustainable, throughout the value chain.

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