Catalyzing Investment for Green Growth

The Role of Business Environment and Investment Climate Policy in Environmentally Sustainable Private Sector Development

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Catalyzing Investment for Green Growth: The Role of Business Environment and Investment Climate Policy in Environmentally Sustainable Private Sector Development

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Developing countries today confront an unprecedented combination of challenges: the need for inclusive growth, worsening environmental degradation, and the impacts of the COVID-19 pandemic. A successful response must be founded on the principles of sustainable development, circular economic systems, and green growth. By transforming private sector activity through sustainable investment, countries can accelerate recovery and stimulate growth.

Achieving this transformation will require robust environmental policies to address externalities and to drive sustainable investment. However, the success of such policies depends on having countries also maintain a supportive investment climate, including:

- A transparent legal and regulatory environment to promote investor confidence.
- Ease of doing business to support green entrepreneurship and innovation.
- Openness to foreign direct investment (FDI), which can provide finance for sustainable projects and access to new technologies.

Environmental policies and regulations should be efficiently designed and implemented to minimize costs imposed on businesses. However, a green growth approach means business regulation reform efforts must account for environmental sustainability, including by:

- Avoiding regulatory exemptions and repeals that reduce the overall strength of environmental protections and incentives.
- Focusing on easing the compliance and administrative costs generated by environmental policies without compromising environmental protection.
- Identifying synergies between sustainability and private sector growth, and pursuing win-win reforms where possible.

Countries can further accelerate green growth by reorienting FDI attraction policies toward sustainability-enhancing firms and sectors, including by:

- Making protection of the environment part of a country’s value proposition to global investors.
- Capitalizing on shifts in global FDI flows by including sustainability considerations as part of sector prioritization.
- Shifting incentives and other policy tools away from more polluting industries and toward sustainability-enhancing investments.

Together, environmental sustainability and investment climate priorities can become mutually reinforcing, creating a sustainable investment climate system that can drive green growth (Figure 1).

> > >

**FIGURE 1 - Components of a Sustainable Investment Climate System**

**SUSTAINABLE FDI**

- Facilitated by an open FDI regime and transparent legal environment
- Robust protections for the environment part of country value proposition
- Strategic attraction and retention efforts in sustainable sectors

**INVESTMENT BY INCUMBENTS**

- Transparent legal environment providing confidence
- Environmental policies, consumer and financial market demands for more sustainability, and competitive pressure all driving change

**NEW GREEN FIRMS**

- Product and business model innovation driven by robust environmental policies and consumer and financial market demands for more sustainability
- Entrepreneurship supported by transparent legal environment and ease of doing business
- New market entrants supported by finance and technology transfer from foreign investors

Source: Authors’ representation.
As the global population has increased and developing and emerging economies have made large development gains, human activity has placed an increasingly severe strain on the natural environment. Pollution—of air, land, fresh water, and oceans—is a pervasive problem for developed and developing countries; ecosystem damage and habitat loss increasingly endanger biodiversity; and global greenhouse gas emissions continue to rise, threatening catastrophic climate change (UNEP 2019).

The consequences are hard to overstate: air pollution contributes to 4.2 million premature deaths each year (WHO 2018); pollution-related diseases reduce gross domestic product (GDP) by 1.3–1.9 percent annually in low-income countries (UNEP 2018); and in the absence of mitigation, climate change threatens massive loss of life and may reduce global GDP by as much as seven percent by the end of the century (Kahn et al. 2019). In fact, recent research by the World Economic Forum (WEF 2020) suggests that more than half of global GDP is directly or indirectly exposed to risks from current environmental challenges.¹

Private sector activity is responsible for generating many of these negative environmental effects. Fossil fuel use in energy production and transport is the primary source of global greenhouse gas emissions, as well as air pollutants such as particulate matter and sulfur dioxide (UNEP 2018). Agricultural and industrial practices are leading contributors to soil and water pollution, and agriculture is the primary cause of deforestation across Africa and South America (FAO 2020).

¹ The US$44 trillion of economic value generation is estimated by considering moderate or high dependence on nature and its services. The risks to businesses occur through direct dependency of business on nature, fallout of business impacts on nature, and impacts of nature loss on society.
As low- and middle-income countries have followed the path of industrialization taken by high-income countries, the resulting rise in energy use and in consumption of food and materials has intensified these processes (Figure 2). This process of industrialization has brought income gains and reductions in global poverty, but there is mounting evidence that continuing this development approach will see the world exceed its ecological carrying capacity (OECD 2012).

A new approach is needed—one that transforms the private sector across both developed and developing countries to mitigate environmental impacts and capitalize on green growth opportunities. In fact, as set out in the World Bank's *Inclusive Green Growth* report, a green growth strategy is the only way to reconcile the rapid growth required to bring developing countries to a greater level of prosperity with the imperative of a better managed environment (World Bank 2012).

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**FIGURE 2 - Key Environmental Indicators and Private Sector Drivers, 1990–2015**

*Source: World Bank World Development Indicators.*

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2. Particulate matter calculated as the share of population exposed to levels of PM2.5 pollution (particulate matter 2.5 micrometers or smaller) exceeding the World Health Organization (WHO) Interim Target-1 value, aggregated across 20 low-income countries with available data.
Importantly, this transformation need not come at the expense of private sector success. The potential upside of a green transition is enormous: the World Economic Federation estimates that shifting critical systems such as food, energy, and cities toward greater sustainability could generate more than US$10 trillion in new business opportunities and 395 million jobs by 2030 (WEF 2020).

Although many developing-country governments and development organizations around the world have committed to such an approach, the investment task ahead is significant. Targets for 2030 set under the Sustainable Development Goals (SDGs) include: substantially reducing deaths from pollution (target 3.9); substantially increasing the share of renewable energy in the global energy mix (7.2); substantially reducing waste (12.5); and protecting and restoring fresh-water, ocean, and forest ecosystems (6.6, 14.2, and 15.2). In addition, 189 countries are parties to the Paris Climate Agreement commitment to limit global warming to 1.5 to 2.0 degrees C above pre-industrial levels. Immense private sector investment will be needed to transform resource consumption, energy production, manufacturing processes, and other economic systems to achieve these goals, and policy intervention will be needed across many fronts to support this transition.

This paper considers the unique role that business environment and investment climate policy (hereafter investment climate policy) can play in meeting these goals and transitioning to green private sector growth in developing countries. A country’s investment climate comprises the legal and regulatory conditions under which firms and investors make investment decisions (Smith and Hallward-Driemeier 2005). It includes the regulations that govern starting and operating a business (the business environment); the rules for domestic and foreign investors seeking to finance and operate firms and projects; and the predictability provided to investors by wider legal, political, and macroeconomic settings. The investment climate helps to shape the direction of private sector development and, by extension, its impact on the natural environment. This places investment climate policy at the center of efforts to achieve green growth.

The paper is organized around three key questions. First, how does a country’s investment climate help enable green economic growth? Second, how can efforts to improve the domestic business environment through business regulation reform take account of the need for environmental protection and sustainability? Third, how can policies related to FDI be adjusted to play a stronger role in promoting sustainable sectors and business practices? Together, the answers to these questions establish key concepts and principles that can make investment climate reform an effective and integral component of a green growth strategy.

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**Box 1 - COVID-19 and the need for a green recovery**

The need to prioritize green growth is even more urgent as countries look to recover from the COVID-19 crisis. The pandemic has exposed the fragility of many aspects of modern life in the face of threats from the natural world, including the disproportionate impact that such threats can impose on poor, marginalized, and vulnerable populations. Indeed, many of the pandemic’s impacts—such as illness, loss of life, and business and supply chain disruptions—mirror potential climate change impacts. Downturns in specific sectors, such as energy and materials, have also reinforced the need for countries dependent on specific sectors to diversify (Mukanjari and Sterner 2020).

Importantly, the policy actions that governments take to drive their recovery from the crisis today will shape environmental outcomes for decades to come. There is significant scope to prioritize sustainability in stimulus and reform measures in order to increase resilience and accelerate decarbonization of economic activity (Hammer and Hallegatte 2020). Investments in green infrastructure, building efficiency improvements, natural capital, education and training, and clean technology research and development all have high potential stimulus and environmental benefits (Hepburn et al. 2020; Engstrom et al. 2020). More broadly, the effects of the crisis on private behavior, firm operations, and the role of government make the pandemic a critical juncture, with the potential to substantially reorient the path of economic development toward greater sustainability (Kuzemko et al. 2020).

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3. Environmental sustainability will require robust policy in many areas, including pollution regulation, ecosystem protection, and climate change mitigation, as well as policies to enhance environmental sustainability in trade, finance, and other sectors. Although this paper touches on policies in these areas, they are not the focus of this paper.
2.

How Does the Investment Climate Support Green Growth?

Transforming private sector activity to achieve environmental goals and deliver a successful green growth strategy will require substantial capital investment. The United Nations Conference on Trade and Development (UNCTAD) estimates that global investment in developing countries of up to US$1.2 trillion annually is needed to achieve environmental aspects of the SDGs by 2030 (UNCTAD 2014). While there are many opportunities for firms to benefit from sustainable investments, there is a strong case for government action to drive change at the speed and scale required to address today’s environmental challenges (see Box 2). In response, governments have leveraged a range of environmental policies to push firms toward more sustainable investments.

For environmental policies to be effective, they must exist within an investment climate that supports and enables such a transformation. As set out in the Policy Framework for Investment of the Organisation for Economic Co-operation and Development (OECD 2015), many policy factors that support business investment in general are, by extension, important for supporting sustainable investment and green growth. In addition, environmental policies are themselves part of the investment climate, and the interaction between the two can shape the success or failure of a green growth strategy.
2.1 Legal and regulatory transparency is essential to promote investor confidence

A transparent legal and regulatory environment that protects the property rights of investors is an essential foundation for a supportive investment climate. For example, transparency in law-making and regulatory processes, protection from arbitrary or unpredictable government actions (including expropriation), and access to recourse mechanisms to resolve disputes are vital to give both domestic and foreign private sector actors the confidence to commit investments. In fact, in the most recent Global Investment Competitiveness survey, 42 percent of firms ranked the legal and regulatory environment as critically important to investment decisions, behind only political and macroeconomic stability (World Bank 2020a).

This foundation is particularly important as firms consider making transformative investments in sustainable technologies, products, and markets. Such investments are often very large and can take several years to generate positive financial returns from the associated cost savings, the benefits of expanded market share, or the success of new products. For example, the US Energy Information Administration estimates that a 200 megawatt (MW) wind-energy project currently costs more than US$250 million and takes three years to build (EIA 2020). Without confidence that the investment climate will offer a predictable operating environment and protection from political risks, firms may be unwilling to commit to sustainability projects at scale.

The need for transparency and consistency also applies to environmental policies and regulations themselves. Like other areas of business regulation, environmental policies can generate regulatory risks for investors if these policies are unclear, involve excessive bureaucratic discretion, or are changed regularly without warning or consultation with the private sector. Robust, well-designed, and effectively implemented environmental regulations are integral to achieving sustainability goals, but are likely to have little effect if firms cannot be reasonably certain of the standards they will need to meet or of the price that will be imposed on any pollution they emit (Teeter and Sandberg 2017). As such, transparency and consistency in environmental policy are paramount to inspire investor confidence.

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**Box 2 - Environmentally sustainable private sector investment and the role of government**

While no single definition of sustainable investment exists, the term can encompass any private sector investment that contributes to a more environmentally sustainable economy, including:

- Investments in more sustainable and efficient production practices.
- Investments in new firms and products that are more sustainable than competitors.
- Investments in the research and development of sustainable technologies.

Some of these investments may have direct benefits for businesses, such as the energy cost savings that arise from a more efficient plant or office building. Others may provide businesses with access to new market opportunities or reputational advantages over competitors that attract new customers. In fact, empirical studies suggest firms’ environmental performance is related to better financial performance (Albertini 2013; Earnhart 2018).

However, sustainable investments also generate positive externalities (or reduce negative externalities), which are the wider benefits to society that arise from a better environment. As these benefits do not necessarily accrue to firms in the form of revenue or profits, the level of sustainable private investment will generally fall short of the optimal level for society overall. As such, some government intervention is needed to incentivize firms to account for environmental impacts and undertake the optimal level of investment.

Common environmental policies used by governments include pollution and technology standards, permitting and approvals processes, pollution taxes, green subsidies, and information disclosure requirements. In general, market-based mechanisms such as taxes and tradeable permits are considered the most efficient approach, although uniform standards are less complex and often are seen as more equitable, which can make them easier to implement (Zhao 2019).
2.2 Ease of doing business for domestic investors can support green entrepreneurship and innovation.

A key factor in a country’s investment climate is the ease with which domestic investors can do business. This covers everything from the business incorporation process to obtaining construction permits, registering property, accessing finance, and paying taxes, as well as covering legal issues such as enforcing contracts and resolving insolvency (World Bank 2020b). It also includes the rules for employing workers, contracting with the government, and engaging in international trade. Countries where the business environment is more favorable for the private sector tend to have higher levels of entrepreneurship, which in turn supports employment growth, innovation, and overall economic development (Djankov et al. 2002; Nyström 2008; Chambers and Munemo 2019).

Innovation is widely recognized as essential for achieving green economic growth. Well-designed environmental policies create incentives for innovation as firms seek to meet higher standards at the lowest possible cost, and in some cases this can serve to enhance the competitiveness of firms and countries overall (Porter and Linde 1995). Numerous studies have confirmed this relationship between environmental regulation and innovation, often focusing on the impact on innovation within existing firms (Ambec et al. 2011; Cohen and Tubb 2018).

However, the entry of new businesses is also a key mechanism for this innovation process, reallocating resources (capital and labor) from existing businesses with unsustainable products and practices to more sustainable businesses (Gast, Gundolf, and Cesinger 2017; Johnson and Schaltegger 2019; Haldar 2019). This is particularly true in developing countries where small- and medium-sized enterprises play an outsized role in the economy (UNCTAD 2017). In addition, if sustainability improvements provide new firms with a reputational advantage among consumers, the competitive pressure from these new market entrants can also drive incumbent firms to become more sustainable, thus enhancing the impact of regulatory pressure.

A supportive regulatory environment that enables entrepreneurs to efficiently start and grow more sustainable businesses is therefore an important mechanism for achieving environmental goals. Conversely, a regulatory system that maintains excessive barriers to entry and burdensome red tape may see the effectiveness of environmental policies stymied. In addition, competition policy has an important role to play by ensuring that new businesses are on equal footing with incumbents. Environmental regulations such as licensing and approval processes also need to be designed and implemented efficiently to facilitate compliance—a question explored further below. Working together in this way, environmental regulation and improved ease of doing business will help accelerate a green economic transformation.
2.3 Openness to foreign direct investment (FDI) is needed to attract and retain sustainable finance.

The rules governing foreign direct investment (FDI) and associated investment policies are an equally important element of a country’s investment climate. Excessive screening and restrictions (on ownership, products, technologies, and prices) can deter FDI, whereas strategic and focused investment promotion activities can help countries attract and retain FDI in key sectors. In turn, FDI can play a significant role as a source of finance for new projects and businesses, and as a mechanism to accelerate productivity growth by transferring knowledge and technologies to host economies (Kusek, Saurav, and Kuo 2020). These two roles—as a source of financing capital investments and as a conduit for technological change—make FDI an instrumental channel for achieving environmental sustainability goals, particularly for developing countries.

First, the investments needed in clean energy, sustainable industrial production, and green infrastructure in developing countries are immense. UNCTAD estimates that between US$550 billion and US$850 billion in capital investment in developing countries is needed annually to meet SDGs related to climate mitigation. Another US$80 billion to US$120 billion is needed for adaptation, and US$70 billion to US$210 billion is needed to preserve ecosystems and biodiversity (Figure 3). FDI is the largest source of overseas finance to developing countries, and despite the significant impact of COVID-19 and the broader slowdown in global FDI flows, it will play a crucial role in financing these goals (Gestrin 2019). Without a supportive FDI regime in place that allocates global capital efficiently, developing countries will find it far more difficult to attract the necessary volume of green investment.

Second, a green growth transformation requires more than capital: it requires the deployment of new technologies and practices in almost every sector of the economy. FDI provides an important avenue for developing countries to access new approaches that have been researched and deployed successfully in advanced economies, which still make up more than 70 percent of global research and development expenditure.5 Foreign parent firms can transfer specific technologies, such as clean energy technology and pollution abatement systems, to their affiliates and can also pass on business practices and management approaches that may include greater prioritization of sustainability concerns (Saurav and Kuo 2020).

These effects can spread, particularly where standards imposed by FDI affiliates drive improvements in their domestic suppliers. In particular, where investment is aimed at producing intermediate and final goods and services for export markets with higher environmental standards, foreign investors have strong incentives to expand the use of cleaner technologies and practices in their affiliates and supplier networks. There may also be spillovers to domestic competitors, who may be driven to improve environmental performance through competitive pressure or may gain access to new knowledge themselves from demonstrations or staff movements.

Not all FDI flows finance sustainable firms and industries, but FDI will be crucial for green growth going forward. Historically, much of the FDI directed toward developing countries has sought to exploit the availability of natural resources, including fossil fuels. Businesses with environmentally unsustainable practices may also seek out locations with weaker environmental protections, further contributing to local environmental challenges. These issues are discussed further below. Nonetheless, significant FDI flows will be crucial for developing countries to transform their private sector and rapidly improve the sustainability of major industries. For this reason, a legal and policy framework that effectively attracts and retains FDI is an essential component of any country’s green growth strategy.

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5. Based on World Bank World Development Indicators data.
2.4 A sustainable investment climate system can drive green growth.

In summary, a supportive investment climate is a crucial companion to strong environmental regulations in achieving a green private sector transformation in developing countries. Strong environmental standards and incentives, when implemented in a competitive and transparently regulated market, can incentivize firms to invest in more sustainable practices and to shift activity toward greener sectors and products. Effective business regulations support this process by facilitating the entrepreneurship and innovation needed for new green businesses to flourish, while FDI can provide finance and technologies to accelerate this transformation. In turn, new businesses put competitive pressure on incumbents while also opening new markets and new sectors. Together, as shown in Figure 1 above, these elements can reinforce one another to create an investment climate system that drives green growth.
How Can Regulatory Reform Account for the Environment?

Policy makers often face difficult trade-offs between regulatory reforms that support private sector growth and environmental sustainability goals. Business regulation reforms are changes to laws, regulations, and government processes that aim to make it easier to do business and reduce risks—for example, by eliminating unnecessary restrictions on sectors and industries or by increasing regulatory transparency (Ploeg, Hinojosa, and Miedzinski 2017).

Environmental policies can become a target of such reform efforts because these policies generally restrict some types of business activity. For example, environmental standards and licensing requirements prevent businesses from operating in ways that do not meet minimum requirements. Similarly, pollution taxes and permits discourage or cap certain activities to incentivize abatement. Environmental regulations also create compliance costs that can weigh on firms’ productivity and serve as a barrier to entry.

While reducing the bureaucratic burden on businesses is important, encouraging private sector development at the expense of environmental protections is incompatible with the goal of achieving sustainable development. As outlined above, the consequences of environmental degradation and climate change threaten not only public health and well-being, but the overall viability of the economic system. Furthermore, analyses of regulations in advanced economies such as the United States have found that the business costs imposed by environmental regulations tend to be outweighed by the welfare benefits achieved for the community overall (Gray 2015; Ferris et al. 2017).

Importantly, the outcomes of such analyses depend on the efficient design and implementation of regulations. This means that policy makers in developing countries must engage in regulatory reform in ways that account for and enhance the imperatives of environmental sustainability and green growth, while also ensuring that environmental regulations are as efficient and effective as possible.
3.1 Policymakers should heed the risk of moving backwards on environmental protection.

There may be good reasons for policy makers to be concerned about the effects of environmental regulation on the cost of doing business—particularly business entry and entrepreneurship. As set out above, extensive research documents that more restrictive business regulations can reduce the entry of new firms. Numerous studies have confirmed that this is true of environmental regulations, with stricter requirements related to reduced business formation and particularly reduced entry of small firms (Dean, Brown, and Stango 2000; Helland and Matsuno 2003; Heyes 2009). As a result, incumbent firms may benefit from reduced competition—but they may also face environmental regulatory barriers themselves when considering new projects and expansions. As such, easing environmental restrictions may provide a tempting opportunity for governments to improve the ease of doing business.

One approach that governments have taken is to introduce exemptions to environmental regulations for particular firms or industries. For example, a high-profile clause in the US Energy Policy Act of 2005 sought to bolster the expansion of the oil and gas industry by exempting the chemicals used in hydraulic fracturing from regulatory oversight under the Safe Drinking Water Act (CRS 2005). In China, research suggests that higher pollution from state-owned enterprises may have arisen because their bargaining power with regulators results in fewer inspections (Dasgupta et al. 2001).

Such de jure and de facto exemptions can be beneficial in some circumstances, such as when firms have different abatement costs or levels of environmental impact. However, these benefits are possible only when exemptions are overseen by a fully informed and benevolent regulator (Eamhart et al. 2019). In policy environments where exemptions are proposed without careful assessment of environmental costs or where decision makers are under undue pressure from interest groups, such exemptions are likely to undermine the effectiveness of sustainability policies (Huetel and Kelly 2016).

In some cases, governments have gone further and scaled back or entirely repealed environmental policies in the name of private sector advancement. For example, the Australian government repealed carbon pricing legislation in 2014 after several years of operation, citing its impact on rising energy costs for industry (Irigoyen 2017). More recently, observers have identified as many as 74 deregulatory actions taken by the US government between 2016 and 2020 that weaken environmental protections (Gross 2020). Recent reforms to environmental laws in countries such as Brazil, India, and Indonesia have also raised concerns about the weakening of protections (Aggarwal 2018; Gonzalez 2020; Jong 2020).

Exemptions and repeals may be necessary in some cases, but such changes risk permanently reducing the stringency of policy settings or the strength of sustainability incentives. New environmental policies can be extremely politically difficult to legislate due to their concentrated effects on some sectors and workers and diffuse benefits for the community overall (Vona 2019). As such, existing progress toward greater sustainability should be carefully protected. Policy makers should approach reforms to environmental regulation with caution, should undertake comprehensive analysis of sustainability impacts, and should avoid options that reduce the overall level of environmental protection.
3.2 Businesses can benefit from reforms that ease compliance and administrative costs without reducing protections.

While preserving the stringency of environmental protections is vital, there may be opportunities to make progress on compliance costs. An important distinction can be made between, on the one hand, the costs and restrictions that regulations intentionally impose to achieve policy aims, and on the other hand, the compliance and administrative costs that regulations inadvertently generate. The latter encompass costs created by environmental impact assessment processes, licensing applications and approvals, and ongoing compliance activities.

Prior research suggests that these regulatory costs are not systematically related to the actual stringency of environmental policies themselves, which suggests there is scope to reform compliance processes and requirements while maintaining or even enhancing the overall level of environmental protections that are in place (Koźluk 2014; Berestycki and Dechezlepêtre 2020). Reducing the compliance cost burden of regulation can be done in many ways, including: creating integrated, digital systems; simplifying processes; enhancing transparency for firms; and risk-based prioritization of regulatory supervision.

Recent reforms to environmental licensing processes in the Brazilian state of Ceára, which were implemented with the support of the World Bank and the Improving Business Environment for Prosperity (IBEP) program, demonstrate this approach (see Box 3). These reforms bolstered transparency and simplified the licensing process for low-risk firms, and while opportunities remain for further improvement, progress to date demonstrates that ease of doing business need not come at the expense of the environment. By focusing on reducing inefficiencies and costs in the licensing process, officials in Ceára have found a way to meaningfully reduce the regulatory burden placed on the private sector without reducing protections in place for the natural world. Furthermore, such reforms can free up scarce resources within the environmental agency, enabling staff to focus on more impactful oversight activities rather than excessively bureaucratic processes.
3.3 Reforms should leverage synergies between sustainability and private sector growth where possible.

Finding ways to reduce the compliance costs associated with environmental policies is important, but there may also be reform opportunities that are beneficial for both businesses and the environment. Such synergies can be realized in a number of ways: removal of some sectoral restrictions may allow companies to better manage their environmental impacts; new mechanisms for natural resource governance may create business opportunities in ecosystem management; and integrated licensing and permitting processes may ensure better overall enforcement of important standards (Ploeg, Hinojosa, and Miedzinski 2017). Identifying and capitalizing on these reform opportunities can be challenging and depends on local conditions and institutions as well as implementation arrangements. However, such reforms have the potential to unlock and accelerate a transition to more environmentally sustainable private sector.

An example of this kind of win-win reform is provided by efforts to improve the management of ship waste in Indonesia (see Box 4). With the support of the World Bank and IBEP, a new system was developed to track and manage waste collection and treatment, not only helping to reduce pollution, but also facilitating the expansion of the waste management services subsector. Work remains to be done for the new system to deliver its full potential. However, the success of the reforms to date shows how stakeholders across government and the private sector can work together to find effective solutions to environmental challenges that enhance private sector efficiency and provide growth opportunities for new businesses.

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**Box 3 - Environmental licensing in Ceára, Brazil**

In 2018, the World Bank and IBEP worked with the Brazilian state of Ceára to complete a technical study of environmental licensing processes and gather feedback about issues experienced by firms using the system. The study identified that the process generated costs and uncertainty for applicants while leaving gaps in the assessment of impacts, and in the monitoring and enforcement of license conditions.

For example, licenses took an average of 142 days to be approved and involved extensive paperwork, and applicants reported concerns about a lack of information on their application’s progress. Licensing laws left considerable room for discretion by officials, and a lack of standardization in the requirements for environmental impact assessments exacerbated uncertainty. At the same time, assessments focused narrowly on individual aspects of applications rather than on integrated and cumulative environmental impacts. A lack of ongoing monitoring and enforcement of license conditions risked leaving licensing as a bureaucratic process with little connection to outcomes.

In response, the Ceára environmental agency (SEMACE) introduced a case-tracking tool, systematic user feedback surveys, and an artificial intelligence–supported chatbot to improve transparency, information access, and predictability for firms applying for licenses. In April 2019, the state environmental council (COEMA) made further progress through a new resolution that changed licensing rules. The period of license validity was extended, easing the renewal burden on both businesses and administrators and freeing resources to assess new applications more quickly. In addition, a streamlined process was introduced for low-risk applications, simplifying licensing for more than 100 sectors where pollution potential is relatively low, while maintaining intensive requirements for higher-risk projects.

There is scope for further improvement, such as standardization of the requirements and methods used in environmental impact assessments in order to further improve certainty for businesses while minimizing opportunities for lenience or error by the regulator. Licensing data could also be leveraged to assess cumulative risks to particular ecosystems, while resources that were once required for application processing could be used to bolster monitoring of compliance and effectiveness of licensing conditions.
Across several years, engagement between Indonesian government agencies, port operators, and shipowners highlighted shared concerns about the poor management of ship waste—particularly oil—in Indonesia’s ports. For example, in 2016 only 5 to 10 collections of oil waste occurred on average each month at the Port of Tanjung Priok in Jakarta, despite more than 13,000 ships calling at the port each year. This low collection rate reflected the lack of a functioning waste management system, with inefficient reporting and cumbersome rules for collection and delivery. In addition, the number of firms providing waste management services was limited at port locations.

With the support of the World Bank and IBEP, the Indonesian Port Corporation (IPC) and government agencies (including the Port Authority and Harbor Master) collaborated to develop a new waste management system with the potential to significantly improve environmental outcomes and while also bolstering the port services subsector. Over the course of 2018, a new online system for ship waste notification was developed and integrated into Inaportnet, the existing shipping data portal used across 17 business ports. The new system requires all ships to report the type and volume of waste planned for disposal ahead of arrival, with the online approach providing a simple and efficient process for ships and improved data collection for port operators and officials.

In 2019, IPC built on this progress at Tanjung Priok by developing an online application to connect shipping agents to waste management operators. Importantly, the new system was expected to increase the demand for waste management services, which led IPC to expand the number of waste management firms operating at Tanjung Priok. This change has increased competition in this subsector and created opportunities for new firms develop.

Once fully implemented, the new system could improve both pollution outcomes and business development across Indonesia’s growing port sector. Now in place across 17 ports, use of the online notification system remains imperfect and greater enforcement may be needed to ensure full compliance with requirements. Work also remains to be done to expand use of the business-to-business application, to resolve questions of fee design, and to continue expanding competition among service providers. Importantly, the key actors are committed to addressing these issues to fully implement the waste management system and advance the plan for greening Indonesian ports.
How Can Investment Attraction Policies Increase Sustainability?

FDI has an important role to play in supporting developing countries’ economic growth, and governments can use a range of policies and tools to attract and retain FDI and maximize its impact on the local economy. This starts with the entry rules and operational processes that apply to FDI, but also includes policies and incentives that are designed to attract new investors, as well as the way that domestic laws and policies apply to foreign-owned companies.

As with the domestic business environment, the restrictions imposed by environmental policies can appear on the surface to put them at odds with the goal of FDI attraction. Mixed evidence suggests that multinational enterprises may relocate pollution-intensive activity to avoid the costs imposed by environmental regulations, and this could incentivize countries to maintain weak or unenforced policies as they compete for FDI (see Box 5).

However, trends in sustainable investment such as the growth of environmental reporting requirements and green bonds, as well as shifts in global FDI flows toward clean sectors, indicate that many investors may now be drawn to countries with robust environmental protections. In fact, as many countries have recognized, reorienting investment promotion to target sectors such as clean energy has the potential to generate both economic and environmental benefits.
BOX 5 - The ‘pollution haven’ vs. ‘pollution halo’ debate

Research on the effects of FDI on the environment has focused on two competing theories. The ‘pollution haven’ hypothesis posits that the costs imposed by environmental policies can drive firms to relocate economic activity, causing industries with a significant environmental footprint to shift production from well-regulated developed economies to less-restrictive developing economies (Copeland and Taylor 1994; Cole 2004). By contrast, the ‘pollution halo’ hypothesis posits that foreign firms bring cleaner and more efficient technology and management practices, thereby reducing overall pollution levels (Zarsky 1999).

Consistent with the haven theory, many empirical studies have linked historical FDI inflows to greater pollution and greenhouse gas emissions in developing countries, with extensive evidence of causal link from FDI inflows to industrialization and increased energy consumption, which in turn generate both pollution and economic growth. However, it is not clear that FDI location decisions themselves are driven by environmental policy differences between countries. While some studies have found that environmental policies do matter for multinational firms’ decisions about investment location, especially in pollution-intensive industries, research suggests that other factors are the primary drivers of these decisions.

At the same time, a number of empirical studies find that FDI inflows can lead to reduced pollution, in line with the theory of a halo effect (Tamazian and Rao 2010; Zhu et al. 2016). Supporting this finding, studies have shown that foreign firms tend to be more energy efficient and use cleaner technology than domestically owned firms, and that FDI contributes to the uptake of clean energy in developing countries (Eskeland and Harrison 2003; Paramati, Ummalla, and Apergis 2016; OECD 2019). Such contradictory results may reflect heterogeneity in effects across sectors, between firms with different investment motivations, across different levels of development, or in the mix of FDI over time.

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a. The historical relationship between FDI and pollution has been documented in South and Southeast Asia (Merican et al. 2007; Baek 2016; Behera and Dash 2017; Guzel and Okumus 2020), in Africa (Kviry and Arminen 2014; Solarin et al. 2017), in the Middle East (Al-mulali 2012), in Latin America (Blanco, Gonzalez, and Ruiz 2012; Sapkota and Bastola 2017), in the BRICS (Brazil, Russia, India, China, and South Africa) and MINT (Mexico, Indonesia, Nigeria, and Turkey) countries (Pao and Tsai 2011; Zakarya et al. 2015; Balsalobre-Lorente et al. 2019), and across developing countries overall (Omri, Nguyen, and Rault 2014; Shahbaz et al. 2015).

b. Commonly identified drivers of FDI location decisions include trade and FDI openness, resource availability, cost and availability of labor, agglomeration, geographic and cultural proximity, and broader political and economic conditions (Manderson and Kneller 2012; Rezza 2014; Kozluk and Timiliotis 2016; Neilsen, Asmussen, and Weatherall 2017).

c. For example, Doytch and Uctum (2016) find that although manufacturing FDI is generally linked to worsening pollution, FDI in services sectors can reduce pollution in high- and middle-income countries.
4.1 Robust environmental protections can form a key part of a country’s value proposition to investors.

Contrary to perceptions, there is little evidence that maintaining weak environmental protections is an effective overall strategy for FDI attraction. As noted in Box 5, environmental policies are unlikely to be a key driver of investment location decisions for most firms. Similarly, a recent study by Jobert, Karanfil, and Tykhonenko (2019) finds that even pollution intensive FDI inflows increase only at very low levels of regulatory stringency. Several studies emphasize that responsiveness to environmental regulations depends on firm characteristics, such as whether the firm already operates in countries with stringent regulations or has capabilities that allow it to adapt to requirements (Dean, Lovely, and Wang 2009; Bu and Wagner 2016). As such, an FDI attraction strategy centered on weak overall environmental protections would not only be damaging to well-being through its effect on environmental outcomes, but would also be unlikely to attract FDI beyond a narrow set of investors.

In fact, emerging evidence suggests that robust and stable environmental regulations can actually contribute to attracting and retaining FDI flows. For example, Omri, Nguyen, and Rault (2014) find that while FDI inflows tend to contribute to greater CO2 emissions in developing countries, higher CO2 emissions actually reduce subsequent FDI inflows, suggesting that elevated pollution can send negative signals to prospective foreign investors. Other studies have taken this analysis further to show a positive effect of environmental regulation on FDI flows (Rivera and Oh 2013; Kim and Rhee 2019).

While at first this finding seems counterintuitive, it may be that firms increasingly see environmental protection as a necessary or even desirable feature of an investment location due to the related benefits for the health of workers and the sustainability of projects, or due to the reputational benefits for firms with sustainability-conscious consumers. As highlighted above, having transparent and effective environmental policies in place may also provide investors with confidence about the long-term regulatory conditions that they will face. Firms may even view robust environmental regulations as a signal about the effectiveness and stability of the wider political and regulatory environment.

Trends in sustainable investment indicate that robust environmental protections may be increasingly important to attract FDI going forward. The most recent UNCTAD World Investment Report (2020) highlighted a growing focus on sustainability as one of the megatrends that will shape international production over coming years. The number of stock markets with mandatory requirements for sustainability reporting has risen from two to 24 in the past decade, securities regulators are increasingly requiring disclosure of climate-related risks, and the value of sustainable investment products such as green bonds and green equity funds has risen to an estimated US$1.2 trillion to US$1.3 trillion.

Higher environmental standards expected by consumers and product regulators in final export markets are also a factor, and the ability for countries to participate in global value chains may be limited if domestic firms are unable to produce intermediate or final export goods that meet these standards. As this pressure from investors and consumers grows, investment location decisions will increasingly need to account for the strength of local environmental regulations and weigh factors such as host country compliance with global climate change goals. In this context, robust environmental policies may become a prerequisite for attracting FDI and a core part of a country’s value proposition to investors.

Embedding sustainability priorities in international investment agreements (IIAs) and broader trade policies may help to reinforce these dynamics. IIAs complement domestic rules and processes for foreign investors by providing additional protections against expropriation and regulatory risk, as well as recourse mechanisms such as investor-state dispute settlement. As set out by UNCTAD (2015), in some cases IIAs can constrain domestic policy making related to sustainable development, and countries may benefit from ensuring that IIAs preserve space for domestic environmental policies and limit the scope to challenge legitimate public-interest regulations.

In addition, there may be ways to strengthen obligations on investors and even governments in FDI source countries to promote responsible and sustainable investment, which would strengthen the positive feedback loop between FDI inflows, sustainable technologies and practices, and environmental outcomes. Ensuring that trade policies and tariffs align with sustainable investment goals, and coordinating such policies at the regional level, may have further benefits by supporting domestic firms to export sustainable goods and services, and capitalizing on economies of scale to develop regional ecosystems of green trade and investment.

6. Though empirical evidence is limited, some studies show that multinational enterprises with stronger corporate social responsibility mandates avoid investing in countries with weak environmental regulations (Dam and Scholten 2008; Poelhekke and van der Ploeg 2015).
4.2 Shifts in global FDI present an opportunity to reorient attraction strategies towards sustainable investment.

Global FDI flows are rapidly shifting away from environmentally damaging industries, such as fossil fuels, and toward clean sectors such as renewable energy. The number of new greenfield FDI projects in renewable energy in developing countries has risen rapidly in recent years and has now surpassed the number in fossil fuel industries (Figure 4). This shift is apparent across projects in upper middle-income, lower middle-income, and low-income country groups, as well as across all regions including traditionally fossil-fuel dependent regions such as the Middle East and Africa.

The same trend is apparent, though less pronounced, in the value of cross-border merger and acquisition (M&A) transactions that target developing countries. Fossil fuel M&A values have fallen by 3 percent on average each year since 2009. Although they still total less, M&A values in renewables have risen by almost 40 percent on average each year over the same period, reaching US$1.8 billion in 2019. There has also been a steady rise in project finance (domestic and foreign) for renewable energy in developing countries, which has risen from 20 percent of all project finance in 2010 to 44 percent in 2019 (UNCTAD 2020).

Developing countries have an opportunity to capitalize on these trends by reorienting investment promotion policies toward attracting and retaining investment in sustainable industries. Strategic planning and prioritization of target sectors is key to the effectiveness of investment promotion efforts and can result in higher overall FDI flows (Harding and Javorcik 2011). By targeting sustainability-enhancing sectors such as renewable energy, as well as other green industries such as the production of recycled materials, electric vehicle production, and sustainable agriculture, governments can unlock a double benefit.

Greater foreign investment in these sectors will provide access to green technologies as well as a source of finance for sustainable projects, accelerating improvements in environmental outcomes, reducing pollution, limiting biodiversity loss, and enhancing well-being. At the same time, developing economies stand to gain from diversification away from fossil fuel extraction and pollution-intensive manufacturing as global investment shifts away from these sectors. Instead, by attracting investment in sustainable sectors, countries can benefit from job growth and productivity improvements that typically accompany expansion.

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7. Sustainable agriculture includes the use of particular farming techniques and technologies, crop and livestock selection and management, and market structures that improve productivity while conserving habitat, water resources, and soil quality, and supporting reductions in poverty (World Bank 2014).
Reorientation of investment promotion will require countries to adjust their approach to analysis and prioritization of target sectors. Traditionally, the selection of priority sectors has focused narrowly on the economic benefits that a sector can bring, as well as on its feasibility. As shown by a World Bank investment sector scan undertaken for Paraguay (Box 6), introducing a sustainability lens requires consideration of new factors in this analysis.

Importantly, many countries have already begun to pursue such approaches. Evidence from the most recent survey of investment promotion agencies (IPAs), conducted jointly by the World Bank and the World Association of IPAs, found that the SDGs play a significant role in influencing the identification of priority sectors, and renewable energy was the most common priority sector across IPAs (Sanchiz Vicente and Omic 2020). The next step is for countries to formally embed sustainability objectives in their IPA’s mandate, strategy, and processes. With momentum on targeting sustainable sectors, developing countries can capitalize on global trends in sustainable foreign investment.

**FIGURE 4 - Renewables vs. Fossil Fuel FDI in Developing Countries, 2003–2019**

**NUMBER OF GREENFIELD FDI PROJECTS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Fossil Fuels</th>
<th>Renewables</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>2007</td>
<td>350</td>
<td>300</td>
</tr>
<tr>
<td>2011</td>
<td>250</td>
<td>150</td>
</tr>
<tr>
<td>2015</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>2019</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

**VALUE OF CROSS-BORDER M&AS (US$ MILLIONS)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Fossil Fuels</th>
<th>Renewables</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>50,000</td>
<td>200</td>
</tr>
<tr>
<td>2007</td>
<td>35,000</td>
<td>300</td>
</tr>
<tr>
<td>2011</td>
<td>25,000</td>
<td>150</td>
</tr>
<tr>
<td>2015</td>
<td>15,000</td>
<td>100</td>
</tr>
<tr>
<td>2019</td>
<td>10,000</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: fDi Markets (greenfield) and Thompson Reuters (M&A) data.
Note: Data are for projects and deals in low- and middle-income countries.
4.3 A range of policy approaches are available to accelerate the shift towards sustainable FDI.

An important starting point for governments as they re-direct investment promotion toward sustainability is to phase out, where possible, any existing support for unsustainable industries. As noted above, such support could exist in the form of lenient environmental protections that have been introduced or maintained in the interests of a sector with significant pollution or ecosystem impacts, or involve regulatory exemptions provided to specific investors and projects.

Some countries also have financial incentives targeted at attracting investment in sectors such as fossil fuel extraction. Recent research estimated that the global cost of direct fossil fuel subsidies was US$269 billion in 2015, or as much as US$4.7 trillion after accounting for environmental costs (Coady et al. 2019). Such measures draw on scarce government resources and may be a barrier to economic diversification. As set out by the OECD (2015), phasing out such measures is essential to ensure that the overall system of investment incentives is coherent with green growth goals.

Successfully attracting sustainable foreign investment will require governments to draw on a wide range of policy tools. As set out in UNCTAD’s *Investment Policy Framework for Sustainable Development* (UNCTAD 2015), this begins with IPAs developing in-house expertise in sustainable sectors, building partnerships with relevant trade and business organizations and research centers, and engaging in promotion activities with a broad set of target investors and businesses.

Additionally, governments can consider introducing measures that incentivize sustainability-enhancing investment. Such measures can target firms in new, more sustainable sectors, or firms within an established sector that meet higher standards for environmental performance. In fact, a recent review found that 97 countries have some form of investment program in place relevant to the SDGs, including 40 with investment incentives related to climate change mitigation (UNCTAD 2020). These include special economic zones with facilities for sustainable industries, financial incentives conditional on environmental performance, and risk-sharing approaches such as public-private partnerships and investment guarantees.

**BOX 6 - Target sector prioritization in Paraguay**

As a result of its economic, social, and environmental characteristics, Paraguay is significantly vulnerable to the effects of climate change. Paraguay’s economy is highly dependent on the primary sector, with production dominated by livestock and agriculture. At the same time, it is currently among the 10 countries most exposed to risks of loss of agricultural productivity from climate change worldwide.

In 2018, the World Bank conducted an investment sector scan in Paraguay, with the objective of identifying sectors with the potential to contribute to a ‘green’ diversification of the Paraguayan economy in the short and medium term. Sectors were evaluated on two dimensions: their attractiveness to potential investors (feasibility) and the expected economic benefits to the country from increased investment (desirability).

Importantly, this study introduced environmental sustainability as one of the five factors used to determine desirability. The potential contribution of each sector to sustainability was assessed based on available evidence and consultations with the public and private sector in Paraguay. This assessment helped to identify ‘ready-to-go’ sectors and ‘aspirational’ sectors that, although underdeveloped, had the potential to contribute to growth and diversification while enhancing sustainability if certain policy reforms were applied. These included tourism, medical devices, and textiles.

Although such analyses are commonly used to identify target sectors for investment and export promotion efforts, environmental sustainability is rarely a consideration. As this example shows, integrating sustainability into prioritization and targeting processes can lead to new insights and can help align sectoral policy with wider sustainable development goals.
These policy tools require careful assessment and design to ensure they are tailored to local conditions, meet the needs of a particular sector, and most importantly deliver on environmental goals. A focus on sustainability may also mean that traditional investment promotion tools must be implemented in a new way to achieve results. For example, designing performance-based incentives may be particularly important to ensure that foreign-owned firms use more sustainable production practices than incumbents. Public-private partnerships or other oversight mechanisms may also be crucial where investment is directed toward essential services such as electricity and water, which can often involve natural monopolies.

Finally, beyond promotion activities and the design of incentives, there is a wider role for government in facilitating the growth of sustainable industries. This role includes providing enabling infrastructure, developing a pipeline of appropriate projects, and supporting education and training in relevant fields. It also includes enhancing the capacity of local firms to act as suppliers to foreign-owned businesses that demand higher environmental standards in order to meet the expectations of sustainability-conscious investors and consumers in final export markets, or that operate in sustainable sectors such as renewable energy.

As demonstrated by the Supplier Development Program under development in Turkey and supported by the World Bank and IBEP (see Box 7), supporting the development of local green supply chains can not only help to attract sustainable investors by providing a supplier network that can meet these higher standards, but also has the potential to bolster productivity by facilitating the transfer of more advanced technologies and management practices from multinationals to local firms. By developing these core supporting factors, countries can be well placed as an attractive host for sustainable investment.

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**BOX 7 - Developing local suppliers for electric and hybrid vehicle production in Turkey**

In recent years, economic growth in Turkey has been hampered not only by political and economic instability, but also by a lack of productivity growth as domestic firms have struggled to increase production competencies and production of sophisticated goods and services. Given the potential productivity benefits of FDI inflows and integration with global value chains, the government has identified greater localization of the supplier base for automotive manufacturing as a policy priority. FDI firms and original equipment manufacturers (OEMs) in the automotive industry also stand to benefit from enhanced reliability and reduced costs if the local supply of high-value inputs could be increased.

In response, the Ministry of Industry and Technology, with the support of the World Bank and IBEP, has developed a Supplier Development Program pilot that aims to boost the competitiveness and capacity of both existing and potential new local suppliers. Under the program, OEMs will nominate domestic firms to participate, and participating firms will receive technical assistance and coaching focused on performance competitiveness improvement over 24 months.

An important feature of the program is a focus on suppliers to electric and hybrid vehicle production. This focus reflects both the high level of technological sophistication in this sector and the significant global shift towards greener models in the automotive manufacturing industry. In nominating potential participants, OEMs must reflect on their potential linkages with electric and hybrid vehicle production, and a key goal of the support provided by the program is to positioning participants to benefit from the long-term growth of this sector. In this way, the program will help position Turkey as an attractive host country for future investment in this significant sustainable sector, while also enhancing competitiveness and productivity growth.
Conclusion

As countries witness unparalleled economic contraction as a result of the COVID-19 pandemic, policymakers are grappling with questions about the future of growth. The human and economic toll of this pandemic has made clear the close interconnection of health, environmental, and economic systems, reinforcing that the private sector must reorient and transform to attain environmental sustainability. As governments consider how to respond to the crisis, a green growth model should be at the heart of recovery plans.

Developing country policymakers should turn to this paper to understand how environmental sustainability can be integrated with investment climate policy during COVID-19 recovery. Policies to promote greater environmental sustainability will be needed in many areas, including directly addressing emissions, pollution, and ecosystem impacts, as well as promoting sustainability in trade, finance, research and development, and consumer behavior. This paper outlines the role that a country’s investment climate plays in the success of these wider environmental policies, including by supporting investor confidence, providing access to finance and advanced technology for green projects, and facilitating green entrepreneurship. It further presents specific policy approaches that can advance regulatory reforms and attract productive investment to attain environmental sustainability goals, including:

• Enhancing the efficiency and effectiveness of environmental regulations through integrated, digital systems; simplification; transparency; and risk-based approaches.
• Finding synergies between private sector growth and sustainability by enhancing competition and removing barriers to entry in environmental service sectors such as waste management.
• Strengthening sustainability obligations on investors through domestic environmental regulations and reporting, FDI rules, and IIAs.
• Targeting investment promotion activities toward investors in clean energy and other environmentally sustainable sectors.
• Introducing or reorienting investment incentives, special economic zones, and investment guarantees toward sustainable sectors and achievement of environmental goals.
• Preparing the domestic economy to transition and support green sectors through infrastructure, skills development, supplier development, and trade policy.

Many opportunities remain to advance research and learning on these topics to inform policy solutions. Limited business-economics literature has investigated the role of the investment climate in transforming business practices to minimize the footprint and adverse effects on the environment. Relatedly, another area for research with evident gaps exists in understanding emerging environmental priorities of businesses and how they intersect with the needs of production, competitive positioning, and financial returns. A fuller understanding of the technological and financial barriers faced by businesses is key to develop public policy solutions that can shape market outcomes. A responsive research agenda could comprise illustrative case studies based on private sector consultations and new data insights as part of existing firm-level surveys.

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