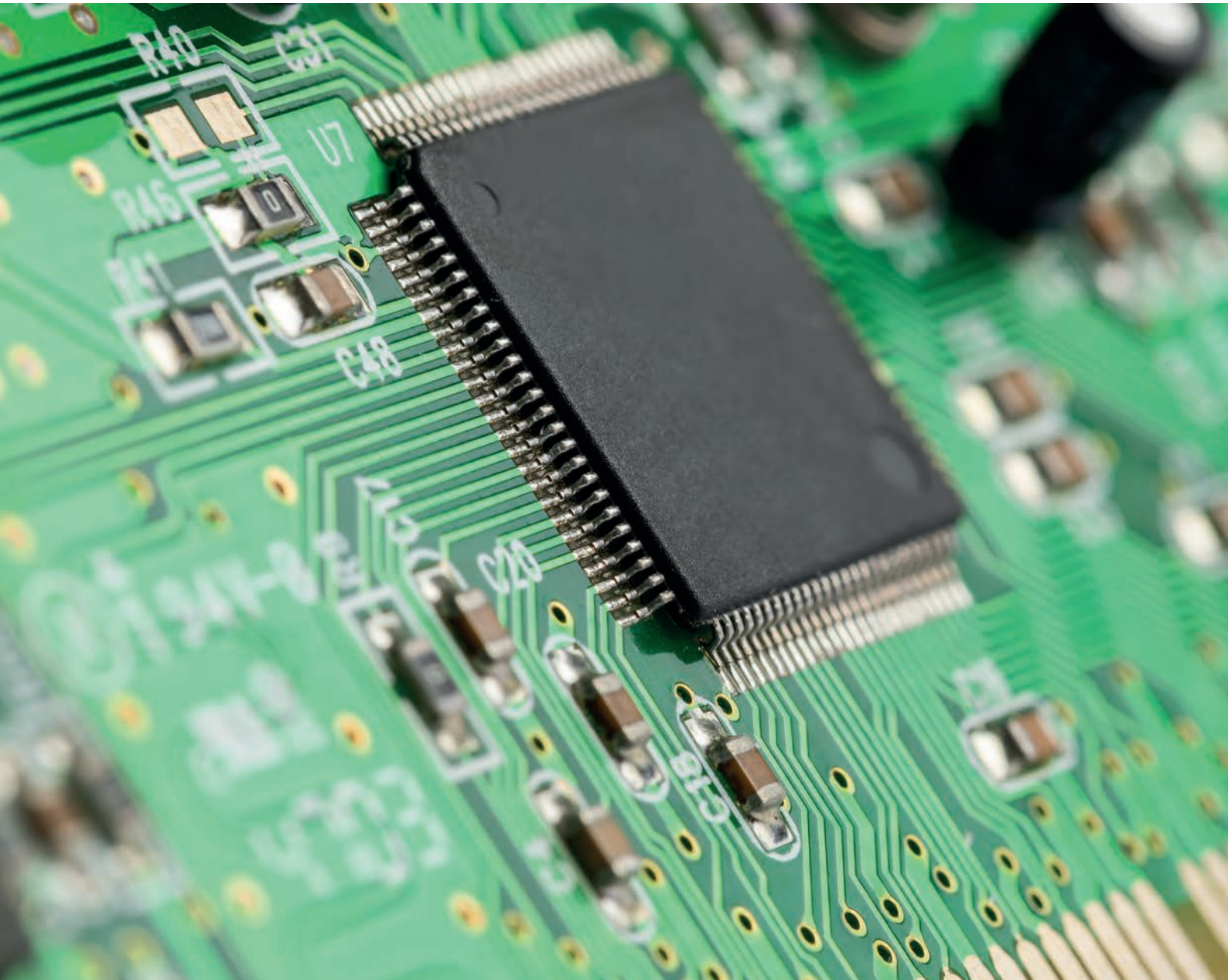
Review of the Dominican Republic's Enabling Environment for the Semiconductor and Microelectronics Industries



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Foreword

Strengthening the resilience of the global semiconductor supply chain is a key priority for policymakers worldwide. The high concentration of critical segments of this supply chain in a limited number of regions increases vulnerability to disruptions. The OECD, through the Committee on Industry, Innovation and Entrepreneurship and the Digital Policy Committee, is helping design policies to enhance semiconductor supply chain resilience, including efforts to increase diversification by developing local semiconductor ecosystems.

This report, *Review of the Dominican Republic's Enabling Environment for the Semiconductor and Microelectronics Industries*, contributes to these goals. It combines analysis of aggregate and firm-level economic data with almost 40 stakeholder interviews to deliver actionable policy recommendations to develop semiconductor and microelectronics industries in the Dominican Republic.

The project began in October 2024 and benefitted from a fact-finding mission to Santo Domingo in November 2024. The project was made possible with financial support from the Dominican Ministry of Industry, Commerce and Micro, Small and Medium-Sized Enterprises (MICM). The work helped inform the drafting of the Dominican Republic's National Strategy for the Promotion of the Semiconductor Industry (*Estrategia Nacional de Fomento a la Industria de Semiconductores*), published in August 2025, which draws on, among other inputs, much of the analysis and many of the recommendations contained within this report.

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Abbreviations and acronyms

ATP	Assembly, testing and packaging
BANDEX	*Banco de Desarrollo y Exportaciones*, Development and Export Bank of the Dominican Republic
CNZFE	*Consejo Nacional de Zonas Francas de Exportación*, National Council of Free Zones
DGA	*Dirección General de Aduanas*, General Directorate of Customs
DGII	*Dirección General de Impuestos Internos*, General Directorate of Internal Taxes
DOP	Dominican peso
FDI	Foreign direct investment
FONDOCYT	*Fondo Nacional de Innovación y Desarrollo Científico y Tecnológico*, National Fund for Innovation and Scientific and Technological Development
GVC	Global value chain
LAC	Latin America and the Caribbean
M&E	Monitoring and evaluation
MESCYT	*Ministerio de Educación Superior, Ciencia y Tecnología*, Ministry of Higher Education, Science and Technology
MICM	*Ministerio de Industria, Comercio y Mipymes,* Ministry of Industry, Commerce and Micro, Small and Medium-Sized Enterprises
ONE	*Oficina Nacional de Estadística*, National Statistics Office
PCB	Printed circuit board
R&D	Research and development

Executive summary

Semiconductors and microelectronics, the components found in numerous industrial products and digital technologies, are integral to the modern economy. In recent years, the global semiconductor and microelectronics industries have experienced significant shifts, as economies aim to develop their domestic ecosystems, diversify their supply chains and enhance their resilience. The Dominican Republic is seeking to capitalise on these developments. Although no semiconductor firms currently operate in the Dominican Republic, Presidential Decree 324-24 declares the development of a domestic semiconductor industry a "high national priority" and the National Strategy for the Promotion of the Semiconductor Industry, published in 2025, sets out the Dominican Republic's plans to establish and grow the country's semiconductor and microelectronics ecosystems.

This report analyses the opportunities, challenges and policy levers to support the development of the semiconductor industry, and the broader microelectronics industry, in the Dominican Republic. Analysis draws on both quantitative and qualitative evidence. Quantitative analysis leverages both aggregate and firm-level data to examine the evolution and performance of the Dominican Republic's advanced manufacturing sector and understand the conditions in which semiconductor and microelectronics firms could operate. Qualitative analysis combines desk research with interviews of almost 40 stakeholders from government, industry, industry associations, academia and research, and labour unions to assess the institutional, policy and regulatory landscapes that could determine whether and how semiconductor and microelectronics firms choose to establish their operations in the Dominican Republic.

The Dominican Republic has many strengths, including an existing advanced manufacturing base, generous incentives in its free zone regime, political stability and democratic institutions, good transport infrastructure, and its geographic proximity to large export markets in the Americas. To fully seize the opportunities presented by the semiconductor and microelectronics industries, the Dominican Republic can further improve its enabling environment in five main ways:

- **Strengthen the institutional framework for semiconductor policymaking** by establishing structures for cross-government collaboration, creating clear channels for engagement with industry and other non-governmental institutions, enhancing regional and international co-operation related to semiconductors and microelectronics, and developing policy monitoring and evaluation capabilities.
- **Leverage the Dominican Republic's free zone regime** to attract semiconductor and microelectronics firms by exploring targeted investment incentives, facilitating the process for firms to establish operations in the free zones, promoting linkages between firms in the free zones and the local economy, and increasing the availability of industrial land.
- **Enhance the business environment for the semiconductor and microelectronics industries**, including by nominating one government agency and a single one-stop shop to be responsible for semiconductor- and microelectronics-related foreign direct investment and exports, removing the remaining import tariffs on semiconductor-related products, expediting the environmental and construction permitting processes, and supporting access to finance for semiconductor and microelectronics firms and industrial parks.

- **Develop the Dominican Republic's science, technology and innovation ecosystem** by establishing robust indicators that adhere to international statistical standards, incentivising private investment in research and development (R&D), and reforming the National Fund for Innovation and Scientific and Technological Development to ensure faster and more targeted disbursement of public R&D funding, including for firms.
- **Improve electricity and water infrastructure** by increasing renewables generation to ensure sufficient electricity supply for semiconductor and microelectronics firms, expanding and upgrading electricity transmission and distribution infrastructure, and incentivising investment in rainwater harvesting, water and wastewater treatment

1 Assessment and recommendations

This chapter sets out the key findings and policy recommendations of the OECD's review of the Dominican Republic's enabling environment for the semiconductor and microelectronics industries. It identifies the Dominican Republic's main strengths and focuses on areas for improvement, relating to the institutional framework; free zone regime; business environment; science, technology and innovation ecosystem; and infrastructure.

Policy recommendations

Institutional framework

- Establish formal mechanisms to co-ordinate the implementation of the National Strategy for the Promotion of the Semiconductor Industry (hereafter the National Semiconductor Strategy) across government agencies and to collaborate with non-governmental stakeholders.
- Co-operate with international institutions, including the OECD, to develop complementary semiconductor policies and align semiconductor supply chains.
- Prioritise specific segments of the semiconductor value chain that align with the Dominican Republic's skills and industrial capabilities.
- Enhance monitoring and evaluation capabilities to enable periodic updates to the National Semiconductor Strategy and the refinement of the strategy's underlying policies.

Free zone regime

- Consider updating the eligibility criteria for free zone firms and complementing the tax exemptions with targeted incentives to help attract the semiconductor and other advanced manufacturing industries.
- Facilitate the process for firms to establish operations in the free zone regime.
- Promote linkages between the free zone regime and local economy.
- Increase the availability of industrial land, through initiatives including but not limited to Santo Domingo 2050, and assess the potential of regions beyond Santo Domingo to host semiconductor or microelectronics clusters.

Business environment

- Nominate one government agency to be responsible for guiding semiconductor firms through the foreign direct investment (FDI) and export processes and create a single one-stop shop for all public services required by semiconductor firms.
- Expedite the construction and environmental permitting processes to reduce the regulatory burden on semiconductor and microelectronics firms.
- Clarify the impact of expropriation provisions and foreign investment restrictions on foreign investors, including semiconductor firms.
- Remove the remaining tariffs on semiconductor-related products and consider signing the Information Technology Agreement 2.
- Diversify semiconductor-related imports by fostering trade partnerships and conducting supply chain risk assessments to enhance resilience and mitigate potential disruptions.
- Support access to finance for semiconductor and other advanced manufacturing firms and industrial parks.

Science, technology and innovation (STI)

- Establish robust STI indicators that adhere to international statistical standards.
- Introduce a research and development (R&D) tax credit to incentivise firms' investment in R&D.

- Significantly reform the National Fund for Innovation and Scientific and Technological Development (FONDOCYT) to improve the disbursement of R&D funding, support firms and promote industry-academia collaboration.

Infrastructure

- Ensure sufficient electricity supply for semiconductor and microelectronics firms by increasing renewables generation and introducing energy efficiency measures.
- Expand electricity transmission infrastructure to integrate renewables and upgrade distribution infrastructure to reduce electricity losses and improve reliability.
- Incentivise investment in rainwater harvesting, water and wastewater treatment infrastructure.

The Dominican Republic has experienced consistently strong economic growth in recent years. Since 2010, the gross domestic product (GDP) growth rate has averaged about 5% annually, above the average for Latin America and the Caribbean (LAC) and for OECD Member countries. During this period, the composition of the Dominican Republic's manufacturing exports has gradually shifted, with medical devices replacing textiles and clothing as the largest share of exports by value. The Dominican Republic aims to continue this evolution towards increasingly advanced manufacturing by developing semiconductor and microelectronics industries. Currently, microelectronics firms only have a small presence and no semiconductor firms operate in the country.

The Dominican Republic aims to attract semiconductor and microelectronics investments and develop a domestic industry by capitalising on global efforts to diversify the semiconductor supply chain and increase resilience. The Dominican Republic has many strengths, including generous incentives for firms in its free zone regime, an existing advanced manufacturing base, political stability and democratic institutions, good transport infrastructure and proximity to large export markets in the Americas, including the United States' semiconductor industry.

The Dominican Republic can further improve the enabling environment for the development of the semiconductor and microelectronics industries, including in five key policy areas: the institutional framework; free zone regime; the business environment; science, technology and innovation (STI); and infrastructure. Skills and human capital are another key lever but are outside the scope of this report. This chapter offers tailored policy recommendations for each of the five areas under consideration. Some of these recommendations entail spending decisions, which the Dominican Republic should carefully assess to retain budget neutrality in a constrained fiscal environment. These recommendations and the underlying analyses also informed the development of parts of the Dominican Republic's National Strategy for the Promotion of the Semiconductor Industry. See Sections 1.1 and 3.1 of this report for more details.

1.1. Institutional framework

Issued in June 2024, Presidential Decree 324-24 identifies the development of a semiconductor industry as a high national priority for the Dominican Republic and commits to publishing the National Semiconductor Strategy. In August 2025, the Dominican Republic launched its National Semiconductor Strategy, which is based on five pillars: industrial development; governance; workforce and human capital; country promotion; and strategic partnerships (MICM, 2025[1]). Box 1.1 summarises the Dominican Republic's National Semiconductor Strategy and its key policy measures.

In drafting its National Semiconductor Strategy, the Dominican Republic engaged constructively with the OECD. For example, the strategy's second pillar on governance draws on some of the evidence and analysis put forward by the OECD in this report. Indeed, it incorporates – in full or in part – many of the recommendations contained in this chapter of the report. While this alignment is encouraging, it remains important that these recommendations are effectively implemented.

To successfully implement the National Semiconductor Strategy and develop semiconductor and microelectronics ecosystems, the Dominican Republic will need to co-ordinate efforts across both public and private institutions and ensure enhanced domestic and international collaboration.

Box 1.1. The Dominican Republic's National Semiconductor Strategy

The Dominican Republic published its National Strategy for the Promotion of the Semiconductor Industry (*Estrategia Nacional de Fomento a la Industria de Semiconductores*) on 12 August 2025. More specifically, the National Semiconductor Strategy intends to prioritise the development of three segments of the semiconductor and microelectronics industries:

- fabrication of passive components (such as resistors and capacitors) and discrete semiconductors
- fabrication and assembly of printed circuit boards (PCBs); and
- assembly, testing and packaging (ATP) of a variety of mature-generation semiconductors.

The National Semiconductor Strategy is structured around five pillars, each foreseeing several policy measures:

1. **Industrial development**: This pillar aims to transform the Dominican Republic's industry from predominantly labour-intensive assembly to advanced, technology-driven manufacturing. Policy measures include: investing in industrial infrastructure (electricity, water, telecommunications); encouraging advanced manufacturing clusters; developing a network of local suppliers.
2. **Governance**: This pillar aims to establish the institutional framework and business environment that are conducive to FDI in the semiconductor and microelectronics industries. Policy measures include: creating structures for cross-government policy co-ordination and collaboration with the private sector; streamlining government bureaucracy; increasing government funding for research, development and innovation.
3. **Workforce and human capital**: This pillar aims to develop semiconductor and microelectronics skills in the Dominican Republic. Policy measures include: enhancing science, technology, engineering and mathematics (STEM) education at the primary and secondary levels; creating technical and vocational certifications aligned with industry needs; establishing specialised semiconductor degree programmes at universities.
4. **Country promotion**: This pillar aims to attract FDI to the Dominican Republic in advanced manufacturing sectors. Policy measures include: developing a unified investment strategy across government agencies; increasing the Dominican Republic's visibility in global high-technology investment circles; strengthening sector-specific branding and messaging.
5. **Strategic partnerships**: This pillar aims to develop partnerships between the Dominican Republic and regional and international academic institutions, governments and the semiconductor industry.

Following the National Semiconductor Strategy's publication, the Dominican Republic is now preparing for its implementation.

Note: For a taxonomy of the different types of semiconductors, see OECD (2024[2]). For additional information on the semiconductor value chain, see Annex A.
Source: MICM (2025[1]), *National Strategy for the Promotion of the Semiconductor Industry*, https://micm.gob.do/wp-content/uploads/2025/08/National-Strategy-for-the-Promotion-of-the-Semiconductor-Industry-ENFIS.pdf.

1.1.1. Establish formal mechanisms to co-ordinate the implementation of the National Semiconductor Strategy across government agencies and to collaborate with non-governmental stakeholders

The Ministry of Industry, Commerce and Micro, Small and Medium-Sized Enterprises (MICM) is responsible for semiconductor policy. However, for a complex, whole-of-government priority like the National Semiconductor Strategy, the Dominican Republic will need to draw on the policy levers and resources of a wide range of relevant government institutions.

The Dominican Republic might wish to establish a formal, centralised co-ordination mechanism to support the MICM in the development of coherent semiconductor policy. A mechanism to co-ordinate the delivery of the National Semiconductor Strategy could be modelled on the examples of the Innovation Cabinet and the Cabinet for Digital Transformation. These two cabinets, established in 2021, helped to co-ordinate two major cross-governmental initiatives in the Dominican Republic, providing technical knowledge and political capital and acting as fora for decision making across ministries.

The National Semiconductor Strategy also requires effective collaboration with non-governmental stakeholders, including private firms, business associations, universities and research centres, labour representatives and civil society organisations. These institutions are likely to be responsible for implementing semiconductor policy or be directly affected by it, but there is currently no formal channel for their input into the National Semiconductor Strategy.

The Innovation Cabinet and the Cabinet for Digital Transformation again provide a helpful model. These two cabinets were supported by a small number of working groups (*mesas de trabajo*), which brought together governmental and non-governmental stakeholders to focus on a specific policy area and provide recommendations for each cabinet's approval. The MICM could establish a similar channel to allow the National Semiconductor Strategy to benefit from stakeholder expertise and increase the structure and transparency of public-private engagement.

1.1.2. Co-operate with international institutions, including the OECD, to develop complementary semiconductor policies and align semiconductor supply chains

International collaboration on semiconductor policy would allow the Dominican Republic to share its expertise and learn from best practice. This is already starting to happen: in 2024, the MICM signed a memorandum of understanding with Purdue University (United States) to promote semiconductor research and academic exchange opportunities. In 2025, the University of the Caribbean (UNICARIBE) opened a Centre of Excellence in Santo Domingo with US firm Keysight Technologies, aimed at developing semiconductor skills. Also in 2025, the Dominican Republic hosted the Third Americas Partnership for Economic Prosperity Semiconductor Symposium, which focused on financial strategies for the semiconductor ecosystem.

The Dominican Republic should build on this progress, for example by increasing its engagement with like-minded countries. The Alliance for Development in Democracy, which the Dominican Republic co-founded alongside Costa Rica and Panama, could help to co-ordinate regional supply chains and policies (see also Recommendation 1.3.5). Additionally, the Dominican Republic could use its membership of the Ibero-American Program of Science and Technology for Development (CYTED) to work with other governments to strengthen the STI ecosystem which supports the semiconductor industry. The Dominican Republic's participation in the OECD Semiconductor Informal Exchange Network offers a unique forum for the exchange of semiconductor industry and policy information.

1.1.3. Prioritise specific segments of the semiconductor value chain that align with the Dominican Republic's skills and industrial capabilities

Decree 324-24 outlines the Dominican Republic's ambitions to "develop every segment of the semiconductor industry: R&D, design, fabrication, assembly, testing and packaging (ATP)". While it is important that the decree sets out this bold vision, the National Semiconductor Strategy must also define its priorities to ensure that available capabilities are effectively leveraged to build a competitive and sustainable semiconductor industry.

The Dominican Republic should prioritise specific segments of the semiconductor value chain to enable policymakers, industry and academia to co-ordinate and focus their resources. For example, semiconductor ATP is relatively labour-intensive and less capital-intensive than front-end manufacturing and has previously served as the entry point for countries developing semiconductor ecosystems in Latin America and Southeast Asia. Semiconductor ATP could prove a viable medium- to long-term path for the Dominican Republic. In the nearer term, the Dominican Republic could also consider focusing on printed circuit board manufacturing and assembly. While it is important that the National Semiconductor Strategy outlines its priorities, it should be cautious of excessive focus, for example on specific semiconductor types: particularly in public-facing strategies, this could unduly limit the Dominican Republic's capacity to seize new opportunities in a fast-moving industry.

1.1.4. Enhance monitoring and evaluation capabilities to enable periodic updates to the National Semiconductor Strategy and the refinement of the strategy's underlying policies

Article 9 of Decree 324-24 also makes the MICM responsible for establishing a new mechanism to monitor the National Semiconductor Strategy's progress. The Dominican Republic should ensure that this new monitoring and evaluation (M&E) mechanism has access to the necessary data and human resources to effectively support the National Semiconductor Strategy's implementation. A robust M&E mechanism would allow the Dominican Republic to periodically update the National Semiconductor Strategy, as required by Article 10 of the decree.

The new M&E mechanism faces several challenges. As set out in Recommendation 1.1.1 on policy co-ordination, semiconductor policy is a cross-government initiative, but datasets tend to belong to individual agencies as opposed to a single, centralised entity. The Dominican Republic should therefore work to break down data silos and enhance access to and sharing of data for better policymaking. For example, the new M&E mechanism should be able to access firm-level and other highly granular data from agencies including the National Statistics Office (ONE), General Directorate of Internal Taxes (DGII) and the Central Bank of the Dominican Republic (BCRD) to enable the Dominican Republic to monitor the impact of the National Semiconductor Strategy and its policies on the country's manufacturing industry.

Beyond data access, the new M&E mechanism also needs to be adequately staffed with the necessary human capital. To this end, the Dominican Republic should map the analytical and technical skills needs of the M&E mechanism and encourage secondments to the M&E mechanism from relevant institutions to fill any identified gaps. The data and skills required for monitoring and evaluating semiconductor policy are similar to the data and skills needed for the M&E of other aspects of public policy. Therefore, the scope of the new M&E mechanism should perhaps extend beyond the National Semiconductor Strategy and also analyse the impact of other economic and industrial policies in the Dominican Republic.

1.2. Free zone regime

As of 2024, the Dominican Republic's free zone regime – a type of special economic zone – encompasses 93 industrial parks and 843 firms, all of which benefit from generous tax exemptions and simplified customs procedures as set out in Law 8-90. With its focus on manufacturing and exports, the free zone regime has been credited with driving much of the country's economic growth and industrial development in recent decades (World Bank, 2016[3]). As the Dominican Republic prepares to develop semiconductor and microelectronics industries, it should assess the possibility of adapting the free zone regime to better attract advanced manufacturing firms and maximise the impact of potential semiconductor and microelectronics investments throughout the economy.

1.2.1. Consider updating the eligibility criteria for free zone firms and complementing the tax exemptions with targeted incentives to help attract the semiconductor and other advanced manufacturing industries

The Dominican Republic's free zone incentives are generous but generic. Free zone firms benefit from a 100% exemption on corporate income tax and a range of other taxes for 15 years, regardless of whether they manufacture cigars (160 free zone firms) and textiles (98 firms) or medical devices (40 firms) and electrical devices (30 firms) (CNZFE, 2025[4]). Furthermore, 40% of firms in the free zones are Dominican, which indicates that the free zone regime is not strongly focused on attracting multinational corporations or FDI, even though semiconductor firms will necessarily be international. The one-size-fits-all nature of the incentives means that the free zone regime does not support specific policy objectives and comes at a high fiscal cost.

The Dominican Republic should, first, clarify the objectives of the free zone regime. The current objective of the free zones – to promote export-led growth – is very broad and dates back decades. It is worth considering whether this objective should be modified or made more specific for the next stage of the Dominican Republic's development. Second, the Dominican Republic should tighten the eligibility criteria for firms to operate under the free zone regime, so that these firms contribute to the clearly defined objectives of the free zones. Third, if necessary, the Dominican Republic could consider complementing the free zones' tax exemptions with a more strategic incentives structure that encourages specific types of high-value investment or expenditure. For example, other countries in the LAC region and elsewhere have adopted targeted incentives frameworks that take into account investment size, sector or technological sophistication, and provide support for capital investment and R&D.[1] If the Dominican Republic does choose to operate two incentives systems in parallel – for example, the existing tax exemptions alongside the more targeted support for R&D and capital investments – it would be important to monitor these systems and assess in the medium term whether consolidation into a single well-targeted incentives scheme would be warranted.

1.2.2. Facilitate the process for firms to establish operations in the free zone regime

Advanced manufacturing firms currently face significant delays to establishing operations in the free zones and benefitting from the associated incentives: medical device manufacturers required on average 44 weeks to navigate through 96 administrative requirements managed by 6 government agencies (World Bank, 2023[5]). Semiconductor and microelectronics manufacturers are expected to face a similar challenge.

To facilitate the entry of semiconductor and microelectronics firms into the free zone regime, the Dominican Republic should enhance its digitisation efforts as some of the administrative requirements still rely primarily on in-person interactions or very basic digital processes. Greater digitisation would also enable better data sharing, making it easier for information submitted through a single digital portal to be accessed and reused by multiple agencies. In this way, greater data sharing – which should preserve data

privacy and confidentiality – can reduce repeated data requests and ease the bureaucratic burden on firms. Additionally, the Dominican Republic should increase transparency by clearly outlining all procedural steps and criteria required for firms to operate within the regime. Greater clarity on the renewal process for free zone operating permits – which can be renewed beyond 15 years at the discretion of the National Council of Free Zones (CNZFE) – could also enhance firms' certainty and enable them to make more informed investment decisions.

1.2.3. Promote linkages between the free zone regime and local economy

While the free zone regime can be particularly attractive to potential semiconductor and microelectronics investments, most firms and employees in the Dominican Republic operate outside of the free zones in the so-called local economy. Therefore, strong linkages between the free zones and the local economy would be required to amplify the economic impact of semiconductor or microelectronics investments and expand the potential for spillover effects. However, there is room for improvement in linking free zones with the local economy. For example, the proportion of inputs that medical and electrical device manufacturers in the free zones source from the local economy is only 3%, which suggests very weak backwards linkages for the advanced manufacturing sector (World Bank, 2018[6]).

Stronger backwards linkages require a sustained, long-term policy focus (Sturgeon, 2025[7]). To begin to strengthen these linkages, the Dominican Republic should help firms in the free zones identify potential suppliers within the local economy by enhancing its existing supplier database. Currently, the Tool for Categorising Suppliers (*herramienta de categorización de proveedores*) targets only the medical devices and pharmaceuticals sector and so should be extended to include the electronics sector. The Dominican Republic should also launch a supplier development programme to help local manufacturers meet international quality standards and gain certifications. Additionally, the matchmaking programme Encadena.DO, which aims to connect firms in the local economy and free zones, should be expanded into an annual programme and include in-person events. Taken together, these initiatives could strengthen linkages and increase the broader economic impact of investments in semiconductor and other advanced manufacturing firms that would typically establish themselves in the free zone regime.

1.2.4. Increase the availability of industrial land, through initiatives including but not limited to Santo Domingo 2050, and assess the potential of regions beyond Santo Domingo to host semiconductor or microelectronics clusters

Industrial parks in the Dominican Republic have a 98% occupancy rate. These land constraints are particularly acute in and around Santo Domingo, where several parks report having no remaining serviced industrial land. This is consistent with the high concentration of advanced manufacturing firms in the Santo Domingo area. Scarce and expensive land poses a major barrier to industrial parks' expansion and their ability to attract semiconductor and microelectronics firms.

The Dominican Republic is undertaking a variety of schemes to address this shortage of industrial land. For example, the Santo Domingo 2050 initiative aims to redevelop state-owned land near the capital city for a variety of social, economic and industrial goals. The Dominican Republic should ensure that some of this land is allocated – by sale or long-term lease – to new industrial parks which are capable of hosting advanced manufacturing firms such as the semiconductor or microelectronics industries. Additionally, in 2025, logistics firm DP World announced the expansion of their industrial park and port in Caucedo, just outside Santo Domingo. In parallel, the Dominican Republic should address land shortages and congestion around Santo Domingo by assessing the potential of other regions to host a semiconductor or microelectronics cluster. The Dominican Republic should ensure that environmental protections are respected in whichever regions semiconductor or other advanced manufacturing firms establish their operations.

1.3. Business environment

While a dynamic business environment is critical for the development of semiconductor and microelectronics ecosystems, firms in the Dominican Republic report significant challenges. For example, according to the World Bank, 39% of firms in the free zones identified the Dominican Republic's business environment as a major challenge to their operations (World Bank, 2022[8]). The Dominican Republic should enhance efforts to improve the institutional, legal and regulatory conditions that shape the country's investment climate and business environment.

1.3.1. Nominate one government agency to be responsible for guiding semiconductor firms through the FDI and export processes and create a single one-stop shop for all public services required by semiconductor firms

ProDominicana is the Dominican Republic's investment promotion agency that aims to attract FDI and increase the country's exports. However, its mandate is in practice very similar to that of the CNZFE, which also aims to develop investment and export opportunities, particularly in the free zones. Firms, industrial parks and government agencies interviewed for this report all recognised that ProDominicana and the CNZFE's overlapping remits lead to ambiguity and duplication. In the absence of a unified FDI strategy, parts of the Ministry of Foreign Affairs (MIREX) and business associations such as the Association of Foreign Investor Companies (ASIEX) are also highly active in this space, increasing uncertainty for prospective investors as to the relevant points of contact in the Dominican Republic and the country's investment priorities.

The need for a more cohesive institutional approach is also evident in the proliferation of online one-stop shops (*ventanillas únicas*). A one-stop shop should help firms and investors to navigate a country's bureaucratic requirements by gathering all relevant government services and administrative processes onto a single digital platform. However, the Dominican Republic has at least four one-stop shops that a prospective semiconductor firm would plausibly need to navigate through: investment, foreign trade, construction and environment. Each one-stop shop is managed by a different government agency, which increases complexity and the risk of delays.

The Dominican Republic should nominate one agency to be responsible for guiding semiconductor and microelectronics firms through the entire legal and regulatory process, from establishing operations in the Dominican Republic through to export. This lead agency for semiconductor and microelectronics investment and exports should also manage an overarching one-stop shop which brings together all administrative processes that semiconductor and microelectronics firms are expected to face into a single place, thereby reducing their bureaucratic burden.

In addition to these near-term actions which aim to improve the situation for semiconductor and microelectronics firms specifically, the Dominican Republic could also consider some medium-term actions with the potential to improve the investment landscape more broadly. For example, the Dominican Republic could map the mandates of ProDominicana and the CNZFE and clarify each agency's activities across all sectors, not just semiconductors and microelectronics. A national investment strategy, which the Dominican Republic currently lacks, could help co-ordinate efforts and further strengthen the country's FDI attraction efforts.

1.3.2. Expedite the construction and environmental permitting processes to reduce the regulatory burden on semiconductor and microelectronics firms

The Dominican Republic's regulatory environment has improved in recent years. Between 2020 and 2024, the Zero Bureaucracy programme (*Burocracia Cero*) – the country's flagship regulatory reform initiative – contributed to DOP 60 billion (Dominican pesos) in cost savings, equivalent to 1% of GDP (CNC, 2024[9]).

However, obtaining construction and environmental permits remain two of the most time-consuming processes that a firm must navigate in the Dominican Republic. On average, firms in the Dominican Republic need 206 days to be granted the necessary construction licences, receive the required inspections and be connected to utilities, which is above the regional average of 191 days (World Bank, 2019[10]). Meanwhile, securing an environmental permit takes an average of 13 weeks for some advanced manufacturing firms seeking to operate in the free zone regime, but could be longer depending on the expected environmental impact of semiconductor firms.

The MICM should engage closely with the National Competitiveness Council, Ministry of Housing and Construction, and Ministry of the Environment and Natural Resources to accelerate the permitting process. Improvements to the One-Stop Shop for Construction (VUC) and One-Stop Shop for Environmental Services (VUSA) could be included as part of the Zero Bureaucracy programme. Currently, both one-stop shops take a sector-agnostic approach to permitting and do not prioritise applications from certain sectors. The Dominican Republic should consider fast-tracking permits for semiconductor and microelectronics projects and other strategic sectors that it might wish to prioritise.

1.3.3. Clarify the impact of expropriation provisions and foreign investment restrictions on foreign investors, including semiconductor firms

Although reforms in recent decades have substantially improved the Dominican Republic's investment environment and opened most sectors of the country's economy to foreign investment, several areas of uncertainty remain. Some investors have raised concerns about the government's handling of expropriation proceedings, citing insufficient compensation, a lack of transparency and delays in judicial decisions. For example, in 2023, a tribunal of the International Centre for Settlement of Investment Disputes ruled that the Dominican Republic had breached international investment agreements relating to indirect expropriation, fair and equitable treatment, and the umbrella clause (ICSID, 2023[11]). Separately, Law 16-95 sets restrictions on foreign investment that could lead to environmental harm or have national security implications. Although other countries also have similar investment restrictions, given the environmental impact of some semiconductor manufacturing processes and semiconductors' dual-use nature, these restrictions could be interpreted as applying to prospective semiconductor investments.

To minimise uncertainties in the investment climate, the Dominican Republic should increase the speed and transparency with which expropriation claims are handled and clarify that investments in the semiconductor industry will not normally be affected by foreign investment restrictions. In the near term, this clarification could entail the publication of data on the enforcement of these laws and targeted communications. In the medium term, the Dominican Republic could envisage amendments to Law 16-95 to clarify its scope, although this would be considerably more time-consuming and sensitive.

1.3.4. Remove the remaining tariffs on semiconductor-related products and consider signing the Information Technology Agreement 2

The Dominican Republic has made significant progress in recent decades to liberalise its trade regime and eliminate tariffs. For example, in 2006, the Dominican Republic signed the World Trade Organization (WTO) Information Technology Agreement 1 (ITA 1), which aims to remove tariffs on hundreds of information technology (IT) products belonging to seven broad categories, including semiconductors and semiconductor manufacturing equipment.

Despite these efforts, the Dominican Republic still maintains tariffs on some semiconductor-related products. Removing these remaining tariffs would bring at least two benefits. First, it would send a clear signal to the industry about the country's commitment to participating in the global semiconductor value chain. Second, it would lower the import costs of these products for firms in the Dominican Republic, particularly those located in the local economy. One way of removing tariffs on most of these

semiconductor-related products would be for the Dominican Republic to sign and ratify ITA 2, which the WTO brokered in 2015 to expand tariff-free status to another 201 IT products. Signing ITA 2 would also bring the Dominican Republic in line with other countries in the region such as Costa Rica.

1.3.5. Diversify semiconductor-related imports by fostering trade partnerships and conducting supply chain risk assessments to enhance resilience and mitigate potential disruptions

The Dominican Republic's imports of semiconductor-related products are highly concentrated. To enhance semiconductor supply chain resilience, the country could expand trade partnerships with a broader range of economies, reducing exposure to potential supply chain disruptions and market fluctuations.

Additionally, conducting regular supply chain risk assessments would help identify potential vulnerabilities in semiconductor-related imports. Using customs data provides a solid foundation for these assessments (see Section 2.2.1), while firm-level import data offers even greater value, as it would allow for a more granular analysis of potential disruptions. These assessments would provide valuable insights into areas of over-reliance on specific suppliers or logistical challenges that may disrupt the supply chain, and they can also be evaluated to take into account geopolitical risks. Policymakers would therefore be able to develop targeted policies to enhance the resilience and stability of a semiconductor and microelectronics industry in the country. Similarly, the Dominican Republic should be mindful of the risks associated with over-reliance on a single main export market.

1.3.6. Support access to finance for semiconductor and other advanced manufacturing firms and industrial parks

Firms and industrial parks in the Dominican Republic have noted several challenges in accessing finance, including limited sources of finance, the high cost of finance and a lack of long-term capital. Banking credit to the private sector as a percentage of GDP is 29.5% in the Dominican Republic, below the regional average (46.9%), suggesting that the country's banking system might not be providing sufficient finance to firms (World Bank, 2023[12]). Moreover, the Dominican Republic's lending interest rate is 14.4%, higher than in Costa Rica, Mexico or Panama, implying that financing from Dominican banks is relatively expensive (World Bank, 2023[13]). The semiconductor industry is capital-intensive, so the Dominican Republic should consider how best to tackle firm financing challenges.

First, the state-owned Development and Export Bank (BANDEX) should consider how its concessional loans and technical support could be tailored to the needs of the semiconductor and microelectronics industries. This might include larger BANDEX loans or extended repayment schedules. Second, the MICM and the Ministry of Finance should work with the Stock Market Superintendence (SIMV) and the Pensions Superintendence (SIPEN) to explore alternative sources of financing for industrial parks. For example, updating regulations relating to pension and mutual funds would build on a previous OECD recommendation and could help unlock additional investment (OECD, 2022[14]).

1.4. Science, technology and innovation

Thriving semiconductor and microelectronics industries depend on a strong STI ecosystem. Despite the Dominican Republic's sustained economic growth and industrial development in recent years, STI remains one of the country's main challenges. The country's ecosystem is characterised by insufficient collaboration between firms and universities, low levels of funding and a lack of R&D activities. The National Innovation Policy 2030, published in 2022, aims to address some of these challenges but is still being implemented. The Dominican Republic must therefore further its efforts to enhance STI.

1.4.1. Establish robust STI indicators that adhere to international statistical standards

The Dominican Republic lacks a system of reliable STI indicators. This gap in data is a challenge for the Dominican Republic because the design of STI policy should build on robust evidence. Moreover, reliable and comparable STI indicators allow countries to benchmark themselves against international peers and monitor whether policy actions are having the intended impact domestically.

In particular, the World Bank and Ibero-American Network for Science and Technology Indicators (RICYT) do not include the Dominican Republic in their datasets on R&D expenditure – an important proxy for innovation inputs – because the country does not report official R&D figures. Different government agencies – such as the National Statistics Office (ONE), the Ministry of Higher Education, Science and Technology (MESCYT), and the Ministry of Finance – already collect some R&D data, albeit on an irregular basis and in a decentralised manner. The Dominican Republic should build on the recent progress of ONE's National Innovation Survey to formalise and centralise the R&D data collection and validation processes, in a way that is consistent with the OECD *Oslo Manual* and *Frascati Manual* (OECD/Eurostat, 2018[15]; OECD, 2015[16]).

1.4.2. Introduce an R&D tax credit to incentivise firms' investment in R&D

Although the Dominican Republic's R&D data are subject to significant limitations, the available data suggest that R&D expenditure is very low, ranging between 0.01-0.03% of GDP (Gabinete de Innovación, 2022[17]). This is well below the average R&D expenditure for the LAC region (0.55%) and the OECD (2.7%) (UIS, 2022[18]; OECD, 2022[19]). Increasing R&D investment is an important way of developing an STI ecosystem that can nurture semiconductor and microelectronics industries.

To incentivise R&D investment, the Dominican Republic should create an R&D tax credit to make eligible investments financially advantageous to firms. While firms in the Dominican Republic's free zone regime already have low or no tax liability, a refundable tax credit would enable these firms to benefit by claiming a refund from the government on their eligible R&D expenditure. In designing the R&D tax credit, the Dominican Republic must give careful consideration to the eligible R&D activities, the rate of the tax credit and its administration. If designed and implemented correctly, the R&D tax credit could increase private investment in R&D, driving up the absorptive capacity of firms,[2] accelerating the development of new technologies and improving existing products and processes. These are all conditions that support the emergence of semiconductor and microelectronics industries.

1.4.3. Significantly reform the National Fund for Innovation and Scientific and Technological Development (FONDOCYT) to improve the disbursement of R&D funding, support firms and promote industry-academia collaboration

FONDOCYT is practically the only source of public R&D funding in the Dominican Republic. However, it is underfunded, allocating only DOP 3.69 billion to projects between 2005 and 2019. Moreover, just over half of total approved FONDOCYT funding during this period was successfully disbursed, due to significant delays and administrative challenges (UNCTAD, 2021[20]). FONDOCYT grants only very limited funding to firms, as it prioritises R&D projects carried out by universities and research centres.

The Dominican Republic should make significant reforms to FONDOCYT to streamline the disbursement of R&D grants, increase the funding available to firms and make it easier for firms to collaborate with universities on research projects. Whereas R&D tax credits typically allow firms the flexibility to choose which projects to invest in, the Dominican Republic should consider whether a reformed FONDOCYT should prioritise certain strategic sectors to receive R&D grants, including but not limited to semiconductors and microelectronics.

1.5. Infrastructure

The Dominican Republic's infrastructure has many strengths. For example, the World Economic Forum ranked the country in the top three in the LAC region for air transport infrastructure quality, port infrastructure quality and road quality (WEF, 2021[21]). This could help the Dominican Republic become an important regional hub for logistics and trade in semiconductor-related products. In parallel, however, the Dominican Republic should also look to improve other parts of its infrastructure that are also important for the semiconductor and microelectronics industries, namely electricity and water.

1.5.1. Ensure sufficient electricity supply for semiconductor and microelectronics firms by increasing renewables generation and introducing energy efficiency measures

Semiconductor manufacturing depends on a stable and affordable supply of energy. Electricity demand in the Dominican Republic is expected to increase substantially by 2030 and the possible development of the semiconductor and microelectronics industries would further increase this demand. This will require the expansion of generation capacity. Currently, renewable sources account for only 16% of the Dominican Republic's electricity generation and fossil fuels account for the remaining 84% (IEA, 2023[22]). The Dominican Republic relies heavily on imported fossil fuels, which can leave its industry vulnerable to supply disruption and global fuel price shocks. There is therefore a strong case for increasing renewable electricity capacity, which would also support the Dominican Republic's domestic and international decarbonisation commitments.

On the supply side, the Dominican Republic can adopt several measures to incentivise and facilitate private investment in renewables. First, it should continue efforts with public tenders for renewable projects, ensuring they proceed smoothly and transparently. Decree 65-23 recently introduced the requirement that competitive public bidding processes should be used to set electricity prices for long-term renewable electricity contracts. It is important that these tenders set out clear and consistent terms and conditions to build investor confidence and unlock financing. Second, the Dominican Republic should streamline the onerous permitting process for renewable energy projects, which requires prospective investors to engage with approximately 19 different government agencies. Third, the Dominican Republic could look to increase electricity generation from auto-producers by raising the limits on auto-producers' maximum capacity and the share of their electricity that they are allowed to sell.

In parallel, on the demand side, the Dominican Republic should take further action on energy efficiency. Decree 158-23 mandates energy efficiency measures in government buildings and across the public administration but does not extend these requirements to the private sector or residential consumers of energy. As a result, the Dominican Republic is one of the few countries in the region that does not have a comprehensive regulatory framework for energy efficiency. A draft law on energy efficiency was first approved by the Senate in 2023 but has not been passed by the Chamber of Deputies. The Dominican Republic could look to pass and implement some form of energy efficiency legislation.

1.5.2. Expand electricity transmission infrastructure to integrate renewables and upgrade distribution infrastructure to reduce electricity losses and improve reliability

The Dominican Republic's electricity infrastructure requires significant improvements. Expanding the transmission infrastructure is required to integrate renewable electricity into the grid, as it allows the transfer of electricity from the locations where renewable energy is generated to the demand centres. As renewable generation increases, investment in transmission will be essential to support grid stability and minimise the curtailment of renewable power.

In the distribution segment, outdated equipment and infrastructure and inadequate tension levels contribute to significant electricity losses for the three state-owned electricity distribution companies (*Empresas Distribuidoras de Electricidad*, EDEs). These technical losses, combined with non-technical losses such as unmetered electricity or theft, mean that 37% of electricity generated is lost during the distribution segment (MEM, 2024[23]). This creates chronic financial deficits for the EDEs and frequent power outages for consumers. These outages predominantly affect users outside the free zones, whereas semiconductor and microelectronics firms are expected to be located within the free zones. Nonetheless, this could make it more difficult for local firms to become suppliers to the semiconductor and microelectronic industries in the free zones.

The state-owned Dominican Electricity Transmission Company holds a monopoly over electricity transmission and the EDEs dominate the distribution segment. However, public investment in electricity infrastructure – including transmission and distribution – has been falling in recent years, reaching just 0.17% of GDP, which is below the regional average of 0.20% (OECD, 2022[14]). Therefore, the Dominican Republic should reverse this under-investment in electricity infrastructure. The announcement of planned investments of USD 450 million in transmission infrastructure and USD 300 million in distribution infrastructure between 2024 and 2028 is a positive first step (MEM, 2024[24]). The issuance of the Dominican Republic's first sovereign green bond in 2024 could also facilitate further investment in electricity infrastructure. It is now essential that this funding is disbursed properly: for example, this funding should not go towards the continued subsidisation of EDE losses but instead be used to invest in tangible improvements to the electricity network.

In parallel to increased infrastructure investment, a complementary means of addressing some of the EDEs' financial losses would be for the Dominican Republic to review the electricity tariff that the EDEs are permitted to charge regulated users. Currently, the Electricity Superintendence (SIE, the electricity regulator) sets the electricity tariff below the costs faced by the EDEs, resulting in the EDEs making a loss on each unit of electricity sold, implying transfers from the Dominican government to the EDEs worth more than 1% of GDP per year (IMF, 2024[25]). The Dominican Republic should therefore consider measures to help ensure the long-term financial sustainability of electricity distribution, including a gradual transition to cost-reflective tariffs. See Section 3.5.1 for a more detailed discussion.

1.5.3. Incentivise investment in rainwater harvesting, water and wastewater treatment infrastructure

Semiconductor manufacturing also requires large quantities of high-quality water. However, the Dominican Republic has a higher level of water stress[3] than other countries in the region such as Costa Rica or Panama and this situation is expected to worsen due to population and economic growth and climate change. Furthermore, only 53% of the Dominican Republic's water treatment plants and 26% of wastewater plants operate at a suitable level (World Bank, 2020[26]).

To address some of the concerns around water supply, the Dominican Republic should support industrial parks to implement rainwater harvesting systems. These systems have been demonstrated to work in Chinese Taipei, where industrial parks collect, store and reuse water from typhoons. The Dominican Republic should explore options to make the most of the water available during the hurricane season.

The Dominican Republic should also look to reverse the state's under-investment in water and sanitation infrastructure (only 0.04% of GDP in 2019), well below the regional average (0.16%) (OECD, 2022[14]). This would help repair and expand water transmission and treatment infrastructure, increase metering and reduce water losses. Through preferential water tariffs, the Dominican Republic could incentivise firms to invest in water treatment technologies. The new sovereign green bond, which was issued in 2024 and raised USD 750 million, has earmarked some of this financing for water and wastewater management projects and could support public investment in water infrastructure.

References

CNC (2024), *Burocracia Cero - Improving Competitiveness through the Efficiency of Public Services*, Consejo Nacional de Competitividad. [9]

CNZFE (2025), *Datos Estadísticos*, National Council of Free Zones, https://www.cnzfe.gob.do/index.php/es/datos-estadisticos (accessed on 11 February 2025). [4]

Cohen, W. and D. Levinthal (1990), "Absorptive Capacity: A New Perspective on Learning and Innovation", *Administrative Science Quarterly*, Vol. 35/1, pp. 128-152, https://josephmahoney.web.illinois.edu/BA545_Fall%202022/Cohen%20and%20Levinthal%20(1990).pdf (accessed on 10 April 2025). [27]

Gabinete de Innovación (2022), *Política Nacional de Innovación 2030*. [17]

ICSID (2023), *Michael Anthony Lee-Chin v. Dominican Republic (ICSID Case No. UNCT/18/3)*, International Centre for Settlement of Investment Disputes, https://www.italaw.com/sites/default/files/case-documents/180334.pdf (accessed on 18 July 2025). [11]

IEA (2023), "Dominican Republic", International Energy Agency, https://www.iea.org/countries/dominican-republic/electricity (accessed on 5 March 2025). [22]

IMF (2024), *Dominican Republic: 2024 Article IV Consultation - Press Release and Staff Report*, IMF Country Report No. 24/294, International Monetary Fund, https://www.imf.org/-/media/Files/Publications/CR/2024/English/1domea2024001-print-pdf.ashx (accessed on 5 March 2025). [25]

MEM (2024), "Gobierno proyecta invertir USD$750 millones en el sistema de distribución y transmisión energética", Ministro de Energía y Minas, https://mem.gob.do/gobierno-proyecta-invertir-us750-millones-en-el-sistema-de-distribucion-y-transmision-energetica/ (accessed on 16 July 2025). [24]

MEM (2024), "Informe de Desempeño Empresas Eléctricas Estatales período de enero-noviembre 2024", Ministro de Energía y Minas, https://mem.gob.do/wp-content/uploads/2025/02/Informe-de-Desempeno-de-las-Empresas-Electricas-Estatales-EEE-noviembre-2024.pdf (accessed on 5 March 2025). [23]

MICM (2025), *National Strategy for the Promotion of the Semiconductor Industry*, Ministerio de Industria, Comercio y Mipymes, https://micm.gob.do/wp-content/uploads/2025/08/National-Strategy-for-the-Promotion-of-the-Semiconductor-Industry-ENFIS.pdf (accessed on 16 October 2025). [1]

OECD (2024), *Chips, nodes and wafers: A taxonomy for semiconductor data collection*, OECD Publishing, Paris, https://doi.org/10.1787/f68de895-en. [2]

OECD (2022), *Gross domestic spending on R&D (indicator)*, OECD, Paris. [19]

OECD (2022), *Multi-dimensional Review of the Dominican Republic: Towards Greater Well-being for All*, OECD Development Pathways, OECD Publishing, Paris, https://doi.org/10.1787/560c12bf-en (accessed on 28 February 2025). [14]

OECD (2015), *Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development*, The Measurement of Scientific, Technological and Innovation Activities, OECD Publishing, Paris, https://doi.org/10.1787/9789264239012-en. [16]

OECD/Eurostat (2018), *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation, 4th Edition*, The Measurement of Scientific, Technological and Innovation Activities, OECD Publishing, Paris/Eurostat, Luxembourg, https://doi.org/10.1787/9789264304604-en. [15]

Sturgeon, T. (2025), "Drawing a New Roadmap for Industrial Upgrading in the Dominican Republic: Industrial Ecosystem Review and Strategic Assessment". [7]

UIS (2022), *GERD as a percentage of GDP (indicator)*, United Nations Educational, Scientific and Cultural Organization Institute for Statistics. [18]

UNCTAD (2021), *República Dominicana: examen de las políticas de ciencia, tecnología e innovación*, United Nations Trade and Development, https://unctad.org/system/files/official-document/dtlstict2020d8_es.pdf (accessed on 14 February 2025). [20]

WEF (2021), *World Economic Forum Travel & Tourism Development Index*, World Economic Forum, https://prosperitydata360.worldbank.org/en/dataset/WEF+TTDI (accessed on 28 March 2025). [21]

World Bank (2023), *Domestic credit to private sector by banks (% of GDP)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/FD.AST.PRVT.GD.ZS (accessed on 28 February 2025). [12]

World Bank (2023), *Lending interest rate (%) - Dominican Republic*, World Bank, Washington, DC, https://data.worldbank.org/indicator/FR.INR.LEND?locations=DO (accessed on 28 February 2025). [13]

World Bank (2023), *Reporte sobre tramitología para el establecimiento de empresas en tres regímenes especiales de República Dominicana*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/099112224175036219/pdf/P178504-76925377-6a5d-4130-ae65-f21ef927c822.pdf (accessed on 18 March 2025). [5]

World Bank (2022), *Paving the way for prosperous cities and territories: Urbanization and Territorial Review of the Dominican Republic*, World Bank, Washington, DC, http://documents1.worldbank.org/curated/en/099520007132233569/pdf/P172715065b95b0bc08ce70a7fe6442f014.pdf. [8]

World Bank (2020), "Realizing Sustainable Development Goals for Water and Sanitation in the Dominican Republic", World Bank, Washington, DC, https://www.worldbank.org/en/results/2020/05/06/realizing-sustainable-development-goals-for-water-and-sanitation-in-the-dominican-republic (accessed on 7 March 2025). [26]

World Bank (2019), *Dealing with Construction Permits*, World Bank, Washington, DC, https://archive.doingbusiness.org/en/data/exploretopics/dealing-with-construction-permits (accessed on 25 February 2025). [10]

World Bank (2018), *Dominican Republic: Systematic Country Diagnostic*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/980401531255724239/pdf/Dominican-Repuiblic-SCD-final-07022018.pdf (accessed on 5 March 2025). [6]

World Bank (2016), *Special Economic Zones in the Dominican Republic: Policy Considerations for a more Competitive and Inclusive Sector*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/184001487332346268/pdf/112878-REVISED-PUBLIC-GVC-and-SEZ-in-DR-P152202-output-final-clean-new-title.pdf (accessed on 20 March 2025). [3]

Notes

[1] Incentives for R&D investment are also considered separately in Recommendations 1.4.2 and 1.4.3.

[2] Absorptive capacity is defined as "the ability of a firm to recognise the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen and Levinthal, 1990[27]). R&D is an important determinant of a firm's absorptive capacity and its innovative capabilities.

[3] The World Bank defines the level of water stress as freshwater withdrawal as a proportion of available freshwater resources.

2 Examining the domestic advanced manufacturing ecosystem

This chapter provides a quantitative analysis of the Dominican Republic's advanced manufacturing sector and assesses the conditions in which semiconductor and microelectronics firms could operate. It starts by examining recent macroeconomic trends and analysing the demographics and performance of advanced manufacturing firms in the Dominican Republic. Furthermore, the chapter analyses the integration of the Dominican Republic's advanced manufacturing sector into global value chains and foreign direct investment.

This chapter provides an assessment of the Dominican advanced manufacturing sector, with a focus on the semiconductor segment where possible.[1] It is organised into two main parts: the first addressing the macroeconomic environment and local industrial market structure, and the second exploring the enabling conditions for the development of a semiconductor ecosystem in the Dominican Republic, including integration into global value chains (GVCs) and foreign direction investment (FDI). The analysis builds on a combination of publicly available aggregate data, granular commercial data accessible to the OECD Secretariat, and granular data provided by the Dominican Republic's National Statistics Office (ONE) to the OECD Secretariat.

2.1. Market structure

The semiconductor industry does not currently operate in the Dominican Republic and the country hosts only a small number of microelectronics firms. Therefore, to assess the conditions in which semiconductor and microelectronics firms could operate, this analysis focuses on the advanced manufacturing sector as a relevant benchmark within the broader economic landscape. Accordingly, this section first provides an overview of the latest macroeconomic developments in the Dominican Republic and then sheds light on the size and structure of the advanced manufacturing sector in the country. This analysis includes an overview of the business demographics (e.g. number of firms, market concentration) and economic activity (e.g. profits, value added) of advanced manufacturing, compared to other manufacturing industries.

Over the past decade, the Dominican Republic has experienced steady gross domestic product (GDP) growth, averaging around 5% annually, outperforming the OECD average. Rising incomes, poverty reduction and a strong labour market (5.6% unemployment rate in 2023) accompanied this growth. Inflation, after peaking at 8.8% in 2022, returned to target levels (defined by the Central Bank of the Dominican Republic (BCRD) as 4.0% ± 1.0%) by 2023.

By 2023, there were 1 046 advanced manufacturing firms in the country, most of which were micro firms (with ten or fewer employees) and concentrated in the country's two main industrial hubs (Santiago and Santo Domingo). Between 2016 and 2022, employment growth in the advanced manufacturing sector closely mirrored that of the rest of the manufacturing sector, despite weaker value-added growth. In recent years, overall profitability in the advanced manufacturing sector has remained comparable to the rest of the manufacturing sector, though certain advanced manufacturing industries have demonstrated notably higher profitability.

The following two sections delve more deeply into these topics, presenting a detailed analysis of recent macroeconomic trends in the Dominican Republic and an in-depth examination of the size, structure and economic performance of the advanced manufacturing sector.

2.1.1. Macroeconomic environment

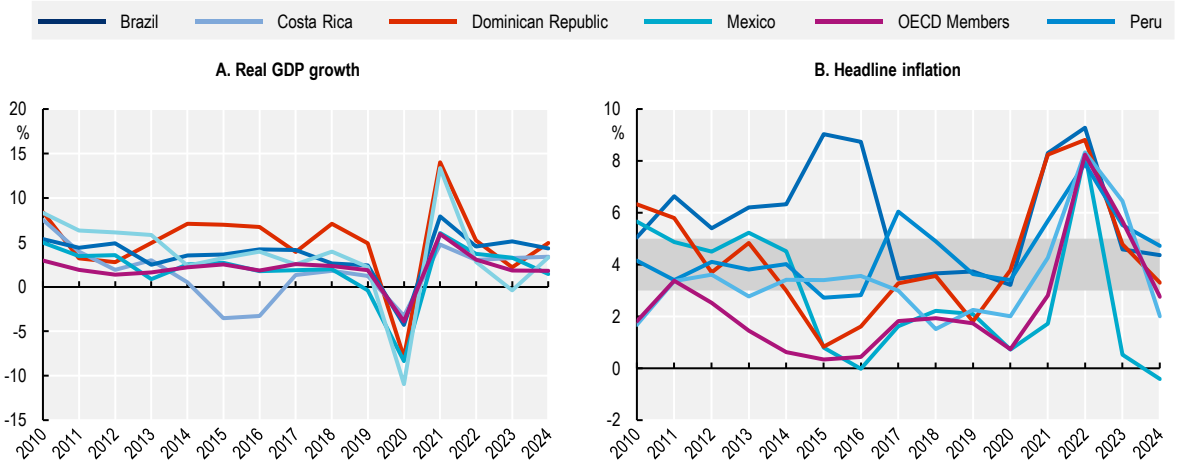
From 2010 to 2024, the Dominican Republic experienced consistent GDP growth, driven by strong private consumption and investment on the expenditure side and by the services and, to a lesser extent, the industries sector on the production side (IMF, 2024[1]). Averaging around 5% annually, average GDP growth rates in the country surpassed other Latin American countries (with similar GDP per capita levels in 2022) and the OECD average (Figure 2.1, Panel A), which helped to steadily raise income and reduce poverty. From 2015 to 2023, the share of population living in poverty (earning less than USD 6.85 per day) decreased from 30.4% to 17.9% (World Bank, 2025[2]). In 2023, economic growth slowed to 2.2% (below its average growth of 5%), driven by a sharp deceleration in private consumption and investment in the first half of 2023 (IMF, 2024[1]). However, domestic demand rebounded in the second half of 2023 and economic growth rebounded to 5.0% in 2024. Headline inflation rose to 8.8% in 2022 but returned to the

BCRD's target range of 3-5% by 2023, staying below the levels recorded in other Latin American countries like Mexico and Peru, as well as the OECD average (Figure 2.1, Panel B).

In 2023, the labour market remained strong, with the unemployment rate standing at 5.6%, below pre-COVID-19 levels and lower than in other countries in the region such as Brazil and Costa Rica (ILO, 2025[3]). Employment growth in the fourth quarter (Q4) of 2023 was relatively broad-based, with sectors such as construction and tourism surpassing 2019 Q4 levels, while the industrial sector remained in line with 2019 Q4 levels. Despite these positive trends, significant gender disparities persisted in labour force participation and employment (IMF, 2024[1]).

The contribution of manufacturing to the Dominican Republic's GDP is relatively low, representing only 13.8% in 2023. This is comparable to other countries in the region, such as Brazil (13.3%) and Costa Rica (13.6%), but significantly lower than Mexico (20.1%) (World Bank, 2025[4]). Manufacturing's contribution to GDP has declined from 21.6% in 2004, reflecting a gradual shift towards a more services-oriented economy. While value added in manufacturing has grown in absolute terms, its slower growth compared to the services sector might reflect key challenges, including dependence on tourism and the need for greater diversification and innovation to boost productivity and value creation in the manufacturing sector.

Figure 2.1. Evolution of real GDP and headline inflation in selected economies, 2010-2024



Note: Panel A shows annual growth rates while Panel B shows annual percentage changes. In Panel B, the shaded grey area reflects the inflation target marked by the BCRD. The latest observations are for 2024.
Sources: Panel A: OECD calculations based on World Bank (n.d.[5]), *GDP (constant 2015 US$) (indicator)*, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD (accessed on 15 October 2025); Panel B: OECD calculations based on World Bank (n.d.[6]), *Inflation, consumer prices (annual %) (indicator)*, https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG (accessed on 15 October 2025).

2.1.2. The electronics and advanced manufacturing ecosystem in the Dominican Republic

As detailed in Section 3.2, the free zone regime in the Dominican Republic was designed to promote industrial development and overseas exports. While it has successfully attracted advanced manufacturing industries, such as medical device manufacturing, the free zone regime has yet to draw semiconductor operations to the country and microelectronics firms have only a very small presence. This section analyses the advanced manufacturing sector to help understand the broader setting in which semiconductor and microelectronics firms may operate. This analysis sheds light on the correlation

between firms' performance and characteristics, pointing to possible policies to unleash the potential of the Dominican semiconductor and microelectronics ecosystem.

Granular data provide a better understanding of the market structure and firm dynamics and reveal important differences in performance across different categories of firms, thereby helping policymakers better design and target policy actions. This report builds on data made available by ONE (see Box 2.1).

Box 2.1. National datasets used in this report

This report employs data made available by ONE and includes the following datasets:

- **The Register of Enterprises and Establishments (*Directorio de Empresas y Establecimientos*)**: The business registry dataset offers identification information, geographical location, number of employees (by size bands) and economic activity for the universe of firms in the Dominican Republic. Available to the OECD Secretariat for the years 2015 to 2023.
- **The National Survey of Economic Activity (*Encuesta Nacional de Actividad Económica*, ENAE)***:* This survey provides detailed insights into the structure and financial performance of formal firms. It includes data on general firm characteristics and income statements (e.g. revenue, costs, profit), enabling the analysis of trends across various sub-sectors. Available to the OECD Secretariat for the years 2016 to 2022.

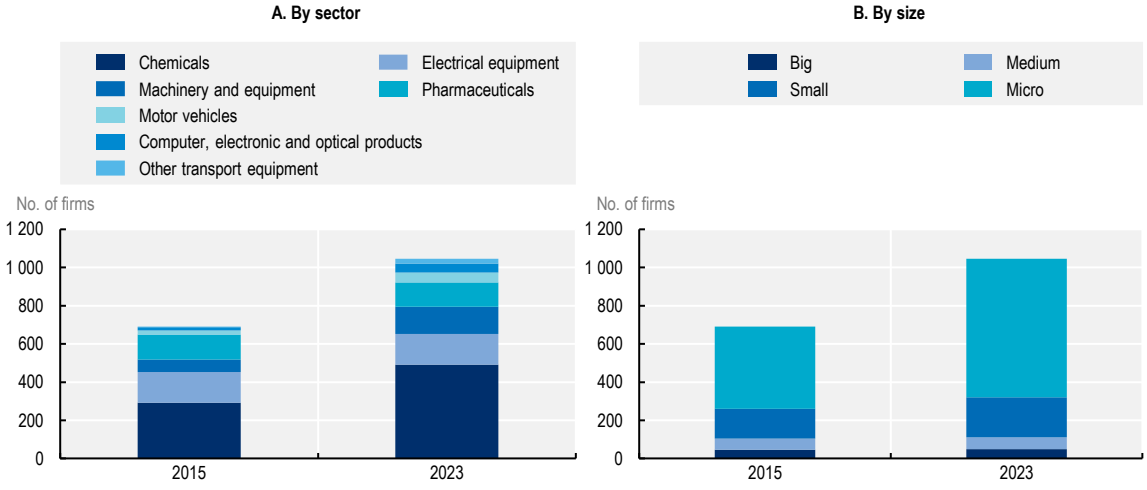
In 2023, there were 1 046 firms in the advanced manufacturing sector, representing 1% of all registered firms in the Dominican Republic. Of the 1 046 firms, 47 (4.5%) corresponded to the manufacturing of computer, optical and electronic products (hereafter, electronics sector). In 2023, the chemicals sector had the highest number of firms within the advanced manufacturing sector, with 491 firms (46.9%), followed by electrical equipment manufacturing with 161 firms (15.4%) and machinery and equipment manufacturing with 142 firms (13.6%) (Figure 2.2, Panel A). Overall, the advanced manufacturing sector grew by 355 firms since 2015, with the electronics sector adding 29 new firms. As a result, the share of advanced manufacturing firms within the total manufacturing sector increased from 11.5% in 2015 to 13.4% in 2023. A significant portion of advanced manufacturing firms were micro firms, employing ten or fewer workers. In 2023, micro firms accounted for 69.4% of the firms, up from 62.2% in 2015 (Figure 2.2, Panel B), in line with total manufacturing (67.5% in 2023).

Figure 2.3 illustrates the distribution of advanced manufacturing firms in the Dominican Republic by province in 2023, highlighting a strong concentration in the Santo Domingo area (composed of the Distrito Nacional and Santo Domingo province) and in Santiago, both of which host the country's main industrial hubs. In 2023, the Santo Domingo area accounted for 61.4% of the advanced manufacturing firms, whereas Santiago accounted for 16.4% of the firms. A large share of these firms operates within free zone industrial parks, which are heavily concentrated in these two areas. According to the National Council of Free Zones (CNZFE) (2025[7]), Santo Domingo and Santiago are the provinces with the highest number of free zone industrial parks, with 20 and 29 respectively. Together, these provinces host 488 out of the 843 firms operating under the free zone regime. The Santiago industrial park was the biggest industrial park in the country (measured in terms of workforce) in 2023, with 22 600 employees, according to ONE (2025[8]), followed by the San Cristóbal Industrial Park (22 141 employees), and the Las Américas Industrial Park (20 006 employees). The latter 2 parks have seen the most significant workforce growth in the country since 2017, each adding around 7 000 employees.

Between 2015 and 2023, 355 new advanced manufacturing firms were established in the country, but the overall concentration of firms in the Santo Domingo area and Santiago has remained relatively unchanged. Santiago's share of advanced manufacturing increased from 13.3% in 2015 to 16.4% in 2023, while the

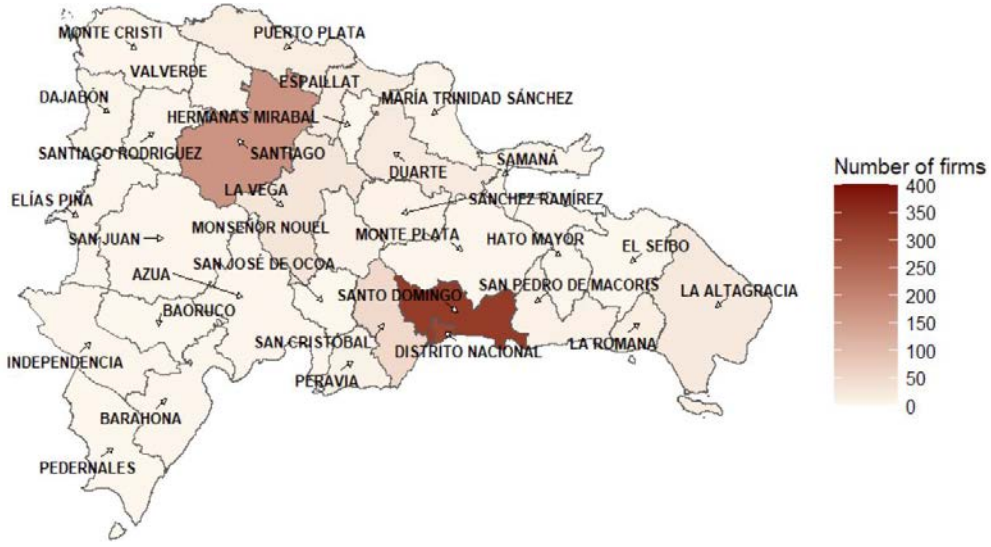
share in the Santo Domingo area declined from 68.1% in 2015 to 61.5% in 2023. Nevertheless, the Santo Domingo area remains the primary hub for industrial expansion, accounting for 49% of the newly established advanced manufacturing firms during this period, compared to 22% in Santiago.

Figure 2.2. Distribution of number of firms in advanced manufacturing sectors, 2015 and 2023



Note: Advanced manufacturing sectors correspond to Sectors 20, 21, 26, 27, 28, 29 and 30 of the 2019 *Clasificación Nacional de Actividades Económicas* (CNAE). They correspond to sectors classified as medium-high and high-technology (high-tech) industries based on research and development (R&D) intensity following Galindo-Rueda and Verger (2016[9]). Firms are categorised by size: micro (1-10 employees), small (11-50 employees), medium (51-250 employees) and large (more than 250 employees).
Source: OECD calculations based on ONE (n.d.[10]), "Directorio de Empresas y Establecimientos, 2015-2023", Confidential data, Oficina Nacional de Estadística (accessed in March 2025). See Box 2.1 for additional details.

Figure 2.3. Distribution of advanced manufacturing firms in the Dominican Republic, 2023



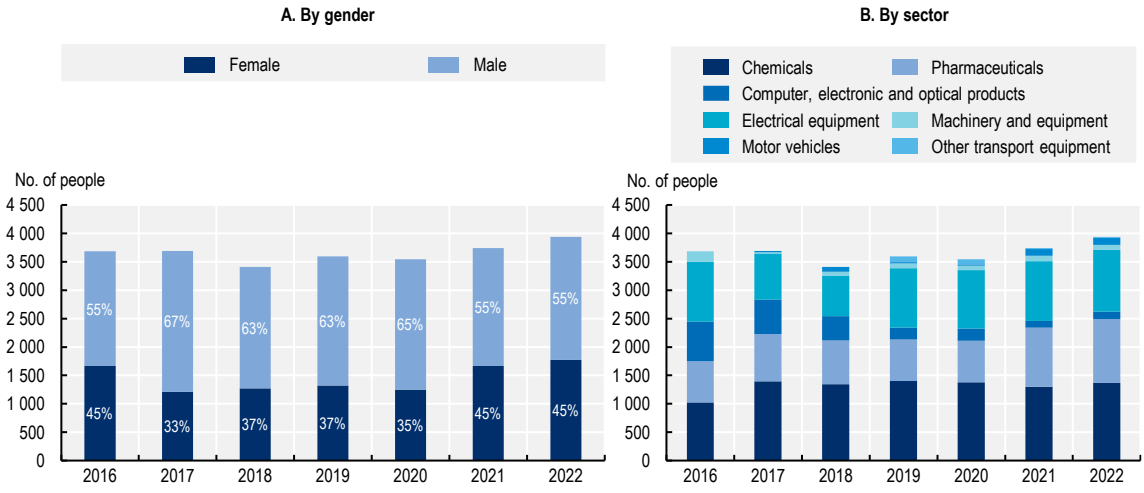
Note: Based on 1 046 firms corresponding to advanced manufacturing firms in 2023. Advanced manufacturing sectors correspond to Sectors 20, 21, 26, 27, 28, 29 and 30 of the 2019 CNAE. They correspond to sectors classified as medium-high and high-tech industries based on R&D intensity following Galindo-Rueda and Verger (2016[9]).
Source: OECD calculations based on ONE (n.d.[10]), "Directorio de Empresas y Establecimientos, 2015-2023", Confidential data, Oficina Nacional de Estadística (accessed in March 2025). See Box 2.1 for additional details.

For the total economy, in 2023, 49.9% of the firms were located in the Santo Domingo area whereas 15.4% of the firms were located in Santiago. While expansion of the main industrial hubs can provide benefits such as shared infrastructure, access to specialised labour or knowledge spillovers, supporting infrastructure development and offering investment incentives in underrepresented provinces could help expand manufacturing capacity beyond these hubs and enhance regional economic growth, fostering a more balanced industrial landscape across the country (see also Section 3.2.4).

In 2022, nearly 40 000 workers were employed in the advanced manufacturing sector, representing an increase of approximately 2 500 employees compared to 2016. Regarding workforce composition, 45% of employees in advanced manufacturing were female in 2022, reflecting a gradual increase from 33% in 2017 (Figure 2.4, Panel A). Furthermore, the female participation rate in advanced manufacturing was noticeably higher than in other manufacturing sectors, where 36% of all employees were female in 2022.

By sector within the advanced manufacturing sector, the chemicals sector had the highest number of employees in 2022 (13 700), followed by the pharmaceuticals (11 3000) and electrical equipment (10 9000) sectors (Figure 2.4, Panel B). In 2022, the advanced manufacturing sector accounted for 13% of total employment in manufacturing and for 5% of total employment in the sectors covered by the ENAE.[2]

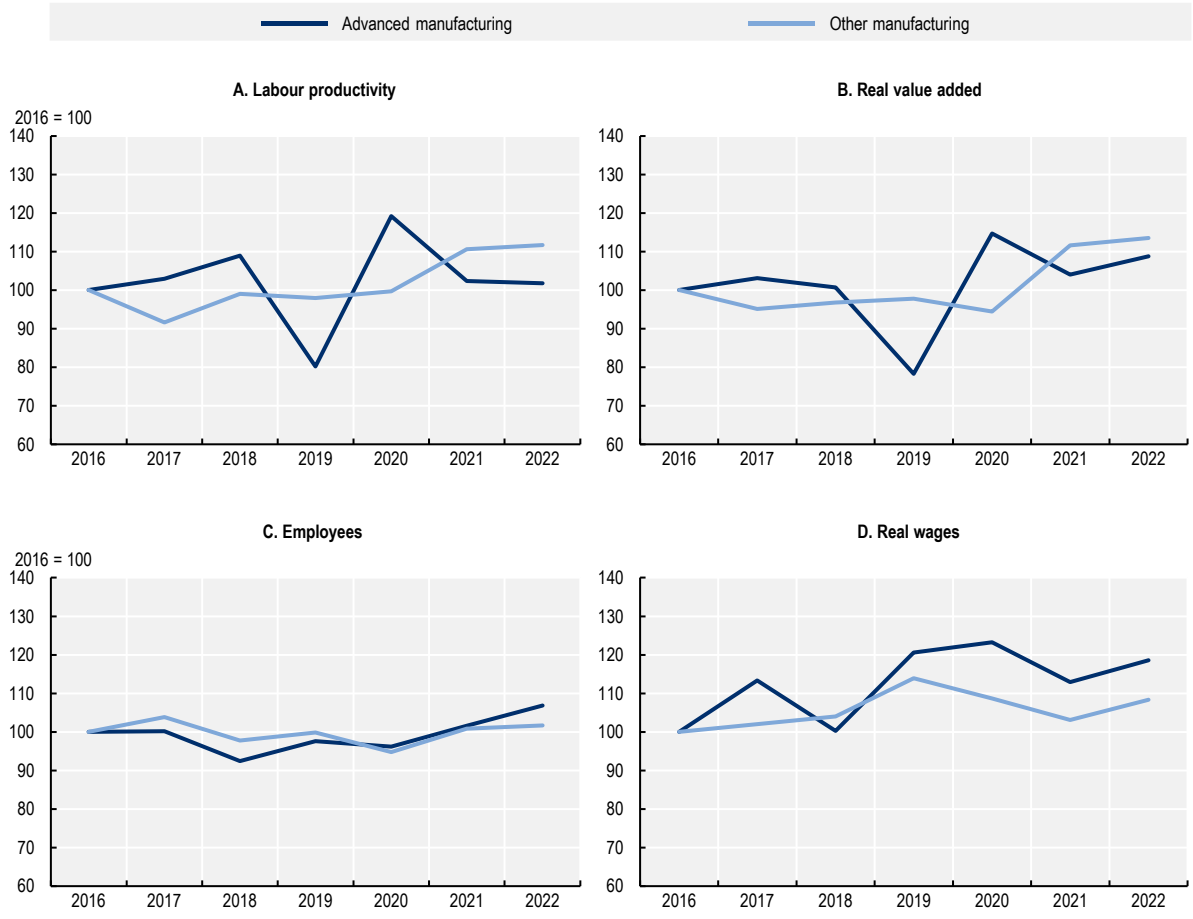
Figure 2.4. Distribution of employees by gender and sector in advanced manufacturing sectors, 2016-2022



Note: Advanced manufacturing sectors correspond to Sectors 20, 21, 26, 27, 28, 29 and 30 of the 2019 CNAE. They correspond to sectors classified as medium-high and high-tech industries based on R&D intensity following Galindo-Rueda and Verger (2016[9]). In Panel A, the data label indicates the share of the respective group in total employment. From ENAE 2018 (based on 2017 data) onwards, only formal employer firms with at least 16 employees are included.
Source: OECD calculations based on ONE (n.d.[11]), "Encuesta Nacional de Actividad Económica, 2016-2022", Confidential data, Oficina Nacional de Estadística (accessed in March 2025). See Box 2.1 for additional details.

Understanding the performance of different manufacturing sectors is essential for assessing the overall competitiveness and growth potential of the Dominican Republic's advanced manufacturing landscape, including for the development of semiconductor and microelectronics industries. Figure 2.5 compares the evolution of labour productivity, real value added, number of employees and real wages between the advanced manufacturing sector and other manufacturing sector. These key indicators provide insights into structural shifts within the manufacturing sector, highlighting both areas of convergence and divergence.

Figure 2.5. Evolution of the main economic variables, advanced and other manufacturing, 2016-2022



Note: All values are presented as an index with 2016 as the base year (2016=100), to allow for relative comparison over time. Labour productivity is calculated as real value added over total employees. Nominal value added is deflated using the producer price index (PPI) for manufacturing with December 2013 as the base period. Nominal wages are deflated using the PPI for manufacturing with December 2013 as the base period. Wages denote annual salaries and they correspond to wages declared in Question 6.1.1 of ENAE divided by the number of employees. Advanced manufacturing sectors correspond to Sectors 20, 21, 26, 27, 28, 29 and 30 of the 2019 CNAE. They correspond to sectors classified as medium-high and high-tech industries based on R&D intensity following Galindo-Rueda and Verger (2016[9]). Data for Sector 29 for 2016 are not available. Data for Sector 30 prior to 2019 are not available. Other manufacturing refers to manufacturing sectors not classified as advanced manufacturing. From ENAE 2018 (based on 2017 data) onwards, only formal employer firms with at least 16 employees are included.
Sources: OECD calculations based on ONE (n.d.[11]), "Encuesta Nacional de Actividad Económica, 2016-2022", Confidential data, Oficina Nacional de Estadística (accessed in March 2025). See Box 2.1 for additional details; ONE (n.d.[12]), *Índice de Precios al Productor (IPP): Variación porcentual acumulada de la sección de industrias manufactureras, según divisiones de la Clasificación Nacional de Actividad Económica. Diciembre de 2013 a Noviembre 2024*, https://www.one.gob.do/media/pg0kncgu/ipp-industrias-manufactureras-segun-divisiones-cnae-_de-diciembre-de-2013-a-noviembre-2024.xlsx (accessed on 15 March 2025).

Although labour productivity remains higher in the advanced manufacturing sector, reaching DOP 887 905 (Dominican pesos) per worker in 2022, the gap to the other manufacturing sector has narrowed in recent years. Labour productivity in the other manufacturing sector increased by 11.7% from 2016 to 2022, reaching DOP 849 067 per worker in 2022. In contrast, the advanced manufacturing sector saw a more modest increase of just 1.8% over the same period (Figure 2.5, Panel A). This trend is explained by the evolution of real value added (Figure 2.5, Panel B), which has grown at a faster pace in the other manufacturing sector, particularly in 2021 and 2022. The advanced manufacturing sector also presents more volatile behaviour, with fluctuations in value-added growth more pronounced in recent years. At the

same time, the number of employees (Figure 2.5, Panel C) has remained broadly stable in both sectors, indicating that productivity gains have been mainly driven by value-added growth rather than significant shifts in employment levels. To better understand what drove productivity gains in the other manufacturing sector between 2016 and 2022, a shift-share decomposition analysis can be carried out (see Annex C). The results suggest that aggregate labour productivity growth during this period (11.7%) was mainly driven by improvements within individual subsectors, contributing 12.2 percentage points (p.p.). Shifts in employment towards initially more productive subsectors added another 3.3 p.p. However, this was partly offset by a negative interaction effect of 3.8 p.p., suggesting that some employment moved into subsectors experiencing declining productivity, or away from those where it was improving.

Lastly, the evolution of real wages (Figure 2.5, Panel D) shows that despite the narrowing labour productivity gap, wage growth remains stronger in the advanced manufacturing sector. From 2016 to 2022, real wages in the advanced manufacturing sector grew by 18.6%, whereas in other manufacturing they increased by 8.3%.

Between 2016 and 2022, the pharmaceuticals sector had the highest average labour productivity, exceeding DOP 1.4 million per worker and per year. It was followed by the chemicals and electronics sectors, with average productivity of DOP 0.97 million and DOP 0.90 million respectively. In terms of average monthly real wages, the chemicals sector again led with DOP 26 080, followed closely by the pharmaceuticals sector with DOP 25 889, and the electronics sector with DOP 20 541. At the other end of the spectrum, average real wages in the other transport equipment manufacturing sector were notably lower, at just DOP 10 163. This sector also lagged in terms of labour productivity, recording the lowest levels among the advanced manufacturing sectors.

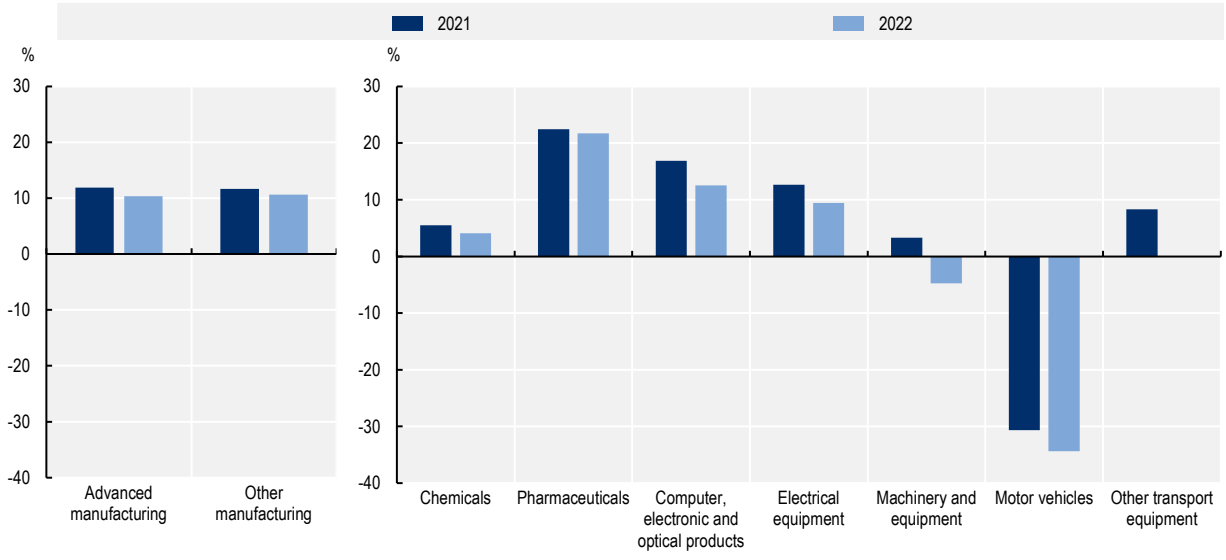
Since 2016, profits (measured in real terms) in the advanced manufacturing sector have decreased by 7.5%, with pharmaceuticals being the exception. In 2022, motor vehicle manufacturing, machinery and equipment manufacturing and other transport equipment manufacturing were facing losses, whereas the profit margin for the pharmaceuticals industry stood at 21.7%, significantly above the advanced manufacturing (10.4%) and other manufacturing (10.6%) averages. The electronics sector was also profitable (12.6%) and above the average for the advanced and other manufacturing sectors, even if profitability declined by 4.3 p.p. from the value recorded in 2021 (Figure 2.6).

Comparing labour productivity across different firm sizes can offer valuable insights into how firms of different scales manage resources, innovate and achieve higher efficiency. Larger firms in manufacturing often have the advantages of economies of scale, higher capital investment or greater access to advanced technologies, which can lead to higher labour productivity. On the other hand, small and medium-sized firms (SMEs) may face more challenges in accessing economies of scale or cutting-edge technology (Marchese et al., 2019[13]; OECD, 2024[14]). Examining productivity trends across firm sizes can reveal disparities between sectors and highlight the specific challenges and opportunities faced by firms, thus providing insights into possible policies to help enhance productivity and promote economic growth, including for the semiconductor and microelectronics industries.

Figure 2.7 shows that in 2022, labour productivity was higher in large firms across both advanced and other manufacturing sectors. Notably, large firms in other manufacturing outperformed their counterparts in advanced manufacturing. The productivity gap between large and smaller firms was particularly pronounced in the other manufacturing sector, where large firms demonstrated significantly higher productivity than medium and small firms.

These findings suggest the need for policies that focus on improving efficiency in large firms within the advanced manufacturing sector, while also supporting SMEs in the other manufacturing sector. Increased efforts in R&D, innovation and the integration of digital transformation could significantly boost productivity by enhancing efficiency and fostering the adoption of innovative technologies (André and Gal, 2024[15]) (see also Section 3.4 for details on the Dominican Republic's science, technology and innovation ecosystem).

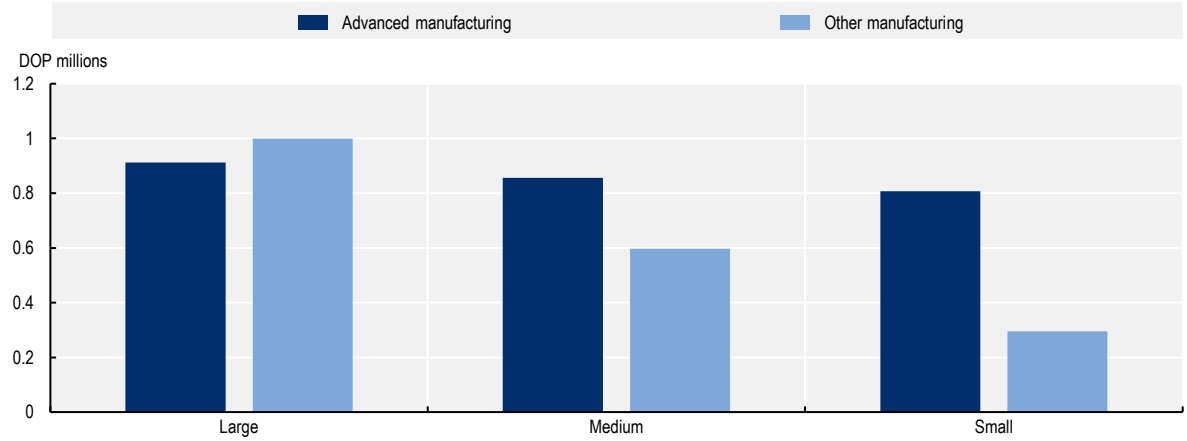
Figure 2.6. Profitability in advanced manufacturing sectors, 2021-2022



Note: The profitability of firms in an accounting period is determined by calculating the share of the revenue earned minus the total value of expenses incurred, compensation of employees and depreciation of machinery and work equipment over total revenues. From ENAE 2018 (based on 2017 data) onwards, only formal employer firms with at least 16 employees are included.
Source: OECD calculations based on ONE (n.d.[11]), "Encuesta Nacional de Actividad Económica, 2016-2022", Confidential data, Oficina Nacional de Estadística (accessed in March 2025). See Box 2.1 for additional details.

Capital investment is an important driver of productivity, as capital-intensive firms tend to have higher returns to scale (OECD, 2024[14]). However, direct data on capital stock from financial firm-level data are often unavailable, making it necessary to rely on proxy measures to assess capital intensity.

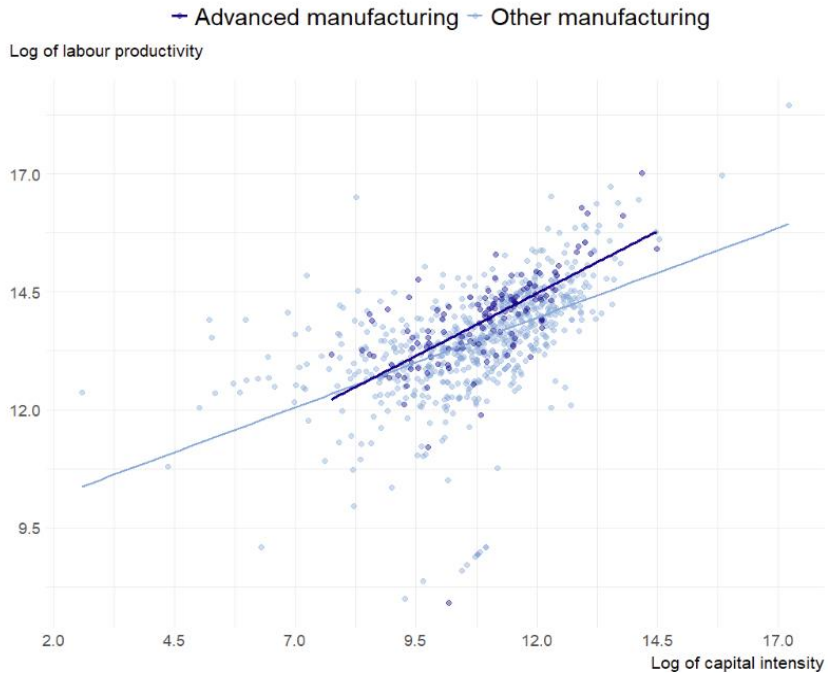
Figure 2.7. Labour productivity by firm size, advanced manufacturing and other manufacturing, 2022



Note: Labour productivity is calculated as real value added over total employees. Nominal value added is deflated using the PPI for manufacturing with December 2013 as the base period. Advanced manufacturing sectors correspond to Sectors 20, 21, 26, 27, 28, 29 and 30 of the 2019 CNAE. They correspond to sectors classified as medium-high- and high-tech industries based on R&D intensity following Galindo-Rueda and Verger (2016[9]). Other manufacturing refers to all other manufacturing sectors not classified as advanced manufacturing. Firms are categorised by size: small (11-50 employees), medium (51-250 employees) and large (more than 250 employees). From ENAE 2018 (based on 2017 data) onwards, only formal employer firms with at least 16 employees are included.
Sources: OECD calculations based on ONE (n.d.[11]), "Encuesta Nacional de Actividad Económica, 2016-2022", Confidential data, Oficina Nacional de Estadística (accessed in March 2025). See Box 2.1 for additional details; ONE (n.d.[12]), *Índice de Precios al Productor (IPP): Variación porcentual acumulada de la sección de industrias manufactureras, según divisiones de la Clasificación Nacional de Actividad Económica. Diciembre de 2013 a Noviembre 2024*, https://www.one.gob.do/media/pg0kncgu/ipp-industrias-manufactureras-segun-divisiones-cnae-_de-diciembre-de-2013-a-noviembre-2024.xlsx (accessed on 15 March 2025).

Figure 2.8 provides insights into how variations in estimated capital investment per worker relate to labour productivity. In the absence of direct data on capital stock, capital intensity is approximated by the ratio of amortisation and depreciation costs to total employment. While imperfect, this serves as an indirect indicator of a firm's capital expenditure.[3] This measure also includes amortisation costs for intangible assets, such as patents or software, reflecting the allocation of expenses associated with the use and consumption of these non-physical capital assets. The findings reveal a positive relationship between capital intensity and labour productivity, with a stronger correlation in the advanced manufacturing sector.

Figure 2.8. Correlation between labour productivity and capital intensity, 2022



Note: Capital intensity is proxied as the ratio of amortisation and depreciation costs to total employment. Labour productivity is measured as value added per worker. Advanced manufacturing sectors correspond to Sectors 20, 21, 26, 27, 28, 29 and 30 of the 2019 CNAE. They correspond to sectors classified as medium-high and high-tech industries based on R&D intensity following Galindo-Rueda and Verger (2016[9]). Other manufacturing refers to all other manufacturing sectors not classified as advanced manufacturing.
Source: OECD calculations based on ONE (n.d.[11]), "Encuesta Nacional de Actividad Económica, 2016-2022", Confidential data, Oficina Nacional de Estadística (accessed in March 2025). See Box 2.1 for additional details.

2.2. Enabling conditions for the development of a semiconductor and microelectronics ecosystem

The successful development of a semiconductor ecosystem requires strong connections with foreign markets, integration into GVCs and sustained investment in advanced manufacturing capabilities. Trade and investment data provide insights into enabling conditions, helping to assess the sector's growth potential.

The Dominican Republic has actively integrated into GVCs, leveraging its strategic location and free zones to boost economic development, diversify its economy and enhance competitiveness. FDI plays a pivotal role in strengthening the advanced manufacturing ecosystem by introducing new technologies, enhancing workforce training, employment and wages and by enabling potential productivity spillovers. Over the past three decades, FDI inflows to the Dominican Republic have remained stable and moderate, surpassing other Latin American countries, with significant growth in FDI in free zones, although other sectors such as tourism have historically attracted most of the investment.

The following two sections provide a detailed analysis of the Dominican Republic's integration into GVCs and the role of FDI in the economy, exploring their key dimensions and implications.

2.2.1. Integration into global value chains

The Dominican Republic has been actively integrating into GVCs, leveraging its strategic location and connections with the United States, Canada, and Central and South America, along with its extensive

network of free zones, to become a pivotal player in regional supply chain networks. This integration is crucial for the country's economic development, particularly as it seeks to diversify its economy and enhance its competitiveness in global markets. Trade plays a significant role in the Dominican Republic's economy, accounting for approximately 50% of GDP in 2023 (World Bank, 2025[16]). The Dominican Republic has been expanding its local manufacturing capabilities, attracting investment and fostering growth in advanced sectors such as medical devices and electronics, which has contributed to its economic development and global trade participation.

According to data from the database for international trade analysis BACI,[4] the Dominican Republic's primary export products in 2023 were instruments and appliances for medical devices (classified under Harmonized System [HS] code 901890), gold (HS code 710812) and cigars (HS code 240210). The main trading partner that year was the United States, accounting for more than half (53%) of total Dominican exports. The Dominican Republic's main imports were petroleum oils (HS codes 271000 and 270900) and natural gas (HS code 271111), underscoring the country's energy dependence (see also Section 3.5.1). The United States was also the main source of imports, supplying 41% of total imports.

In real terms,[5] exports of medical instruments (4-digit HS code 9018), the leading export category, amounted to USD 1 322 million in 2023, reflecting a 9.9% increase compared to 2014. As for overall exports, the United States is by far the most important destination for Dominican medical instruments (USD 907 million in exports). Nonetheless, exports to the People's Republic of China (hereafter China), the second-largest market for Dominican medical instruments in 2023, have more than doubled during the last decade, from USD 35 million in 2014 to USD 79 million in 2023 (124% increase). The revealed comparative advantage (RCA) indicator, which can be used to assess the Dominican Republic's relative specialisation within different markets, reveals that the country is one of the most specialised countries in medical devices globally. In 2023, it achieved an RCA value above 20, the second highest value globally, just behind Costa Rica.[6]

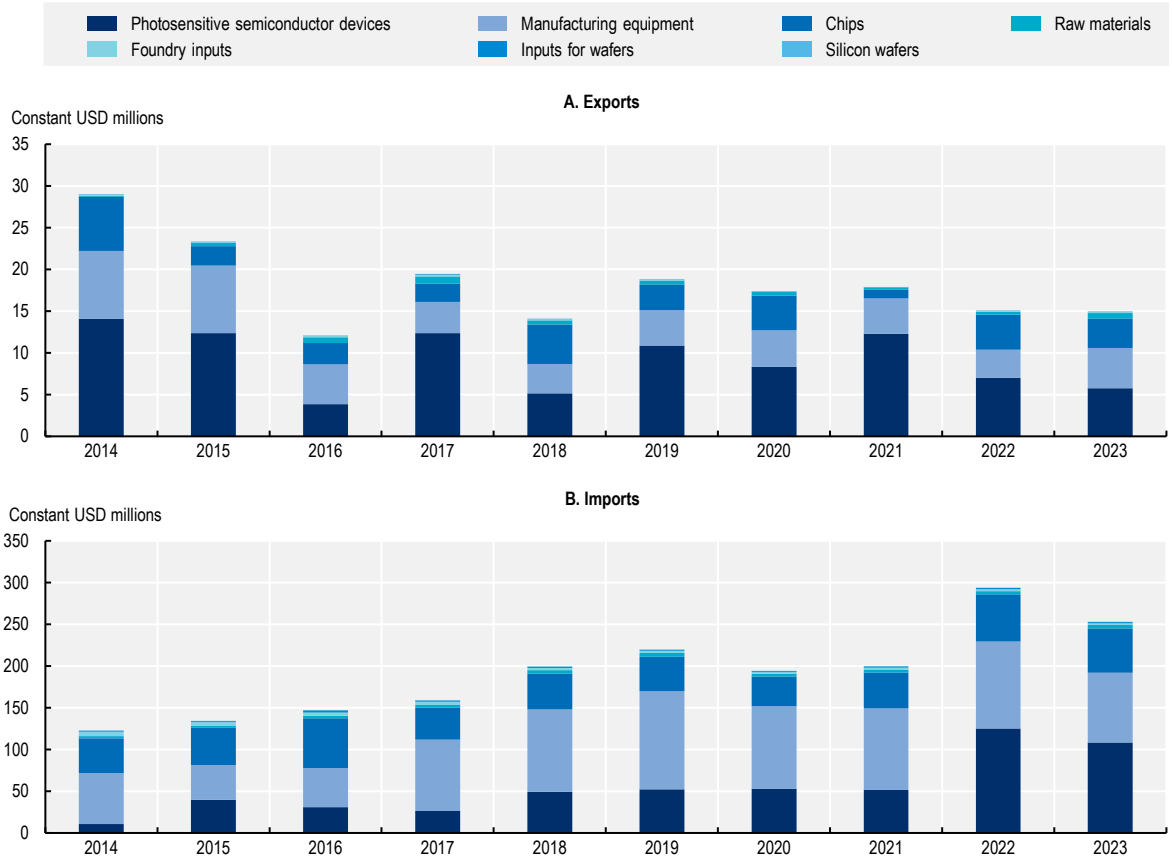
The Dominican Republic's experience in producing and exporting medical instruments can provide a solid foundation for entering the semiconductor and microelectronics industries, with opportunities to leverage existing trade relationships, develop and expand key infrastructure, and attract investment to support growth in this advanced industry.

The semiconductor value chain encompasses multiple stages and complex production processes, from the extraction and refinement of raw materials to the final assembly, testing and packaging of chips. At each stage, a diverse set of critical inputs is essential to the production process, which can be broadly categorised into six key areas: raw materials, wafer inputs, silicon wafers, foundry inputs, manufacturing equipment and final semiconductor products, such as chips and photosensitive devices. These categories encompass the core materials, specialised components and advanced machinery required for semiconductor fabrication.[7] The products at each stage can be classified according to international trade data standards, with a comprehensive list provided in Table A B.1 of Annex B.

Exports of semiconductor-related products have experienced a notable decline from USD 29 million in 2014 to USD 15 million in 2023, nearly halving (Figure 2.9, Panel A).[8] The most exported product in this group was photosensitive semiconductor devices (HS code 854140). Conversely, imports of semiconductor-related products have followed an upwards trajectory. Since 2014, imports have more than doubled, increasing from USD 122 million in 2014 to USD 253 million by 2023 (Figure 2.9, Panel B). The most notable increase was again observed in photosensitive semiconductor devices (HS code 854140), for which imports grew by USD 98 million. Imports of chips also increased significantly, from USD 61 million in 2014 to USD 84 million in 2023, with parts of electronic integrated circuits (HS code 854290) accounting for 46% of the imports of chips in 2023. Similarly, imports of manufacturing equipment rose from USD 42 million in 2014 to USD 53 million in 2023. The most imported items were machinery and apparatus for filtering or purifying gases (HS code 842139) and their parts (HS code 842199), which together accounted for 37% of total imports of manufacturing equipment in 2023. The widening gap

between imports and exports reflects a worsening trade balance in semiconductor-related goods, indicating the growing weight of imports in the sector.

Figure 2.9. Trade in semiconductor-related products



Note: Semiconductor-related products are detailed in Annex B. Exports and imports are adjusted for inflation using the PPI for manufacturing, with December 2013 as the base period.
Sources: OECD calculations based on CEPII (n.d.[17]), *The CEPII-BACI dataset*, https://www.cepii.fr/DATA_DOWNLOAD/baci/doc/baci_webpage.html (accessed on 15 March 2025); ONE (n.d.[12]), *Índice de Precios al Productor (IPP): Variación porcentual acumulada de la sección de industrias manufactureras, según divisiones de la Clasificación Nacional de Actividad Económica. Diciembre de 2013 a Noviembre 2024*, https://www.one.gob.do/media/pg0kncgu/ipp-industrias-manufactureras-segun-divisiones-cnae-_de-diciembre-de-2013-a-noviembre-2024.xlsx (accessed on 15 March 2025).

In 2023, the United States was the main export destination, receiving 55.4% of the semiconductor-related products. In contrast, China was the primary source of imports, accounting for 48.8% of the total. Notably, the share of China's imports has grown significantly, increasing by 36.6 p.p. since 2014. This heavy reliance on a partner for imports underscores the importance of assessing potential risks and effectively managing supply chain dynamics.

Understanding the concentration of sources for essential semiconductor components is crucial for assessing potential risks in supply chains. The Herfindahl-Hirschman Index (HHI) is a widely used measure of market concentration.[9] For the semiconductor-related products that the Dominican Republic imported the most (with annual imports of at least USD 1 million in nominal terms), 69% show a high concentration, while 31% exhibit a moderately high concentration. The highest concentration in 2023 is observed in photosensitive semiconductor devices (HS code 854140), which are commonly used in renewable energy production, particularly in solar panels. China held a significant share of the supply of this product,

accounting for 85% of imports. Furthermore, the concentration for this product has intensified in recent years, with the HHI surpassing 0.7 since 2019 (Figure 2.10).

Similarly, in 2023, the concentration for integrated circuit parts (HS code 854290), categorised under chips, remained notably high, with the United States supplying 73% of the total imports. The concentration of imports for this product has remained high for the whole sample period. Imports of photographic goods (HS code 370790), categorised as inputs for wafers, have also remained highly concentrated, with an HHI above 0.4 for the entire period. In 2023, China accounted for 57% of these imports and the United States 39%, leaving only 4% for other countries.

The strong concentration in the imports of semiconductor-related products highlights the heavy reliance on specific trading partners, which could create vulnerabilities in the event of supply chain disruptions, geopolitical tensions or changes in trade policies, such as the imposition of tariffs or revisions to trade agreements. It also underscores the importance of diversifying sources of imports in developing the local semiconductor industry to reduce potential risks relating to market instability and disruption.

2.2.2. Foreign direct investment

The role of FDI is crucial for strengthening the advanced manufacturing sector and help materialise ambitions to develop semiconductor and microelectronics ecosystems. FDI can produce positive productivity spillovers as multinationals integrate domestic firms into their productive process and foster the development of a local ecosystem (OECD, 2022[18]). Moreover, multinationals may bring new technology and provide access to new markets, thereby improving the training and qualifications of the local workforce and improving employment and wages (Carril-Caccia and Pavlova, 2020[19]; Alfaro Urena, Manelici and Vasquez, 2021[20]). The positive spillovers of investment by multinationals can be further leveraged if co-ordinated with the development of a local ecosystem of suppliers and customers to help ensure long-term benefits to the local economy (see also Section 3.2.3). Multinational corporations engage in FDI activities for various strategic purposes. As highlighted by Carril-Caccia and Pavlova (2020[19]), market potential, asset seeking, efficiency seeking, institutional quality and macroeconomic stability are among the primary determinants for firms to engage in FDI activities.

Figure 2.11 shows that over the past three decades, the Dominican Republic has maintained relatively stable and moderate FDI inflows, with significant peaks in the early 2000s and around 2008. In the most recent period, the Dominican Republic's FDI inflows surpassed those of Brazil, Mexico and Peru (as a percentage of GDP), remaining below Costa Rica which led the region in FDI attraction.

According to the BCRD, FDI inflows to the Dominican Republic continued to perform strongly in 2023, increasing by 7.1% compared to 2022 and reaching USD 4.39 billion (BCRD, 2025[21]). This growth is particularly noteworthy given the global context of declining investment flows, with global FDI decreasing by 1.5% in the same period (UNCTAD, 2024[22]).

Figure 2.10. Import concentration for selected semiconductor-related products

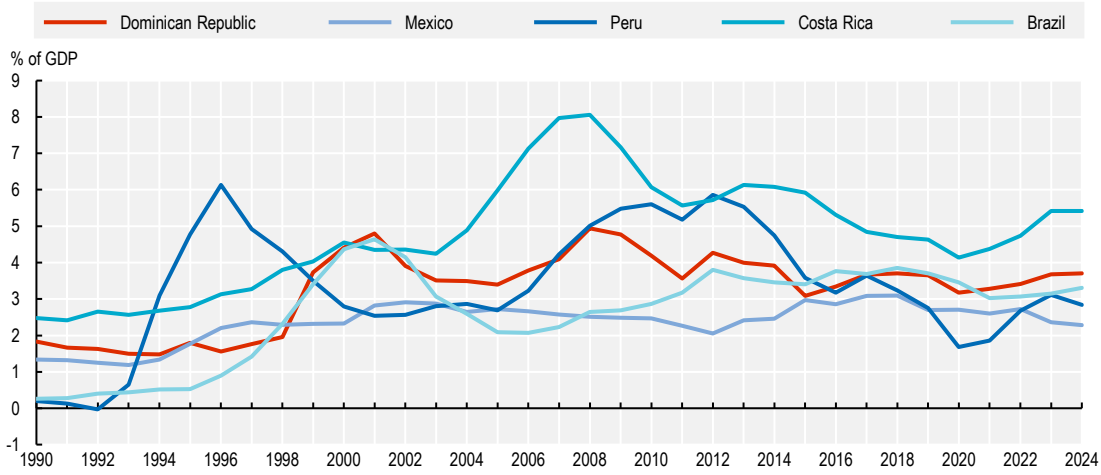
Herfindahl-Hirschman Index

Note: Only products for which imports amounted to USD 1 million or more (in current USD) in each year are included.
Source: OECD calculations based on CEPII (n.d.[17]), *The CEPII-BACI dataset*, https://www.cepii.fr/DATA_DOWNLOAD/baci/doc/baci_webpage.html (accessed on 15 March 2025).

FDI in the Dominican Republic originates from a range of different countries. As of 2024, the United States remained the leading source of FDI (USD 1 162 million), followed by Spain from where FDI flows increased by more than 5 times between 2010 (USD 203 million) and 2024 (USD 1 126 million). Notably, investment from Spain rose sharply in 2024, increasing from USD 668 million in 2023. Brazil was the third-largest investor in 2024, with USD 229 million followed by Mexico (USD 210 million) and Canada (USD 207 million). Other countries, such as Panama and France, have also increased their investments, reaching USD 192 million and USD 163 million respectively (Figure 2.12, Panel A).

The Dominican Republic's free zones, analysed in depth in Section 3.2, have experienced remarkable growth, becoming a vital engine for economic development and job creation, particularly in the manufacturing sector. The growth in these zones has been particularly notable in recent years, with significant expansion in key industries. According to the CNZFE (2025[7]), the electronics sector saw substantial growth, with the number of firms increasing from 20 in 2017 to 30 in 2024. Similarly, the medical devices manufacturing sector grew from 31 to 40 firms over the same period, reflecting the country's increasing attractiveness for high-tech industries.

Figure 2.11. Foreign direct investment, net inflows

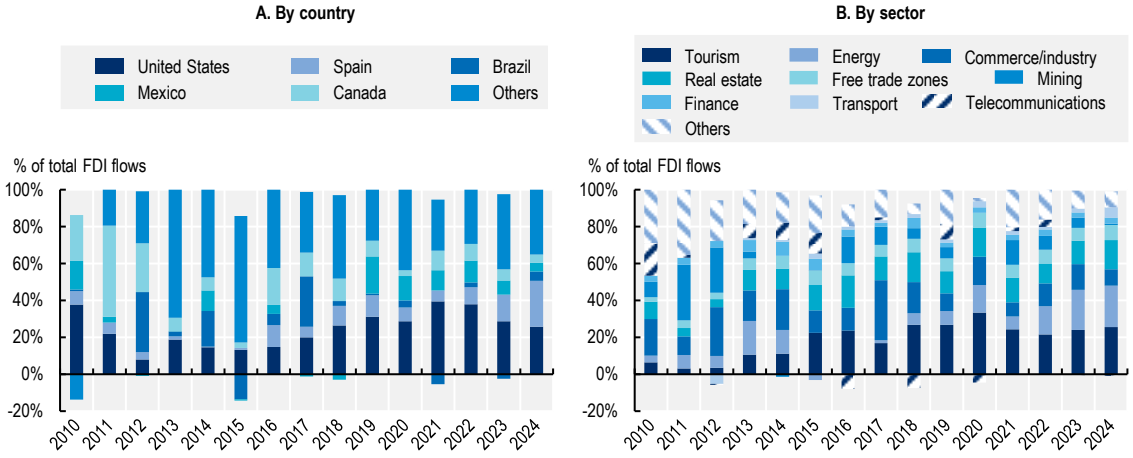


Note: FDI is the net inflow of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings and other long-term as well as short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors and is divided by GDP. The chart shows three-year moving averages. The latest observations are for 2024.
Source: World Bank (n.d.[23]), *Foreign direct investment, net inflows (% of GDP) (indicator)*, https://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS (accessed in October 2025).

After adjusting for inflation, FDI flows in free zones increased from USD 100.6 million in 2010 to USD 294.6 million in 2024 (expressed in constant 2018 USD), representing, by 2024, 9.2% of the total investment in the country (Figure 2.12, Panel B). This trend reflects growing investor interest in this special regime, which includes a range of activities including manufacturing and services. Nonetheless, tourism has consistently been the dominant sector for FDI inflows, especially since 2015, representing a substantial portion of total investment. Other sectors such as energy, commerce/industry and real estate have also attracted significant capital.

A breakdown of FDI by type provides a better understanding of the strategic preferences of foreign investors and the impact of these investments on the Dominican Republic's economy. FDI can generally be categorised into two main types: greenfield or brownfield. Greenfield investments involve the creation of entirely new facilities, infrastructure or operations which are particularly significant for economic growth. In contrast, brownfield investments take place through acquisitions of existing ventures which are already operating, often through mergers and acquisitions (M&A). These investments enable businesses to quickly gain market presence and enhance efficiency while minimising the risks and costs associated with developing entirely new projects. They can be particularly beneficial in mature industries where existing facilities can be modernised to boost productivity and competitiveness.

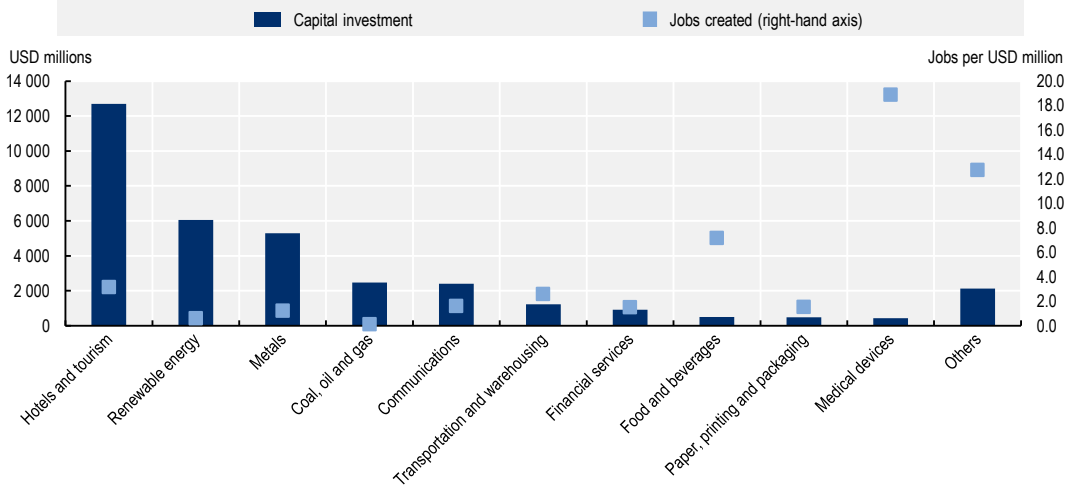
Figure 2.12. FDI flows to the Dominican Republic by country and sector, 2010-2024



Note: The observations with negative values correspond to operational losses, disinvestment and/or dividend payments. Statistics calculated in accordance with the Sixth Edition of the Balance of Payments and International Investment Position Manual of the International Monetary Fund (IMF, 2009[24]). Others reflect the sum of other countries/sectors not represented in the chart. The selected countries/sectors represented are those with a higher investment in 2024.
Source: OECD calculations based on data from BCRD (2025[21]), *Inversión extranjera directa (IED) por país de origen* and *Inversión extranjera directa (IED) por sectores de destino*, https://www.bancentral.gov.do/a/d/2532-sector-externo (accessed on 13 March 2025).

Data from the cross-border investment tracking database fDi Markets covering greenfield investment indicate that between January 2003 and May 2024, the hotel and tourism sector attracted the largest share of greenfield capital investment, exceeding USD 12 billion. This sector also led in job creation, generating 40 000 direct new jobs. Despite receiving significantly lower investment (USD 0.4 billion), the medical devices sector ranked second in direct job creation, contributing over 8 000 jobs. This reflects a substantially higher employment intensity in the medical devices sector, with nearly 19 direct jobs generated per million USD invested, compared to only 3 in the hotel and tourism sector (Figure 2.13).

Figure 2.13. Greenfield investment by sector, January 2003-May 2024



Note: Based on 347 projects recorded between January 2003 and May 2024 for the Dominican Republic. Job creation only refers to direct jobs.
Source: OECD calculations based on fDi Markets (2024[25]), *The crossborder investment monitor*, https://www.fdimarkets.com/ (accessed on 15 March 2025).

Regarding brownfield investment, Bureau van Dijk's Zephyr[10] data show that the majority of M&A transactions in the Dominican Republic were concentrated in the electricity, gas, steam and air conditioning supply sector (Statistical Classification of Economic Activities in the European Community [NACE] code 35), telecommunications (NACE code 61) and beverage manufacturing (NACE code 11) between 2000 and 2022. Together, these sectors accounted for 75.3% of the deals value (USD 7 618 million). In contrast, M&A activity in advanced manufacturing sectors remained limited, totalling USD 66 million, of which USD 60 million were in the manufacture of machinery and equipment (NACE code 28) and USD 6 million in the chemicals sector (NACE 20).

References

Alfaro Urena, A., I. Manelici and J. Vasquez (2021), "The Effects of Multinationals on Workers: Evidence from Costa Rican Microdata", *Princeton University Working Papers*, No. 285, Center for Economic Policy Studies, Department of Economics, Princeton University. [20]

André, C. and P. Gal (2024), "Reviving productivity growth: A review of policies", *OECD Economics Department Working Papers*, No. 1822, OECD Publishing, Paris, https://doi.org/10.1787/61244acd-en. [15]

BCRD (2025), *Inversión extranjera directa (IED) por país de origen*, Central Bank of the Dominican Republic, https://www.bancentral.gov.do/a/d/2532-sector-externo (accessed on 13 March 2025). [21]

Bonnet, P. and A. Ciani (2023), *Applying the SCAN methodology to the Semiconductor Supply Chain*, European Commission, https://publications.jrc.ec.europa.eu/repository/handle/JRC133736 (accessed on 16 December 2025). [28]

Carril-Caccia, F. and E. Pavlova (2020), "Mergers and acquisitions & trade: A global value chain analysis", *The World Economy*, Vol. 43/3, pp. 586-614, https://doi.org/10.1111/twec.12882. [19]

CEPII (n.d.), *The CEPII-BACI dataset*, Centre d'études prospectives et d'informations internationales, https://www.cepii.fr/DATA_DOWNLOAD/baci/doc/baci_webpage.html (accessed on 15 March 2025). [17]

CNZFE (2025), *Datos Estadísticos*, National Council of Free Zones, https://www.cnzfe.gob.do/index.php/es/datos-estadisticos (accessed on 11 February 2025). [7]

fDi Markets (2024), *The crossborder investment monitor*, https://www.fdimarkets.com/ (accessed on 15 March 2025). [25]

Galindo-Rueda, F. and F. Verger (2016), "OECD Taxonomy of Economic Activities Based on R&D Intensity", *OECD Science, Technology and Industry Working Papers*, No. 2016/4, OECD Publishing, Paris, https://doi.org/10.1787/5jlv73sqqp8r-en. [9]

Gaulier, G. and S. Zignago (2010), *BACI: International Trade Database at the Product-level The 1994-2007 Version*, https://www.cepii.fr/pdf_pub/wp/2010/wp2010-23.pdf (accessed on 15 December 2025). [26]

ILO (2025), *ILO Modelled Estimates and Projections Database (ILOEST)*, International Labour Organization, https://ilostat.ilo.org/data/ (accessed on 13 February 2025). [3]

IMF (2024), *Dominican Republic: 2024 Article IV Consultation - Press Release and Staff Report*, IMF Country Report No. 24/294, International Monetary Fund, https://www.imf.org/-/media/Files/Publications/CR/2024/English/1domea2024001-print-pdf.ashx (accessed on 5 March 2025). [1]

IMF (2009), *Balance of Payments and International Investment Position Manual (Sixth Edition)*, International Monetary Fund, https://www.imf.org/external/pubs/ft/bop/2007/pdf/bpm6.pdf. [24]

Kowalski, P. and C. Legendre (2023), "Raw materials critical for the green transition: Production, international trade and export restrictions", *OECD Trade Policy Papers*, No. 269, OECD Publishing, Paris, https://doi.org/10.1787/c6bb598b-en. [29]

Marchese, M. et al. (2019), "Enhancing SME productivity: Policy highlights on the role of managerial skills, workforce skills and business linkages", *OECD SME and Entrepreneurship Papers*, No. 16, OECD Publishing, Paris, https://doi.org/10.1787/825bd8a8-en. [13]

OECD (2024), *OECD Compendium of Productivity Indicators 2024*, OECD Publishing, Paris, https://doi.org/10.1787/b96cd88a-en. [14]

OECD (2022), *FDI Qualities Policy Toolkit*, OECD Publishing, Paris, https://doi.org/10.1787/7ba74100-en. [18]

ONE (2025), *Total de empleos en las Zonas Francas por año y sexo, según parque industrial, 2017-2023 (indicator)*, Oficina Nacional de Estadística, https://www.one.gob.do/media/jgabgv30/3-4-10-total-empleos-zonas-francas-a%C3%B1o-sexo-seg%C3%BAn-parque-industrial.xlsx. [8]

ONE (n.d.), "Directorio de Empresas y Establecimientos, 2015-2023", Confidential data, Oficina Nacional de Estadística. [10]

ONE (n.d.), "Encuesta Nacional de Actividad Económica, 2016-2022", Confidential data, Oficina Nacional de Estadística. [11]

ONE (n.d.), *Índice de Precios al Productor (IPP): Variación porcentual acumulada de la sección de industrias manufactureras, según divisiones de la Clasificación Nacional de Actividad Económica. Diciembre de 2013 a Noviembre 2024*, Oficina Nacional de Estadística, https://www.one.gob.do/media/pg0kncgu/ipp-industrias-manufactureras-segun-divisiones-cnae-_de-diciembre-de-2013-a-noviembre-2024.xlsx (accessed on 15 March 2025). [12]

UNCTAD (2024), *World Investment Report 2024*, United Nations Trade and Development. [22]

Vicard, V. and P. Wibaux (2023), *EU Strategic Dependencies: A Long View*, Centre d'études prospectives et d'informations internationales, https://www.cepii.fr/PDF_PUB/pb/2023/pb2023-41.pdf. [27]

World Bank (2025), *Macro Poverty Outlook*, World Bank, Washington, DC, https://www.worldbank.org/en/publication/macro-poverty-outlook (accessed on 13 February 2025). [2]

World Bank (2025), *Trade (% of GDP) (indicator)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS (accessed on 25 March 2025). [16]

World Bank (2025), *World Bank national accounts data (indicator)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/NV.IND.MANF.ZS?end=2023&locations=ZA%26view%3Dchart-DO&start=1965&view=chart (accessed on 13 February 2025). [4]

World Bank (n.d.), *Foreign direct investment, net inflows (% of GDP) (indicator)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS (accessed on 15 October 2025). [23]

World Bank (n.d.), *GDP (constant 2015 US$) (indicator)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD (accessed on 15 October 2025). [5]

World Bank (n.d.), *Inflation, consumer prices (annual %) (indicator)*, World Bank, Washington DC, https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG (accessed on 15 October 2025). [6]

Notes

[1] Advanced manufacturing sectors correspond to Sectors 20, 21, 26, 27, 28, 29 and 30 of the 2019 *Clasificación Nacional de Actividades Económicas* (CNAE). They correspond to sectors classified as medium-high and high-tech industries based on R&D intensity following Galindo-Rueda and Verger (2016[9]).

[2] ENAE covers the following sectors: mining and quarrying; manufacturing industries; electricity supply; water supply; construction, trade, transport and storage; accommodation and food services; and information and communications.

[3] Assets such as machinery and equipment are typically subject to physical deterioration over time, and the costs associated with their depreciation provide an estimate of the firm's investment in maintaining or upgrading its capital base. Using amortisation and depreciation costs per worker as a proxy for capital intensity has, however, significant limitations. While this method can offer some insights, particularly when direct capital stock data are unavailable, it should be interpreted with caution. This approach reflects, to some extent, the historical allocation of resources towards capital assets such as machinery or equipment, but it may not accurately represent current or future capital intensity. Additionally, accounting methods and industry-specific factors and the age of assets can significantly influence depreciation rates, further complicating cross-firm comparisons.

[4] French acronym for *Base pour l'Analyse du Commerce International*. The BACI database can present several advantages over the raw United Nations Comtrade database, which is the most comprehensive database on world trade, building on data on bilateral trade flows reported by countries to the United Nations Statistical Division (for more information, see https://comtradeplus.un.org/). However, while countries report both their imports and their exports through Comtrade, mirror flows (which should be identical for the reporter and partner country) between partners may differ. BACI employs a procedure to reconcile flows reported by importers and exporters to provide consistent trade flow estimates (Gaulier and Zignago, 2010[26]).

[5] To account for inflation, nominal exports were deflated using the producer price index (PPI) for manufacturing with December 2013 as the base period, sourced from ONE.

[6] The RCA indicator compares a country's share of exports in a particular segment to the global share of those exports, thereby providing evidence of countries' specialisation in certain segments and products. An RCA value above 1 indicates a specialisation.

[7] For more details, see Annex A.

[8] Given that there is no active semiconductor industry in the Dominican Republic, chip exports likely represent re-exports rather than domestically produced goods.

[9] The HHI is calculated as the sum of the squared market shares of each country for a given good. The index equals one in the case of a monopoly and converges to zero with a large number of atomistic suppliers. Thus, the closer the value is to zero, the lower the concentration. The interpretation of the HHI level varies depending on the context. Vicard and Wibaux (2023[27]) and Bonnet and Ciani (2023[28]) deem a product to be concentrated when the index exceeds 0.4. Following Kowalski and Legendre (2023[29]), this report classifies markets with an HHI between 0.15 and 0.25 as moderately concentrated, and those above 0.25 as highly concentrated.

[10] For more information, see https://login.bvdinfo.com/R1/ZephyrNeo. The covered transactions include deals in the following categories: genuine acquisition; further acquisition; minority stakes; and joint venture. Only cross-border investments are considered: domestic deals are not included.

3 Understanding the policy and regulatory landscape

This chapter analyses the institutions, policies and regulations that shape the Dominican Republic's advanced manufacturing ecosystem. Drawing on desk research and stakeholder interviews, the chapter examines challenges and opportunities relating to the country's institutional framework, free zone regime, business environment, science, technology and innovation ecosystem, and infrastructure.

This chapter analyses the institutions, policies and regulations that shape the Dominican Republic's advanced manufacturing ecosystem. It is divided into five sections – the institutional framework; the free zone regime; the business environment; science, technology and innovation; and infrastructure – and each section contains recommendations to support the development of semiconductor and microelectronics industries in the Dominican Republic. In this way, this chapter provides the evidence and policy analysis to substantiate the recommendations summarised in Chapter 1.

3.1. Institutional framework

3.1.1. Co-ordination across institutions

The institutional framework for the Dominican Republic's emerging semiconductor ecosystem was first outlined in Presidential Decree 324-24 (henceforth, the Decree). Issued in June 2024, the Decree classifies the development of a semiconductor industry as a high national priority and aims to position the Dominican Republic as a strategic, competitive and trusted location for semiconductor firms and foreign investment. The Decree commits to publishing a National Strategy for the Promotion of the Semiconductor Industry (henceforth, the National Semiconductor Strategy), which was launched in August 2025. The National Semiconductor Strategy is structured around five pillars: industrial development; governance; workforce and human capital; country promotion; and strategic partnerships. The Dominican Republic engaged with the OECD in developing certain sections of the National Semiconductor Strategy, which was also informed by the analyses and recommendations contained in this report. See Box 1.1 in Chapter 1 for more details on the National Semiconductor Strategy.

The Decree also highlights the key role of the Ministry of Industry, Commerce and Micro, Small and Medium-Sized Enterprises (MICM), which is responsible for developing, implementing and evaluating the National Semiconductor Strategy. According to Article 3 of the Decree, the MICM must co-ordinate all cross-sectoral initiatives and projects related to the semiconductor industry (Presidencia, 2024[1]). The MICM has a mandate for industrial development, manufacturing and foreign trade and is ultimately accountable for many of the government agencies with functions that are highly relevant to the semiconductor ecosystem (Table 3.1).

Table 3.1. Selected government agencies affiliated with the MICM

MICM-affiliated agencies with the potential to support the development of the semiconductor ecosystem

Agency	Function
National Council of Free Zones (CNZFE)	Oversees the export-oriented free zone regime
ProDominicana	Export promotion and investment attraction
ProIndustria	Development of the local manufacturing industry (located outside of the free zones)
National Office for Industrial Property (ONAPI)	Protects and enforces industrial property rights, including the management of invention patents and registration of industrial designs
Dominican Institute for Quality (INDOCAL)	National authority for technical standards and metrology
National Commission for the Defence of Competition (ProCompetencia)	Promotes efficient markets and competition

Note: In total, the MICM organigram lists 14 affiliated agencies.
Source: MICM (2024[2]), *Organigrama*, https://micm.gob.do/wp-content/uploads/2024/10/organigrama_micm_2024.pdf.

While the MICM and the relevant expertise of MICM-affiliated agencies are key for the development of the National Semiconductor Strategy and implementation of the government's semiconductor policy, many other institutions will play an important role in supporting the development of the semiconductor ecosystem (Table 3.2).

Table 3.2. Selected government agencies with a stake in semiconductor ecosystem development

Agency	Function
Ministry of Finance (Hacienda)	Fiscal policy
General Directorate of Internal Taxes (DGII)	Administration of internal taxes, including granting tax exemptions to special tax regimes. Affiliated with Hacienda
General Directorate of Customs (DGA)	Oversees the customs regime. Affiliated with Hacienda
Ministry of Higher Education, Science and Technology (MESCyT)	Responsibilities include research and development (R&D) policy (note: in 2025, MESCyT was undergoing a merger with the Ministry of Education, MINERD)
National Fund for Innovation and Scientific and Technological Development (FONDOCYT)	The primary source of public funding for R&D. Affiliated with MESCyT
Ministry of Education (MINERD)	Responsible for primary and secondary education
Ministry of Public Administration (MAP)	Regulatory reform, including facilitating firms' and individuals' interactions with government services
Ministry of the Presidency (MINPRE)	Implements the president's policy priorities, often by co-ordinating cross-governmental actions
National Competitiveness Council (CNC)	Works to improve the country's competitiveness and productivity. Affiliated with MINPRE
Ministry of the Economy, Planning and Development (MEPyD)	Economic and regional development, planning, statistics and analytical functions
Ministry of the Environment and Natural Resources (MIMARENA)	Responsible for environmental policy, including permits
Ministry of Energy and Mines (MEM)	Oversees energy policy and development of the national energy system
National Energy Commission (CNE)	Energy policy, including the administration of renewable energy incentives. Affiliated with MEM
Ministry of Housing and Construction (MIVED)	Responsibilities include construction permits
Ministry of Foreign Relations (MIREX)	Responsibilities include international trade and export promotion

Note: This table lists the agencies which are expected to have a significant role in the development of the Dominican Republic's semiconductor ecosystem. This list is not intended to be exhaustive; other agencies are also likely to contribute.

Given the breadth of the agencies listed in Table 3.2, the MICM is likely to require some form of support to co-ordinate these agencies' perspectives and expertise into coherent cross-government semiconductor policy. Internationally, other countries recognise the need for strong inter-institutional co-ordination in relation to semiconductor policy, for example Panama's Commission for Innovation in Microelectronics and Semiconductors or Viet Nam's National Steering Committee for Semiconductor Industry Development (MICI, 2024[3]; Government of Viet Nam, 2024[4]).

Domestically, the Dominican Republic has two recent precedents for establishing mechanisms for successful cross-governmental co-ordination in other policy areas: Decree 71-21 created the Cabinet for Digital Transformation to co-ordinate the implementation of the Digital Agenda 2030 and Decree 464-21 created the Innovation Cabinet to co-ordinate the National Innovation Policy 2030 (Presidencia, 2021[5]; 2021[6]). These two cabinets could serve as models for the co-ordination mechanism for the National Semiconductor Strategy.

In contrast, the case of the Dominican Republic's former Strategic Plan for Science, Technology and Innovation 2008-18 (PECYT+I) illustrates the risks that arise from a lack of central policy co-ordination. The PECYT+I was a major whole-of-government initiative that required inter-institutional co-ordination, just like the National Semiconductor Strategy. A single ministry, MESCyT, was given full responsibility for the implementation of the PECYT+I, similar to the MICM's current role with respect to the National Semiconductor Strategy. However, MESCyT struggled to deliver the PECYT+I because the main policy levers and sources of funding were under the responsibility of other government agencies, without MESCyT having access to the structures to direct and co-ordinate the actions of these other agencies. In evaluating the PECYT+I, the United Nations recommended developing a more effective co-ordination mechanism between the various government institutions in the Dominican Republic (UNCTAD, 2021[7]).

Therefore, the Dominican Republic should create a formal co-ordination mechanism to enable the MICM to design and deliver the National Semiconductor Strategy with the support of, and in close consultation with, a wide range of government agencies. If the Dominican Republic chooses to create a new cabinet, its membership should be restricted to a small number of government agencies to ensure effective and agile decision making. By way of comparison, the recent Cabinet for Digital Transformation was composed of 10 government agencies, named in Decree 71-21; the Innovation Cabinet was composed of 15, named in Decree 464-21.

The new cabinet's functions could include the approval of National Semiconductor Strategy policies, implementation plans, budget, goals and indicators. It should be empowered to hire experts to form a technical secretariat to inform its decision-making process. As with the other cabinets, the new cabinet could be chaired by the President of the Republic, even if the running of the cabinet is delegated to the MICM. Such visible support from the president could further strengthen the MICM's co-ordinating capabilities and increase the National Semiconductor Strategy's political capital.

The Dominican Republic should nevertheless give careful consideration to the scope of any new cabinet. On the one hand, a dedicated Semiconductors Cabinet could be too narrow, as the Dominican Republic does not yet have a semiconductor industry and there are risks associated with devoting resources to an unproven sector with an uncertain future. On the other hand, an Advanced Manufacturing Cabinet could be too broad as it would encompass a broad range of sectors with diverse requirements, even though the implementation of the National Semiconductor Strategy needs targeted policy support. A Microelectronics Cabinet could be a good compromise, as its scope would include semiconductors and other related industries, such as printed circuit boards (PCBs) which already have an emerging presence in the country. The scope of the cabinet should also be adaptable, in case policy priorities or industry trends evolve over time. For example, in 2023, the Cabinet for Digital Transformation and the Innovation Cabinet were merged into a new Cabinet for Innovation and Digital Development (Presidencia, 2023[8]). While it is important to futureproof the cabinet in this way, the Dominican Republic should also avoid the unnecessary creation and abolition of institutions as this could lead to policy instability.

In addition to strong co-ordination within government, the National Semiconductor Strategy also requires effective collaboration with external institutions. Government collaboration with industry, academia and civil society would allow the Dominican Republic's semiconductor policy to benefit from external expertise and secure their support. There is currently no formal channel for external input into the National Semiconductor Strategy, which is a gap that the Dominican Republic should address. The existing cabinet model could again provide a helpful precedent. The Cabinet for Digital Transformation and the Innovation Cabinet were supported by six and four working groups (*mesas de trabajo*) respectively that brought together government agencies, firms, business associations, higher education and research institutions, and civil society. For any new semiconductor-related cabinet, it would also be important to seek the perspective of labour representatives on how they could support the development of the semiconductor and microelectronics industries.

For the two previous cabinets, each working group focused on a specific policy area related to the cabinet's mandate and developed concrete policy recommendations and implementation plans. The working groups presented their proposals to the cabinet, which voted on whether to adopt them and make them government policy proposals. Governmental and non-governmental stakeholders, interviewed for this report, praised the working groups as a means of increasing the structure and transparency of public-private engagement. Therefore, working groups – which might address themes such as R&D, human capital, infrastructure or investment – could also be created to support the new cabinet responsible for the National Semiconductor Strategy. Elsewhere in the region, Costa Rica has also formed cross-sectoral working groups to implement its Semiconductors Roadmap (COMEX, 2024[9]).

3.1.2. Alignment with other strategies

It is also important to align the new National Semiconductor Strategy with other government strategies. However, relevant government strategies published in recent years make no reference to semiconductors. These include the National Competitiveness Strategy (published in 2021), the Digital Agenda (2022), the National Innovation Policy (2022) and the National Artificial Intelligence Strategy (2023). While this is understandable – because semiconductors are a new area of focus for the Dominican Republic – better alignment with other strategies reduces the risk of policy contradictions, duplications or gaps. Therefore, the Dominican Republic should ensure that forthcoming strategies in related fields are consistent with the National Semiconductor Strategy and acknowledge that the semiconductor industry is a high national priority.

There are nevertheless encouraging signs from more recent strategy documents. For example, an outline of Objective DR 2036 (*Meta RD 2036*) – the Dominican Republic's plan to double its gross domestic product (GDP) by 2036 – was published in late 2024 and suggests that semiconductors could be a priority sector (CNC, 2024[10]). The MICM Annual Operating Plan for 2025 – which sets the programme of work for each government agency for the year ahead – acknowledges the need for firms in the free zone regime to develop semiconductor skills and talent (MICM, 2024[11]). Other forthcoming strategies – including the National Multi-Year Plan for the Public Sector (*Plan Nacional Plurianual del Sector Público*) and National Multi-Year Plan for Public Investment (*Plan Nacional Plurianual de Inversión Pública*), revisions to the Digital Agenda and revisions to the National Pact for the Reform of the Electricity Sector – should also consider how they can contribute to the development of the Dominican Republic's semiconductor ecosystem. Alignment of key government strategies with the National Semiconductor Strategy sends a clear signal to industry and prospective investors that semiconductors are a whole-of-government priority. Moreover, such alignment would help secure cross-government support for the National Semiconductor Strategy and act as an additional co-ordination mechanism.

3.1.3. International collaboration

In parallel to co-ordinating semiconductor policy across domestic institutions, the Dominican Republic should also co-operate with international institutions. Co-operation with like-minded countries would enable the Dominican Republic to both share its expertise and learn from best practice. There is already some evidence of international collaboration in the field of semiconductors. In 2024, the MICM signed a memorandum of understanding with Purdue University, based in the United States, to promote research and academic exchange opportunities in the fields of semiconductors and microelectronics (Purdue University, 2024[12]). In 2025, the University of the Caribbean (UNICARIBE) opened with US firm Keysight Technologies a Centre of Excellence in Santo Domingo aimed at developing skills in semiconductor technologies (UNICARIBE, 2025[13]). The Dominican Republic also hosted the Third Americas Partnership for Economic Prosperity (APEP) Semiconductor Symposium in 2025, with a focus on financial strategies in the semiconductor ecosystem. The APEP event brought together representatives from government, the private sector, financial institutions and international organisations (MICM, 2025[14]).

Building on this, the Dominican Republic should engage with a range of potential government partners to co-ordinate semiconductor supply chains and develop complementary semiconductor policies. This type of intergovernmental collaboration already occurs amongst countries in other regions, such as the Semiconductor Coalition, launched in March 2025 by nine European Union members (EC, 2025[15]). An industry association interviewed for this project suggested that the Alliance for Development in Democracy (ADD), which the Dominican Republic founded alongside Costa Rica and Panama, could help to co-ordinate regional semiconductor policies. In 2024, the ADD convened a dialogue on supply chains for medical devices; a future ADD meeting could focus on semiconductor supply chains, of particular importance given that the Dominican Republic's semiconductor-related imports are highly concentrated from a small number of countries (see Section 2.2.1). Additionally, the Dominican Republic could use its membership of the Ibero-American Program of Science and Technology for Development (CYTED), which supports cross-country co-operation in the fields of science, technology and innovation (STI), to work with others to strengthen the regional semiconductor industry. The Dominican Republic is also a participant in the OECD Semiconductor Informal Exchange Network, which promotes international collaboration and exchange of semiconductor market data and policy information.

3.1.4. Priorities for the National Semiconductor Strategy

Decree 324-24 outlines a bold vision for the Dominican Republic's semiconductor industry, aiming to establish itself in every part of the value chain. While the Dominican Republic is right to be ambitious, the National Semiconductor Strategy must define its priorities. Clear prioritisation would strengthen the Dominican Republic's institutional framework by allowing policymakers, industry, academia and other stakeholders to co-ordinate and focus their resources on a logical entry point into the global semiconductor value chain, in a way that aligns with the Dominican Republic's skills and industrial capabilities. Therefore, the Dominican Republic should prioritise specific segments of the value chain. In broad terms, there are three main segments of the semiconductor value chain: design; wafer fabrication; and assembly, testing and packaging (ATP) (see Annex A).

One possible priority segment is semiconductor ATP. ATP is relatively labour-intensive and, on average, less capital-, water- and electricity-intensive than front-end manufacturing (EC, 2023[16]). In this way, ATP could be a good fit for the Dominican Republic's domestic context. ATP has also allowed other countries to integrate the semiconductor global value chain, such as Costa Rica or Malaysia. In the case of Malaysia, the country initially established itself as a global hub for semiconductor ATP, which strengthened its ability to move up the value chain. In recent years, firms such as Arm – which provides intellectual property (IP) cores used in the design segment of the value chain – and Infineon – an integrated device manufacturer (IDM) active in the wafer fabrication and ATP segments – have announced their intentions to establish a presence in Malaysia (Reuters, 2025[17]; Infineon, 2024[18]).

The National Semiconductor Strategy should view semiconductor ATP as a medium- to long-term objective, as it can take years for outsourced semiconductor assembly and test (OSAT) firms or IDMs to establish new ATP facilities. In the nearer term, the Dominican Republic could also focus on PCB manufacturing and assembly, as the country's PCB industry is already beginning to emerge.

3.1.5. Policy monitoring and evaluation

Finally, Article 9 of the Decree also directs the MICM to establish a new unit to monitor the National Semiconductor Strategy's progress. The MICM must ensure that this new monitoring and evaluation (M&E) mechanism is properly equipped – with both data and human resources – to support the strategy's successful implementation. There are likely to be challenges: as set out above, semiconductor policy is a cross-government initiative, yet relevant datasets tend to be held by individual government agencies.

The Dominican Republic should break down these data silos by ensuring that the new M&E mechanism has access to firm-level and other highly granular data from the relevant agencies (including the National Statistics Office [ONE], the General Directorate of Internal Taxes [DGII] and the Central Bank of the Dominican Republic) to enable the effective monitoring of the National Semiconductor Strategy's impact on the industry. This impact could be measured across a range of indicators, including firm performance (such as value added, productivity and export volumes), labour market dynamics (including employment generation, labour market mobility and changes in real wages), levels of investment (both domestic and foreign) and innovation outcomes such as R&D activity.

The ability to access and analyse these granular data – while preserving data privacy and confidentiality – is important for designing and adapting policy. In this way, the Dominican Republic would be in a stronger position to update the strategy on a periodic basis, if necessary, in accordance with Article 10 of the Decree. In addition to enhancing the micro-data infrastructure, the Dominican Republic should develop the analytical capabilities of the new M&E mechanism, for example by mapping its analytical needs and skills gaps and encouraging secondments from relevant institutions (OECD, 2023[19]).

The granular data and analytical skills required for conducting M&E of semiconductor policy are broadly similar to the data and skills required to monitor and evaluate other aspects of economic and industrial policy. There could therefore be a strong argument for broadening the scope of this new M&E mechanism beyond just the National Semiconductor Strategy and placing the mechanism at the centre of government, for example under the responsibility of the Ministry of the Presidency. This would be similar to the model of France Stratégie, which evaluates public policies and reports directly to the French prime minister.

In establishing the M&E mechanism, the MICM should follow best practice and give regard to the OECD Recommendation of the Council on Public Policy Evaluation, which suggests conducting policy evaluation with a systematic, whole-of-government approach, establishing quality standards and mechanisms for evaluations, and developing institutional skills and capacities to conduct, commission and use evaluations (OECD, 2022[20]).

3.2. The free zone regime

Free zones have been at the core of the Dominican Republic's industrial development for decades. The free zone regime refers to the firms and industrial parks which are overseen by the National Council of Free Zones (CNZFE) and benefit from tax exemptions and other advantages.[1] Since the opening of the country's first free zone industrial park in 1969, the regime has expanded to include 93 industrial parks and 843 firms by the end of 2024 (CNZFE, 2025[21]).

Most, but not all, free zone firms are located inside an industrial park. Of the 843 free zone firms, 651 – focused primarily on manufacturing – operate in an industrial park. Firms that are classified as belonging to a services free zone (73 firms) or a special free zone (119 firms) can, but do not have to, operate in an industrial park.[2] Given the generous tax exemptions and provision of serviced industrial land, it is likely that a semiconductor or microelectronics firm that decides to establish itself in the Dominican Republic would choose to operate in a free zone industrial park.[3] This section analyses how the free zone regime can support the development of the country's semiconductor and microelectronics industries.

3.2.1. Free zone incentives

The free zone regime was formalised in 1990 by Law 8-90. Firms have many incentives to establish operations in the free zones, including simplified customs procedures (see Section 3.3.3) and support for workforce recruitment and development. Notably, firms in the Dominican Republic free zones are exempt from a wide range of taxes (Table 3.3). The tax exemptions last 15 years, with the possibility of renewal (see Section 3.2.2 for a discussion of the renewal process).

Table 3.3. Tax Exemptions under the Dominican Republic's free zone regime

Tax	Tax exemption	Length of exemption
Corporate income tax	100%	15 years (possibility of renewal)
Tax on the transfer of industrialised goods and services (a type of value-added tax, known by the abbreviation ITBIS)		
Import taxes, tariffs and customs duties (relating to raw materials, equipment, construction materials, building components, etc. intended for use in the free zones)		
Other import taxes relating to equipment, utensils and transportation intended to benefit the workforce of the free zones		
Export and re-export taxes		
Patent tax and tax on assets or wealth		
Taxes on the formation of commercial companies		
Taxes on construction, loan agreements and the registration and transfer of property		
Municipal taxes		
Consular fees		

Source: OECD analysis of Congreso Nacional (1990[22]), *Ley 8-90 sobre Fomento de Zonas Francas*, https://dgii.gov.do/legislacion/leyesTributarias/Documents/Leyes%20de%20Incentivos%20y%20Fomentos/8-90.pdf.

The eligibility criteria that firms must fulfil to be able to apply for a free zone operating permit are very broad. Article 4 of Law 8-90 states that, in theory, any firm can apply for an operating permit as long as they "contribute to the country's development by increasing its production and generating employment". Free zone firms should be export-oriented and, according to Article 13, "allocate their production and/or services for export purposes", but the requirement that firms in the free zones export a minimum of 80% of their sales internationally was removed by additional legislation in 2007 and 2011 (Congreso Nacional, 2007[23]; 2011[24]).

The generous 100% tax exemptions and broad eligibility criteria have led to both advantages and, it could be argued, disadvantages for the Dominican Republic. On the one hand, the free zones and their incentives regime have been credited with driving much of the country's growth and economic development in recent decades, supporting foreign direct investment (FDI) and job creation (World Bank, 2016[25]). Analysis in Section 2.2.2 shows that FDI inflows to the free zones increased substantially between 2010 (USD 100.6 million, expressed in constant 2018 USD) and 2024 (USD 294.6 million), even if the free zones' share of total FDI into the Dominican Republic (about 9%) remained broadly constant over this period. The expansion of the free zone regime under Law 8-90 has also coincided with strong GDP growth (see Section 2.1.1).

Additionally, the 15-year duration of the Dominican Republic's free zone tax exemptions is relatively long, which further enhances the attractiveness of the country's business support. The OECD Investment Tax Incentives Database compares corporate income tax incentives across 70 mostly emerging and developing economies. The average tax exemption is 7 years, with most tax exemptions applying for 5 years (29% of temporary tax exemptions) or 10 years (25%) (OECD, 2025[26]). The 15-year Dominican tax exemptions, with the possibility of renewal, are likely to align well with the long time horizons of semiconductor industry.

On the other hand, a possible disadvantage of the free zone tax exemptions is their generic nature. The current incentives regime provides the same support to labour-intensive, low-value-added manufacturing as it does to advanced manufacturing. For example, free zone firms can access the same 100% tax exemptions regardless of whether they manufacture cigars and other tobacco products (160 free zone firms) and textiles (98 firms) or medical devices (40 firms) and electrical devices (30 firms) (CNZFE,

2025[21]). Similarly, the free zones' top exporting sectors are a mixture of advanced manufacturing and other manufacturing: medical and pharmaceutical devices (33% of total free zone exports by value), tobacco (14%), electrical and electronic devices (14%), textiles (11%) and jewellery (9%) (CNZFE, 2025[21]). Furthermore, 41% of firms in the free zones are Dominican, which indicates that the free zone regime is not tailored to attracting multinational corporations or FDI, even though semiconductor firms will necessarily be international. The one-size-fits-all nature of the incentives means that the free zone regime does not support specific policy objectives or sectors.

The Dominican Republic should first clarify the objectives of the free zone regime. Currently, the primary objective of the free zones as set out in Law 8-90 – to promote export-led growth – is very broad and dates back to 1990. In the intervening years, the Dominican Republic has experienced significant economic growth and industrialisation. It is therefore necessary to consider whether the free zones' objectives should be refined or modified for the next phase of the country's development, and how the semiconductor industry aligns with these objectives.

Based on these clearly defined objectives, the Dominican Republic should then tighten the eligibility criteria for firms to operate under the free zone regime. Relatedly, the CNZFE could increasingly act as a "filter", prioritising free zone operating permits (see Section 3.2.2) for firms that contribute directly to the core objectives of the free zones. In this way, the tax exemptions will benefit primarily the firms and the sectors that the Dominican Republic considers to be high priority. Other countries in the region already take a similar approach. For example, under Costa Rica's free trade zone regime, firms must meet minimum investment requirements to be eligible for lower corporate income tax rates and firms manufacturing integrated circuits and other advanced electronics can benefit from full exemptions on import and consular duties (SCIJ, 1990[27]). In Mexico, some regional special economic zones offer tax incentives to strategic sectors such as electronics and semiconductors (UNCTAD, 2024[28]).

Finally, if necessary and consistent with the free zone objectives and eligibility criteria, the Dominican Republic could consider introducing more targeted incentives to complement the current regime of tax exemptions. These targeted incentives could be designed to encourage specific types of high-value investment or expenditure, such as in R&D or capital formation. For example, some economies in southeast Asia offer specific incentives for high-technology firms to support their capital and R&D expenditure. Viet Nam's Investment Support Fund provides cash grants towards the R&D costs and fixed asset investments of eligible firms (UNCTAD, 2024[29]). Malaysia's Investment Tax Allowance supports firms' capital expenditure (LHDN Malaysia, 2024[30]). This new system of more targeted incentives could co-exist in parallel with the Dominican Republic's current system of tax exemptions, on the condition that they are clearly delineated and mutually exclusive. That is to say, a firm would need to choose to apply for either the existing tax exemptions or the new targeted incentives scheme, but not both. The co-existence of parallel incentive schemes should be revisited in the medium term alongside an assessment of whether the Dominican Republic should transition towards a single well-targeted investment scheme.

In considering any modifications to the free zone incentives, the Dominican Republic should also be mindful of their fiscal cost. Currently, the country's free zone tax expenditure – the government's tax revenue foregone as a result of the tax exemptions – is equivalent to 0.60% of GDP, the second-highest tax expenditure on special economic zones in Latin America (behind Costa Rica, 0.95% of GDP) (Campos Vázquez, 2022[31]). The high free zone tax exemptions contribute to low tax revenue in the Dominican Republic (13.8% of GDP in 2022), less than the Latin America and Caribbean (LAC) regional average (14.3% of GDP) (World Bank, 2023[32]). Consequently, the Dominican Republic has the highest tax expenditure as a percentage of tax collection in Latin America (36.6%), although the free zones are not the sole cause of this and other tax expenditures (for example, subsidies to households) also contribute (Campos Vázquez, 2022[31]). In this way, high tax expenditure on free zone incentives could limit the country's ability to support the development of other parts of the semiconductor and microelectronics ecosystems, such as innovation, infrastructure, a skilled workforce or access to finance. This is especially important in light of the country's 2024 Fiscal Responsibility Law (Box 3.1).

Box 3.1. The Dominican Republic's Fiscal Responsibility Law

In 2024, the Dominican Republic passed the Fiscal Responsibility Law (Law 35-24) to strengthen the country's fiscal sustainability.

The law establishes a debt ceiling, limiting the government's debt to GDP ratio to 40%. The government is required to meet the debt ceiling by the end of 2035 (for context, consolidated public sector debt was 59.3% of GDP in 2023). A related measure is the establishment of an expenditure ceiling: as the government transitions to its debt ceiling by 2035, its expenditure growth is capped at the annual inflation rate plus 3 percentage points. After the government reaches its debt target, its expenditure is calibrated annually to adhere to the debt ceiling.

In parallel, the law aims to increase transparency, as the Ministry of Finance commits to publishing quarterly reports on spending, revenues and financing. The law also provides for the creation of a Fiscal Responsibility Supervisory Committee to ensure compliance with the fiscal rules.

As the Dominican Republic works to attract semiconductor and microelectronics firms to the country – for example through tax incentives, R&D funding or infrastructure investment – it must consider how these expenditure decisions align with the requirements of the Fiscal Responsibility Law.

Sources: Congreso Nacional (2024[33]), *Ley 35-24*; IMF (2024[34]), *Dominican Republic: 2024 Article IV Consultation - Press Release and Staff Report*, https://www.imf.org/-/media/Files/Publications/CR/2024/English/1domea2024001-print-pdf.ashx.

3.2.2. Free zone administrative processes

While the previous section discusses the design of suitable free zone incentives for semiconductor and other advanced manufacturing firms, it is also important to ensure the efficient administration of these incentives in a way that reduces the bureaucratic burden on firms and enhances the Dominican Republic's competitiveness.

The National Council of Free Zones (CNZFE) is ultimately responsible for determining which firms can operate under the free zone regime and so benefit from these tax incentives. Created by Law 8-90, the CNZFE oversees free zone industrial parks and firms, and its functions include evaluating, approving or rejecting firms' applications for a free zone operating permit (*permiso de instalación*) and promoting the development of the free zone regime. The CNZFE Executive Council, which has decision-making authority, is composed of representatives from the public and private sectors. The Executive Council is chaired by the MICM and includes, amongst others, the Ministry of Finance, ProDominicana, ProIndustria and representatives of industrial parks, free zone firms and the Dominican Association of Exporters (ADOEXPO) (Congreso Nacional, 1990[22]).

To attract the semiconductor, microelectronics or other advanced manufacturing industries to the Dominican Republic, it is critical that firms can establish operations in the free zone regime smoothly. The evidence on this is mixed. Most firms and industrial parks interviewed as part of this research noted that the CNZFE granted the free zone operating permit relatively quickly, which is in line with the CNZFE's commitment to granting operating permits approximately 30 days from the date that all required documents are received (CNZFE, 2024[35]).

Although the operating permit is essential for a firm to establish itself in the free zone regime, it is not sufficient. In addition to the CNZFE, firms must also engage with other government agencies to comply with their administrative requirements. Firms and industrial parks interviewed as part of this research raised concerns about the delays and administrative burdens faced by firms trying to establish free zone operations. This is broadly consistent with the findings of recent analysis showing that medical device

manufacturers wait an average of 44 weeks to begin their operations in the Dominican Republic's free zones (World Bank, 2023[36]). This analysis is not perfectly applicable to the semiconductor industry because it includes sector-specific interactions with the Ministry of Public Health, required for medical device manufacturers. Nonetheless, medical device firms are amongst the Dominican Republic's most advanced manufacturers and so offer a reasonable indication of the administrative processes that semiconductor firms can be expected to face (Table 3.4).

Table 3.4. Minimum processes required for firms to establish operations under free zone regime

Process	Government agency	Administrative requirements	Weeks
Operating permit for firms in free zone industrial parks	CNZFE (1st interaction)	8	4
No objection to the cost-benefit analysis	Ministry of Finance (1st interaction)	1	1 (can be done in parallel with other processes)
Registration for the free zone special tax regime	DGII (1st interaction)	6	2
Customs registration	DGA	6	1 (can be done in parallel with other processes)
Environmental authorisation	MIMARENA	15	13
No objection to issuing the ITBIS Exemption Card	CNZFE (2nd interaction)	3	1
Request for the ITBIS Exemption Card	Ministry of Finance (2nd interaction)	4	2
Issuance of the ITBIS Exemption Card	DGII (2nd interaction)	4	2
Total (8 processes)	**5**	**47**	**24**

Notes: This table excludes sector-specific processes required for firms in certain sectors, such as the Ministry of Public Health's requirements for medical device manufacturers.
All administrative processes are sequential (i.e. they cannot begin until the previous process has finished) with the exception of the no objection to the cost-benefit analysis (one week) and customs registration (one week), which can be done in parallel with other processes. Therefore, the total estimated time for all of these processes is 24 (sequential) weeks.
Source: OECD analysis of World Bank (2023[36]), *Reporte sobre tramitología para el establecimiento de empresas en tres regímenes especiales de República Dominicana*, https://documents1.worldbank.org/curated/en/099112224175036219/pdf/P178504-76925377-6a5d-4130-ae65-f21ef927c822.pdf.

Table 3.4 suggests that in order to benefit from the free zone tax exemptions, firms must, as a minimum, engage with 5 government agencies (including multiple interactions with three agencies) to comply with 8 processes and 47 administrative requirements over a 24-week period. This is complex and burdensome and risks making the free zones less competitive. In very broad terms, the Dominican Republic should focus on two areas to address this problem: both enhancing the process of establishing operations in the free zones and improving firms' understanding and expectations of this process. These reforms to the free zone administrative processes could benefit from the support of the Zero Bureaucracy programme (*Burocracia Cero*), the Dominican Republic's flagship regulatory reform initiative (see Section 3.3.4). Stakeholders consulted for this report suggested that the Zero Bureaucracy programme had not yet delivered substantial streamlining to the free zone regime and so there was significant scope to accelerate regulatory reforms in this area.

To improve the processes summarised in Table 3.4, the Dominican Republic should commit to greater digitisation. Currently, some processes – such as registration for the free zone special tax regime with the DGII – rely primarily (but not exclusively) on in-person interactions (World Bank, 2023[36]). Greater digitisation would also facilitate a second major reform: greater data-sharing, as information submitted to one digital portal could be shared across multiple agencies. Some pockets of good practice do already exist – for example, the CNZFE and DGA have an interoperability agreement, and the DGII is able to access the database of the Santo Domingo Chamber of Commerce – but this is relatively rare. Improved data sharing would also reduce duplication, as it is estimated that 29 of the administrative requirements faced by medical device manufacturers are repeat requests, asked multiple times by different agencies (World Bank, 2023[36]). In this way, data sharing – which should comply with data privacy requirements – can increase the speed of establishing operations in the free zones, reduce administrative errors and minimise the administrative burden.

A third important way to streamline free zone administrative processes is to ensure that, as far as possible, the processes can be done in parallel. Currently, six of the eight processes in Table 3.4 occur sequentially which significantly extends firms' wait-times. Relatedly, the Dominican Republic should aim to stop firms having to interact multiple times with the same agency – as is currently the case with the CNZFE, the Ministry of Finance and the DGII – because this increases the bureaucratic burden on the firm and the agency.

To improve firms' understanding of what is required to establish free zone operations, the Dominican Republic should also make the processes in Table 3.4 much more transparent. The Dominican Republic does not currently publicise the full set of processes that firms must comply with to begin operations in the free zones. Although the CNZFE's website explains how to obtain the free zone operating permit, it does not situate the operating permit in the context of the other processes in Table 3.4. As a result, firms are unsure about the time or resources they need to set aside to comply with all of the administrative requirements. Similarly, the CNZFE does not set clear, public criteria for evaluating firms' applications for free zone operating permits or explain its rationale for rejecting applications, which makes the process seem opaque to firms. Improving the transparency of these processes will also help to manage firms' expectations.

Similar concerns arise in relation to the renewal of the 15-year tax exemption, which depends on the renewal of a firm's free zone operating permit by the CNZFE. One industrial park operator explained that the renewal process is opaque and a firm's probability of renewal is uncertain. Law 8-90 only states that the "CNZFE can extend the operating permits when it considers this necessary and in keeping with the spirit of this Law" (Congreso Nacional, 1990[22]). Regulation 366-97, which explains how Law 8-90 should be applied, makes no reference to the renewal process (CNZFE, 1997[37]). It is plausible that the uncertainty around whether firms can continue benefitting from tax exemptions beyond 15 years will be a barrier to prospective investors. Therefore, the CNZFE should set objective criteria and clarify the steps in the renewal process, including the estimated time required. The CNZFE should also consider publishing data on the renewal rate for operating permits, so that semiconductor and microelectronics firms can make informed investment decisions.

3.2.3. Linkages between the free zone regime and local economy

Despite this section's focus on the free zone regime, it is important to state that free zone firms represent a minority of firms in the Dominican Republic. The 843 free zone firms account for 0.7% of all (formal) firms in the Dominican Republic and 4% of total employment (CNZFE, 2025[21]; ONE, 2024[38]). The vast majority of firms and workers in the Dominican Republic operate under the national tax regime, also known as the local economy. Manufacturing also occurs in the local economy and the MICM has a dedicated Vice-Ministry for Industrial Development focused on supporting the local manufacturing industry. Many of these local manufacturing firms operate in non-free-zone industrial parks, overseen by ProIndustria.

Firms in the local economy have very different characteristics to their free zone counterparts. Compared to the export-oriented free zone firms, the average transaction value of local firms' exports and imports is substantially lower, and they trade a smaller number of products with a smaller number of countries. Moreover, firms in the local economy manufacture less technologically sophisticated products than firms in the free zone regime (World Bank, 2016[25]). Local firms also have a much higher rate of informality, as many choose not to register their business.

To drive further economic growth, these two parts of the Dominican economy – the free zones and the local economy – should be well integrated. However, this appears not to be the case, based on the decreasing proportion of inputs that free zone firms have sourced from the local economy over time. In 2005, free zone firms purchased 22% of their total inputs locally; by 2018, this had fallen to 18% (OECD, 2020[39]). There is significant variation across sectors in the free zones. Textile and footwear firms in the free zones source respectively 28% and 22% of their inputs locally, but more technologically advanced sectors like medical and electric device manufacturers source less than 3% of their inputs locally (World Bank, 2018[40]). This strongly suggests that semiconductor and microelectronics manufacturers are likely to also source most of their inputs internationally and not from the local Dominican market. Currently, local firms tend to supply only basic goods such as paper or cardboard packaging to the free zones. It is important to enhance linkages between the two parts of the Dominican Republic's economy to expand the potential for spillover effects from the semiconductor and microelectronics industries and amplify its economic impact.

Interviews with Dominican government agencies, firms and industry associations emphasised three main barriers to linkages. First, firms in the local economy struggle to become suppliers to firms in the free zone regime because of their difficulty in meeting international standards. For example, one electronics manufacturer in a free zone industrial park explained that local firms are unable to comply with the AS9100 aerospace standard and so the electronics manufacturer is obliged to source components from overseas. Given the semiconductor industry's strict quality standards, local firms could also find it challenging to supply semiconductor manufacturers, without initiatives to increase local standards. Other free zone firms noted that local firms lacked the technical skills to supply precision components or lacked suitable storage or transportation procedures and infrastructure.

A second barrier to strengthening linkages is the bureaucratic burden faced by local firms. An industry association explained that local firms typically face greater administrative requirements to supply free zone firms than international firms or other free zone firms do. This is principally because Article 2 of Law 8-90 states that sales from the local economy to the free zones are deemed to be exports and vice versa (Congreso Nacional, 1990[22]), which requires local firms to engage in additional bureaucracy with the DGII and DGA, straining the local firms' more limited resources.

The third barrier is cost. The free zone tax exemptions create a bias towards inputs from overseas, as they make the cost of high-quality foreign inputs relatively lower (World Bank, 2018[40]). In contrast, inputs from local firms to the free zones are usually considered imports and not necessarily exempt from all taxes, which can lead to higher costs or requires the local firm to apply for an exemption to the tax (such as the value-added ITBIS). An additional cost barrier to linkages comes from the fact that firms in the local economy are affected by more expensive and less reliable electricity (see Section 3.5.1), which drives up the cost of their manufactured goods. An unreliable electricity supply also reinforces the local firms' challenges with quality standards (described above): losses due to power outages decrease a firm's likelihood of holding an internationally recognised quality certification (World Bank, 2018[40]).

The Dominican Republic should promote linkages by supporting the development of suppliers in the local economy and connecting them with semiconductor and microelectronics firms in the free zone regime. The MICM and ProIndustria should launch a supplier development programme to provide technical assistance to upgrade local manufacturers to meet international quality standards and gain internationally recognised quality certifications. The MICM should also collaborate with the DGII and DGA to remove unnecessary

administrative requirements on local suppliers to the free zones, thereby contributing to levelling the playing field between local and international suppliers.

To build connections between firms, the Dominican Republic should expand its matchmaking programme. In January 2024, the MICM organised Encadena.DO, an online fair with 1 850 registered participants aimed at matchmaking commercial relationships between local and free zone firms (MICM, 2024[41]). The MICM should now formalise this programme by making it an annual event and including offline, in-person events too, similar to the Encadenados programme in Costa Rica.

The Dominican Republic should also enhance its existing supplier database, which lists local suppliers and the goods or services they provide. This Tool for Categorising Suppliers (*herramienta de categorización de proveedores*, hereafter the *herramienta*), managed by the MICM, evaluates local firms and allows them to become part of a network of potential suppliers to the free zones. Currently, the *herramienta* is targeted specifically at the medical and pharmaceutical devices sector, so the Dominican Republic could consider extending the *herramienta* to sectors relevant to the needs of semiconductor and microelectronics firms (see Annex A for a list of key inputs for semiconductor production). Additionally, local firms have struggled to engage successfully with the *herramienta*: as of 2023, only 18 local firms had been categorised, of which just 5 fulfilled requirements to become free zone suppliers, indicating a gap between the standards of local firms and the standards expected by free zone firms (IFC, 2023[42]). Therefore, the Dominican Republic could consider relaunching the *herramienta* alongside the new supplier development programme (mentioned above) to raise the standards of local firms.

In the short term, it will be challenging for firms in the Dominican Republic's local economy to supply the semiconductor industry, given that semiconductor firms already have global networks of trusted suppliers and given the technological sophistication and quality standards of some semiconductor inputs. At first, it is possible that local firms will only supply services such as utilities, transportation, food or construction (Sturgeon, 2025[43]). In the medium term, however, if some of the above recommendations are successfully implemented, deeper linkages may begin to form and the country as a whole can start to benefit from the presence of foreign semiconductor and microelectronics firms.

More concretely, free zone firms involved in semiconductor ATP could look to source some of their packaging consumables from firms in the local economy. Semiconductor packaging consumables such as lead frames and encapsulants are less complex and have lower purity requirements than inputs for front-end manufacturing. Furthermore, semiconductor firms qualify encapsulants like mold compounds and underfills at the package level, not for the whole ATP facility, allowing chemical suppliers to gain entry with small batches rather than high-risk, high-volume commitments.

3.2.4. Industrial park land constraints

The majority of free zone industrial parks are privately owned (76%), with the remainder owned by the government, public-private ventures or not-for-profit organisations (IFC, 2023[42]). The parks provide a wide range of facilities and services to the firms operating inside them. These can include a dedicated customs office, workforce pre-selection and recruitment, recycling and waste disposal and access to electricity, water and connectivity infrastructure (see Sections 3.5.1 and 3.5.2). Critically, the parks also provide their firms with dedicated space for manufacturing and other industrial processes. However, free zone parks cited very limited industrial space as a top concern. One park in the San Cristóbal province consulted for the purpose of this report expressed concerns that it had run out of serviced industrial land and so would find it difficult to attract more firms. Several parks in the Santo Domingo province noted that land was scarce and expensive, acting as a major barrier to their expansion. This anecdotal evidence is supported by data: in 2023, the Dominican Republic's industrial parks had a 98% occupancy rate, indicating very little space for new firms (CNZFE, 2023[44]). Without addressing these land constraints, the industrial parks could struggle to attract semiconductor and microelectronics firms.

The Dominican Republic should pursue two complementary solutions. Land constraints are particularly acute in Santo Domingo and the surrounding areas. One option for tackling the lack of industrial land is the Santo Domingo 2050 (SD2050) initiative (see Box 3.2). As part of the SD2050, the Dominican Republic should consider selling or making long-term leases of state-owned land to industrial parks to support their ability to attract semiconductor or other advanced manufacturing firms. A draft plan for the SD2050 suggests that this land could support four new industrial parks, home to a variety of sectors including pharmaceutical devices and the manufacturing of (unspecified) technologies. The SD2050 is also expected to include a wastewater treatment plant and a solar park, valuable infrastructure for the development of a semiconductor industry (see also Section 3.5).

In addition to the creation of this industrial corridor, the SD2050 aims to redevelop land for housing and other social purposes. Given that the state-owned land is finite, the MICM and MEPyD will need to balance these multiple, potentially competing, goals. The initiative has not yet allocated land to any redevelopment projects, but this process is due to begin by the end of 2025. The Commission and Public Trust responsible for the SD2050 – both ultimately accountable to MEPyD – are in the process of designing their methodology for land allocation. They must ensure that this methodology allows the allocation of land to industrial parks with advanced manufacturing firms including those related to semiconductors and microelectronics, while also fulfilling the broader social, economic and environmental goals of the SD2050.

Box 3.2. The Santo Domingo 2050 initiative

The overarching objective of the Santo Domingo 2050 (SD2050) initiative is to redevelop state-owned land situated near the capital city in a manner that advances the government's social, economic and industrial goals.

More specifically, the government has identified 44 million square metres (m^2) of state-owned land around the Avenida Circunvalación motorway, some of which could be used to create an industrial corridor to support new industrial parks. This is one of several goals of the SD2050, which also aims to use the land to develop housing and health services, sports and cultural centres and offices and business facilities. Underpinning these goals is a commitment to improved public services, better public transport to reduce congestion and sustainable land use.

This initiative dates back to 2022, when Decrees 595-22 and 596-22 acknowledged that Santo Domingo was in need of sustainable development, created a commission to manage the SD2050 and identified the tracts of state-owned land that could be redeveloped. The commission works closely with a public trust (*fideicomiso público*), created by Decree 353-23, which administers the state-owned land and other assets.

The SD2050 remains at a relatively early stage – as its objectives are not expected to be achieved in full until 2050 – and it has not yet allocated land to any development projects. However, it is an important initiative that, if properly implemented, would contribute to addressing the land shortage in the Greater Santo Domingo area and support the development of new free zone industrial parks.

Sources: OECD analysis of the presentation *SD2050* delivered by MEPyD in February 2025; Presidencia (n.d.[45]), *Decreto 595-22;* Presidencia (n.d.[46]), *Decreto 596-22*; Presidencia (n.d.[47]), *Decreto 353-23.*

Although the SD2050 may be the Dominican Republic's most high-profile initiative to redevelop land around Santo Domingo, other projects to address the shortage of industrial land are also ongoing. For example, in 2025, the Dominican Republic signed a memorandum of understanding with logistics firm DP

World to expand its free zone industrial park and port in Caucedo, close to Santo Domingo (DP World, 2025[48]).

In parallel, the MICM should study the feasibility of locating semiconductor and microelectronics firms in industrial parks outside of the Greater Santo Domingo region, considering the potential costs and benefits. As explained in Section 2.1.2, the province of Santo Domingo (20 industrial parks) and the neighbouring San Cristóbal (12) together account for 34% of the country's free zone industrial parks (CNZFE, 2025[21]). While this means that land is scarce and the roads tend to be congested, the two provinces have significant advantages such as proximity to universities and R&D institutions, a larger and more skilled labour market and access to international transport hubs. The Dominican Republic's Eastern Corridor faces the opposite situation, with abundant land but very limited industry and no cluster developments. It remains an open question as to whether the MICM views the semiconductor and microelectronics industries as an opportunity for local industrial development in regions without existing industrial ecosystems, which would probably require complementary place-based policies.

Table 3.5 summarises the potential costs and benefits of three regions where a semiconductor or microelectronics cluster could be located. This report chooses to analyse these three regions because they are located in different geographic areas, capture a broad range of the Dominican Republic's local economic and industrial conditions, and have distinct advantages and disadvantages from one another (Sturgeon, 2025[43]). The regions are not mutually exclusive, as semiconductor and microelectronics firms could theoretically establish themselves in all three locations. However, it is also clear that all three regions entail some trade-offs.

Table 3.5. Comparison of possible locations for semiconductor and microelectronics clusters in the Dominican Republic

	Greater Santo Domingo	Cibao Norte	Eastern Corridor
Industrial ecosystem	Relatively mature industrial ecosystem, with 32 free zone industrial parks	Relatively mature industrial ecosystem, with 34 free zone industrial parks	Very limited industrial ecosystem, with only 6 free zone industrial parks
	Cluster of advanced manufacturing (medical devices)	Cluster of advanced manufacturing centred around Santiago de los Caballeros	
Higher education and research	Proximity to universities such as Autonomous University of Santo Domingo (UASD), Santo Domingo Institute of Technology (INTEC) and Las Américas Institute of Technology (ITLA)	Proximity to universities such as the Pontifical Catholic University Madre y Maestra (PUCMM)	Far removed from universities
Human capital	Large and relatively skilled labour market	Some challenges with matching local skills supply to demand, e.g. technicians for mechanical engineering and electronics engineering	Labour market predominantly serves tourism and other service industries
Transport	Excellent port infrastructure (Caucedo and Haina) and airports	Reasonable port infrastructure (Puerto Plata), albeit significantly less sophisticated than in Greater Santo Domingo	Good air transport infrastructure (Punta Cana International Airport)
	Road congestion and traffic		
Water and electricity	Population and economic growth strains water supply	Water scarcity in Yaque del Norte river basin	Outdated distribution infrastructure contributes to high electricity losses for regulated users outside of the free zone regime

	Greater Santo Domingo	Cibao Norte	Eastern Corridor
Land availability	Scarce and expensive land constrains further industrial development	No major concerns	Abundant and more affordable land

Note: Greater Santo Domingo includes the provinces of Santo Domingo, San Cristóbal and the National District. Cibao Norte includes the provinces of Santiago, Puerto Plata and Espaillat. The Eastern Corridor includes the provinces of San Pedro de Macorís, La Romana and LaAltagracia.
Sources: OECD analysis of FHI360 (2020[49]), *Dominican Republic Labor Market Assessment*, https://www.fhi360.org/wp-content/uploads/2024/02/resource-dr-lma-report.pdf? (accessed on 14 April 2025); IFC (2023[42]), *Creating Markets in the Dominican Republic: Country Private Sector Diagnostic*, https://www.ifc.org/content/dam/ifc/doc/2023/dominican-republic-country-private-sector-diagnostic-en.pdf (accessed on 11 February 2025); Sturgeon, T. (2025[43]), "Industrial Ecosystem Review and Strategic Assessment for the Dominican Republic - Preliminary findings and recommendations".

3.3. Business environment

This section considers the institutional, legal and regulatory conditions that shape the environment in which firms and investors in the Dominican Republic operate. The section analyses five areas that would influence the business environment for the semiconductor and microelectronics industries: government investment promotion initiatives; the legal framework for foreign investment; trade and customs policy; construction and environmental permitting procedures; and access to finance for firms and industrial parks.

3.3.1. Investment promotion

The Dominican Republic's ability to attract FDI is critical to its ambitions to develop semiconductor and microelectronics industries. Section 2.2.2 shows that the country has performed reasonably well in FDI attraction, with stable and moderate FDI inflows. In 2023, net inflows to the Dominican Republic were equivalent to 3.9% of GDP, above the average for the LAC region (3.0% of GDP) (World Bank, 2023[50]). Many factors contribute to the Dominican Republic's good FDI performance, including the tax exemptions outlined in Section 3.2, the country's increasingly well-established democratic norms and institutions (International IDEA, 2024[51]), a stable investment environment and its strategic geographic location close to large export markets in the Americas. Inward FDI has many potential benefits for an upper-middle-income country like the Dominican Republic, including access to new technologies, R&D and knowledge spillovers, human capital development, job creation and establishing productive linkages between domestic and foreign firms.

Multiple organisations – both inside and outside the Dominican government – are involved in investment promotion efforts. ProDominicana is ostensibly the country's national investment promotion agency, whose mission is to "promote the Dominican Republic's exports and investment opportunities to attract FDI" (ProDominicana, 2025[52]). Affiliated with the MICM, ProDominicana offers a range of services to prospective investors, including guidance on initiating and developing new (greenfield) FDI projects, assistance to expand existing (brownfield) FDI projects, accompaniment throughout the processes managed by other government agencies, advice on export requirements and investment aftercare. The agency also publishes the annual investment guide to the Dominican Republic, which summarises investment incentives and regulations across a wide range of economic sectors (ProDominicana, 2024[53]). ProDominicana increasingly uses digital tools to provide these services: for example, ProDominicana Connect aims to connect Dominican exporters with international customers and ProInteligencia aims to aggregate the latest information on market access, FDI trends and investment and trade statistics (ProDominicana, 2025[54]).

Despite ProDominicana's role as the national investment promotion agency, the CNZFE has a very similar mandate. The CNZFE's mission is to "drive the growth and development of the free zones sector by promoting and attracting new investments", with a particular focus on "driving an increase in exports" (CNZFE, 2025[55]). In theory, the two agencies have distinct remits, with the CNZFE supposed to support FDI solely in the free zone regime and ProDominicana in other parts of the economy; but in practice their remits are blurred. Firms, industrial parks and government agencies interviewed for this report all acknowledged that ProDominicana and the CNZFE's overlapping mandates sometimes lead to ambiguity and duplication.

The two agencies attempt to minimise the risk of confusion by working closely together. ProDominicana is a member of the CNZFE's Executive Council and vice versa, and the CNZFE informs ProDominicana of all foreign investments in the free zones so that ProDominicana can update the national register of foreign investment. Nonetheless, the institutional landscape is made even more complicated by the involvement of other institutions. For example, one industrial park commented that the Directorate of Trade and Investment Promotion at MIREX is also highly active in this policy area. The lack of a unified investment strategy from government causes industry associations, such as the Association of Foreign Investor Firms (ASIEX), to engage in their own investment attraction efforts.

Other recent reports have highlighted the same weakness in the Dominican Republic's investment promotion efforts. The OECD previously called for a single co-ordinating agency for all FDI attraction in the Dominican Republic (OECD, 2020[39]). The International Finance Corporation advocated for a much clearer division of responsibilities between ProDominicana and the CNZFE (IFC, 2023[42]). This new OECD report recommends that, in the short term, the Dominican Republic should nominate one agency to be wholly responsible for guiding semiconductor and microelectronics firms through the entire legal and regulatory process, from establishing operations in the Dominican Republic through to export. Over the medium term, the Dominican Republic should also map the mandates of ProDominicana and the CNZFE and clarify the agencies' activities across all sectors, not just semiconductors and microelectronics. Depending on the outcome of this mapping exercise, the Dominican Republic could consider empowering a single agency for all FDI attraction activities.

In reorganising how ProDominicana and the CNZFE interact with each other and other relevant institutions, the Dominican Republic should draw on best practices for investment promotion agencies (IPAs). Literature suggests that good IPAs share four main characteristics. First, they benefit from a strong institutional arrangement, with considerable autonomy, strong connections to the private sector and partnerships with other government agencies. Second, they have a clear mandate, focused narrowly on FDI attraction and prioritising investment in specific sectors of high importance to the country. Third, effective IPAs need to be well resourced and staffed, including by people with private sector experience. Fourth, they offer high-quality services to investors by using appropriate tools and M&E processes (OECD, 2018[56]; Heilbron and Kronfol, 2020[57]; Steenbergen, 2023[58]). Currently, ProDominicana and the CNZFE do not exhibit all of these characteristics.

An additional way of achieving greater policy coherence is through a national strategy. Work on the National Strategy for Investment Attraction (ENAI) began in 2021 but has since been paused. The Dominican Republic should consider updating, finalising and publishing the ENAI so that the relevant public and private organisations can co-ordinate their resources and efforts towards attracting FDI in advanced manufacturing and other sectors.

Another, related challenge facing the Dominican Republic's objective of attracting investment from foreign semiconductor and microelectronics firms is the presence of multiple one-stop shops (*ventanillas únicas*). A one-stop shop is often viewed by policymakers as a means of delivering user-friendly services and lightening the administrative burdens on firms. For example, since the Dominican Republic's One-Stop Shop for Investment (VUI) was formally launched in 2021, it has brought together 33 processes from 21 government agencies to a single online platform, and ProDominicana partly attributes the increase in

inward FDI to reforms such as the VUI (Presidencia, 2024[59]). However, stakeholders consulted for this report stressed the importance of having a single one-stop shop, with one industry association noting that having many one-stop shops can be worse than having no one-stop shop at all.

The Dominican Republic has at least four one-stop shops with some relevance to the semiconductor and microelectronics industries (Table 3.6). Semiconductor and microelectronics firms will plausibly need to navigate through all four of these and deal with four different government agencies, which risks complicating their process of establishing operations in the Dominican Republic and exporting their products.

Table 3.6. One-stop shops in the Dominican Republic

Selection of one-stop shops with relevance to the semiconductor and microelectronics industries

Name	Focus	Managed by
One-Stop Shop for Investment (VUI)	Investment permits, licences and certificates	ProDominicana
One-Stop Shop for Foreign Trade (VUCERD)	Import and export processes	DGA
One-Stop Shop for Construction (VUC)	Construction permits, including for manufacturing facilities	MIVED
One-Stop Shop for Environmental Services (VUSA)	Environmental authorisation processes	MIMARENA

The Dominican Republic's current arrangement still requires firms to engage with multiple online platforms. In comparison, one-stop shops in other countries are genuinely single points of contact, as ePortugal offers over 1 000 government services provided by 590 entities, Norway's Altinn signposts users to 1 000 government forms and services, and GOV.UK acts as the starting point for 152 essential government services (OECD, 2020[60]).

To address this potential challenge, there is a near- and medium-term recommendation. In the near term, the Dominican Republic should nominate one "single window" to act as a genuine one-stop shop for all services required by semiconductor firms. This one-stop shop should be managed by the lead investment promotion agency for the semiconductor and microelectronic sectors chosen by the Dominican Republic (see above). One possible way to achieve this is by creating a sector-specific portal on one of the existing one-stop shops. For example, Mexico's Single Window for Investors has dedicated portals for strategic sectors, including semiconductors (at the time of writing, this portal was still under construction). It is therefore encouraging that ProDominicana has already created a website for semiconductor investments (ProDominicana, 2024[61]), although it appears incomplete as it does not provide any information on applying for free zone operating permits, thereby requiring firms to be aware of the need to apply for this operating permit and proactively navigate to the CNZFE website (see Section 3.2.2 for analysis of the free zone operating permits).

In the medium term, the Dominican Republic should move towards unifying the multiple one-stop shops into an overarching single point of contact for government services, similar to the system of other countries. In this scenario, individuals or firms access a single online page which then signposts them to their sector of interest or the services of the relevant government agency. Again, the Dominican Republic is already making progress in this respect, as its Single Portal for Dominican Government Services unifies 598 services from 176 institutions (Government of the Dominican Republic, 2025[62]). The next step could be to bring all four of the one-stop shops in Table 3.6 under the Single Portal too.

3.3.2. Investment legal framework

In addition to these institutional improvements to the investment environment, the Dominican Republic could also consider facilitating foreign semiconductor and microelectronics investments by clarifying the country's legal framework. In general, the Dominican Republic is considered a stable location for investments in the LAC region. The country has made a concerted attempt since 2020 to strengthen democratic and judicial norms and the constitutional amendments in October 2024 aimed to enshrine presidential elections as a fundamental right, strengthen the limits on presidential terms and increase the independence of the judiciary's selection process (Presidencia, 2024[63]). Recently, the Dominican Republic has seen an increase in its Rule of Law score from the Global Innovation Index, from 35.3 (in 2019) to 39.2 (2022). Its ranking has climbed from 91 to 76 over the same period, now placing it above the regional average (84.5) (World Bank, 2023[64]).

Despite this progress, there remain areas in the Dominican Republic's legal framework which could deter potential investors. Article 51 of the country's constitution allows the expropriation of property and land by the Dominican government on the grounds of public utility or social interest, on the condition that the government offers full compensation (Tribunal Constitucional, 2015[65]). In theory, this expropriation provision is not a source of concern. Many countries, including OECD Members, have legal provisions that allow their governments to take private property for public use, as long as certain conditions are met. Moreover, the Dominican Republic-Central America-Free Trade Agreement (DR-CAFTA) between the Dominican Republic, the United States and five Central American countries (see Section 3.3.3) prohibits the expropriation of foreign investors without compensation (CAFTA-DR-USA, 2004[66]).

In practice, however, the expropriation process in the Dominican Republic has led to disputes and arbitration between investors and the government, and insufficient or delayed compensation (U.S. Department of State, 2024[67]). One recent example is the case Lee-Chin v. Dominican Republic. In 2023, a tribunal of the International Centre for Settlement of Investment Disputes ruled that the Dominican Republic had breached international investment agreements relating to indirect expropriation, fair and equitable treatment and the umbrella clause (ICSID, 2023[68]; UNCTAD, 2024[69]). Given the large investments associated with semiconductor and microelectronics firms and the need for international private capital to develop the Dominican Republic's semiconductor industry, it would be important to ensure that the expropriation process does not act as a barrier to the country's ambitions.

Law 16-95 also contains provisions that could be revisited in light of the government's objective to attract semiconductor and microelectronics investments to the country. In general, Law 16-95 has been credited with opening up most sectors of the Dominican economy to foreign investment in the 1990s and catalysing long periods of sustained economic growth. However, Article 5 of the law also imposes restrictions on foreign investment in three areas:

- disposal of toxic, dangerous or radioactive waste not produced in the country
- activities that affect public health and the environment
- production of materials directly linked to defence and national security (Congreso Nacional, 1995[70]).

These types of limits on foreign investment are not unusual, as other countries impose similar foreign investment restrictions (OECD, 2016[71]). However, it is important to consider how these restrictions could interact with possible investments in the semiconductor industry. Some parts of the semiconductor value chain depend on chemicals with potentially hazardous waste or emissions which can harm the environment. Moreover, semiconductors are dual-use technologies, some of which can have military or national security applications. Therefore, it is conceivable that investment in the Dominican Republic's semiconductor industry could fall foul of the second and third foreign investment restrictions.

The above could contribute to an unpredictable environment for investors. To address this, the Dominican Republic should improve the speed and transparency with which the government delivers expropriation compensation to the affected parties and, where applicable, the courts deal with expropriation claims. The Dominican Republic should also clarify that investments in the semiconductor and microelectronic sectors are exempt from foreign investment restrictions, as long as they comply with, for example, the environmental regulations. This clarification could entail the publication of data on the enforcement of these restrictions and targeted communications to reassure prospective investors. The Dominican Republic could also look to amend the underlying legislation to exempt semiconductor investments from investment restrictions, although this would be a more complex, sensitive and time-consuming process.

3.3.3. Trade and customs

Trade policy is another important area shaping the business environment in the Dominican Republic, including for the semiconductor and microelectronics industries, as it can provide firms with access to international markets and higher-quality inputs. A review by the World Trade Organization (WTO) concluded that the Dominican Republic's trade policy regime had few obstacles and was broadly open and transparent (WTO, 2023[72]). The Dominican Republic has also signed trade agreements with many partners, most notably DR-CAFTA. DR-CAFTA, to which the Dominican Republic, the United States, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua are signatories, includes a most-favoured nation clause and reduces or removes tariffs and non-tariff barriers to trade on a wide range of goods and services, in a market of almost 400 million people. The impact of the changes to US tariff policy announced in April 2025 on the provisions of DR-CAFTA remains to be seen.

DR-CAFTA has promoted exports of medical devices, pharmaceuticals, plastic products and footwear (World Bank, 2023[73]) and since the agreement entered into force in the Dominican Republic in 2007, Dominican exports to the other signatory countries more than doubled to USD 7.2 billion and Dominican exports to the other DR-CAFTA signatories accounted for almost 60% of total Dominican exports in 2022 (ProDominicana, 2023[74]). The Dominican Republic has also reached trade agreements with other economies, such as the CARIFORUM-EU Economic Partnership Agreement, signed in 2008 with the European Union and 13 countries of the Caribbean Community. Of particular relevance to this report, the Dominican Republic is also a signatory to the WTO Information Technology Agreement (ITA 1), which aims to eliminate tariffs on hundreds of information technology products classified into seven product categories, including semiconductors and semiconductor manufacturing equipment. However, the Dominican Republic has not yet ratified ITA 1.

As a result of these important trade liberalisation efforts, the Dominican Republic has already eliminated tariffs on most of the semiconductor-related products identified in Annex B. However, the Dominican Republic still maintains tariffs on a small number of semiconductor-related products, used in various segments of the value chain (Table 3.7).

Table 3.7. Dominican Republic tariffs on semiconductor-related products

HS code	Label	Category	Tariff (%)
854151	Semiconductor-based transducers	Chips	Up to 20
852351	Solid-state, non-volatile data storage devices for recording data from an external source (flash memory cards or flash electronic storage cards)		14
852359	Semiconductor media, unrecorded, for the recording of sound or of other phenomena		3
900699	Photographic flashlight apparatus	Manufacturing equipment	20

HS code	Label	Category	Tariff (%)
900120	Sheets and plates of polarising material/sheets of semiconductor	Foundry inputs	3
900190	Lenses, prisms, mirrors and other optical elements, unmounted		8
900219	Objective lenses		3
900220	Optical filters		8
900290	Lenses, prisms, mirrors and other optical elements, mounted		3
811292	Gallium, germanium, hafnium, indium, niobium (columbium), rhenium and vanadium; articles thereof, unwrought, including waste and scrap, powders	Raw materials	3
370199	Photographic plates and film in the flat for monochrome photography, sensitised, unexposed, of any material other than paper, paperboard or textiles (excluding X-ray film and photographic plates, film in the flat with any side > 255 mm, and instant print film)	Inputs for wafers	20

Notes: Harmonized System (HS) code 854151, listed in this table, does not appear in the list of semiconductor inputs in Annex B. This is because the Dominican Republic has adopted the 2022 edition of HS nomenclature, whereas Annex B uses the 2017 edition of HS nomenclature. HS 2022 reclassified what used to be known as HS code 854150 in the 2017 edition into two separate codes, 854151 and 854159. Annex B still uses HS 2017 as this allows for cross-country and over-time analyses, since not all countries have adopted the latest HS 2022. For further details, refer to the official World Customs Organization documentation (HS Nomenclature 2022 Amendments).
HS codes 900699 and 811292 are not included in ITA 1 or 2.
Source: Information provided by the MICM in response to OECD (unpublished[75]), "Policy Questionnaire – Review of Governance and Framework Policies for the Semiconductor and Microelectronics Industries", OECD, Paris.

Therefore, the Dominican Republic should consider removing the remaining tariffs on these semiconductor-related products. This would bring at least two benefits. First, it would send a clear signal to industry about the Dominican Republic's commitment to participating in the global value chain. Second, it would lower costs for some inputs for the Dominican Republic's prospective semiconductor industry. Although most imports into the free zones are already exempt, firms in the local economy still need to pay tariffs on imports. This increases manufacturing costs in the local economy and acts as an additional barrier to local firms providing inputs to free zone firms. In this way, removing tariffs could help to foster linkages (see Section 3.2.3).

One way of removing tariffs on most, but not all, of these products would be for the Dominican Republic to sign and ratify ITA 2, which the WTO brokered in 2015 to expand tariff-free status to another 201 information technology products.[4] Signing ITA 2 would also bring the Dominican Republic in line with other countries in the region such as Costa Rica. The Dominican Republic should also ratify ITA 1.

Closely related to trade policy, customs procedures determine the ease with which imports and exports enter and exit the country. The efficiency of the Dominican Republic's customs clearance process scores 2.60 out of 5, slightly above the LAC regional average (2.48) (World Bank, 2023[76]). For firms in the free zones, customs procedures are particularly agile as Article 32 of Law 8-90 created a Customs Deputy Directorate dedicated exclusively to the free zone regime (Congreso Nacional, 1990[22]). This allows the DGA to devote additional resources to the free zones and each free zone industrial park has its own DGA Customs Office. When imports destined for the free zones arrive in the Dominican Republic, they do not go through the usual customs procedures in airports or maritime ports but are instead accompanied directly to the free zone industrial park where the customs checks take place. For exports from the free zones, all customs paperwork is verified in the industrial park by the DGA before being dispatched to the airport or maritime port (AZFA, 2024[77]).

Law 168-21, passed in 2021, is expected to improve the Dominican Republic's customs system further, as it legalises electronic customs declarations, so invoices and other documents can now be submitted electronically (Congreso Nacional, 2021[78]). The law also reiterates the status of authorised economic operators (AEOs), individuals or firms which are eligible for simplified customs processes. As of 2022, more than 500 firms had been certified as AEOs (WTO, 2022[79]). The advantages of AEO certification

include a reduced number of physical inspections, reduced requests for documents, dedicated lanes for AEO cargo and dedicated storage areas at ports (DGA, 2024[80]).

In addition to this relatively new law, the DGA has also rolled out two other programmes. The 24-hour Dispatch (D24H) programme aims to reduce the time taken for imports to clear customs from seven days to one (DGA, 2024[81]). Since its launch in 2021, the programme has cut the average container dispatch time to four days, contributing to taxpayer savings of approximately DOP 1.38 billion (Dominican pesos) due to reductions in expenditure on storage, transport and security (DGA, 2024[82]). Export More (*Exporta Más*) aims to increase Dominican exports through greater digitisation and automation of customs processes, improvements to the One-Stop Shop for External Trade (VUCERD – see Section 3.3.1) and more non-intrusive inspections of goods. Since 2021, the Export More programme has facilitated exports worth more than USD 15 billion by 500 firms (Presidencia, 2024[83]). This progress appears encouraging; to further support the development of the semiconductor industry, the DGA will need to ensure that its customs procedures can adapt to semiconductor-related products, which are often delicate and can be hazardous. This would entail close collaboration between the DGA and the Ministry of the Environment and Natural Resources (MIMARENA), the agency responsible for the Certificate for the Import of Industrial Chemicals which needs to be applied for via VUCERD 15 days before the products reach the Dominican Republic (DGA, 2020[84]).

3.3.4. Permitting

Permitting – the process by which firms receive government authorisation to carry out a certain activity – is another part of the business environment which could be improved further to increase the Dominican Republic's ability to attract semiconductor and microelectronics firms. This section builds on the analysis of free zone administrative processes in Section 3.2.2 by focusing on two processes that were often raised by stakeholders interviewed for this report as challenges: construction and environmental permits.

Government officials, industrial parks and firms all expressed concern that delays to construction permits could last almost one year. Data from the World Bank confirm that it takes a firm in the Dominican Republic 206 days, on average, to obtain all necessary construction licences, request and receive the required inspections, and obtain utility connections. This is longer than the regional average (191 days) and substantially longer than in countries such as Costa Rica (138 days) or Panama (105 days). It should be noted, however, that the Dominican Republic scores 70.8 out of 100 – better than the regional average of 63.2 – for dealing with construction permits, which takes into account variables other than just permitting time, such as cost and building quality (World Bank, 2019[85]). Nonetheless, for an industry like semiconductors, which relies on the construction of dedicated manufacturing plants, the slow construction permits in the Dominican Republic could act as a barrier to investment.

The main reason for the delay in construction permits is the large number of procedures (as many as 21) and government agencies (as many as 18) that a firm must navigate. Although the Ministry of Housing and Construction (MIVED) is the lead agency, firms often also have to interact with MIMARENA, the Ministry of Public Works and Communications, the state-owned electricity transmission and distribution companies and water authorities. In addition to these national institutions, firms are also required to deal with the local authorities in the area where they hope to build (CNC, 2024[86]).

Historically, there have been limited connections and data-sharing between these agencies, which has resulted in a fragmented and slow permitting process. However, MIVED has recognised that this is an area for improvement and so created the Construction One-Stop Shop (*Ventanilla única de la construcción*, VUC). With support from the government's Zero Bureaucracy programme (see Box 3.3), in 2022, MIVED launched VUC, which aims to bring together in a single place the institutions and procedures involved in the construction permitting process, reduce duplicate data requests of firms, and increase digitisation. The impact of VUC is still to be seen.

Box 3.3. The Zero Bureaucracy Programme

Since 2020, the Dominican Republic has prioritised regulatory reform. One of the major motivations for regulatory reform was a 2019 review of more than 2 300 government procedures, which estimated their economic and social cost at DOP 250 billion, the equivalent of 4.7% of GDP. This heavy bureaucratic burden was also reflected in the World Economic Forum (WEF) Global Competitiveness Index, which ranked the Dominican Republic 108th out of 141 countries for its regulatory burden, with a score of 33 points out of 100 (WEF, 2019[87]).

In response, the Dominican Republic launched the Zero Bureaucracy (*Burocracia Cero*) programme in 2020 to improve the efficiency of its public administration and increase the Dominican Republic's competitiveness. The programme has five overarching objectives:

- Reduce the costs of government bureaucracy and regulation.
- Increase the effectiveness and transparency of the public administration, by simplifying and redesigning processes.
- Promote the use of information and communications technology (ICT) to automate and digitise government procedures and public services.
- Improve the quality of regulations to increase public participation and trust.
- Monitor government procedures and public services to increase their productivity and ensure their continued improvement.

Specific reforms have included the introduction of the Construction One-Stop Shop (VUC), improvements to the industrial registry, reduced time for opening new businesses and certifying small and medium-sized enterprises (SMEs), quicker social security registrations and the digitisation of pension certificates.

As set out in Decrees 640-20 and 707-22, the Zero Bureaucracy programme is managed by four government agencies. The Ministry of Public Administration has overall responsibility for the programme. The National Competitiveness Council (CNC) co-ordinates and leads the implementation of the programme. The Ministry of the Presidency and the Government Office for ICT provide political and technical support respectively.

Between 2020 and 2024, the Zero Bureaucracy programme helped to reduce the average time spent on a sample of government procedures by 50%, which is estimated to have contributed to DOP 60 billion in savings (equivalent to 1% of GDP). During this period, the Dominican Republic improved its ranking for ease of complying with government regulations by 39 positions (according to the WEF's Executive Survey) and its ranking for government effectiveness by 38 positions (according to the World Bank's Worldwide Governance Indicators).

Sources: CNC (2024[86]), *Burocracia Cero - Improving Competitiveness through the Efficiency of Public Services*, Consejo Nacional de Competitividad; CNC (2025[88]), *Memorias Burocracia Cero 2022-24*, https://cnc.gob.do/wp-content/uploads/2025/01/Book-Memorias-2da-Fase-Rev1.pdf%20.

Related to their concerns about construction permits, firms consulted for this report also noted the slow process for obtaining environmental permits. MIMARENA oversees the Dominican Republic's environmental authorisation procedures, which are mandatory (with very few exceptions) for all projects, infrastructure developments, industries or any other public or private activities which could affect the country's natural resources, environment or public health. The ministry defines four categories of projects according to their expected environmental impact, from Category A (high likelihood of adverse

environmental impact) to Category D (low environmental impact). Appropriately, projects with a higher expected environmental impact require a higher level of environmental authorisation. However, this higher level of environmental authorisation also leads to significantly longer processing times (Table 3.8).

Table 3.8. Environmental permitting in the Dominican Republic

Summary of the four categories of environmental authorisation

	Category A	Category B	Category C	Category D
Impact	Potentially high environmental impact	Moderate environmental impact	No significant adverse impact	Low environmental impact
Environmental authorisation	Environmental Licence	Environmental Permit	Environmental Certificate	Certificate of Minimal Impact
Assessment	Environmental Impact Assessment	Environmental Impact Declaration	None	None
Other requirements	Measures to prevent, mitigate or compensate adverse impact	Measures to prevent, mitigate or compensate adverse impact	None	None
Maximum time limit for MIMARENA to reach a decision	190 working days	125 working days	60 working days	30 working days

Source: OECD analysis of MIMARENA (2014[89]), *Compendio de Reglamentos y Procedimientos para Autorizaciones Ambientales de la República Dominicana*, https://eitird.mem.gob.do/wp-content/uploads/2019/12/Compendio-de-Reglamento.pdf.

Even though the Dominican Republics has created a dedicated one-stop shop for environmental services (VUSA), environmental permitting is nonetheless highly onerous and the single longest process that firms must go through in order to operate in the free zones, lasting an average of 13 weeks for some advanced manufacturing firms (see Section 3.2.2). For projects categorised in Categories A and B, this can be substantially longer. VUSA has not yet managed to address some of the fundamental challenges of the environmental permitting process. For example, a lack of clear criteria means that firms face considerable uncertainty about which category of environmental authorisation they are required to seek. Instead, MIMARENA appears to have substantial discretion to determine a firm's category after the firm has submitted its application, potentially increasing its administrative requirements and slowing down the process. Another challenge is that VUSA still requires firms to pay their application fee by cheque, which is slower than electronic payment (World Bank, 2023[36]).

The burdensome process of environmental permitting is particularly relevant for semiconductor firms. As alluded to in the analysis of foreign investment restrictions in Section 3.3.2, the semiconductor manufacturing process relies on inputs such as fluorinated gases and wet chemicals, which can contribute to greenhouse gas emissions and environmental contamination. This is particularly the case for the fabrication stage of the value chain, but ATP can also cause adverse environmental impacts. It is therefore reasonable that semiconductor projects should require one of the higher categories of environmental authorisation, in order to protect the Dominican Republic's environment. However, this does entail a long wait time for firms.

To address the ongoing concerns around construction and environmental permitting, the CNC, MIVED and MIMARENA should streamline these processes. The Zero Bureaucracy programme is set to continue, with its next phase taking place between 2024 and 2028, so the Dominican Republic should consider using the programme to target improvements in permitting. Currently, MIVED and MIMARENA take a sector-agnostic approach to permitting and do not prioritise applications from certain sectors over others; one possible improvement would be to fast-track permits for priority sectors, including semiconductor, microelectronics and other advanced manufacturing projects. Regarding environmental permitting, the

Dominican Republic should set transparent criteria – for example, based on a firm's sector, their inputs, goods manufactured and waste produced – that provides clear guidance as to a firm's category of environmental authorisation before a firm submits its application. The World Bank estimates that firms must fulfil 15 administrative requirements to receive environmental authorisation (World Bank, 2023[36]), so there may also be scope to combine some of these requirements or carry them out in parallel as opposed to sequentially.

Given that the semiconductor industry does not currently operate in the Dominican Republic, MIVED and MIMARENA staff may require specific training in order to assess permit applications from firms in that sector.

3.3.5. Finance

The semiconductor industry is highly capital-intensive: one study estimated that the global semiconductor industry's net capital expenditure as a percentage of sales is almost 12%, one of the most capital-intensive sectors (Damodaran, 2025[90]). Although the segments of the semiconductor value chain that the Dominican Republic aims to develop have relatively lower capital expenditure, firms will still need finance to purchase assets including buildings, equipment and land, as well as working capital for their daily operations.

While no semiconductor firms currently operate in the Dominican Republic, the evidence on barriers to finance for firms already operating in the country is mixed. Only 3% of firms surveyed in the free zone regime named access to finance as a critical bottleneck to their operations, which suggests that this is not a significant problem (World Bank, 2022[91]). More anecdotally, however, firms and industrial parks raised concerns that difficulties in accessing finance were one of their major obstacles to expansion. According to them, difficulties included the limited domestic sources of finance, as most firms and parks rely on bank loans, the high cost of finance, and insufficient long-term capital.

Data appear to substantiate some of these concerns. Banking depth in the Dominican Republic is low compared to other countries in the region: banking credit to the private sector as a percentage of GDP is 29.5%, below the LAC regional average of 46.9% (World Bank, 2023[92]). On the cost of finance, the Dominican Republic's lending interest rate – the bank rate that usually meets the short- and medium-term financing needs of the private sector – is 14.4%, higher than in Panama (6.9%), Costa Rica (9.1%) or Mexico (11.6%), which suggests that financing from Dominican banks is relatively expensive (World Bank, 2023[93]).

To support firms in the semiconductor ecosystem to access finance, the MICM should work closely with the Development and Export Bank (BANDEX). BANDEX is still relatively new, having been established in its current form in 2021 through Law 122-21, and its mission would seem to align well with the needs of the advanced manufacturing sector. Majority-owned by the Dominican state and backed by a government guarantee, BANDEX aims to provide both financing and technical support to develop strategic, often export-oriented, sectors of the economy. BANDEX financing often takes the form of concessional loans, with a lower interest rate than an equivalent loan from a commercial bank.

As of 2023, BANDEX had total assets worth DOP 22.5 billion and a net loan portfolio of DOP 7.35 billion. In 2023 alone, BANDEX issued DOP 5.16 billion in loans, of which 14% went to manufacturing (the second-highest share of any sector) and 6% went to construction (BANDEX, 2023[94]). BANDEX should consider how some of its financial support could be tailored more closely to the requirements of the semiconductor sector, for example through larger loans or extended repayment schedules. Additionally, 12% of BANDEX loans in 2023 went to SMEs, which suggests that the bank could also support some firms in the local economy to become suppliers to the semiconductor industry, an important step in promoting linkages between the free zones and local economy and ensuring that the impact of the semiconductor industry is felt throughout the economy (see Section 3.2.3). In parallel, the MICM should also collaborate

with BanReservas, another state-owned bank, to understand how its products could support advanced manufacturing firms.

As highlighted in Section 3.2.4, some free zone industrial parks face barriers to expanding and attracting advanced manufacturing firms due to expensive and scarce land. While BANDEX and BanReservas loans could theoretically help industrial park operators purchase and develop land, the high capital requirements suggest that additional sources of financing should also be considered. Nigua Free Zone, an industrial park located just outside Santo Domingo and home to over 30 firms including medical and electrical device manufacturers, presents an interesting case study for alternative sources of financing. Nigua does not rely on bank loans as the park is an asset managed by Pioneer Investment Fund and owned by large Dominican pension funds. This source of financing has allowed Nigua to engage in an expansion project, adding 230 000 m^2 and 15 industrial buildings to its facilities (Nigua Free Zone, 2023[95]).

The example of Nigua points to some of the benefits of receiving equity from institutional investors such as pension funds. However, the case of Nigua is relatively rare, as Dominican pension funds tend not to invest in infrastructure projects and their portfolios are highly concentrated in government securities: approximately 75% of their assets under management are bonds from the Ministry of Finance or the Central Bank of the Dominican Republic (IFC, 2023[42]). Given that Dominican pension funds have assets worth USD 17.3 billion (equivalent to 15.4% of GDP), the Dominican Republic could aim to steer a larger share of this towards the development of industrial infrastructure by engaging closely with the Stock Market Superintendence and Pensions Superintendence. This would build on a previous OECD recommendation to modify regulations to encourage greater investment from pension and mutual funds in the Dominican Republic (OECD, 2022[96]). Evidently, using pension funds as sources of finance presents risks and requires close regulatory oversight. However, investing in industrial parks could provide the pension funds with reliable income streams, given the long-term lease agreements and rental income from the parks' firms.

3.4. Science, technology and innovation

A key factor in the development of semiconductor and microelectronics industries is an STI ecosystem that connects firms and academia, stimulates R&D and fosters knowledge spillovers. Several institutions play important roles in the Dominican Republic's STI ecosystem. Within the government, MESCyT is, as of 2025, the ministry in charge of the country's system of higher education, science and technology. It is responsible for the National Fund for Innovation and Scientific and Technological Development (FONDOCYT), which provides public funding to organisations – including universities and research centres – for R&D projects, the purchase of equipment and the development of research infrastructure.

As of 2021, there were 48 universities and higher education institutions in the Dominican Republic. The three largest recipients of FONDOCYT funding – an indicator of involvement in research, development and innovation activities (RD&I) – were the Autonomous University of Santo Domingo (UASD), the Pontifical Catholic University Madre y Maestra (PUCMM) and Santo Domingo Institute of Technology (INTEC) (UNCTAD, 2021[7]). In 2024, UASD received FONDOCYT support to investigate the semiconductor properties of germanium diselenide. PUCMM, headquartered in the northern Santiago province, was the first Dominican university to file for and obtain an international patent, for its research in nanotechnology (Pimentel, 2014[97]; PUCMM, 2016[98]). INTEC, regarded as the country's leading technical institute, also received FONDOCYT funding to research the semiconductor properties of graphene oxide (MESCyT, 2024[99]).

After government agencies and universities, firms are the third main type of institution active in the Dominican Republic's STI ecosystem, albeit to a much lesser extent. In general, few firms in the country engage in innovation; those which do tend to focus on incremental improvements to processes and products, often adopting or adapting technologies from other countries (UNCTAD, 2021[100]). In recent

years, some firms have partnered with Dominican universities. For example, in 2022, Eaton Corporation – an American firm which manufactures a variety of electric circuit breakers in PIISA Industrial Park – opened an industry design centre adjacent to the INTEC campus. The design centre focuses on product development for Eaton's major product lines and supports manufacturing innovation (Eaton, 2022[101]). The design centre is the latest example of Eaton and INTEC's relationship, as the multinational has previously contributed to funding laboratories and laboratory equipment at INTEC (INTEC, 2022[102]). The collaboration between Eaton and INTEC emerged organically, as a result of decades of co-existence in the same ecosystem. In general, however, industry-academia collaboration in the Dominican Republic remains rare.

3.4.1. STI challenges

The Dominican Republic's STI ecosystem has several areas for improvement. First, government agencies with responsibility for STI have been frequently created and then dissolved in recent years, contributing to a lack of consistent and coherent policymaking. For example, in 2020 Decree 175-20 dissolved the Council for Innovation and Technological Development – the body responsible for co-ordinating innovation policy – and replaced it with three new entities: a Presidential Commission for Promoting Innovation, the National Innovation Centre and the National Fund for Supporting Business Innovation (Presidencia, 2020[103]). However, following the change of government in 2020, Decree 175-20 was repealed by Decree 464-21 which replaced these three new entities with the Innovation Cabinet (Presidencia, 2021[6]). Similarly, in 2024, the government announced that the lead ministry MESCyT would be merged with the Ministry of Education (MINERD), which will assume most of MESCyT's former functions (Presidencia, 2025[104]). However, the functions of MESCyT's Vice-Ministry of Science and Technology have not yet been assigned to another part of government, so it is currently unknown which agency will assume responsibility for these critical policy areas. The Dominican Republic must ensure that the MESCyT-MINERD merger does not disrupt the implementation of the National Innovation Policy 2030 (see Section 3.4.2) or efforts to attract semiconductor and microelectronics investments.

A second area for improvement relates to the weak links between academia and industry. One business association interviewed for this report noted the very limited relationships between its members and universities. Similarly, representatives from academia noted firms' lack of engagement with their research. These impressions are supported by the Global Innovation Index 2024, which ranked the Dominican Republic 100th out of 133 countries for university-industry R&D collaboration, well below Costa Rica (68th) and Mexico (74th) but above Panama (111th) (WIPO, 2024[105]). It is true that firms in the Dominican Republic's Medical Devices and Pharmaceuticals Cluster are developing partnerships with universities such as PUCMM, INTEC and Universidad Iberoamericana in relation to human capital and skills training. Moreover, the cluster's Technical Education Committee engages with vocational and higher education institutions to co-develop education programmes, and also has outreach initiatives for students (Báez, 2024[106]). However, it remains to be seen whether these partnerships can also foster long-lasting R&D collaboration between the firms and academic institutions.

A third challenge is the lack of reliable STI data, which is important for guiding evidence-based policymaking in this domain. United Nations Trade and Development notes that the Dominican Republic's statistics in these areas are only sporadically collected and updated (UNCTAD, 2021[7]), while the OECD has previously highlighted that the country does not report official R&D figures (OECD, 2020[39]). As a result, the Dominican Republic is absent from datasets on R&D expenditure held by the World Bank and the Ibero-American Network for Science and Technology Indicators (RICYT) (World Bank/UIS, 2024[107]; RICYT, 2022[108]). The absence of data is potentially problematic as it makes it more challenging for policymakers to assess the state of the STI ecosystem, design policy and monitor whether policy is having the intended impact. It could also raise concerns with potential investors in R&D-intensive industries like semiconductors.

Fourth, although the Dominican Republic's R&D data are subject to limitations, they suggest that R&D expenditure is extremely low. The National Innovation Policy estimates that R&D expenditure is in the range of 0.01-0.03% of GDP (Gabinete de Innovación, 2022[109]), which is significantly lower than the average R&D expenditure for the LAC region (0.55%) as well as the OECD (2.7%) (UIS, 2022[110]; OECD, 2022[111]). Lack of investment in R&D could have several disadvantages for the Dominican Republic's advanced manufacturing industry, including reduced absorptive capacity of firms,[5] slower development of new technologies, fewer improvements to existing products and processes, and lower productivity. High levels of R&D investment are essential for the global semiconductor industry, which spends on average 13% of its revenue on R&D per year (Damodaran, 2025[112]).

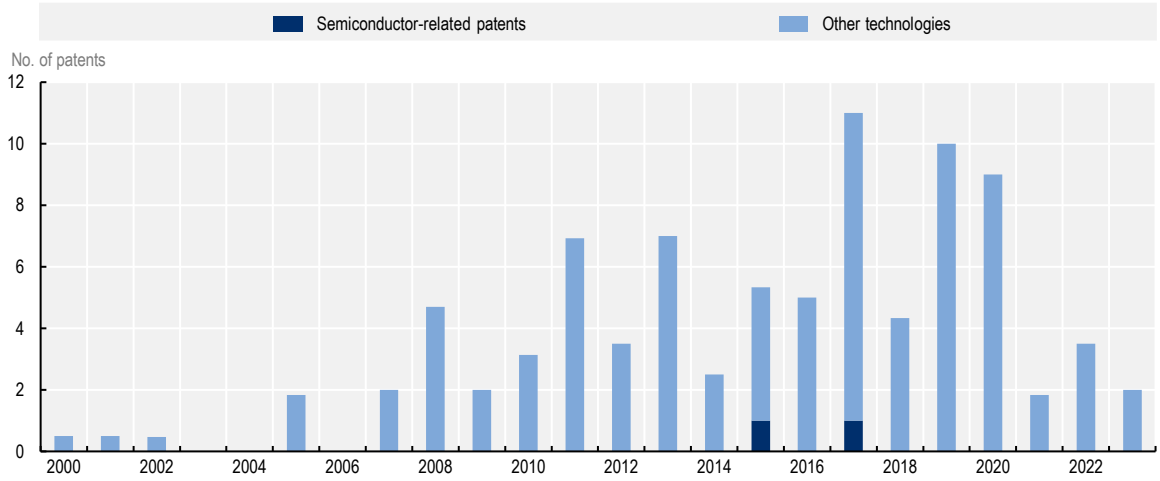
There are several mutually reinforcing explanations for low R&D investment. The Dominican Republic's productive structure tends to favour activities with low technological content, which means that firms rely on labour-intensive production and have relatively few incentives to invest in R&D or pursue competitive advantage through technology adoption. Multinational corporations operating in the Dominican Republic typically prefer to conduct R&D in the countries where they are headquartered, such as the United States, where they may have access to the necessary R&D talent and infrastructure, an IP regime with stronger protections and generous government R&D incentives. Indeed, the Dominican Republic offers very low public funding for R&D. Between 2005 and 2019, FONDOCYT, which is practically the only source of government research funding in the Dominican Republic, only allocated the equivalent of DOP 3.69 billion to 539 projects, an annual average of approximately DOP 263 million (UNCTAD, 2021[7]).

The fifth challenge relates to the effectiveness of FONDOCYT, which struggles to support the country's STI ecosystem. FONDOCYT's disbursement of R&D funding is slow and incomplete. Between 2005 and 2018, just over half of the total awarded FONDOCYT funding was successfully allocated; the remaining half was delayed or never disbursed (UNCTAD, 2021[7]). The lack of funding consistency could hinder innovative activities in an R&D-intensive industry like semiconductors. Additionally, FONDOCYT provides extremely limited funding to firms, due to Law 139-01 and the subsequent general regulation in 2009, which states that FONDOCYT must prioritise funding to academic institutions (Congreso Nacional, 2001[113]; MESCyT, 2009[114]). Firms can receive FONDOCYT funding but only when they are in a consortium with higher education institutions, research centres or research institutions, and these institutions must be the lead partner.

According to one study, firms participated in only 5% of all FONDOCYT-funded projects between 2005 and 2018 and no firm had ever led a project (Gómez-Valenzuela, Rosa and Tejeda, 2020[115]). This lack of engagement between FONDOCYT and firms is reinforced by stakeholder interviews, as several firms in advanced manufacturing sectors interviewed for this report claimed that neither they nor their peers had received support from FONDOCYT, and the executive vice-president of a large industry association did not even know about FONDOCYT or the funding it offered. The challenges associated with FONDOCYT R&D funding are made greater by the absence of alternatives, such as an R&D tax credit.

Taken together, these challenges contribute to very low levels of patenting. The number of patent applications filed in the Dominican Republic under the Patent Cooperation Treaty (PCT) – a proxy for high-potential patents – has been consistently low for all technologies over 20 years, with only 2 semiconductor-related PCT patent applications between 2000 and 2023 (Figure 3.1).

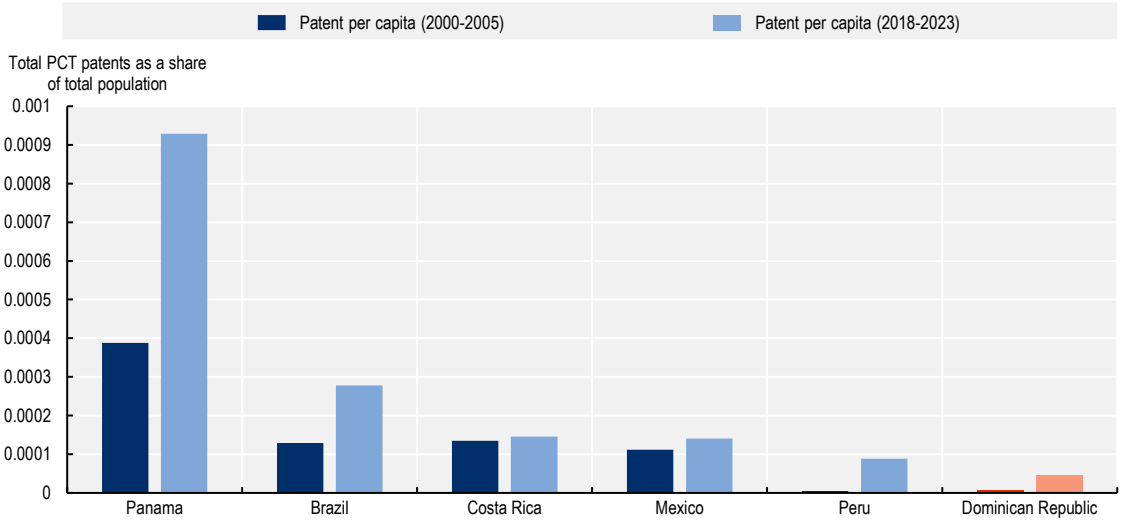
Figure 3.1. PCT patents related to semiconductor and other technologies in the Dominican Republic



Note: Data refer to patent applications filed under the PCT by earliest filing date. Patent application follows fractional counting. Patents related to semiconductors include keywords such as "semiconductor", "transistor", "integrated circuit", "silicon wafer", "logic chip" and "memory chip". The latest observations are for 2023.
Source: OECD (n.d.[117]), *STI Micro-data Lab: Intellectual Property Database*, http://oe.cd/ipstats (accessed on 15 October 2025).

Figure 3.2 shows that the Dominican Republic lags behind other countries in the region in terms of PCT patent applications per capita. This is confirmed by the Global Innovation Index, in which the Dominican Republic ranks 92nd (out of 133 countries) for PCT patents, below Mexico (76th), Panama (79th) and Costa Rica (80th) (WIPO, 2024[105]). This low ranking is perhaps not surprising given that multinational corporations operating in the Dominican Republic typically perform their R&D outside of the country. In the short term, there is an argument for the Dominican Republic to focus less on the registration of new patents and more on the enforcement of existing IP rights. It is therefore encouraging that, in 2024, the United States Trade Representative removed the Dominican Republic from its Special 301 Report Watch List, recognising the country's progress in IP enforcement and transparency and noting advances in combating signal piracy and counterfeit medicines, a larger number of specialised IP prosecutors and the publication of enforcement-related statistics (USTR, 2024[116]). This could also act as a positive signal to potential semiconductor investors.

Figure 3.2. PCT patents per capita in selected countries and periods



Note: Data refer to patent applications filed under the PCT by earliest filing date. Patent application follows fractional counting. Population refers to total population in the country. Noise reduction is achieved over an average period of five years. Values represent patents per capita, multiplied by 100 for readability. The latest observations are for 2023.
Sources: OECD (n.d.[117]), *STI Micro-data Lab: Intellectual Property Database*, http://oe.cd/ipstats (accessed on 15 October 2025); for population data, World Bank (n.d.[118]) *Population, total (indicator)*, https://data.worldbank.org/indicator/SP.POP.TOTL (accessed on 15 March 2025).

3.4.2. National Innovation Policy 2030

It is an important first step that the Dominican Republic has acknowledged these innovation challenges and aims to address many of them through the National Innovation Policy 2030 (PNI). Formally approved through Decree 278-22, the PNI was published in 2022 and is structured around three main objectives (Presidencia, 2022[119]). The first objective is to develop human capital with the skills required to participate in the knowledge economy and fourth industrial revolution.

The second is to establish an effective governance framework for the Dominican Republic's innovation ecosystem. To achieve this objective, the PNI prioritises several actions. These include creating a National System of Innovation Indicators and conducting a National Innovation Survey. Other actions relate to establishing a network of Innovation Laboratories, signing a National Innovation Pact to secure the support of all sectors of the economy and society, and developing a National Plan to Promote Intellectual Property.

The third objective is to increase investment in RD&I to 1% of GDP by 2030. Actions to support this objective include the creation of an Innovation Support Fund (*Fondo de Apoyo a la Innovación*, FAI), which would see the Dominican government co-finance business innovation, although the FAI has not yet been established and it remains to be seen how it would complement the existing FONDOCYT. The PNI also calls for the establishment of a National Network of Public-Private Incubators to support innovative start-ups. The PNI sets milestones for all these actions for 2024, 2027 and 2030 (Gabinete de Innovación, 2022[109]).

The PNI's choice of objectives is sensible but its implementation is inconsistent. Of the actions listed in the previous paragraphs, only the National Innovation Survey appears to be on track – as the National Statistics Office (ONE) successfully conducted a survey of innovation in businesses in 2022 – and many actions are not meeting their milestones or have not even started. Therefore, the recommendations in this report focus on putting in place strong fundamentals for the Dominican Republic's STI ecosystem. These fundamentals would support both the development of a semiconductor industry and the country's economic development more broadly.

3.4.3. Fundamentals for enhancing the STI ecosystem

The Dominican Republic must build on the progress of ONE's National Innovation Survey by mapping the existing, decentralised sources of R&D data – which are currently collected by, amongst others, ONE, MESCyT and the Ministry of Finance – and then formalising and centralising the R&D data collection process in one lead agency. Given that no Dominican government agency currently collects, validates, organises and publishes STI indicators on a regular basis, it is likely that the agency staff may, in the first instance, require training. The agency in charge of the new centralised R&D data collection should adhere to international statistical standards, such as the OECD *Oslo Manual*, which sets standards for constructing indicators of technological innovation (OECD/Eurostat, 2018[120]), and the *Frascati Manual*, which establishes a methodology for collecting and using R&D statistics (OECD, 2015[121]). The development of robust STI indicators would also align with a recent OECD legal instrument which commits to promoting "reliable, trustworthy, and internationally comparable official data in alignment with FAIR principles [findability, accessibility, interoperability, and reusability], statistics and empirical evidence in science, technology, and innovation" (OECD, 2024[122]).

As with the lack of reliable R&D data, it is a step in the right direction that the PNI and Digital Agenda both already recognise that low R&D investment is an area for improvement (Gabinete de Transformación Digital, 2021[123]). To increase R&D investment, the Dominican Republic could introduce an R&D tax credit to incentivise private R&D and innovation by making eligible investments financially advantageous to firms. As set out in Section 3.2, firms in the free zone regime have a 100% exemption on corporate income tax, so the MICM, the Ministry of Finance and others must consider the most suitable approach for the R&D tax credit to incentivise firms with no tax liability. A refundable tax credit would allow firms with no tax liability to claim the full value of the credit by receiving a refund from the government, typically worth the difference between the tax credit and liability. These refunds could incur a fiscal cost, at a time when the government is looking to limit expenditure in line with the Fiscal Responsibility Law (see Box 3.1). However, if the rates of business R&D are as low as the data suggest, the introduction of refundable R&D tax credits should initially be relatively inexpensive for the Dominican government. Refundable tax credits are less complex to administer than, for example, transferrable tax credits and hence are on balance preferable.

The R&D tax credit must be carefully designed to achieve the desired policy objective. The Dominican Republic should carefully define the R&D activities and costs that are eligible for the tax credit. It is also important to consider the rate of the tax credit and whether there should be a cap on the cost of the credit, to minimise its fiscal impact. The tax credit should align with other types of R&D support (such as grants – see below) and other tax incentives (such as the free zone tax exemptions). It is also critical that the tax credit is straightforward for the government to administer and does not place a significant administrative burden on firms, while guarding against abuse. In general, the R&D tax credit should be available to firms both inside and outside the free zone regime and support a broad range of sectors, to encourage innovation across the economy. If designed and implemented correctly, the R&D tax credit could increase private investment in R&D and foster greater industry-academia collaboration.

Alongside introducing an R&D tax credit, the Dominican Republic should significantly reform FONDOCYT and increase the funding available for RD&I grants. In overhauling FONDOCYT, the Dominican Republic should draw on past OECD research on innovation agencies, which recommends clear governance rules for the agency and formal co-ordination mechanisms, stronger links between the design and implementation of funding programmes, and robust M&E (OECD, 2017[124]). If the Innovation Support Fund (FAI) is ever established (see Section 3.4.2 on the National Innovation Policy), the Dominican Republic should consider carefully how FONDOCYT and the FAI interact with one another, to avoid duplication between the two institutions.

The Dominican Republic should also consider best practices for innovation agencies in upper-middle income countries. A World Bank report examines case studies from Colombia, Serbia, South Africa and other countries to suggest that effective innovation agencies should have a clear but adaptable mission,

sustainable funding, strategic partnerships, capable staff, and adopt diagnostic-based interventions and strong M&E (World Bank, 2019[125]). These principles could offer guidance to the Dominican Republic as it reforms FONDOCYT to ensure that it can support the development of a semiconductor ecosystem.

Whereas R&D tax credits give firms the flexibility to decide which projects to invest in, the Dominican Republic should consider whether the reformed FONDOCYT should prioritise certain strategic sectors and technologies for R&D grants, such as semiconductors and microelectronics. The FONDOCYT reforms should also remove the barriers to firms accessing R&D funding and leading FONDOCYT-funded projects; currently only academic institutions can lead FONDOCYT projects (MESCyT, 2009[114]).

3.5. Infrastructure

This section focuses on three types of infrastructure that support the development of a semiconductor ecosystem: electricity, water and transport. Analysis suggests that the Dominican Republic's electricity and water infrastructure have areas for improvement, but its transport infrastructure is one of the country's strengths.

3.5.1. Electricity

Stable and affordable energy is a critical input for semiconductor manufacturing. The semiconductor industry relies on electricity for many processes, including operating specialised equipment and regulating the manufacturing plant's temperature and other aspects of its environment. Although semiconductor ATP is typically less electricity-intensive than the wafer fabrication stage of the value chain, it still depends on a strong electricity supply. More broadly, low electricity prices are associated with a competitive manufacturing sector and a dynamic business environment, which can favour inward FDI.

The institutional landscape for the Dominican Republic's electricity sector is complex. The Ministry of Energy and Mines (MEM) oversees the country's energy sector, which includes policymaking for the electricity sector. The National Energy Commission (CNE) issues recommendations relating to granting electricity concessions, manages applications for renewable energy incentives and has some policymaking and regulatory functions. The Electricity Superintendence (SIE) is the electricity regulator and is responsible for setting electricity tariffs. The General Electricity Law 125-01 established the CNE and SIE. Law 100-13 established MEM and made the CNE and SIE accountable to it (Congreso Nacional, 2013[126]). Historically, however, the mandates of all three institutions have overlapped, giving rise to disagreements (EIU, 2015[127]). While MEM, the CNE and SIE set the policy and regulatory frameworks for the country's electricity sector, the Coordinating Body has a primarily operational role, as it oversees transactions in the wholesale electricity market and manages the national interconnected electricity system (SENI). Most, but not all, of the electricity produced in the Dominican Republic is connected to the SENI, which brings together electricity generation, transmission and distribution infrastructure.

The Dominican state's involvement in the electricity market varies by segment. In the generation segment, firms can be privately owned (e.g. Punta Cana-Macao Energy Consortium, CEPM), state-owned (e.g. Dominican Hydroelectric Generation Company, EGEHID) or public-private (e.g. Haina Electricity Generation Company). Private firms play the largest role, accounting for 73% of electricity generated in 2022 (IFC, 2023[42]). The generation segment also includes auto-producers, which are firms or other entities that generate electricity for their own consumption and can sell their surplus electricity to the SENI or other third parties. In the transmission segment, the state-owned Dominican Electricity Transmission Company (ETED) has a monopoly. The distribution segment is dominated by three regional state-owned enterprises (SOEs): EDEsur, EDEnorte, EDEeste, referred to collectively as the EDEs. Until 2021, the Dominican Corporation of State-Owned Electricity Enterprises co-ordinated the activities of all electricity SOEs, but it was dissolved by Decree 342-20 and replaced by the Unified Council of the Distribution

Companies (*Consejo Unificado de las Empresas Distribuidoras*, CUED) due to mismanagement and a lack of government oversight (World Bank, 2023[128]). The average electricity price for industrial users in the Dominican Republic is approximately USD 0.16 per kilowatt-hour (IMF, 2024[34]).

On the whole, electricity is a challenge for the Dominican Republic's manufacturing sector. According to one survey, free zone firms named electricity as one of their top three bottlenecks in the Dominican Republic (World Bank, 2022[91]). Despite this, the reliability and affordability of electricity is generally significantly better for firms in the free zones than in other parts of the economy. This is because many free zone firms benefit from the status of non-regulated user of the SENI.

To qualify as a non-regulated electricity user, a firm must have a power demand of at least 1 megawatt (MW) and receive authorisation from the SIE by fulfilling the requirements in resolution SIE-040-2013 (Congreso Nacional, 2001[129]; SIE, 2013[130]).[6] Non-regulated users are authorised to negotiate directly with electricity generators in the wholesale market; as large electricity consumers, non-regulated users are typically able to secure prices cheaper than the regulated electricity tariff that regulated users must pay. This also allows non-regulated users to bypass the EDE electricity distribution companies and avoid some of their outdated distribution infrastructure, improving the reliability of their electricity supply. In contrast, the majority of electricity consumers in the Dominican Republic are regulated users, relatively small electricity consumers that pay the regulated electricity tariff set by the SIE and receive their electricity through the state-owned EDE distribution companies. As of early 2025, the SIE had authorised 249 entities to operate as non-regulated users (SIE, 2025[131]). Although non-regulated users represent a small minority of electricity consumers, their share of electricity demand is increasing, from about 8% of total SENI demand in 2010 to 12% in 2020 (CNE, 2022[132]).

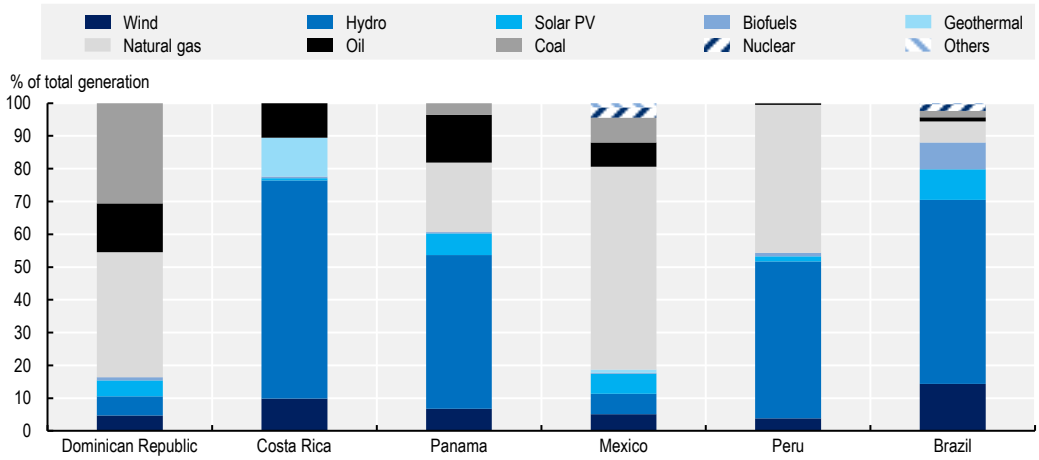
It is a reasonably safe assumption that semiconductor or microelectronics firms in the Dominican Republic would benefit from the more reliable and affordable electricity supply of non-regulated users. It is possible that these firms could become non-regulated users in their own right, by receiving authorisation directly from the SIE. Alternatively, some free zone industrial parks also qualify as non-regulated users and are then able to supply electricity to the firms located in their parks on favourable terms. Park operators interviewed for this report noted that their status as non-regulated users is an important factor in attracting firms to establish their operations.

Electricity generation

The Dominican Republic has an installed electricity generation capacity of 5 985 MW and, in 2024, total electricity generated was 23 067 gigawatt hour (GWh) (OC, 2025[133]). However, annual electricity demand is expected to increase substantially by 2030, with some projections suggesting at least 30 000 GWh (Government of Canada, 2024[134]; UASD, 2025[135]). The growth of semiconductor and microelectronics industries would increase electricity demand even further, so it is necessary to expand generation capacity. This broadly aligns with Presidential Decree 3-24, issued in January 2024, that called for the development of electricity generation projects, from both traditional and renewable sources (Presidencia, 2024[136]).

The Dominican Republic should focus on expanding its capacity for renewable generation to meet the growth in national electricity demand, including from non-regulated users such as advanced manufacturing firms and industrial parks. As of 2023, fossil fuels accounted for 84% and renewables for the remaining 16% of the Dominican Republic's electricity generation, with hydropower accounting for 5.9%, wind for 4.7%, solar photovoltaic for 4.9% and biofuels for 0.9% (IEA, 2023[137]). Figure 3.3 shows that this share of renewables in electricity generation is comparable to Mexico but much lower than in countries such as Costa Rica, Brazil and Peru. The Dominican Republic relies heavily on imported fossil fuels, so accelerating the deployment of renewables could reduce this import dependence and help to shelter Dominican industry from supply disruption and global fuel price shocks.

Figure 3.3. Electricity generation sources in selected countries



Sources: OECD calculations based on IEA (n.d.[138]), *Countries and regions (database)*, https://www.iea.org/countries (accessed on 15 October 2025). Latest data available for Costa Rica, Mexico and Brazil are from 2024. Latest data available for Dominican Republic and Peru are from 2023.

Expanding renewable generation would also reduce the carbon intensity of the Dominican Republic's electricity supply and support the country to meet its national and international climate commitments. Law 57-07 set the target that 25% of the Dominican Republic's electricity should be generated from renewable sources by 2025 (Congreso Nacional, 2007[139]). The country subsequently set a further target that renewables should account for 30% of electricity generation by 2030 (MEM, 2022[140]). The Dominican Republic has also submitted to the United Nations Framework Convention on Climate Change its plans for a 27% reduction in greenhouse gas emissions by 2030 relative to the business-as-usual scenario, and it aims to reach net-zero emissions by 2050 (Government of the Dominican Republic, 2020[141]).

The main policy tools for increasing renewable energy capacity are set out in Law 57-07. As with the incentives in the free zone regime (see Section 3.2.1), Law 57-07 relied primarily on tax exemptions. These included a 100% exemption on import tax and the ITBIS value-added tax on certain equipment and machinery required for renewable energy generation, as well as a 10-year corporate income tax exemption on income earned from renewable electricity generation or the sale of relevant equipment and machinery. Law 57-07 also provided a tax reduction on interest payments for the foreign financing of renewable energy projects, offered a feed-in tariff for renewable electricity, and introduced a 75% tax credit on the cost of capital equipment for auto-producers of renewable energy (Congreso Nacional, 2007[139]). However, fiscal reforms contained in Law 253-12 subsequently removed the corporate income tax exemption and reduced the tax credit for auto-producers from 75% to 40% (Congreso Nacional, 2012[142]). Despite these cuts, the impact of the Dominican Republic's renewable energy incentives appears to have been broadly positive, as the share of electricity generated from renewable sources doubled between 2015 and 2021 (WTO, 2022[79]).

Nonetheless, the Dominican Republic should increase further its renewable generation capacity to support, amongst other sectors, its semiconductor and microelectronics industries. The Dominican Republic can take several measures to incentivise and facilitate private investment in renewables. First, the Dominican Republic should streamline the onerous permitting process for renewable energy projects. Throughout the entire process – from obtaining the provisional energy concession until the start of the renewable facility's operations – prospective investors need to engage with approximately 19 different government agencies (GIZ, 2020[143]). Challenges include a lack of digitisation, which requires manual or paper-based input; repeated requests and duplications from the different agencies; a lack of

standardisation across these institutions; and a lack of consequences for any institution that causes a delay to the process or fails to respond to the prospective investor. Some of these challenges are similar to the administrative burdens previously analysed in the context of the free zone regime (see Section 3.2.2) and construction and environmental permits (see Section 3.3.4).

In 2024, ProDominicana integrated the energy sector into the One-Stop Shop for Investment (Presidencia, 2024[144]). This represents a positive step toward streamlining investment processes. Merging renewable energy investments into an existing one-stop shop, as opposed to creating a new standalone one-stop shop, is a pragmatic approach (see also Section 3.3.1). Nevertheless, this measure alone is insufficient: while the One-Stop Shop for Investment provides a clearer overview of the steps required for renewable energy investment, it has yet to address all of the administrative challenges highlighted in the previous paragraph. Therefore, the Dominican Republic will need to continue efforts to improve the renewable energy permitting process and reduce approval timelines. The provisions from the European Union's 2024 Net-Zero Industry Act, such as accelerated permitting processes for renewable projects and priority handling in dispute resolutions, might be examples to consider (European Parliament, 2025[145]).

As a second recommendation to increase renewable electricity generation, the Dominican Republic should ensure that its public tenders for renewable projects proceed smoothly and transparently. In 2023, Decree 65-23 introduced the requirement that competitive public bidding processes should be used to set the electricity prices for long-term renewable electricity contracts (Presidencia, 2023[146]; Ministerio de Hacienda, 2024[147]). In theory, inviting renewable energy developers to submit bids will increase competition and drive down electricity prices, and the long-term contract can provide the certainty to increase investor confidence and unlock financing. However, in practice, this type of public bidding process remains relatively new in the Dominican Republic, so it is important that these tenders are carefully implemented, set out clear terms and conditions and allow electricity policymakers to learn lessons that can be adopted for subsequent tenders. For example, in April 2025, MEM announced its intention to launch a tender for renewable energy and battery storage, although energy stakeholders expressed some concern that they were insufficiently consulted on the proposed terms of the tender and that key details relating to the tenders remained uncertain (CNE, 2025[148]; Future Energy Summit, 2025[149]).[7] This 2025 tender is an important opportunity to continue enhancing the transparency and predictability of the tender process and further increase investor confidence.

Third, the Dominican Republic could consider increasing electricity generation from auto-producers. There are currently limits on auto-producers' electricity generation. According to Decree 202-08, auto-producers are limited to a capacity of 1.5 MW and they cannot sell more than 50% of their electricity generated to the SENI or third parties (Presidencia, 2008[150]). These limits serve an important function, as they are designed to preserve grid stability and maintain a clear regulatory distinction between auto-producers and commercial electricity generators. Nonetheless, Article 96 of Decree 202-08 allows auto-producers that use biomass as their primary energy source to request an expansion of their installed generation capacity above 1.5 MW (Presidencia, 2008[150]). Based on this precedent, the Dominican Republic could explore the feasibility of raising the 1.5 MW limit on generation capacity for auto-producers of all types of renewable electricity, not just biomass. Similarly, the Dominican Republic could consider raising the 50% limit on the share of their electricity that auto-producers are allowed to sell.

The Dominican Republic should be mindful of the possible fiscal consequences, as raising these limits could also increase the number of auto-producers eligible for renewable energy tax credits under Law 57-07 (see above). Nevertheless, expanding auto-production is a plausible option for increasing the total renewable electricity supply in the Dominican Republic and so merits further examination. It is also worth noting that the Dominican Republic's industrial sector plays an important role in the country's electricity auto-production, with 42% of total auto-production generated by industrial firms (CNE, 2022[132]). This suggests that firms in the semiconductor or microelectronics industries could be well placed to become auto-producers.

In parallel to expanding renewable electricity supply, the Dominican Republic should also seek to manage electricity demand. Actions on energy efficiency can contribute to making energy more affordable, promote energy security and support climate goals (IEA, 2022[151]; 2023[152]). Decree 158-23 mandates energy efficiency measures in government buildings and across the public administration. For example, the public administration must adhere to requirements relating to air conditioning, lighting, refrigeration and vehicles (Presidencia, 2023[153]). However, these measures do not extend to other parts of the economy, such as the private sector or residential consumers of energy. According to MEM, the Dominican Republic is one of the few countries in the region that does not have a regulatory framework relating to energy efficiency (Suelo Solar, 2024[154]). A draft law on energy efficiency was first approved by the Senate in 2023, but it has not yet been passed by the Chamber of Deputies. The draft law proposed measures to promote energy-efficient technologies and encourage behavioural change amongst consumers (Senado, 2023[155]). The Dominican Republic should strengthen its efforts to conserve energy and pass legislation on energy efficiency. Conserving energy in other parts of the economy could help to ensure sufficient energy supply for advanced manufacturing, including semiconductors and microelectronics firms.

Electricity transmission and distribution

The Dominican Republic should also expand and upgrade its electricity transmission network. Improving the country's transmission infrastructure is especially important to integrate renewable energy into the SENI. For example, the areas with the highest potential for wind power are in the north, southwest and east of the country, which are relatively distant from the main load centres in Santiago and, in particular, Santo Domingo (IRENA, 2016[156]). Investing in transmission infrastructure helps to transfer electricity from the locations where renewable energy is generated to the demand centres, improving grid stability and minimising the uneconomic curtailment of renewable power.

The Dominican Republic's public investment in electricity – including transmission – is 0.17% of GDP, below the regional average (0.20%) (OECD, 2022[96]). It is therefore encouraging that MEM announced plans to invest USD 450 million in electricity transmission between 2024 and 2028, principally in the south of the country (MEM, 2024[157]). Additionally, the Dominican Republic issued its first sovereign green bond in 2024, raising USD 750 million (see Box 3.4). The Dominican Republic could consider allocating some of this financing to transmission infrastructure.

Box 3.4. The Dominican Republic's sovereign green bond

In June 2024, the Dominican Republic issued its first sovereign green bond in international markets, which was also the first sovereign thematic bond from the Caribbean and Central America region. The bond raised USD 750 million with a 12-year maturity. The annual coupon was 6.6%, 15 basis points lower than conventional bonds, indicating high demand from investors. According to the Dominican government, the green bond could help to finance or re-finance several categories of projects with a positive environmental impact. These categories include:

- renewable energy
- efficient and resilient management of water and wastewater
- low-carbon transport
- climate change adaptation
- natural resources, land use and marine protected areas.

Given the alignment between these projects and some of the infrastructure investments suggested by this report, the Dominican Republic's green bond could play a role in developing the infrastructure for the semiconductor and microelectronics ecosystems.

Sources: GGGI (2024[158]), *Dominican Republic's Green Bond Debut (USD 750 Million)*, https://gggi.org/dominican-republics-green-bond-debut-usd-750-million-after-publication-of-green-social-sustainable-bonds-framework/; World Bank (2024[159]), "Investing in a Greener Future: Successful Debut of the Green Bond in the Dominican Republic", https://blogs.worldbank.org/en/latinamerica/invertir-futuro-debut-bono-verde-republica-dominicana; Sustainalytics (2025[160]), "Government of the Dominican Republic: 2024 Green Bonds Allocation Review", https://www.creditopublico.gob.do/Content/emisiones_de_titulos/asg/opiniondesegundaparte/.

The most serious challenges facing the Dominican Republic's electricity sector relate to the distribution segment. It is possible that distribution challenges would not directly affect semiconductor or microelectronics firms, since these firms are expected to be non-regulated electricity users operating in the free zones. Their non-regulated status could allow some of these firms to bypass the distribution infrastructure controlled by the state-owned electricity distribution companies. Nonetheless, the technical, operational and financial challenges of the distribution segment have an impact on the Dominican Republic's broader industrial ecosystem and fiscal position. Consequently, it is worth analysing the nature of these challenges and considering possible solutions.

In 2024, approximately 37% of electricity generated was lost during the distribution segment before the electricity could reach a paying consumer (MEM, 2024[161]). The Dominican Republic's distribution losses are amongst the highest in the region, far higher than Panama (13%), Mexico (12%) or Costa Rica (8%) (CREES, 2025[162]). The electricity losses can be classified as technical or non-technical. Technical losses relate to outdated equipment and infrastructure – for example power lines, transformers or substations – which contribute to overcharged distribution lines and a lower power factor, increasing the likelihood of electricity losses. Non-technical losses, which make up most of the electricity losses, arise from electricity theft and illegal connections, unmetered electricity and fraud (World Bank, 2023[163]).

These electricity losses contribute to the chronic financial deficits of the EDEs, the state-owned distribution companies. Another major cause of these deficits is the EDEs' shortfall in electricity tariff revenue. The SIE regulator sets a below-cost electricity tariff – partly to insulate consumers from increases in fuel prices and inflation – which does not accurately capture the full costs of generation, transmission and distribution. As a result of this low electricity tariff, there is a gap between the price at which the EDEs can sell electricity to end users and the higher cost of electricity production. The EDEs therefore make large financial losses on the electricity that they sell, recovering only 60% of their costs in 2024 (MEM, 2024[161]). The country's

National Energy Plan 2022-2036 states that "the EDEs' financial unsustainability is the greatest challenge currently facing the Dominican electricity system" (CNE, 2022[132]).

The financial distress of the EDEs creates a heavy fiscal burden on the Dominican government. The government makes very large transfers to the EDEs – worth more than 1% of GDP per year (IMF, 2024[34]) – to close the gap between electricity production costs and distribution prices. To continue subsidising the EDEs, the Dominican Republic has diverted public funding away from electricity investment to cover losses by the EDEs or to address other current expenditure needs (OECD, 2022[96]; EIU, 2015[127]). Consistent under-investment in electricity infrastructure creates a vicious circle, making it more difficult to improve the outdated distribution equipment and infrastructure, leading to continued losses and ongoing government subsidies. The fiscal burden of the EDEs also reduces the Dominican Republic's ability to provide funding for other parts of the semiconductor and microelectronics ecosystem, such as renewable electricity generation and transmission or R&D.

As a result of these challenges in the distribution segment, the Dominican Republic's electricity sector has significant operational challenges. On average, customers on the public grid suffered 19 interruptions and 24 blackout hours per month in 2022, much higher than the regional average (World Bank, 2023[163]). Firms in the Dominican Republic lose on average 5% of their sales due to power outages, the second-highest in the LAC region (World Bank, 2018[40]). These outages disproportionately affect regulated users, such as firms outside the free zones. Outages require local firms to use generators which increases their operating costs; the Association of Industries of the Dominican Republic (AIRD), which represents firms in the local economy, says that these outages have decreased the competitiveness of its members (Renovables Verdes, 2024[164]).

The distinction between regulated users – smaller consumers of electricity that pay the regulated electricity tariff and are more exposed to power outages – and non-regulated users – larger consumers that can negotiate a lower tariff and are largely sheltered from outages – risks widening the divide between firms in the local economy and firms in the free zones. This has several implications for linkages (see also Section 3.2.3). The higher electricity costs of regulated users in the local economy increase their manufacturing costs and hence reduce their competitiveness compared to firms in the free zones or international firms. This creates an additional obstacle to supplying inputs to advanced manufacturing firms in the free zones. Furthermore, the probability of a firm holding an internationally recognised quality certificate – a factor that supports domestic linkages – decreases with losses due to power outages. As noted previously, outages predominantly affect regulated users in the local economy.

The Dominican Republic should reverse its under-investment in distribution infrastructure to tackle some of the underlying causes of power outages and the EDEs' high electricity losses. To address the technical losses, the Dominican Republic should upgrade distribution networks, invest in transformers and rehabilitate electricity circuits. To address the non-technical losses, it should invest in secure connections and additional electricity meters with anti-tampering controls (EIU, 2015[127]). The recent announcement by MEM of investments worth USD 300 million into distribution infrastructure over the next four years is a welcome development (MEM, 2024[157]). Multilateral organisations like the World Bank are also providing technical expertise and financial support to reform the Dominican Republic's electricity distribution system. Nonetheless, it is essential that this funding is effectively allocated and used for the intended infrastructure improvements. Ensuring that these resources are directed toward long-term investments, rather than current expenditures such as covering the EDEs' operational deficits, will be critical to achieving meaningful reform.

A complementary measure to improve electricity distribution in the Dominican Republic would be for the SIE to raise the tariff that the EDEs are allowed to charge regulated users. Such a reform has long been under consideration, both domestically and internationally. The Dominican Republic's National Pact for the Reform of the Electricity Sector 2021-2030 (*Pacto Nacional para la Reforma del Sector Eléctrico*) committed to cost-reflective electricity tariffs (Presidencia, 2021[165]). The National Energy Plan 2022-2036

argued that the electricity tariff should allow the EDEs to recover their costs (CNE, 2022[132]). The World Bank and International Monetary Fund have advocated for a review of the Dominican Republic's tariff scheme, ultimately leading to an increase in the electricity tariff (IMF, 2024[34]; World Bank, 2023[73]). In 2021, the SIE initiated quarterly tariff increases, the first time the tariff had been increased since 2011. However, in response to popular protests, in 2022, the SIE chose to delay further tariff increases to help consumers deal with inflationary pressures (World Bank, 2023[128]).

There are strong arguments for the SIE to resume periodic increases in the electricity tariff. Such adjustments would help to ease the financial burden on the state-owned EDEs and the consequent fiscal burden on the government, ensuring consistency with the Fiscal Responsibility Law (see Box 3.1). The Dominican Republic could use any resulting fiscal space to invest in electricity distribution infrastructure. However, there are also valid concerns regarding further tariff increases at this point in time. Stakeholders consulted as part of this project noted that higher electricity tariffs for regulated users could raise manufacturing costs for the local industry and undermine their competitiveness, potentially limiting their ability to establish linkages with the free zones. There are also concerns about the impact of increased electricity tariffs on households, particularly amongst poor and vulnerable social groups (World Bank, 2022[166]).

Complementary measures, such as investment in distribution infrastructure to reduce electricity losses, energy efficiency measures to reduce consumption or increased renewables generation, could all lower the costs of the overall electricity provision. This, in turn, would help reduce the gap between the electricity costs incurred by the EDEs and the tariff revenue they receive, thereby also reducing the value of the state subsidy to the EDEs. On balance, the appropriate level of the electricity tariff is an area that the Dominican Republic should assess more carefully, with attention to its impact on all stakeholders. In the medium to long term, however, the gradual transition toward a cost-reflective tariff appears necessary to ensure the sustainability of the electricity system.

3.5.2. Water

Water is another important input for semiconductor manufacturing. As with electricity, the ATP segment tends to consume less water than wafer fabrication. However, ATP still requires water for many processes including cleaning components to remove dust or contaminants and controlling temperature and humidity. Semiconductor manufacturing requires the water supply to fulfil two broad conditions: it must be abundant and pure.

The Dominican Republic could face challenges in providing both the quantity and quality of water needed for semiconductor manufacturing. The country has lost more than half of its per capita water resources since the mid-1990s, due to population and economic growth, poor management of water resources and climate change (World Bank, 2018[40]). As of 2021, the Dominican Republic's level of water stress – represented by the proportion of its total freshwater resources withdrawn to meet the country's water demand – was 40%, considerably higher than in Costa Rica (6%) or Panama (1%) and one of the highest in the region (World Bank, 2021[167]).

Many free zone industrial parks attempt to shelter their firms from this water stress by providing water services: for example, PIISA Industrial Park in the San Cristóbal province allows firms to access a water reservoir with a large storage capacity (PIISA, 2025[168]). However, the country's water scarcity is only expected to worsen with projections of a 25% decrease in freshwater resources and a 15% decrease in average precipitation by 2050 (UNCTAD, 2021[7]; MIMARENA, 2017[169]). Water scarcity is particularly acute around the Yaque del Norte river basin, where more than 93% of the renewable surface and groundwater supply is used every year (UNEP, 2022[170]). This could be problematic for the emergence of the Dominican Republic's semiconductor and microelectronics industries, as the Yaque del Norte serves the city of Santiago de los Caballeros and other parts of the Cibao Norte region, which is home to a large number of industrial parks and has the potential to develop a microelectronics cluster.

As for water quality, the situation in the Dominican Republic is also challenging. Just 53% of water treatment plants and 26% of wastewater plants operate adequately (World Bank, 2020[171]). Approximately 40% of wastewater collected by sewerage systems is treated, which places the Dominican Republic above countries such as Costa Rica (4%) and Panama (13%) but below Mexico (46%) (World Bank, 2021[172]). However, it should be noted that the remaining 60% of wastewater collected by the Dominican Republic's sewerage network is discharged untreated and, moreover, only a small share of total wastewater generated (7.3%) is actually collected by the sewerage network; most wastewater enters the ground or bodies of water directly (UNEP, 2022[170]). As with water supply, many industrial parks provide water treatment as a service to their firms: for example, PISANO Industrial Park, located in Santiago Norte, has a wastewater treatment plant. However, this is the initiative of individual parks and is not the result of government water policy.

The Dominican Republic's water-related challenges can be attributed to several causes. Some causes relate to the country's geography and its vulnerability to drought. But, as with the Dominican Republic's challenges with electricity, many of the causes are institutional, operational and financial. Multiple studies have noted the fragmentation of water management responsibilities between MIMARENA, the National Institute for Hydraulic Resources (*Instituto Nacional de Recursos Hídricos*, INDRHI) and the nine decentralised government agencies that provide water and sanitation services to different regions of the country, such as the National Institute for Drinking Water and the Sewage System (*Instituto Nacional de Aguas Potables y Alcantarillados*, INAPA) (RVO, 2021[173]; World Bank, 2023[174]).

Inter-institutional co-ordination and effective water management is made harder by the absence of high-quality data, as water systems often lack instrumentation to determine water consumption and the nine state-owned water and sanitation firms file incomplete financial reports and are only sporadically audited (World Bank, 2023[174]). Water losses can be as high as 60% – due to clandestine connections, poor infrastructure and a lack of metering – which means that less than 30% of service providers' operational costs are recovered. As a result, the government heavily subsidises the nine SOEs that dominate the water market (RVO, 2021[173]).

To address concerns around the Dominican Republic's water supply, the MICM should work with MIMARENA to support industrial parks to implement rainwater harvesting systems. These systems have been effective in Chinese Taipei to collect and store water from typhoons and reuse the water in industrial parks. For example, Yunlin Technology Industrial Park – home to semiconductor firms – is able to recycle 20 000 tonnes of rainwater per day, equivalent to Chinese Taipei's entire water consumption for 42 days (Taiwan Trade Shows, 2023[175]). Between 2003 and 2013, advances in rainwater harvesting increased the rate of water reuse in industrial parks from 46% to 69% (Water Resources Agency, 2017[176]). Given that the Dominican Republic is a hurricane-prone country, rainwater harvesting could be an opportunity to increase the water supply available to industrial parks and their firms.

To improve water and wastewater treatment, the Dominican Republic should increase investment in water infrastructure. Public investment in water and sanitation infrastructure in the Dominican Republic (0.04% of GDP in 2019) has been consistently below the LAC average (0.16%) (OECD, 2022[96]). Greater public investment could help repair and expand infrastructure for water transmission and treatment, increase metering and reduce water losses. One possible means of financing this investment is through the new green bond, issued in 2024, which is expected to finance several infrastructure projects including water and wastewater management (see Box 3.4). The Dominican Republic should also incentivise firms to invest in water recycling and treatment technologies, for example through preferential water tariffs.

3.5.3. Transport

Transport infrastructure connects a country's semiconductor industry to global supply chains. The semiconductor industry depends on several modes of transport. Air transport is well suited to the small size and weight of semiconductors and electronic components, and also allows global supply chains to

comply with just-in-time production processes. Maritime freight often transports semiconductor inputs, particularly those which are bulky, stable, less sensitive to light and heat and less time-sensitive (OECD, 2024[177]; Son et al., 2024[178]). A network of roads is required to transport semiconductor-related imports and exports between the country's airports and maritime ports and the semiconductor manufacturing plants. More broadly, a strong transport system can decrease delivery times, reduce transport costs and enhance an economy's productivity and competitiveness.

The Dominican Republic's transport sector is a strength as the country seeks to attract semiconductor firms. The WEF Global Competitiveness Index ranks the Dominican Republic highly for all three of the main modes of transport described in the previous paragraph: the Dominican Republic ranks second in the LAC region for air transport infrastructure quality, equal-second for port infrastructure quality and third for roads quality (WEF, 2021[179]). The World Bank finds that only 13.8% of firms in the Dominican Republic identify transport as a major constraint, well below the average for upper-middle income (24.35%) or regional (27%) countries (World Bank, 2022[180]). According to the World Bank's 2022 Logistics Performance Index, the quality of the Dominican Republic's trade and transport-related infrastructure scored 2.7 out of 5, slightly above the LAC regional average (2.55) and an increase on the Dominican Republic's previous score of 2.36 in 2018 (World Bank, 2023[181]). Representatives from industry, industry associations and government interviewed for this report also recognised the Dominican Republic's transport infrastructure as an advantage for developing semiconductor and microelectronics ecosystems. Moreover, the Dominican Republic joined the International Transport Forum in 2024, which is a sign of its commitment to further improve its transport policies and continue developing its infrastructure.

The Dominican Republic has eight airports serving international flights, including three important hubs: Las Américas International Airport (close to Santo Domingo), Punta Cana International Airport (which serves the eastern region) and Puerto Plata International Airport (which serves the north of the country). Of particular relevance to the semiconductor industry, Las Américas has the technical infrastructure and trained personnel to receive and store temperature-sensitive and hazardous cargo. However, the high volumes of traffic passing through the airport can lead to delays in customs processing and clearance (Logistics Cluster, 2024[182]).

The Dominican Republic has 13 commercial maritime ports, but traffic is highly concentrated, with 70% of all traffic (by tonnage) handled by just two ports, Caucedo and Haina. Relatedly, there is a regional imbalance in the Dominican Republic's port infrastructure: while Caucedo and Haina are both located near to Santo Domingo on the south coast, the northern ports of Manzanillo and Puerto Plata only account for 5-6% of total tonnage (World Bank, 2022[180]). Caucedo and Haina are also the two most sophisticated ports in the country. Caucedo, situated close to Las Américas International Airport, has deep-water berths, advanced cargo handling equipment and fast dispatch ports for sensitive cargo. The port currently handles a range of products including electronics and automotive parts (Logistics Cluster, 2024[182]). Haina has specialised berths for handling liquid chemicals. The geographic imbalance in port facilities should be taken into account in discussions on where a semiconductor or microelectronics cluster could develop (see Section 3.2.4).

The Dominican Republic's road network – which totals 20 000 kilometres – faces slightly greater challenges. The majority of the country's primary road network is deemed by the Logistics Cluster to be in either good (36%) or fair (32%) condition (Logistics Cluster, 2024[182]), which is important for semiconductor ATP machinery which requires high-quality roads to avoid losing calibration during transport (OECD, 2024[177]). However, secondary and tertiary roads – which account for more than 70% of the Dominican Republic's total network – tend to be in poorer condition and require rehabilitation. There are also some concerns about the price of road freight, which can be attributed in part to the high average age of the motor freight fleet (over 20 years old), which increases maintenance costs and reduces productivity (IFC, 2023[42]).

Congestion affects road traffic in and around important production and logistics hubs (such as Caucedo, Haina and Santo Domingo). This is a challenge that the Santo Domingo 2050 initiative should seek to address (see Section 3.2.4), by developing more public transport services. To facilitate workers' travel to their manufacturing facilities, many free zone industrial parks provide transport services for their employees (DR Free Zones, 2024[183]). The Dominican Republic's first sovereign green bond has also earmarked some financing for expanding the Santo Domingo Metro, constructing the first line of the Santiago monorail and building cable car facilities in Santiago and Santo Domingo and in Santo Domingo (see also Box 3.4). This could contribute to easing the congestion.

References

AZFA (2024), *Guía Legal de Zonas Francas de Iberoamérica*, Asociación de Zonas Francas de las Américas, https://www.media.asociacionzonasfrancas.org/media/publications/files/Gu%C3%ADa_Legal_AZFA_2024.pdf (accessed on 13 April 2025). [77]

Báez, D. (2024), "Newsletter: January-December 2024", Medical Devices and Pharmaceuticals Cluster, Dominican Republic, https://myemail.constantcontact.com/CDMF---Newsletter.html?soid=1139174501419&aid=if2r-LNRBO4 (accessed on 10 April 2025). [106]

BANDEX (2023), *BANDEX: Memoria Institucional 2023*, Banco de Desarrollo y Exportaciones, https://www.bandex.com.do/memorias/# (accessed on 28 February 2025). [94]

BN Americas (2025), "Dominican Republic eases rules in 600MW solar, wind supply tender", https://www.bnamericas.com/en/news/dominican-republic-eases-rules-in-600mw-solar-wind-supply-tender (accessed on 20 October 2025). [187]

CAFTA-DR-USA (2004), *CAFTA-DR (2004)*, Free Trade Agreement Between Central America, the Dominican Republic and the United States of America, https://jusmundi.com/fr/document/treaty/en-central-america-dominican-republic-united-states-free-trade-agreement-dr-cafta-cafta-dr-usa-2004-thursday-5th-august-2004 (accessed on 13 April 2025). [66]

Campos Vázquez, R. (2022), *Measurement of Tax Expenditures in Latin America*, Economic Development Division of the Economic Commission for Latin America and the Caribbean, https://repositorio.cepal.org/server/api/core/bitstreams/be42490d-c86e-4f5f-a9a9-b664a50ba70c/content (accessed on 19 March 2025). [31]

CNC (2025), *Memorias Burocracia Cero 2022-24*, Consejo Nacional de Competitividad, https://cnc.gob.do/wp-content/uploads/2025/01/Book-Memorias-2da-Fase-Rev1.pdf%20 (accessed on 25 February 2025). [88]

CNC (2024), *Burocracia Cero - Improving Competitiveness through the Efficiency of Public Services*, Consejo Nacional de Competitividad. [86]

CNC (2024), *Meta RD 2036*, Consejo Nacional de Competitividad, https://cnc.gob.do/wp-content/uploads/2024/12/META-RD-2036-18-12-24-Book-Digital.pdf (accessed on 14 March 2025). [10]

CNE (2025), “República Dominicana se prepara para licitación de energías renovables y almacenamiento”, National Energy Commission, https://cne.gob.do/noticia/republica-dominicana-se-prepara-para-licitacion-de-energias-renovables-y-almacenamiento/ (accessed on 15 July 2025). [148]

CNE (2022), *Plan Energético Nacional 2022-2036*, National Energy Commission, https://bvearmb.do/bitstream/handle/123456789/1855/Plan%20Energetico%20Nacional%20%28PEN%29%202022-2036.pdf?sequence=1&isAllowed=y (accessed on 11 July 2025). [132]

CNZFE (2025), *Datos Estadísticos*, National Council of Free Zones, https://www.cnzfe.gob.do/index.php/es/datos-estadisticos (accessed on 11 February 2025). [21]

CNZFE (2025), *Sobre Nosotros - ¿Quiénes Somos?*, National Council of Free Zones, https://cnzfe.gob.do/index.php/es/sobre-nosotros/quienes-somos (accessed on 18 February 2025). [55]

CNZFE (2024), *Preguntas Frecuentes*, National Council of Free Zones, https://cnzfe.gob.do/faqs. [35]

CNZFE (2023), *Informe Estadístico: Zonas Francas*, National Council of Free Zones, https://wp.cnzfe.gob.do/wp-content/uploads/2025/04/Informe-Estadistico-2023.pdf (accessed on 14 February 2025). [44]

CNZFE (1997), *Reglamento 366-97*, National Council of Free Zones, https://adozona.org/wp-content/uploads/2022/08/Reglamento-no.-366-97-para-la-aplicacion-de-la-ley-8-90.pdf (accessed on 17 July 2025). [37]

Cohen, W. and D. Levinthal (1990), “Absorptive Capacity: A New Perspective on Learning and Innovation”, *Administrative Science Quarterly*, Vol. 35/1, pp. 128-152, https://josephmahoney.web.illinois.edu/BA545_Fall%202022/Cohen%20and%20Levinthal%20(1990).pdf (accessed on 10 April 2025). [184]

COMEX (2024), *Hoja de Ruta Para el Fortalecimiento del Ecosistema de Semiconductores en Costa Rica*, Ministerio de Comercio Exterior, https://www.comex.go.cr/media/10187/hrs_vfinal_21-3-24.pdf. [9]

Congreso Nacional (2024), *Ley 35-24*. [33]

Congreso Nacional (2021), *Ley 168-21*. [78]

Congreso Nacional (2013), *Law 100-13*, https://mem.gob.do/wp-content/uploads/2019/01/Ley-No.-100-13-que-crea-el-Ministerio-de-Energ%C3%ADa-y-Minas-de-la-Rep%C3%BAblica-Dominicana.pdf (accessed on 5 March 2025). [126]

Congreso Nacional (2012), *Ley 253-12*. [142]

Congreso Nacional (2011), *Ley 139-11*, https://dgii.gov.do/legislacion/leyestributarias/documents/codigo%20tributario%20y%20leyes%20que%20lo%20modifican%20y%20complementan/139-11.pdf (accessed on 16 April 2025). [24]

Congreso Nacional (2007), *Ley 56-07*, https://dgii.gov.do/legislacion/leyesTributarias/Documents/Leyes%20de%20Incentivos%20y%20Fomentos/56-07.pdf (accessed on 16 April 2025). [23]

Congreso Nacional (2007), *Ley 57-07 de Incentivo a las Energías Renovables y Regimenes Especiales*, https://dgii.gov.do/legislacion/leyesTributarias/Documents/Leyes%20de%20Incentivos%20y%20Fomentos/57-07.pdf (accessed on 15 July 2025). [139]

Congreso Nacional (2001), *Ley 139-01 de Educación Superior, Ciencia y Tecnología*, https://www.aduanas.gob.do/media/fzrdqj2a/139-01_de_educacion_ciencia_y_tecnologia.pdf (accessed on 17 February 2025). [113]

Congreso Nacional (2001), *Ley General de Electricidad 125-01*, https://mem.gob.do/wp-content/uploads/2019/01/Ley-No.-125-01-General-de-Electricidad.pdf (accessed on 11 July 2025). [129]

Congreso Nacional (1995), *Law 16-95*, https://dgii.gov.do/legislacion/leyesTributarias/Documents/Leyes%20de%20Incentivos%20y%20Fomentos/16-95.pdf (accessed on 19 February 2025). [70]

Congreso Nacional (1990), *Ley 8-90 sobre Fomento de Zonas Francas*, https://dgii.gov.do/legislacion/leyesTributarias/Documents/Leyes%20de%20Incentivos%20y%20Fomentos/8-90.pdf (accessed on 11 February 2025). [22]

CREES (2025), "República Dominicana entre los países con mayores pérdidas eléctricas de América Latina", Regional Centre for Sustainable Economic Strategies, https://crees.org.do/?p=28498 (accessed on 28 July 2025). [162]

Damodaran, A. (2025), *Capital Expenditures, Acquisitions and R&D and Sales/Invested Capital Ratios (dataset)*, Stern NYU, https://pages.stern.nyu.edu/~adamodar/pc/datasets/capexGlobal.xls (accessed on 3 April 2025). [90]

Damodaran, A. (2025), *R&D expenditures over time (dataset)*, Stern NYU, https://pages.stern.nyu.edu/~adamodar/pc/datasets/R&DGlobal.xls (accessed on 8 April 2025). [112]

DGA (2024), "Despacho 24 Horas - Preguntas Frecuentes", Dirección General de Aduanas. [81]

DGA (2024), "En tan solo dos años y medio los ahorros de D24H ascienden a RD$1,380 millones para los contribuyentes", Dirección General de Aduanas, https://www.aduanas.gob.do/noticias/en-tan-solo-dos-anos-y-medio-los-ahorros-de-d24h-ascienden-a-rd-1-380-millones-para-los-contribuyentes/ (accessed on 25 March 2025). [82]

DGA (2024), *Operador Económico Autorizado - República Dominicana*, Dirección General de Aduanas, https://oea.aduanas.gob.do/media/1431/nuevo-brochure-oea.pdf (accessed on 13 April 2025). [80]

DGA (2020), *Procedimiento Importación de Sustancias Químicas Industriales*, Dirección General de Aduanas, https://vucerd.gob.do/media/2156/importaci%C3%B3n-de-sustancias-quimicas-industriales.pdf (accessed on 15 April 2025). [84]

DP World (2025), "DP World signs agreement to launch $760m port and free trade zone in Dominican Republic", https://www.dpworld.com/usa/news/latest-news/dp-world-signs-agreement-to-expand-port-caucedo-in-dominican-republic (accessed on 17 July 2025). [48]

DR Free Zones (2024), “Soft Incentives”, https://drfreezones.com/incentives/soft-incentives/ (accessed on 13 April 2025). [183]

Eaton (2022), “Eaton opens first industry design center in Dominican Republic, creating hub for technical innovation in the region”. [101]

EC (2025), “Strengthening Europe’s Semiconductor Future”, European Commission, https://digital-strategy.ec.europa.eu/en/news/strengthening-europes-semiconductor-future (accessed on 14 March 2025). [15]

EC (2023), *Semiconductors in the EU*, Joint Research Centre Technical Report, European Commission, https://publications.jrc.ec.europa.eu/repository/bitstream/JRC133850/JRC133850_01.pdf (accessed on 14 March 2025). [16]

EIU (2015), *The Future of the Electricity Sector in the Dominican Republic*, The Economist Intelligence Unit, https://ces.gob.do/images/2015/FunglodeElectricitySectorReportEnglishFINAL.pdf (accessed on 5 March 2025). [127]

European Parliament (2025), *Implementing the EU’s Net-Zero Industry Act*. [145]

FHI360 (2020), *Dominican Republic Labor Market Assessment*, https://www.fhi360.org/wp-content/uploads/2024/02/resource-dr-lma-report.pdf (accessed on 14 April 2025). [49]

Future Energy Summit (2025), “Incertidumbre en la antesala de la licitación de distribuidoras en República Dominicana”, https://futurenergysummit.com/incertidumbre-en-la-antesala-de-la-licitacion-de-distribuidoras-en-republica-dominicana/ (accessed on 28 July 2025). [149]

Gabinete de Innovación (2022), *Política Nacional de Innovación 2030*. [109]

Gabinete de Transformación Digital (2021), *Agenda Digital 2030*, https://agendadigital.gob.do/wp-content/uploads/2022/01/Agenda-Digital-2030.pdf (accessed on 14 February 2025). [123]

GGGI (2024), “Dominican Republic’s Green Bond Debut (USD 750 Million)”, Global Green Growth Institute, https://gggi.org/dominican-republics-green-bond-debut-usd-750-million-after-publication-of-green-social-sustainable-bonds-framework/ (accessed on 7 March 2025). [158]

GIZ (2020), *Ventanilla Única de Energía Renovable en República Dominicana*, Deutsche Gesellschaft für Internationale Zusammenarbeit, https://www.giz.de/en/downloads/GIZ2022-DomRep-Ventanilla-%C3%9Anica-de-Energ%C3%ADa-Renovable.pdf (accessed on 15 July 2025). [143]

Gómez-Valenzuela, V., H. Rosa and A. Tejeda (2020), “Policy mix to foster innovation in the Dominican Republic: attempts from an empirical perspective”, *Technology Analysis & Strategic Management*, Vol. 32/0, pp. 1035-1048, https://www.tandfonline.com/doi/epdf/10.1080/09537325.2020.1739640?needAccess=true (accessed on 17 February 2025). [115]

Government of Canada (2024), “Renewable energies market in the Dominican Republic”, Canada Trade Commissioner, https://www.tradecommissioner.gc.ca/dominican-republic-republique-dominicaine/market-reports-etudes-de-marches/0007721.aspx?lang=eng (accessed on 5 March 2025). [134]

Government of the Dominican Republic (2025), *Portal Único de Servicios del Gobierno Dominicano*, https://www.gob.do/ (accessed on 12 April 2025). [62]

Government of the Dominican Republic (2020), *Contribución Nacionalmente Determinada 2020 NDC-RD 2020*, https://unfccc.int/sites/default/files/NDC/2022-06/Dominican%20Republic%20First%20NDC%20%28Updated%20Submission%29.pdf (accessed on 15 July 2025). [141]

Government of Viet Nam (2024), "VN set up a national committee to promote semiconductor industry development", Ministry of Science and Technology, https://english.mic.gov.vn/vn-set-up-a-national-committee-to-promote-semiconductor-industry-development-197240809142729916.htm (accessed on 7 April 2025). [4]

Heilbron, A. and H. Kronfol (2020), "Increasing the Development Impact of Investment Promotion Agencies", in *Global Investment Competitiveness Report 2019/2020: Rebuilding Investor Confidence in Times of Uncertainty*, World Bank, Washington, DC, https://doi.org/10.1596/978-1-4648-1536-2_ch5 (accessed on 24 March 2025). [57]

ICSID (2023), *Michael Anthony Lee-Chin v. Dominican Republic (ICSID Case No. UNCT/18/3)*, International Centre for Settlement of Investment Disputes, https://www.italaw.com/sites/default/files/case-documents/180334.pdf (accessed on 18 July 2025). [68]

IEA (2023), "Dominican Republic", International Energy Agency, https://www.iea.org/countries/dominican-republic/electricity (accessed on 5 March 2025). [137]

IEA (2023), *The Evolution of Energy Efficiency Policy to Support Clean Energy Transitions*, International Energy Agency, https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/12/the-evolution-of-energy-efficiency-policy-to-support-clean-energy-transitions_7670b975/18f6db00-en.pdf (accessed on 28 July 2025). [152]

IEA (2022), *Energy Efficiency 2022*, International Energy Agency, https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/11/energy-efficiency-2022_7d4276e9/679f39bd-en.pdf (accessed on 28 July 2025). [151]

IEA (n.d.), *Countries and regions (database)*, International Energy Agency, https://www.iea.org/countries (accessed on 15 October 2025). [138]

IFC (2023), *Creating Markets in the Dominican Republic: Country Private Sector Diagnostic*, International Finance Corporation, World Bank Group, Washington, DC, https://www.ifc.org/content/dam/ifc/doc/2023/dominican-republic-country-private-sector-diagnostic-en.pdf (accessed on 11 February 2025). [42]

IMF (2024), *Dominican Republic: 2024 Article IV Consultation - Press Release and Staff Report*, IMF Country Report No. 24/294, International Monetary Fund, https://www.imf.org/-/media/Files/Publications/CR/2024/English/1domea2024001-print-pdf.ashx (accessed on 5 March 2025). [34]

Infineon (2024), "Infineon opens the world's largest and most efficient SiC power semiconductor fab in Malaysia", https://www.infineon.com/cms/en/about-infineon/press/press-releases/2024/INFXX202408-133.html (accessed on 10 April 2025). [18]

INTEC (2022), “Rector of INTEC congratulates Eaton for the inauguration of its first Design Center in the Dominican Republic”, Instituto Tecnológico de Santo Domingo, https://www.intec.edu.do/en/notas-de-prensa/item/rector-del-intec-felicita-a-eaton-por-la-inauguracion-de-su-primer-centro-de-diseno-en-republica-dominicana (accessed on 12 March 2025). [102]

International IDEA (2024), “Dominican Republic”, Global State of Democracy Initiative, https://www.idea.int/democracytracker/country/dominican-republic (accessed on 12 April 2025). [51]

IRENA (2016), *Renewable Energy Prospects: Dominican Republic*, International Renewable Energy Agency, https://islands.irena.org/-/media/Sids/Files/Publications/Dominican-Republic-_-Renewable-Energy-Prospects.pdf (accessed on 16 July 2025). [156]

LHDN Malaysia (2024), *Promotions of Investments Act 1986 - Investment Tax Allowance*, Lembaga Hasil Dalam Negeri Malaysia, https://www.hasil.gov.my/en/international/incentives/investment-tax-allowance/ (accessed on 10 April 2025). [30]

Logistics Cluster (2024), “Dominican Republic - 2.2.1 Dominican Republic Las Americas International Airport”, https://www.lca.logcluster.org/221-dominican-republic-las-americas-international-airport. [182]

MEM (2024), “Gobierno proyecta invertir USD$750 millones en el sistema de distribución y transmisión energética”, Ministro de Energía y Minas, https://mem.gob.do/gobierno-proyecta-invertir-us750-millones-en-el-sistema-de-distribucion-y-transmision-energetica/ (accessed on 16 July 2025). [157]

MEM (2024), “Informe de Desempeño Empresas Eléctricas Estatales período de enero-noviembre 2024”, Ministro de Energía y Minas, https://mem.gob.do/wp-content/uploads/2025/02/Informe-de-Desempeno-de-las-Empresas-Electricas-Estatales-EEE-noviembre-2024.pdf (accessed on 5 March 2025). [161]

MEM (2022), “Viceministro Gómez: RD tendrá 30% de energía renovable en 2030”, Ministerio de Energía y Minas, https://mem.gob.do/viceministro-gomez-rd-tendra-30-de-energia-renovable-en-2030/#:~:text=En%20la%20actividad%2C%20realizada%20en,de%2030%25%20para%20el%202030. (accessed on 15 July 2025). [140]

MESCyT (2024), *FONDOCYT: Programa y Resúmenes 2024*, Ministerio de Educación Superior, Ciencia y Tecnología, https://mescyt.gob.do/wp-content/uploads/2025/02/XVI-Seminario-de-Investigacion-Cientifca-e-Innovacion-Tecnologica-FONDOCYT-2024-ISBN-978-9945-9484-2-4.pdf (accessed on 12 March 2025). [99]

MESCyT (2009), *Reglamento General del Fondo Nacional de Innovación y Desarrollo Científico-Tecnológico (FONDOCYT)*, Ministerio de Educación Superior, Ciencia y Tecnología, https://mescyt.gob.do/wp-content/uploads/2024/07/Reglamento-General-del-Fondo-Nacional-de-Innovacion-y-Desarrollo-Cientifico-Tecnologico-FONDOCYT.pdf (accessed on 17 February 2025). [114]

MICI (2024), “CIMS aprueba borrador de Estrategia Nacional de semiconductores para su revisión en el Consejo de Gabinete”, Ministerio de Comercio e Industrias de Panamá, https://mici.gob.pa/2024/10/31/cims-aprueba-borrador-de-estrategia-nacional-de-semiconductores-para-su-revision-en-el-consejo-de-gabinete/ (accessed on 7 April 2025). [3]

MICM (2025), “RD acoge Simposio de la APEP para impulsar integración estratégica en semiconductores”, Ministerio de Industria, Comercio y Mipymes, https://micm.gob.do/rd-acoge-simposio-de-la-apep-para-impulsar-integracion-estrategica-en-semiconductores/ (accessed on 28 July 2025). [14]

MICM (2024), “MICM lanza feria virtual “Encadena.DO”; empresas podrán amplíar aliados y construir nuevas relaciones comerciales”, Ministerio de Industria, Comercio y Mipymes, https://presidencia.gob.do/noticias/micm-lanza-feria-virtual-encadenado-empresas-podran-ampliar-aliados-y-construir-nuevas (accessed on 31 March 2025). [41]

MICM (2024), *Organigrama*, Ministerio de Industria, Comercio y Mipymes, https://micm.gob.do/wp-content/uploads/2024/10/organigrama_micm_2024.pdf (accessed on 11 March 2025). [2]

MICM (2024), *Plan Operativo Anual (POA) Año 2025*, Ministerio de Industria, Comercio y Mipymes, https://micm.gob.do/transparencia/plan-estrategico-de-la-institucion-pei?task=callelement&format=raw&item_id=35466&element=f4e23046-2591-45ad-9481-94342da5ce5d&method=download&args[0]=0 (accessed on 24 February 2025). [11]

MIMARENA (2017), *Tercera Comunicación Nacional de República Dominicana para la Convención Marco de las Naciones Unidas sobre Cambio Climático*, Ministerio de Medio Ambiente y Recursos Naturales, https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/29064815_Dominican%20Republic-NC3-1-Informe%20Tercera%20Comunicaci%C3%83%C2%B3n%20(Para%20WEB)%20(2).pdf (accessed on 7 March 2025). [169]

MIMARENA (2014), *Compendio de Reglamentos y Procedimientos para Autorizaciones Ambientales de la República Dominicana*, Ministerio de Medio Ambiente y Recursos Naturales, https://eitird.mem.gob.do/wp-content/uploads/2019/12/Compendio-de-Reglamento.pdf (accessed on 25 February 2025). [89]

Ministerio de Hacienda (2024), “Offering Memorandum: The Dominican Republic - DOP105,000,000,000 10.750% Bonds due 2036 Payable in U.S. dollars”, https://www.creditopublico.gob.do/Content/english/bonds_issuance/externalFiles/prospectus/26Prospectus%20for%20amortizing%20DOP%20bonds%20due%202036.pdf (accessed on 15 July 2025). [147]

Nigua Free Zone (2023), *1st Picazo Nigua Free Trade Zone Expansion*. [95]

OC (2025), *Informe Anual de Operaciones y Transacciones Económicas del Año 2024*, Organismo Coordinador del Sistema Eléctrico Nacional Interconectado, https://www.oc.org.do/DesktopModules/Bring2mind/DMX/API/Entries/Download?Command=Core_Download&EntryId=200287&language=es-ES&PortalId=0&TabId=185 (accessed on 11 July 2025). [133]

OECD (2025), "OECD Investment Tax Incentives Database (2024 Edition) - Corporate Income Tax Incentives in Emerging and Developing Economies", *OECD Business and Finance Policy Papers*, No. 79, OECD, Paris, https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/oecd-investment-tax-incentives-database-2024-update_f3a3a175/b0de19dc-en.pdf. [26]

OECD (2024), *Declaration on Transformative Science, Technology and Innovation Policies for a Sustainable and Inclusive Future*, OECD/LEGAL/0501, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0501 (accessed on 13 April 2025). [122]

OECD (2024), *Promoting the Growth of the Semiconductor Ecosystem in the Philippines*, OECD Publishing, Paris, https://doi.org/10.1787/01497fea-en. [177]

OECD (2023), *Boosting Evidence-based Policy Making for Economic Development Policies in Italy*, OECD, Paris, https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/structural-reforms/country-tailored-policy-reforms/italy-boosting-evidence-based-policy-making-for-economic-development-report-2023.pdf (accessed on 16 April 2025). [19]

OECD (2022), *Gross domestic spending on R&D (indicator)*, OECD, Paris. [111]

OECD (2022), *Multi-dimensional Review of the Dominican Republic: Towards Greater Well-being for All*, OECD Development Pathways, OECD Publishing, Paris, https://doi.org/10.1787/560c12bf-en (accessed on 28 February 2025). [96]

OECD (2022), *Recommendation of the Council on Public Policy Evaluation*, OECD/LEGAL/0478, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0478. [20]

OECD (2020), *One-Stop Shops for Citizens and Businesses*, OECD Best Practice Principles for Regulatory Policy, OECD Publishing, Paris, https://doi.org/10.1787/b0b0924e-en. [60]

OECD (2020), *Production Transformation Policy Review of the Dominican Republic: Preserving Growth, Achieving Resilience*, OECD Development Pathways, OECD Publishing, Paris, https://doi.org/10.1787/1201cfea-en. [39]

OECD (2018), *Mapping of Investment Promotion Agencies in OECD countries*, https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/10/mapping-of-investment-promotion-agencies-in-oecd-countries_3fd8bae0/098e4f0e-en.pdf (accessed on 24 March 2025). [56]

OECD (2017), *OECD Reviews of Innovation Policy: Costa Rica 2017*, OECD Reviews of Innovation Policy, OECD Publishing, Paris, https://doi.org/10.1787/9789264271654-en. [124]

OECD (2016), "Investment Policies Related to National Security: A Survey of Country Practices", *OECD Working Papers on International Investment*, No. 2016/02, OECD, Paris, https://www.oecd.org/content/dam/oecd/en/publications/reports/2016/06/investment-policies-related-to-national-security_g17a281a/5jlwrrf038nx-en.pdf. [71]

OECD (2015), *Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development*, The Measurement of Scientific, Technological and Innovation Activities, OECD Publishing, Paris, https://doi.org/10.1787/9789264239012-en. [121]

OECD (unpublished), "OECD Policy Questionnaire – Review of Governance and Framework Policies for the Semiconductor and Microelectronics Industries", OECD, Paris. [75]

OECD (n.d.), *STI Micro-data Lab: Intellectual Property Database*, OECD, Paris, http://oe.cd/ipstats (accessed on 15 October 2025). [116]

OECD/Eurostat (2018), *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation, 4th Edition*, The Measurement of Scientific, Technological and Innovation Activities, OECD Publishing, Paris/Eurostat, Luxembourg, https://doi.org/10.1787/9789264304604-en. [120]

ONE (2024), *Distribución de empresas registradas por año de referencia, según sección y división de actividad económica, 2010-2023*, Oficina Nacional de Estadística. [38]

PIISA (2025), *PIISA - Operaciones*, Parque Industrial Itabo. [168]

Pimentel, K. (2014), "PUCMM y MESCyT registran patente descubrimiento con nanotecnología", Acento, https://acento.com.do/sociales/pucmm-y-mescyt-registran-patente-descubrimiento-con-nanotecnologia-1159682.html (accessed on 17 February 2025). [97]

Presidencia (2025), "Proceso de fusión del Minerd y la Mescyt se encuentra en la recta final", https://presidencia.gob.do/noticias/proceso-de-fusion-del-minerd-y-la-mescyt-se-encuentra-en-la-recta-final. [104]

Presidencia (2024), "Adoexpo reconoce a la Dirección General de Aduanas por su servicio al sector exportador", https://www.presidencia.gob.do/noticias/adoexpo-reconoce-la-direccion-general-de-aduanas-por-su-servicio-al-sector-exportador (accessed on 25 March 2025). [83]

Presidencia (2024), *Decreto 3-24*, https://img.mmc.com.do/elcaribe-bucket/uploads/2024/01/decreto-3-24.pdf (accessed on 11 July 2025). [136]

Presidencia (2024), *Decreto 324-24*, https://presidencia.gob.do/decretos/324-24 (accessed on 11 March 2025). [1]

Presidencia (2024), "Luis Abinader pone fin a 180 años de continuismo con la nueva Constitución reformada proclamada hoy", https://presidencia.gob.do/noticias/luis-abinader-pone-fin-180-anos-de-continuismo-con-la-nueva-constitucion-reformada (accessed on 19 February 2025). [63]

Presidencia (2024), "ProDominicana incorpora Energía y Minas a la Ventanilla Única de Inversión para potenciar la atracción de IED", https://presidencia.gob.do/noticias/prodominicana-incorpora-energia-y-minas-la-ventanilla-unica-de-inversion-para-potenciar-la (accessed on 15 July 2025). [144]

Presidencia (2024), *Reporte de UNCTAD muestra que RD lidera flujos de IED en Centroamérica y el Caribe en 2023, destacando Ventanillas Únicas de Inversión*. [59]

Presidencia (2023), *Decreto 158-23*, https://mem.gob.do/wp-content/uploads/2023/04/Decreto-158-23.pdf (accessed on 15 July 2025). [153]

Presidencia (2023), *Decreto 338-23*. [8]

Presidencia (2023), *Decreto 65-23*, https://micm.gob.do/transparencia/images/pdf/transparencia/base-legal-de-la-institucion/resoluciones/decretos/2023/Decreto_65-23_que_establece_el_Reglamento_de_aplicacion_L.57-07_de_Incetivos_Energia_Renovable.pdf (accessed on 15 July 2025). [146]

Presidencia (2022), *Decreto 278-22*. [119]

Presidencia (2021), *Decreto 464-21*, https://presidencia.gob.do/sites/default/files/decree/2021-07/Decreto%20464-21.pdf (accessed on 17 February 2025). [6]

Presidencia (2021), *Decreto 71-21*, https://presidencia.gob.do/decretos/71-21. [5]

Presidencia (2021), *Pacto Nacional para la Reforma del Sector Eléctrico en la República Dominicana (2021-2030)*, https://mem.gob.do/wp-content/uploads/2021/03/pactp-electrico.pdf (accessed on 16 July 2025). [165]

Presidencia (2020), *Decreto 175-20*. [103]

Presidencia (2008), *Decreto 202-08*, https://dgii.gov.do/legislacion/reglamentos/Documents/2008/202-08.pdf (accessed on 15 July 2025). [150]

Presidencia (n.d.), *Decreto 353-23*. [47]

Presidencia (n.d.), *Decreto 595-22*. [45]

Presidencia (n.d.), *Decreto 596-22*. [46]

ProDominicana (2025), "¿Quiénes somos?", https://prodominicana.gob.do/quienessomos (accessed on 24 March 2025). [52]

ProDominicana (2025), "Servicios de Inversión", https://prodominicana.gob.do/servicios/inversion (accessed on 18 February 2025). [54]

ProDominicana (2024), *Investment Guide - Dominican Republic*, https://prodominicana.gob.do/en/invest/investment-guide (accessed on 12 April 2025). [53]

ProDominicana (2024), "Semiconductores", https://www.prodominicana.gob.do/inversion/sectores/semiconductores (accessed on 18 February 2025). [61]

ProDominicana (2023), *Informe evaluación e impacto sobre el aprovechamiento del DR-CAFTA*, https://prointeligencia.prodominicana.gob.do/apiv2/data/post/6de7325b-701c-4004-91c0-879eeb6094d1/pdf/Informe%20evaluaci%C3%83%C2%B3n%20e%20impacto%20sobre%20el%20aprovechamiento%20del%20DR-CAFTA.pdf (accessed on 19 February 2025). [74]

PUCMM (2016), "Programa de investigación en materiales nanoestructurados y funcionales de carbono (NANOCARBON)", Pontificia Universidad Católica Madre y Maestra, https://investigacion.pucmm.edu.do/nanocarbon (accessed on 10 April 2025). [98]

Purdue University (2024), "Purdue, Dominican Republic enter agreement to drive semiconductor growth", https://www.purdue.edu/newsroom/2024/Q3/purdue-dominican-republic-enter-agreement-to-drive-semiconductor-growth/ (accessed on 24 February 2025). [12]

Renovables Verdes (2024), "The Dominican Republic's energy mix in the face of the electricity crisis", https://en.renovablesverdes.com/Dominican-Republic-bets-on-energy-mix-to-overcome-crisis/ (accessed on 16 July 2025). [164]

Reuters (2025), "Malaysia to pay Arm Holdings $250 million for chip design blueprints", *Reuters*, https://www.reuters.com/markets/asia/malaysia-minister-says-pay-arm-holdings-250-million-chips-design-blueprints-2025-03-05/ (accessed on 10 April 2025). [17]

RICYT (2022), *Expenditure on R&D as a percentage of GDP 2013-2022 (indicator)*, Network for Science and Technology Indicators, https://app.ricyt.org/ui/v3/comparative.html?indicator=GASTOxPBI&start_year=2013&end_year=2022 (accessed on 14 February 2025). [108]

RVO (2021), *Dominican Republic Water Sector Report 2021*, Dutch Ministry of Foreign Affairs, https://www.rvo.nl/sites/default/files/2021/08/DR-Water-Sector-Report-2021.pdf (accessed on 7 March 2025). [173]

SCIJ (1990), *Free Trade Zone Regime Law, Law No. 7210*, Sistema Costarricense de Información Jurídica, http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?nValor1=1&nValor2=11593 (accessed on 8 March 2024). [27]

Senado (2023), "El Senado aprobó en segunda lectura el Proyecto Ley de Eficiencia Energética", https://www.senadord.gob.do/el-senado-aprobo-en-segunda-lectura-el-proyecto-ley-de-eficiencia-energetica/ (accessed on 15 July 2025). [155]

SIE (2025), *Autorizaciones para el ejercicio de la condicion de usuario no regulado*, Superintendencia de Electricidad, https://sie.gob.do/wp-content/uploads/2025/02/UNRs-ACTIVOS-2-2025-Por-Provincia.xlsx (accessed on 28 July 2025). [131]

SIE (2025), *Resolución SIE-092-2025-LCE*, Superintendencia de Electricidad, https://sie.gob.do/wp-content/uploads/2025/08/SIE-092-2025-LCE.pdf (accessed on 20 October 2025). [186]

SIE (2025), *Resolución SIE-121-2025-LCE*, Superintendencia de Electricidad, https://sie.gob.do/wp-content/uploads/2025/09/SIE-121-2025-LCE.pdf (accessed on 20 October 2025). [185]

SIE (2013), *Resolución SIE-040-2013-REG*, Superintendencia de Electricidad, https://sie.gob.do/wp-content/uploads/2023/07/RESOLUCION20SIE-040-2013-MEM2020REGLAMENTO20UNR2020-20ALTA20RESOLUCION.pdf (accessed on 11 July 2025). [130]

Son, Y. et al. (2024), "Transportation Product Carbon Footprint: A Framework for Semiconductor Supply Chain", Institute of Electrical and Electronics Engineers, https://ieeexplore.ieee.org/document/10838806/authors#authors (accessed on 13 April 2025). [178]

Steenbergen, V. (2023), *What Makes an Investment Promotion Agency Effective?*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/099144501132320106/pdf/IDU0db197ce406d740471308edd040f4f19f6f35.pdf (accessed on 24 March 2025). [58]

Sturgeon, T. (2025), "Drawing a New Roadmap for Industrial Upgrading in the Dominican Republic: Industrial Ecosystem Review and Strategic Assessment". [43]

Suelo Solar (2024), “Importancia de la aprobación de propuesta de ley sobre eficiencia energética en República Dominicana”, https://suelosolar.com/noticias/eficiencia-energetica/repdominicana/20-12-2024/importancia-aprobacion-propuesta-ley-eficiencia-energetica-republica-dominicana (accessed on 15 July 2025). [154]

Sustainalytics (2025), “Government of the Dominican Republic: 2024 Green Bonds Allocation Review”, https://www.creditopublico.gob.do/Content/emisiones_de_titulos/asg/opiniondesegundaparte/02Government%20of%20Dominican%20Republic%20allocation%20review.pdf (accessed on 18 July 2025). [160]

Taiwan Trade Shows (2023), “Overcoming drought stress”, https://www.taiwantradeshows.com.tw/en_US/news-info-31322/004.html (accessed on 7 March 2025). [175]

Tribunal Constitucional (2015), *Constitución de la República Dominicana*, https://www.tribunalconstitucional.gob.do/transparencia/base-legal-de-la-instituci%C3%B3n/constituci%C3%B3n-de-la-rep%C3%BAblica-dominicana/ (accessed on 19 February 2025). [65]

U.S. Department of State (2024), “2024 Investment Climate Statements: Dominican Republic”, United States Department of State, https://www.state.gov/reports/2024-investment-climate-statements/dominican-republic/ (accessed on 24 March 2025). [67]

UASD (2025), “Energías Renovables en la República Dominicana: Desafíos y Servicios de Regulación de Frecuencia”, Universidad Autónoma de Santo Domingo, https://uasd.edu.do/wp-content/uploads/UASD-Renovables-y-Regulacion-Frecuencia-RD-Augusto-Bello-2622025.pdf (accessed on 18 July 2025). [135]

UIS (2022), *GERD as a percentage of GDP (indicator)*, United Nations Educational, Scientific and Cultural Organization Institute for Statistics. [110]

UNCTAD (2024), *Lee-Chin v. Dominican Republic*, United Nations Trade and Development, https://investmentpolicy.unctad.org/investment-dispute-settlement/cases/899/lee-chin-v-dominican-republic. [69]

UNCTAD (2024), “Mexico - Adopts new tax incentives for special economic zones in Yucatan”, Investment Policy Monitor, United Nations Trade and Development, https://investmentpolicy.unctad.org/investment-policy-monitor/measures/4783/adopts-new-tax-incentives-for-special-economic-zones-in-yucatan (accessed on 9 April 2025). [28]

UNCTAD (2024), “Viet Nam: Enacts Decree Establishing Investment Support Fund for High-Tech Enterprises, Products”, Investment Policy Hub, United Nations Trade and Development, https://investmentpolicy.unctad.org/investment-policy-monitor/measures/4900/viet-nam-enacts-decree-establishing-investment-support-fund-for-high-tech-enterprises-products (accessed on 10 April 2025). [29]

UNCTAD (2021), *República Dominicana: examen de las políticas de ciencia, tecnología e innovación*, United Nations Trade and Development, https://unctad.org/system/files/official-document/dtlstict2020d8_es.pdf (accessed on 14 February 2025). [7]

UNCTAD (2021), *Science, Technology and Innovation Policy Review of the Dominican Republic*, United Nations Trade and Development, https://unctad.org/system/files/official-document/dtlstict2020d8summary_en.pdf (accessed on 17 February 2025). [100]

UNEP (2022), "Interactive Country Fiches - Dominican Republic", United Nations Environment Programme, https://dicf.unepgrid.ch/dominican-republic/water (accessed on 7 March 2025). [170]

UNICARIBE (2025), "UNICARIBE and Keysight Technologies inaugurate innovative Center of Excellence", Universidad del Caribe, https://noticias.unicaribe.edu.do/unicaribe-and-keysight-technologies-inaugurate-innovative-center-of-excellence/ (accessed on 24 February 2025). [13]

USTR (2024), "USTR Releases 2024 Special 301 Report on Intellectual Property Protection and Enforcement", Office of the United States Trade Representative, https://ustr.gov/about-us/policy-offices/press-office/press-releases/2024/april/ustr-releases-2024-special-301-report-intellectual-property-protection-and-enforcement#:~:text=USTR%20removed%20the%20Dominican%20Republic,with%20IP%20enforcement%20and%20tran. [117]

Water Resources Agency (2017), "IDB (MOEA) Provides Technical Support on Water Reuse", https://www.wra.gov.tw/wracben/News_Content.aspx?n=42481&s=215557. [176]

WEF (2021), *World Economic Forum Travel & Tourism Development Index*, World Economic Forum, https://prosperitydata360.worldbank.org/en/dataset/WEF+TTDI (accessed on 28 March 2025). [179]

WEF (2019), *The Global Competitiveness Report 2019*, World Economic Forum, https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf (accessed on 25 February 2025). [87]

WIPO (2024), "Dominican Republic's innovation system", World Intellectual Property Organization. [105]

World Bank (2024), "Investing in a Greener Future: Successful Debut of the Green Bond in the Dominican Republic", World Bank, Washington, DC, https://blogs.worldbank.org/en/latinamerica/invertir-futuro-debut-bono-verde-republica-dominicana (accessed on 7 March 2025). [159]

World Bank (2023), *Domestic credit to private sector by banks (% of GDP)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/FD.AST.PRVT.GD.ZS (accessed on 28 February 2025). [92]

World Bank (2023), *Dominican Republic Country Economic Memorandum: Sustaining Economic Growth*, World Bank, Washington, DC, https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099072523145018880/p1767091452d11731eea1143a418ae716718fe03a5af (accessed on 16 July 2025). [73]

World Bank (2023), *Dominican Republic Distribution Efficiency Improvement and Utility Strengthening Project (P180512)*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/099112223095513794/pdf/BOSIB06c7636c0087080a00dc9e70cc3ec0.pdf. [163]

World Bank (2023), *Dominican Republic Water Sector Modernization Program (P177823)*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/099164503072314540/pdf/BOSIB0b92ab57d03f09cd909876abf83b8c.pdf (accessed on 11 April 2025). [174]

World Bank (2023), *Foreign direct investment, net inflows (% of GDP)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS (accessed on 18 February 2025). [50]

World Bank (2023), *Global Innovation Index: Rule of law*, World Bank, Washington, DC, https://prosperitydata360.worldbank.org/en/indicator/WIPO+GII+16 (accessed on 19 February 2025). [64]

World Bank (2023), *Lending interest rate (%) - Dominican Republic*, World Bank, Washington, DC, https://data.worldbank.org/indicator/FR.INR.LEND?locations=DO (accessed on 28 February 2025). [93]

World Bank (2023), *Logistics performance index: Efficiency of customs clearance process*, World Bank, Washington, DC. [76]

World Bank (2023), *Logistics performance index: Quality of trade and transport-related infrastructure*, World Bank, Washington, DC, https://data.worldbank.org/indicator/LP.LPI.INFR.XQ?end=2022&locations=DO-ZJ&start=2007&view=chart. [181]

World Bank (2023), *Reporte sobre tramitología para el establecimiento de empresas en tres regímenes especiales de República Dominicana*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/099112224175036219/pdf/P178504-76925377-6a5d-4130-ae65-f21ef927c822.pdf (accessed on 18 March 2025). [36]

World Bank (2023), *Second Electricity Reform for Sustainable Growth Development Policy Loan*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/099050523115028302/pdf/BOSIB07b54e0710760a2880fd936979f268.pdf (accessed on 6 March 2025). [128]

World Bank (2023), *Tax Revenue (% of GDP)*, World Bank, Washington, DC. [32]

World Bank (2022), *Dominican Republic Infrastructure Sector Assessment Program (InfraSAP)*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/099050624090530209/pdf/P17748211c6630691beef1ff4757a0c2ec.pdf. [180]

World Bank (2022), *Dominican Republic: Electricity Reform for Sustainable Growth Development Policy Loan (P175874)*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/202841649092948080/pdf/Dominican-Republic-Electricity-Reform-for-Sustainable-Growth-Development-Policy-Financing.pdf (accessed on 28 July 2025). [166]

World Bank (2022), *Paving the way for prosperous cities and territories: Urbanization and Territorial Review of the Dominican Republic*, World Bank, Washington, DC, http://documents1.worldbank.org/curated/en/099520007132233569/pdf/P172715065b95b0bc08ce70a7fe6442f014.pdf. [91]

World Bank (2021), *Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (indicator)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/ER.H2O.FWST.ZS?locations=DO-PA-CR&view=chart (accessed on 7 March 2025). [167]

World Bank (2021), *Wastewater treatment, %*, World Bank, Washington, DC, https://prosperitydata360.worldbank.org/en/indicator/WEF+TTDI+WASTERWATER (accessed on 7 March 2025). [172]

World Bank (2020), "Realizing Sustainable Development Goals for Water and Sanitation in the Dominican Republic", World Bank, Washington, DC, https://www.worldbank.org/en/results/2020/05/06/realizing-sustainable-development-goals-for-water-and-sanitation-in-the-dominican-republic (accessed on 7 March 2025). [171]

World Bank (2019), *Dealing with Construction Permits*, World Bank, Washington, DC, https://archive.doingbusiness.org/en/data/exploretopics/dealing-with-construction-permits (accessed on 25 February 2025). [85]

World Bank (2019), *Innovation Agencies: Cases from Developing Economies*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/615921573678530574/pdf/Innovation-Agencies-Cases-from-Developing-Economies.pdf (accessed on 17 February 2025). [125]

World Bank (2018), *Dominican Republic: Systematic Country Diagnostic*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/980401531255724239/pdf/Dominican-Repuiblic-SCD-final-07022018.pdf (accessed on 5 March 2025). [40]

World Bank (2016), *Special Economic Zones in the Dominican Republic: Policy Considerations for a more Competitive and Inclusive Sector*, World Bank, Washington, DC, https://documents1.worldbank.org/curated/en/184001487332346268/pdf/112878-REVISED-PUBLIC-GVC-and-SEZ-in-DR-P152202-output-final-clean-new-title.pdf (accessed on 20 March 2025). [25]

World Bank (n.d.), *Population, total (indicator)*, World Bank, Washington, DC, https://data.worldbank.org/indicator/SP.POP.TOTL (accessed on 15 March 2025). [118]

World Bank/UIS (2024), *Research and development expenditure (% of GDP) - Dominican Republic*, World Bank and United Nations Educational, Scientific and Cultural Organization Institute for Statistics, https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?locations=DO (accessed on 14 February 2025). [107]

WTO (2023), "Concluding Remarks by the Chairperson", World Trade Organization, https://www.wto.org/english/tratop_e/tpr_e/tp535_crc_e.htm. [72]

WTO (2022), *Trade Policy Review - Dominican Republic*, World Trade Organization, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/TPR/S435.pdf&Open=True (accessed on 11 February 2025). [79]

Notes

[1] Free zones that are not overseen by the CNZFE are outside of the scope of this report. For example, commercial free zones (*zonas francas comerciales*), which sell goods in hotels, airports and other tourist centres, are not analysed.

[2] Services free zones focus on services including, but not limited to, call centres, financial services or information technology. Special free zones are for sectors that must operate in a specific geographic area, for example agribusiness.

[3] Not all industrial parks come under the free zone regime. In addition to the 93 free zone industrial parks, the Dominican Republic has other industrial parks that operate outside of the free zone regime and support non-free zone firms in the local economy (see Section 3.2.3).

[4] As noted in Table 3.7, HS codes 900699 and 811292 are not included in ITA 1 or 2.

[5] Absorptive capacity is defined as "the ability of a firm to recognise the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen and Levinthal, 1990[184]). R&D is an important determinant of a firm's absorptive capacity and its innovative capabilities.

[6] Resolution SIE-040-2013 sets out the legal and administrative requirement for firms to qualify as non-regulated users (detailed in Annex A of the resolution) and technical requirements (Annex B of the resolution). Legal and administrative requirements include submitting a letter of application to the SIE and all relevant corporate documentation. Technical requirements include evidence of electricity demand and compliance with grid interconnection standards, safety and metering criteria. Applicants to become non-regulated users must also pay a fee ranging between DOP 327 000 and DOP 381 000.

[7] In August 2025, the Dominican Republic proceeded to launch this public tender for 600 MW of solar photovoltaic and wind generation, including energy storage systems (SIE, 2025[186]). However, the following month, in September 2025, the Dominican Republic modified the rules for the tender following feedback from stakeholders: the revised rules eased the requirement that only generation projects that already possessed a definitive concession could participate in the tender and expanded the pool of eligible generation projects to include those that could secure a definitive concession by the tender registration deadline (SIE, 2025[185]; BN Americas, 2025[187]).

Annex A. Understanding the semiconductor value chain

The semiconductor value chain involves a complex system of processes and inputs undergoing substantial change due to technology, geopolitical and business developments. To help policymakers read this report, this annex provides a simplified overview of the semiconductor value chain, key inputs and common business models. For more detailed OECD analysis on this topic, please refer to the paper "Mapping the semiconductor value chain" (OECD, 2025[1]).

The semiconductor value chain

Semiconductors vary in their complexity, function and size, and some semiconductors require unique manufacturing processes (BCG/SIA, 2021[2]; Haramboure et al., 2023[3]). At a high level, semiconductors are produced in three simplified steps: design; wafer fabrication; and assembly, testing and packaging. Inputs for the manufacture of semiconductor chips can differ based on their type but can be broadly categorised into three categories: i) intangible inputs, including software and intellectual property (IP); ii) materials, including gases, chemicals and substrate materials; and iii) capital equipment, which is required for both front-end and back-end manufacturing.

Design involves determining the requirements of the chip, planning its architecture and using a test bench to validate the final design. Design requires relatively little physical capital expenditure compared to the other stages but accounts for approximately half of the total value added in the semiconductor supply chain (BCG/SIA, 2021[2]). Chip designers make important decisions that determine processes undertaken in the fabrication and assembly, testing and packaging process.

- **Inputs to the design process:** Design is reliant on specialised software inputs, especially **electronic design automation (EDA) tools**, which are crucial to managing the billions of transistors, circuit elements and other components found in semiconductors (OECD, 2025[1]). Semiconductor designs rely on many different **IP blocks**, often sourced from third-party suppliers, to shorten development time. These IP blocks provide a variety of functionality, such as compute cores, memory and communication interfaces (e.g. high-definition multimedia interface [HDMI], Universal Serial Bus [USB]) that can be reused in semiconductor design. They are often proprietary to one company or organisation and are licensed to other companies (OECD, 2025[1]). Together, this input accounts for approximately 4% of value added in the semiconductor supply chain (BCG/SIA, 2021[2]; OECD, 2025[1]).

Wafer fabrication (also known as front-end manufacturing) is the process of etching an integrated circuit design onto a wafer of semiconducting material (often silicon). It is the most capital-intensive stage, encompassing nearly two-thirds of the industry's capital expenditures (BCG/SIA, 2021[2]). Fabrication is an advanced and delicate process involving "a cycle of polishing, deposition, resist application, lithography, etching, ion implantation, and resist removal" for each chip layer (OECD, 2025[1]).

- **Inputs to wafer fabrication:** A key input for fabrication includes **unprocessed wafers** of semiconducting material, like silicon or other substrate materials, such as gallium and germanium. Along with the wafer inputs, fabrication requires several other advanced material inputs like **chemicals**, which are important for etching, the wafer cleaning process, and ensuring wafers are uniform, and specialised gases, used in dry etching and for the protection of atmospheric exposure; chemical mechanical planarisation slurries also prepare the surface of wafers, ensuring their uniformity. Important types of **wafer fabrication equipment** include photolithography, resist processing, deposition, etching and cleaning equipment. The global semiconductor manufacturing equipment (SME) market was around USD 139 billion in 2024 (SEMI, 2024[4]). The main types of SME are: i) wafer fabrication equipment; ii) assembly and packaging equipment; and iii) testing equipment. Typically, SME suppliers specialise in one of those equipment categories.

Assembly, testing and packaging (ATP, also known as back-end manufacturing) involves cutting the processed silicon wafers outputted from fabrication into individual chips (called dies), packaging the dies into protective frames and resin shells, which allows them to be connected to a larger system through wires or soldering, and testing them for defects and performance (OECD, 2025[1]). ATP accounts for between 10% and 15% of physical capital expenditure and comprises approximately 5% of value added in the semiconductor supply chain (BCG/SIA, 2021[2]).

- **Inputs to ATP: Material inputs** into the ATP process include lead frames, packaging substrates, bonding wires and die-attach materials such as epoxy resin, metal alloys and ceramics (OECD, 2025[1]). Raw materials account for approximately 5% of value added in the semiconductor supply chain (BCG/SIA, 2021[2]). Dicing tools, temporary and permanent bonding tools and die placement are examples of **assembly and packaging tools** (OECD, 2025[1]).

After design, fabrication and ATP, the packaged chips are passed downstream for the assembly of printed circuit boards and final electronic products.

Key business models in the semiconductor ecosystem

The term **foundry** refers to firms that operate production facilities (also known as “fabs”) to produce semiconductors for other firms, usually on a contract basis.

“**Fabless firms**” create semiconductor designs but outsource manufacturing to foundries. As new electronic and digital applications drive demand for highly specialised and complex chips, a wide variety of firms carry out semiconductor design without either the front-end or back-end manufacturing processes.

Outsourced semiconductor assembly and test (OSAT) firms are typically third-party service providers that offer ATP services to fabless design firms, integrated device manufacturers (see below) and system firms (see below).

Integrated device manufacturers (IDMs) are vertically integrated manufacturers that can perform all processes of the value chain, from design to final packaging (OECD, 2025[1]). IDMs may also offer front-end or back-end contract manufacturing services to fabless or system firms, or outsource some manufacturing processes to OSAT firms or foundries.

“System firms” design semiconductors for use in their own products, like cars, smartphones or services, typically relying on OSAT firms and foundries for semiconductor production. In contrast, fabless firms typically design and sell chips.

Semiconductor IP vendors design and sell pre-designed, reusable functional blocks (IP cores) used in chip designs.

References

BCG/SIA (2021), *Strengthening the Global Semiconductor Supply Chain in an Uncertain Era*, Semiconductor Industry Association/Boston Consulting Group, https://www.semiconductors.org/strengthening-the-global-semiconductor-supply-chain-in-an-uncertain-era/. [2]

Haramboure, A. et al. (2023), "Vulnerabilities in the semiconductor supply chain", *OECD Science, Technology and Industry Working Papers*, No. 2023/05, OECD Publishing, Paris, https://doi.org/10.1787/6bed616f-en. [3]

OECD (2025), "Mapping the semiconductor value chain: Working towards identifying dependencies and vulnerabilities", *OECD Science, Technology and Industry Policy Papers*, No. 182, OECD Publishing, Paris, https://doi.org/10.1787/4154cdbf-en. [1]

SEMI (2024), "Global Total Semiconductor Equipment Sales Forecast to Reach a Record of $139 Billion in 2026, SEMI Reports", https://www.semi.org/en/semi-press-release/global-total-semiconductor-equipment-sales-forecast-to-reach-a-record-of-dollar-139-billion-in-2026-semi-reports (accessed on 2 May 2025). [4]

Annex B. List of identified semiconductor-related products

Table A B.1. List of semiconductor-related products

HS code	Label	Category
854110	Electrical apparatus; diodes other than photosensitive or light-emitting diodes	Chips
854121	Electrical apparatus; transistors (other than photosensitive), with a dissipation rate of less than 1 watt (W)	
854129	Electrical apparatus; transistors (other than photosensitive), with a dissipation rate of 1 W or more	
854130	Electrical apparatus; thyristors, diacs and triacs, other than photosensitive devices	
854160	Crystals; mounted piezo-electric	
854190	Electrical apparatus; parts for diodes, transistors and similar semiconductor devices and photosensitive semiconductor devices	
854231	Electronic integrated circuits; processors and controllers, whether or not combined with memories, converters, logic circuits, amplifiers, clock and timing circuits or other circuits	
854232	Electronic integrated circuits; memories	
854233	Electronic integrated circuits; amplifiers	
854239	Electronic integrated circuits; n.e.c. in heading no. 8542	
854290	Parts of electronic integrated circuits	
852351	Solid-state, non-volatile data storage devices for recording data from an external source (flash memory cards or flash electronic storage cards)	
852352	Cards incorporating one or more electronic integrated circuits “smart cards”	
852359	Semiconductor media, unrecorded, for the recording of sound or other phenomena	
853290	Parts of electrical “pre-set” capacitors, fixed, variable or adjustable, n.e.s	
853390	Parts of electrical resistors	
854140	Electrical apparatus; photosensitive, including photovoltaic cells, whether or not assembled in modules or made up into panels, light-emitting diodes	Photosensitive semiconductor devices
854150	Electrical apparatus; photosensitive semiconductor devices n.e.s. in heading no. 8541, including photovoltaic cells, whether or not assembled in modules or made up into panels	
252800	Natural borates and concentrates thereof (whether or not calcined), but not including borates separated from natural brine; natural boric acid (H_3BO_3) containing not more than 85% of H_3BO_3 calculated on the dry weight	Raw materials
280421	Argon	
280429	Rare gases (excluding argon)	
280461	Silicon; containing by weight no less than 99.99% of silicon	
280480	Arsenic	
281000	Oxides of boron; boric acids	
281212	Phosphorus oxychloride	
282560	Germanium oxides and zirconium dioxide	
283325	Sulphates, copper	
284011	Borates; disodium tetraborate (refined borax), anhydrous	
284019	Borates; disodium tetraborate (refined borax), other than anhydrous	
284920	Silicon carbide	
285000	Hydrides, nitrides, azides, silicides and borides, whether or not chemically defined (excluding compounds which are also carbides of heading no. 2849, and inorganic or organic compounds of mercury whether or not chemically defined)	

HS code	Label	Category
811292	Gallium, germanium, hafnium, indium, niobium (columbium), rhenium and vanadium; articles thereof, unwrought, including waste and scrap, powders	
811299	Articles of niobium "columbium", gallium, indium, vanadium and germanium, n.e.s.	
841459	Air or vacuum pumps (excluding gas compound elevators and pneumatic elevators and conveyors); air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters; gas-tight biological safety cabinets, whether or not fitted with filters; parts thereof	Manufacturing equipment
841950	Heat-exchange units (excluding those used with boilers)	
842129	Machinery and apparatus for filtering or purifying liquids (excluding such machinery and apparatus for water and other beverages, oil or petrol filters for internal combustion engines and artificial kidneys)	
842139	Machinery and apparatus for filtering or purifying gases (excluding isotope separators and intake air filters for internal combustion engines, and catalytic converters and particulate filters for purifying or filtering exhaust gases from internal combustion engines)	
842199	Parts of machinery and apparatus for filtering or purifying liquids or gases, n.e.s.	
903082	Instruments and apparatus for measuring or checking semiconductor wafers or devices, including integrated circuits	
903084	Instruments and apparatus for measuring or checking electrical quantities, with a recording device (excluding appliances specially designed for telecommunications, multimeters, oscilloscopes and oscillographs, and apparatus for measuring or checking semiconductor wafers or devices)	
903300	Regulating or controlling instruments	
900699	Photographic flashlight apparatus	
848610	Machines and apparatus of a kind used solely or principally for the manufacture of semiconductor boules or wafers	
848620	Machines and apparatus of a kind used solely or principally for the manufacture of semiconductor devices or electronic integrated circuits	
848630	Machines and apparatus of a kind used solely or principally for the manufacture of flat panel displays	
848640	Machines and apparatus of a kind used solely or principally for the manufacture or repair of masks and reticles, assembling semiconductor devices or electronic integrated circuits, or for lifting, handling, loading or unloading items of heading no. 8486	
848690	Machines and apparatus of heading no. 8486; parts and accessories	
900120	Sheets and plates of polarising material/sheets of semiconductor	Foundry inputs
900190	Lenses, prisms, mirrors and other optical elements, unmounted	
900219	Objective lenses	
900220	Optical filters	
900290	Lenses, prisms, mirrors and other optical elements, mounted	
901210	Electron microscopes, proton microscopes and diffraction apparatus	
901290	Parts and accessories for electron microscopes, proton microscopes and diffraction apparatus	
903141	Optical instruments inspecting semiconductor devices	
370130	Photographic plates and film in the flat, sensitised, unexposed, with any side > 255 millimetres	Wafer inputs
370199	Photographic plates and film in the flat, sensitised, unexposed, of any material other than paper, paperboard or textiles; instant print-film in the flat, sensitised, unexposed, whether or not in packs other: other: cinematographic film	
370790	Photographic goods	
381800	Silicon wafers	Silicon wafers

Note: The classifications presented in this table are based on the Harmonized System (HS) 2017 edition. Subsequent revisions introduced in the HS 2022 edition may have modified or restructured some of the codes listed.
Sources: OECD compilation based on Bonnet, P. and A. Ciani (2023[1]), *Applying the SCAN methodology to the Semiconductor Supply Chain*, https://publications.jrc.ec.europa.eu/repository/handle/JRC133736; Haramboure, A. et al. (2023[2]), "Vulnerabilities in the semiconductor supply chain", https://doi.org/10.1787/6bed616f-en; OECD (2019[3]), "Measuring distortions in international markets: The semiconductor value chain", http://dx.doi.org/10.1787/8fe4491d-en.

References

Bonnet, P. and A. Ciani (2023), *Applying the SCAN methodology to the Semiconductor Supply Chain*, European Commission, https://publications.jrc.ec.europa.eu/repository/handle/JRC133736. [1]

Haramboure, A. et al. (2023), "Vulnerabilities in the semiconductor supply chain", *OECD Science, Technology and Industry Working Papers*, No. 2023/05, OECD Publishing, Paris, https://doi.org/10.1787/6bed616f-en. [2]

OECD (2019), "Measuring distortions in international markets: The semiconductor value chain", *OECD Trade Policy Papers*, No. 234, OECD Publishing, Paris, http://dx.doi.org/10.1787/8fe4491d-en. [3]

Annex C. Shift-share decomposition analysis

A shift-share decomposition can be employed to better disentangle the drivers of labour productivity growth. This method allows for the identification of whether aggregate labour productivity growth in a sector can be attributed to improvements within individual subsectors (within effect), shifts in employment towards more productive subsectors (shift effect), or the interaction of these two forces. Following Molnar and Chalaux (2015[1]), aggregate labour productivity growth can be expressed as:

$$\frac{\Delta LP}{LP_{t-1}} = \sum_i S_{it-1} \frac{\Delta LP_i}{LP_{t-1}} + \sum_i \Delta S_i \frac{LP_{it-1}}{LP_{t-1}} + \sum_i \Delta S_i \frac{\Delta LP_i}{LP_{t-1}}$$

where LP denotes labour productivity, i indexes the individual subsectors, S denotes the employment share of subsector i in the other manufacturing sector, and Δ denotes the change between periods t and $t-1$.

The first term of the right-hand side of the equation denotes the within-sector effect, i.e. the sum of industry productivity growth rates, weighted by the initial employment shares. The second component is the shift effect, i.e. the sum of changes in employment shares, weighted by the initial productivity level. The third component is the interaction effect, which is positive when the restructuring of the economy is beneficial, i.e. when industries experiencing productivity growth are also attracting more employment.

References

Molnar, M. and T. Chalaux (2015), "Recent trends in productivity in China: shift-share analysis of labour productivity growth and the evolution of the productivity gap", *OECD Economics Department Working Papers*, No. 1221, OECD Publishing, Paris, https://doi.org/10.1787/5js1j15rj5zt-en. [1]

Review of the Dominican Republic's Enabling Environment for the Semiconductor and Microelectronics Industries

In 2024, the Dominican Republic declared the development of its domestic semiconductor ecosystem to be a "high national priority", aiming to capitalise on shifts in the global semiconductor supply chain towards greater diversification and resilience.

This report examines the opportunities, challenges and policy levers to support the development of the semiconductor industry, and the broader microelectronics industry, in the Dominican Republic. The report draws on both quantitative and qualitative analyses to assess the macroeconomic, institutional and regulatory conditions that could determine whether and how semiconductor and microelectronics firms choose to establish their operations in the Dominican Republic.

Although the Dominican Republic already has important strengths, the report highlights five areas where the country could further improve its enabling environment. Specifically, the report recommends strengthening the Dominican Republic's institutional framework for semiconductor policymaking, leveraging the free zone regime, enhancing the business environment, developing the science, technology and innovation ecosystem, and improving electricity and water infrastructure. By implementing these policy recommendations, the Dominican Republic can seize the opportunities presented by shifts in the global semiconductor and microelectronics value chains.

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