

Science, technology and innovation for sustainable and inclusive productive development

Guidelines for 2024-2025



UNITED NATIONS



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Working for
a productive, inclusive
and sustainable future



Fourth meeting of the
**Conference on Science, Innovation
and Information and
Communications Technologies** of the
**Economic Commission for
Latin America and the Caribbean**

Bogotá, 4 and 5 April 2024

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José Manuel Salazar-Xirinachs
Executive Secretary

Javier Medina Vásquez
Deputy Executive Secretary a.i.

Raúl García-Buchaca
Deputy Executive Secretary
for Management and Programme Analysis

Luis F. Yáñez
Secretary of the Commission

Marco Llinás
Chief, Division of Production, Productivity and Management

Sally Shaw
Chief, Documents and Publications Division

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Marco Llinás, Chief of the Division of Production, Productivity and Management of ECLAC, and Nicolo Gligo, Economic Affairs Officer of the same Division, were responsible for the overall coordination and preparation of the document.

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Contents

Foreword	5
A. Background to the conference	7
1. Participation and governance.....	7
2. Conference meetings, priorities and biennial programme of regional and international cooperation activities in support of policies on science, technology and innovation.....	7
B. Challenges in productivity and in science, technology and innovation.....	8
1. The productivity challenge	8
2. Structural challenges in science, technology and innovation	8
C. Productive development and strategic areas.....	10
D. Productive development policies and the role of science, technology and innovation.....	11
E. Guidelines for 2024–2025.....	13
1. Science, technology and innovation instruments for sustainable and inclusive productive development.....	13
2. Science, technology and innovation governance.....	15
3. Science, technology and innovation with a territorial approach.....	16
4. Strategic sectoral and technological agendas.....	17
F. How will the Conference work?.....	18
Bibliography.....	18
Annex A1	19
Figures	
A1.1 Latin America and the Caribbean and selected countries and blocs: research and development spending as a share of GDP, 2013–2021.....	21
A1.2 Latin America and the Caribbean (14 countries): research and development spending as a share of GDP, 2014–2021.....	21
A1.3 Selected countries and blocs: research and development spending, by funding sector, 2021	22
A1.4 Selected countries and blocs: research and development spending, by target sector, 2021.....	22
A1.5 Latin America and the Caribbean (12 countries) and other selected countries: research and development spending, by type of activity, around 2021.....	23
Diagrams	
1 Sectors and areas driving economic growth and a sustainable and inclusive productive transformation in the region	11
2 Definition and scope of productive development policies	12
Box	
1 Brief overview of science, technology and innovation in Latin America and the Caribbean based on research and development spending	9

Foreword

The Economic Commission for Latin America and the Caribbean (ECLAC) views science, technology and innovation as a fundamental enabler of and driving force for the productive transformation needed by the countries of the region to achieve much sought-after sustainable and inclusive development.

On that basis, it is essential to consider what needs to be done to ensure that science, technology and innovation effectively fulfil that role, and how. These are the major questions facing those charged with formulating and implementing public policy on science, technology and innovation, as part of broader productive development policy agendas.

Science, technology and innovation policies, and their link with other productive development policies, are central to forging a new path for stronger and more sustainable and inclusive development. This is because in addition to boosting the productivity of existing activities through incremental or radical improvements in processes and forms of organization, they encourage the creation of new sectors or the expansion of existing ones through innovation and technology-based entrepreneurship in new products and services. In this regard, intensifying and improving science, technology and innovation efforts will be fundamental for boosting value added and generating good jobs with a smaller ecological footprint, to advance towards a more sustainable and inclusive development model.

The Conference on Science, Innovation and Information and Communications Technologies, a subsidiary body of ECLAC, is a permanent forum for policy and technical dialogue that convenes high-level authorities responsible for science, technology and innovation policies to coordinate action and knowledge-sharing with a view to improving the quality and effectiveness of policies in the relevant areas.

At the fourth meeting of this Conference, participants will define the areas of cooperation of a regional agenda for 2024–2025, centred around science, technology and innovation for productive development.

This document serves as an input to the discussion and proposes four workstreams for the Conference for 2024–2025: (i) science, technology and innovation instruments for sustainable and inclusive productive development; (ii) science, technology and innovation governance; (iii) science, technology and innovation with a territorial approach and (iv) strategic sectoral and technological agendas.

It is therefore intended to underpin a regional work agenda that gives rise to concrete proposals for the work needed in science, technology and innovation for productive development, and that is supported by a unanimous commitment to push for the productive transformation required in the region.

José Manuel Salazar-Xirinachs

Executive Secretary

Economic Commission for Latin America
and the Caribbean (ECLAC)

A. Background to the conference

- The Conference on Science, Innovation and Information and Communications Technologies was established pursuant to resolution 672(XXXIV) of the thirty-fourth session of the Economic Commission for Latin America and the Caribbean (ECLAC) and resolution 2012/35 of the Economic and Social Council, as a subsidiary body of ECLAC.¹
- The Conference is a permanent forum for policy and technical dialogue at the highest level on science, innovation and information and communications technologies² that facilitates the coordination of action and knowledge-sharing to improve the quality and effectiveness of policies in these areas. It is also intended to strengthen the role of science, technology and innovation in the pursuit of greater sophistication, diversification and structural change in these economies to improve productivity and competitiveness, in an environmentally sustainable and socially inclusive manner.

1. Participation and governance

- The Conference convenes mainly the high-level authorities responsible for science, technology and innovation policies in each country, and has an Executive Committee composed of a chair and six other members, who are elected for a two-year term. The Executive Committee is responsible for monitoring the activities of the Conference, among other tasks.
- ECLAC serves as the technical secretariat of the Conference and is responsible for ensuring that the documents approved by the Executive Committee are available to the Conference members. The Commission also provides support with regard to the formation and functioning of the working groups.

As a subsidiary body of ECLAC, the Conference is a permanent and invaluable forum for high-level authorities responsible for science, technology and innovation policies to discuss and work on issues of common interest, with the technical support of the Commission.

2. Conference meetings, priorities and biennial programme of regional and international cooperation activities in support of policies on science, technology and innovation

- The Conference periodically holds meetings to elect the chair and other members of the Executive Committee, and to define priorities, activities and workplans. Conference meetings are currently held every two years. The third meeting of the Conference on Science, Innovation and Information and Communications Technologies of ECLAC was held in hybrid format from 13 to 15 December 2021, in Buenos Aires.³
- At the fourth meeting of the Conference, the new chair and other members of the Executive Committee will be elected for 2024–2025. Traditionally, the country that hosts the meeting has served as chair of the Conference for the period beginning in the year when the meeting is held.

¹ The subsidiary bodies are standing intergovernmental bodies of ECLAC that examine various public policy issues in the region, facilitate cooperation and peer-to-peer learning based on comparative experiences, adopt regional agreements in their respective areas of responsibility and issue mandates for the Office of the Secretary of the Commission. See information on all ECLAC subsidiary bodies [online] <https://www.cepal.org/en/about-eclac/subsidiary-bodies>.

² ECLAC leads another forum for regional coordination, the Ministerial Conference on the Information Society in Latin America and the Caribbean, whose work focuses on the design and implementation of the Digital Agenda for Latin America and the Caribbean (eLAC), and with which the Conference on Science, Innovation and Information and Communications Technologies seeks to maximize synergies.

³ See [online] <https://innovalac.cepal.org/3/en>.

- The biennial programme of regional and international cooperation activities for 2022–2023 on science, innovation and information and communications technologies, adopted at the third meeting of the Conference, proposed a joint effort to improve the positioning of science, technology and innovation policies with a view to fostering dynamic sectors that would lay the foundations for more sustainable and inclusive development in the countries of the region. To that end, the programme was based on three strategic objectives and seven workstreams.⁴

The objectives and workstreams for each period are approved at the biennial meetings of the Conference.

B. Challenges in productivity and in science, technology and innovation

1. The productivity challenge

- Latin America and the Caribbean has been affected by unfavourable international conditions deriving from the coronavirus disease (COVID-19) pandemic and, more recently, the wars in Ukraine and the Middle East, trade tensions, geopolitical conflicts and the resurgence of inflationary pressures. However, the key challenges facing the region are more structural. The year 2023 marked the end of a decade in which average annual growth was just 0.8%, much lower than the 2.0% recorded during the last decade of the 1980s (ECLAC, 2023a).
- This weak growth is largely due to productivity remaining stagnant, or even declining in recent decades, and also decreasing compared to the rest of the world.
- Although there are many underpinning factors, one of the most significant is the inability of the countries of the region to build more sophisticated, diversified economies and bring about virtuous structural change in their productive apparatus.

Without sustained productivity growth, the region will find it difficult to achieve the strong, sustainable and inclusive growth it seeks.

2. Structural challenges in science, technology and innovation

- In science, technology and innovation specifically, the region's problems are also structural and long-standing. The brief overview presented at the third meeting of the Conference (ECLAC, 2022a) and updated in the present document (see box 1), indicates that the situation will remain unchanged or improve only slightly, which means that the gap with more developed countries will not be closed unless active science, technology and innovation policies, backed by human and financial resources and incorporated into more far-reaching productive development policies, are decisively encouraged and implemented.⁵

⁴ See Buenos Aires Declaration [online] <https://innovalac.cepal.org/3/en/documents/buenos-aires-declaration>.

⁵ See details of the updated data in annex A1 to this document.

Box 1

Brief overview of science, technology and innovation in Latin America and the Caribbean based on research and development spending

- The region is clearly lagging in research and development (R&D) spending, not only with respect to more developed countries, but also in comparison with some emerging economies, such as China. This gap has been widening in recent years.
- The United States, the European Union, the member countries of the Organisation for Economic Co-operation and Development (OECD) and China spend the equivalent of more than 2% of their GDP on R&D. The figure is 3% for the United States and more than 4% for the Republic of Korea. In Latin America and the Caribbean, R&D spending as a share of GDP is about four times lower, and fell from 0.7% in 2015 to 0.6% in 2021.
- Trends among Latin American and Caribbean countries are mixed. In terms of absolute amounts, Argentina, Brazil and Mexico account for 83% of the region's R&D spending, according to 2020 data. Brazil alone accounts for 62% and also leads in relative terms, spending the equivalent of 1.2% of its GDP on R&D (2020). Meanwhile, Colombia, El Salvador, Guatemala, Panama, Paraguay, Peru, and Trinidad and Tobago spend the equivalent of less than 0.2% of their GDP on R&D.
- Most funding for R&D expenditure in Latin American and Caribbean countries is provided by the State and is managed mainly by the academic sector, in contrast to more developed countries, where companies primarily provide funding and execute spending.
- The weakness of Latin American and Caribbean countries in terms of R&D investment is merely a reflection of more structural problems linked to the design and implementation of science, technology and innovation initiatives.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Ibero-American Network on Science and Technology Indicators (RICYT) [online] <http://www.ricyt.org/en>; Organisation for Economic Co-operation and Development (OECD), OECD.Stat [online database] <http://stats.oecd.org/>; and UNESCO Institute for Statistics (UIS), UIS.Stat [online] <http://data.uis.unesco.org/>.

- Meanwhile, advancing science, technology and innovation in the region is not limited to ensuring that more resources are available, although greater availability of resources clearly broadens policies' scope of implementation. This effort also involves increasing the impact—particularly in terms of productivity—of the resources and efforts targeting science, technology and innovation.
- Therefore, in a scenario of structural weakness, scarce resources and the need for scale to achieve results, the resources allocated to support science, technology and innovation, or at least a portion of them, must be directed towards areas of knowledge and initiatives aimed at addressing the main challenges faced by the countries, including the aforementioned productivity challenge, while increasing the cost-effectiveness of these resources and efforts.

Science, technology and innovation policies should play a central role not only in building national R&D capabilities, but also in solving national problems and challenges within the framework of the countries' development policies.

C. Productive development and strategic areas

- If stagnant productivity is not addressed, it will be difficult for the countries of the region to take on other challenges, such as reducing poverty and inequality, creating quality jobs and reducing informality, and even the challenges posed by climate change.
- In order to address these issues, the countries of the region must scale up their ambition and efforts in relation to sustainable and inclusive productive development policies, understood as those instruments and initiatives that aim directly to build more sophisticated and diversified economies and to bring about virtuous structural change, in order to increase productivity.^{6,7}
- Increasing sophistication is understood as improving the productivity of existing economic activities, while diversification means broadening the range of productive activities, and virtuous structural change refers to the mobilization of factors from lower-productivity economic activities to higher-productivity ones.⁸
- The region must move forward in establishing a new investment structure, prioritizing investments targeting more knowledge-intensive activities that generate stronger growth in demand, create higher-productivity jobs and foster the development of productive chains, while helping to preserve the environment and reduce the ecological footprint (ECLAC, 2022b).
- Although governments aim to meet the greatest number of needs through their productive and science, technology and innovation policies, it is clear that the resources for this —not only financial, but also institutional and human— fall far short of potential demand. Therefore, countries and their territories must prioritize and target productivity in specific areas, sectors and clusters, or challenges within the framework of these policies.
- ECLAC has identified a series of dynamic sectors or areas, which are not limited to the industrial sphere, but may and should include all productive sectors, such as agriculture, services, mining and, of course, manufacturing.
- ECLAC has proposed an initial, non-exhaustive list of 15 strategic sectors or areas with the potential to drive economic growth and productive transformation in the region, which countries and their territories may prioritize in their productive development policies (ECLAC, 2023b) (see diagram 1).

In order to drive sustained productivity growth in the countries of the region, the productive apparatus must become more sophisticated and diversified, while undergoing virtuous structural change.

The direction of structural change is significant. Some economic activities create more opportunities for innovation and learning than others, and allow for greater productivity leaps.

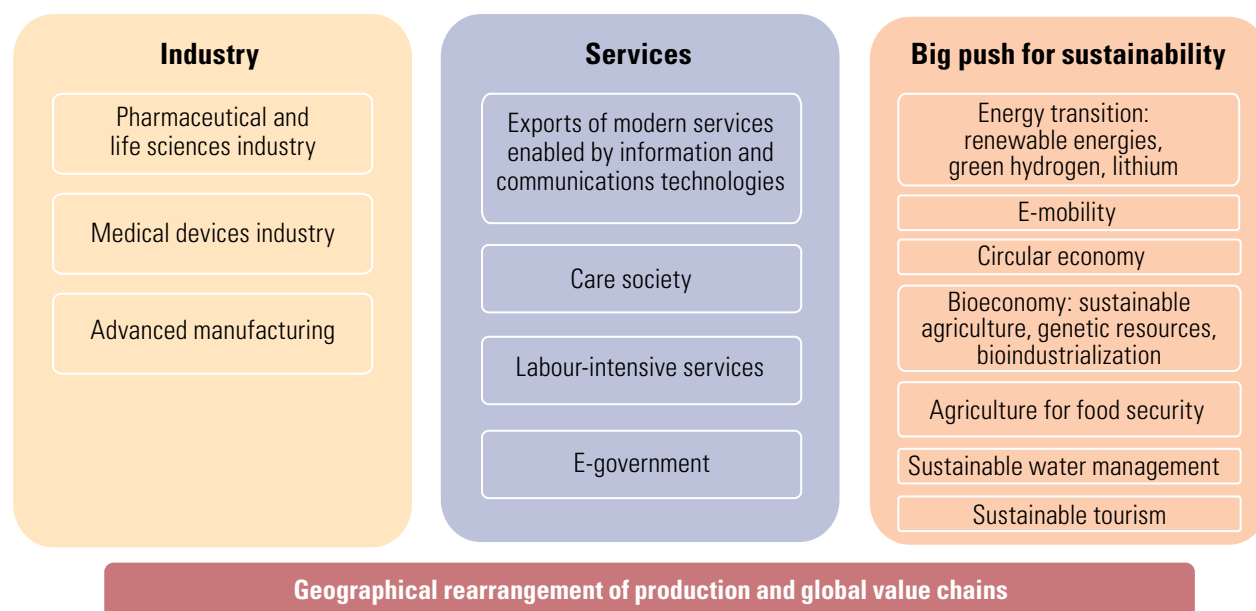
⁶ Recently, some countries have announced productive development policies along these lines, for example the national reindustrialization policy in Colombia and *Nova Indústria Brasil*.

⁷ See Salazar-Xirinachs and Llinás (2024) for more details on what ECLAC has been proposing in terms of productive development policies.

⁸ ECLAC also employs a more exhaustive definition of virtuous structural change, in which Keynesian and Schumpeterian efficiencies are combined. This is expanded into the concept of progressive structural change, which also considers environmental efficiency (see ECLAC, 2016).

Diagram 1

Sectors and areas driving economic growth and a sustainable and inclusive productive transformation in the region



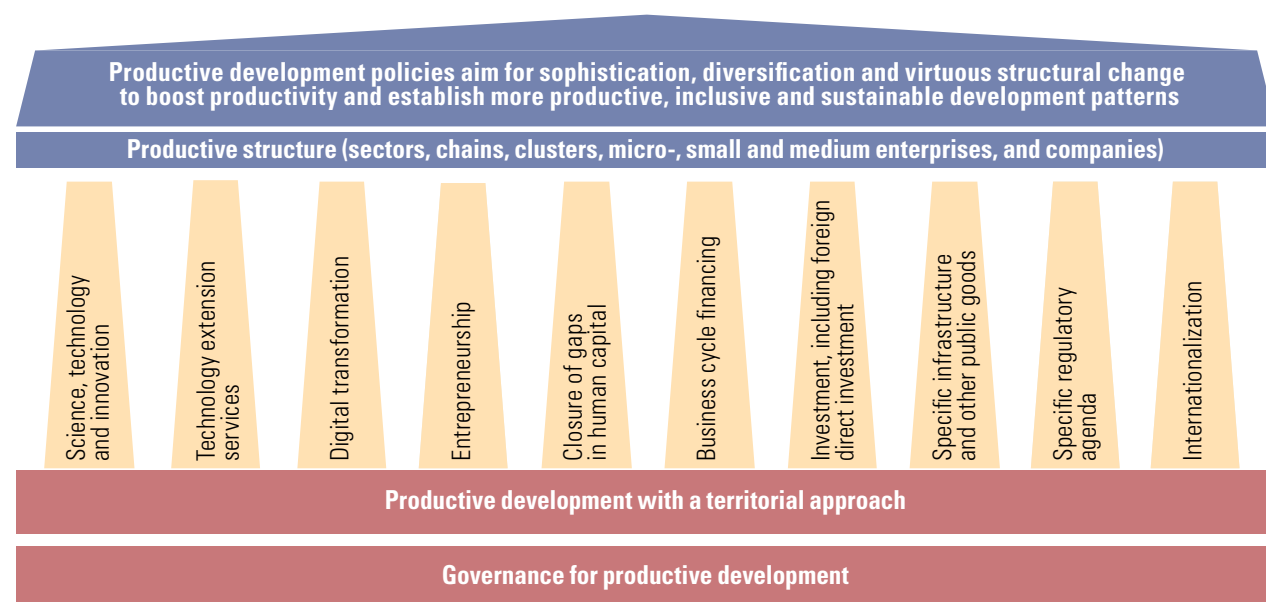
Source: Economic Commission for Latin America and the Caribbean (ECLAC).

- In the sectors or areas considered, there is enormous potential for the creation of better-quality jobs, innovation and the incorporation of technological advances, export diversification, climate change adaptation and mitigation, and the development of regional and extraregional cooperation efforts.

D. Productive development policies and the role of science, technology and innovation

- Spontaneous market factors are not enough to bring about productive transformation. Nor will this process occur as a result of State intervention alone. Therefore, within the framework of productive development policies, a broad agenda of policies, measures and efforts is required, along with the coordinated work of the public, private and academic sectors and civil society to identify and address the bottlenecks that limit this transformation.
- Given the need for virtuous structural change, many areas should be included in a productive development agenda.
- Multiple policy areas must be combined in a comprehensive productive development agenda. In addition to the traditional policies aimed at facilitating investment and working capital financing throughout companies' life cycles (including the role of development banks), there are others aimed at identifying and closing gaps in human talent, digital transformation, foreign direct investment, internationalization, specific infrastructure and other public goods, including quality infrastructure and regulatory agendas (see diagram 2).

Diagram 2
Definition and scope of productive development policies



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

- Amid this backdrop, science, technology and innovation policies play a central role, owing to their effect both on increasing the productivity of existing activities through incremental or radical improvements in processes and forms of organization, and on the creation of new sectors or the expansion of existing ones, through innovation and technology-based entrepreneurship in new products and services.
- It is important to note the efforts to be made in technology extension services, as part of science, technology and innovation policies, to ensure the adoption of technologies and knowledge by companies, as well as the push to be made for the development of mature entrepreneurship ecosystems.

Well-directed science, technology and innovation policies play a fundamental role in progressive structural change and must be coordinated with other productive development policies.

E. Guidelines for 2024–2025

- Science, technology and innovation are essential to meet the great challenge facing Latin America and the Caribbean to decisively boost productivity, which has remained stagnant and even declined in recent decades, along with other development and sustainability challenges.
- The work of the Conference from 2022 to 2023, as mentioned earlier, was “to improve the positioning of science, technology and innovation policies with a view to fostering dynamic sectors that lay the foundations for more sustainable and inclusive development in the countries of the region” (ECLAC, 2022c). The Conference therefore focused on seven workstreams, among which priority was given to strengthening institutional capacities for policy design.

Science, technology and innovation are expected to play a central role in the productive development policies of the countries of the region and their territories, in order to foster more sophisticated and diversified productive structures that can boost productivity, and thus achieve higher levels of prosperity and well-being for inhabitants.

- The region still faces a significant set of challenges, including strengthening public institutions to support the development of science, technology and innovation; increasing the private sector's commitment to innovation for productivity and competitiveness; improving the linkage of science, technology and innovation policies with the region's strategic challenges; and fostering regional and international cooperation in science, technology and innovation.
- To address these and other challenges, in 2024–2025, it is proposed that the Conference focus on supporting and guiding member countries and their territories in the design and implementation of improved science, technology and innovation policies within the framework of their productive development policies. This would be carried forward by means of a relevant regional agenda that can be described as “science, technology and innovation for sustainable and inclusive productive development”.
- The aim is to analyse in more detail the mechanisms and operationalization of science, technology and innovation policies that are necessary to successfully implement the agendas proposed by the countries and their territories. In other words, the proposal is to focus the regional science, technology and innovation agenda on providing the countries and their territories with the best guidelines on what they should do in these areas and how they should do so.
- It is therefore suggested to organize the 2024–2025 biennial programme of activities into four areas of work, which would be developed on the basis of the work of the respective working groups, to be determined within the framework of the Conference.

Science, technology and innovation for sustainable and inclusive productive development

2024–2025 workstreams

- (1) Science, technology and innovation instruments for sustainable and inclusive productive development
- (2) Science, technology and innovation governance
- (3) Science, technology and innovation with a territorial approach
- (4) Strategic sectoral and technological agendas

- The four suggested workstreams to be developed in 2024–2025, along with some of the questions to be addressed in relation to each of them, are as follows:

1. Science, technology and innovation instruments for sustainable and inclusive productive development

- In this workstream, progress is sought in providing guidance on the different types of policy instrument, such as financial instruments, technology extension services, support for entrepreneurship, incentives for applied science and basic science, and human capital formation for science, technology and innovation, among others; combining these instruments within the framework of mission-oriented policies (overcoming specific challenges collaboratively), strategies and, in general, productive development policies; and in the mechanisms for monitoring and evaluating instruments both individually and as a whole.

Instruments and how they are combined (the “whats” and “hows”) give rise to science, technology and innovation policy.

- In the region, the most common instruments for supporting science, technology and innovation are the allocation of subsidies, generally on the basis of the competitive funding model, and support for human resources training via grants for further study.
- There is a tendency to prioritize support for basic research, and to a lesser extent for applied research, which is carried out in universities and research institutes. Governments channel a significant portion of public spending on R&D to these institutions. The flip side is the relative stagnation of business participation in the financing and execution of R&D activities in the region, with the consequent lack of linkages between stakeholders (ECLAC, 2022a).
- The combination of policy instruments to support innovation seems incomplete and insufficient to drive the productive transformation needed. While there are factors specific to the economic environment that may inhibit business innovation, the lack of support, such as credit for innovation and innovative public procurement, available in many developed countries, limits the possibilities for companies to take on innovative projects (ECLAC, 2022a).
- This has resulted in a system of support for science, technology and innovation characterized by underfunded projects; wide dispersal of research and innovation projects, which hampers the formation of a critical mass of researchers and innovation-intensive companies; a de facto prioritization of short-term projects, and insufficient investment in research areas linked with national or local challenges, because they are beyond the capabilities of researchers and companies or exceed the scope of their priorities.
- One of the challenges is to increase technology diffusion efforts in order to reduce the gaps in productivity levels among companies, even within the same sector, so that they, particularly micro-, small and medium-sized enterprises, can adopt available technology and knowledge. So far, efforts in this area have been relatively limited.
- Another challenge is to incorporate the gender perspective into the design and implementation of policies and instruments to foster science, technology and innovation. Instruments must be created to encourage the participation of women in the entire cycle of knowledge creation and innovation.

Guiding questions

- How can the impact on productivity of resources allocated to science, technology and innovation for sustainable and inclusive productive development be increased?
- What kind of support instruments are the most effective and feasible to implement, depending on the different contexts?
- How can investment in research and development be optimized to ensure greater commercial leveraging of outcomes, while giving priority to strategic areas or resolving the most pressing challenges?
- What amount of resources should be allocated to basic science, applied science and technology diffusion to foster science, technology and innovation for productive development?
- How can instruments that allow efforts and resources to be directed towards strategic areas or challenges (e.g. through missions) be designed and implemented?
- How can the capacity to monitor and evaluate science, technology and innovation policies, and the capacity to learn from such monitoring and evaluation, be increased?
- How can the gender perspective be incorporated into the design and implementation of science, technology and innovation policies and instruments for productive development that is actually inclusive?

2. Science, technology and innovation governance

- Productive development policies, including science, technology and innovation policies, require a considerable amount of coordination. This process generally involves at least four types of coordination —between public and private stakeholders, between various public stakeholders, between various private stakeholders and between national and local stakeholders—, in addition to the relationship with civil society. Therefore, governance —broadly understood as the institutional arrangements, mechanisms, forces, rules of the game and incentive modalities that allow the coordination of efforts, stakeholders and resources based on strategic agendas— plays a central role.
- It is essential to establish or strengthen institutional arrangements that facilitate the coordination of efforts, resources and stakeholders at different levels around the strategic priorities defined within the framework of the productive development policies of the countries and their territories.
- Although the institutional framework for science, technology and innovation policies in the region has improved significantly in recent years, considerable weaknesses remain. More capacity is needed to design medium- and long-term strategies and instruments to support science, technology and innovation, and for their implementation, follow-up and evaluation.
 - Several countries in Latin America and the Caribbean have made institutional changes that have given rise to relevant ministries or other high-level political institutions. However, the creation of these new bodies has not necessarily led to science, technology and innovation playing a more active role in productive development policies or in other policies, including social policies (ECLAC, 2022a).
 - The enhanced institutional status of science, technology and innovation has not been matched by budgetary increases and, in some cases, there have been cuts. Significant changes in policy priorities and positions as a result of the administrative changes of new governments are common. Lastly, relevant policies are not always established in a formal document. Rather, they are a set of different measures that governments have adopted over time. In many cases it is necessary to review the support instruments that are being applied to infer the underlying policy (ECLAC, 2022a).

Guiding questions

- What institutional arrangements contribute to better governance of the national innovation system?
- How can a more productive relationship between the institutions supporting science and basic research and those supporting business innovation and productive development be developed?
- How can the coordination of efforts in science, technology and innovation with other productive development efforts be improved?
- What can be done to ensure that the triple helix model —comprising the public, academic and business sectors— or the quadruple helix model (which also includes civil society) actually works in the region?
- How can better policy continuity be achieved?

3. Science, technology and innovation with a territorial approach

- One of the challenges of governance is coordinating the efforts made at the national and local levels —particularly in science, technology, innovation and productive development policies— with initiatives largely carried out by local actors, in order to reduce the large gaps in productivity among territories in the countries of the region.
- This territorial approach to productive development offers the possibility of scaling up efforts by combining those at the local level with those at the national level; of taking into account the specific characteristics of the territories, not only in terms of productive and technological factors, but also in terms of institutional capacities; and of considering that many of the bottlenecks that limit productive and technological transformation can only be identified and addressed at the local level. Meanwhile, local actors and entities are increasingly setting their sights on —and even demanding— the power to determine their productive development.
- All of the above explains why localized policies, which involve a bottom-up rather than a top-down, centralist approach, are once again relevant.
- In the territories of the region's countries, the capacities for implementing initiatives in science, technology and innovation in particular, and productive development in general, are considerably mixed. Therefore, it will be essential to strengthen the capacities of the territories to carry out these agendas.
- Bearing these factors in mind, this workstream will be focused on offering guidelines for strengthening subnational innovation and productive development ecosystems and agendas, while at the same time enhancing subnational capacities in these areas.
- Decentralization does not mean that territories operate in isolation, as autonomous entities. In a complex scenario, stakeholders cannot achieve significant goals of sustainable and inclusive transformation by acting independently. Hence the need to create and strengthen multilevel and multi-stakeholder governance bodies that encourage coordination between public and private stakeholders, between public stakeholders, between private stakeholders and between national and subnational stakeholders.

Many initiatives relating to policies for productive development and science, technology and innovation must be carried out at the local level, with local actors, to reduce the large gaps in productivity among territories in the countries of the region.

Guiding questions

- How can national efforts be coordinated with subnational efforts in science, technology and innovation for productive development? How can multilevel governance modalities that allow alignment between national and subnational priorities be developed?
- How can the capacities of the territories that are lagging be strengthened? How can the capacities of territories be strengthened in general?
- How can local strategies in this area (e.g. smart specialization strategies) be designed and implemented?
- How should science, technology and innovation agendas be developed within the framework of cluster initiatives and other local productive coordination initiatives?

4. Strategic sectoral and technological agendas

- Science, technology and innovation policies must play a central role not only in building national capacities in R&D, but also with regard to solving problems and overcoming national challenges, particularly within the framework of the productive development policies of countries and their territories.
- There is need of science, technology and innovation policies that provide solutions to national problems and challenges, and that are incorporated into sectoral and technological work agendas.
- Addressing many challenges facing the region, in both the public and private spheres, requires a scientific and technical approach as the problems in question are becoming increasingly complex. This implies targeted public support in science, technology and innovation for areas of knowledge, especially those related to the sectors and technologies linked to the main challenges confronting each country.⁹ Mission-oriented science, technology and innovation policies can become a tool for the alignment of public and private stakeholders, while allowing efforts to be directed towards resolving national and global challenges.
 - The above-mentioned sectors and technologies proposed by ECLAC are closely aligned with the priorities established by the Community of Latin American and Caribbean States (CELAC) in science, technology and innovation, including the health industry, digital transformation and artificial intelligence, the energy transition and food security.
 - Therefore, the Conference on Science, Innovation and Information and Communications Technologies may act as an institutional arrangement for the creation of working groups that would lay the groundwork for the development of regional agendas in specific sectors or technologies. These working groups would also provide inputs to the countries and their territories to design their own relevant agendas for the relevant sectors and technologies. For example, a working group on strengthening the region's capacity to produce drugs and medical devices could be the first, followed by other groups to formulate agendas related to sectors or technologies that the countries prioritize within the framework of the Conference.

Guiding questions

- How can countries or territories design and implement science, technology and innovation strategies linked to productive development agendas in priority areas, sectors and technologies?
- What are the main barriers faced in the region in specific areas, sectors or technologies, or in relation to specific challenges, and how could these be addressed through science, technology and innovation, and productive development efforts?
- Which themes of these agendas should be addressed at the local, national and regional levels?
- What projects and initiatives should be carried out at these different levels?
- What policy instruments are available for this purpose?
- Which of the main public, academic or productive stakeholders should participate in creating and implementing strategic agendas at the different levels?
- How can regional coordination and cooperation to advance regional agendas relating to these specific areas, sectors, technologies and challenges be improved?

⁹ The scientific or technological solutions required to address these challenges will not necessarily come from R&D initiatives developed in the country, and in many cases, stakeholders will have to turn to solutions developed elsewhere.

F. How will the Conference work?

- In 2024–2025, the Conference on Science, Innovation and Information and Communications Technologies will be responsible for carrying out the workstreams defined at its fourth meeting.
- In order to determine and implement these workstreams, and to respond to the questions raised, it is suggested to set up working groups for each one. Working groups would include representatives of the science, technology and innovation and productive development authorities of the relevant countries, along with relevant representatives of the private and academic sectors and of civil society. Each group would be led by science, technology and innovation authorities of ECLAC member states.
- It would be the responsibility of each group to define the specific workplan, which would be approved by the Executive Committee of the Conference.
- ECLAC would help to manage the working groups, acting as technical secretariat for each one.
- These groups should meet periodically to carry out their respective workplans.
- The working groups would be expected to create forums for peer discussion on priority themes, and to discuss experiences from outside the region that could serve as a reference for better policy design and implementation.
- The working groups could also commission research and studies on topics relevant to their respective agendas.
- It is also hoped that these groups may work on regional agendas relating to their respective topics, allowing the leveraging of synergies that would contribute the scale and power of a regional approach to these efforts.
- Each meeting of the Conference would serve as a forum to take stock of progress in the implementation of each group's workplan.

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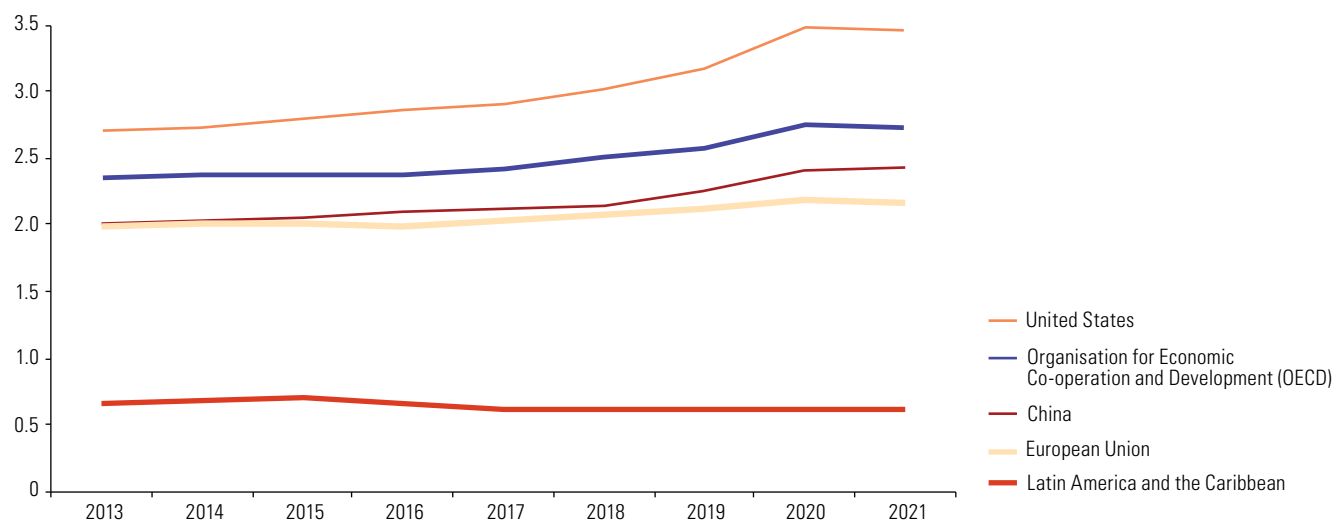
Annex A1

Latin America and the Caribbean: selected science, technology and innovation indicators

Figure A1.1

Latin America and the Caribbean and selected countries and blocs: research and development spending as a share of GDP, 2013–2021

(Percentages)

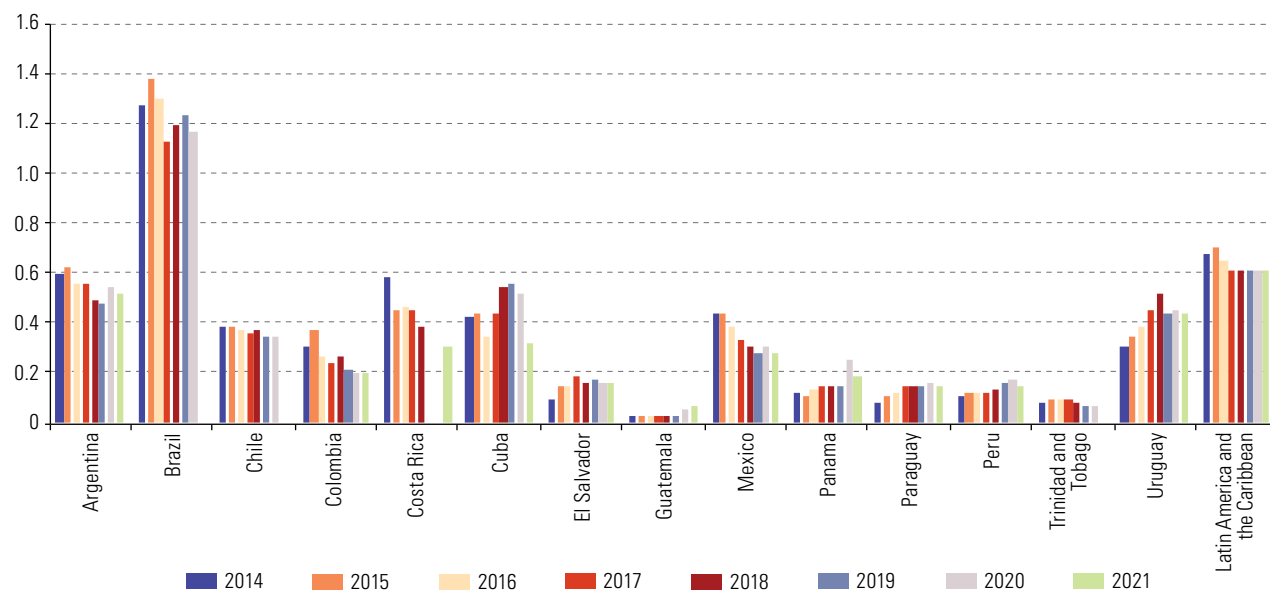


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Ibero-American Network on Science and Technology Indicators (RICYT) [online] <http://www.ricyt.org/en> (for Latin America and the Caribbean); and Organisation for Economic Co-operation and Development (OECD), OECD.Stat [online database] <http://stats.oecd.org/> (for the United States, the European Union, OECD and China).

Figure A1.2

Latin America and the Caribbean (14 countries): research and development spending as a share of GDP, 2014–2021

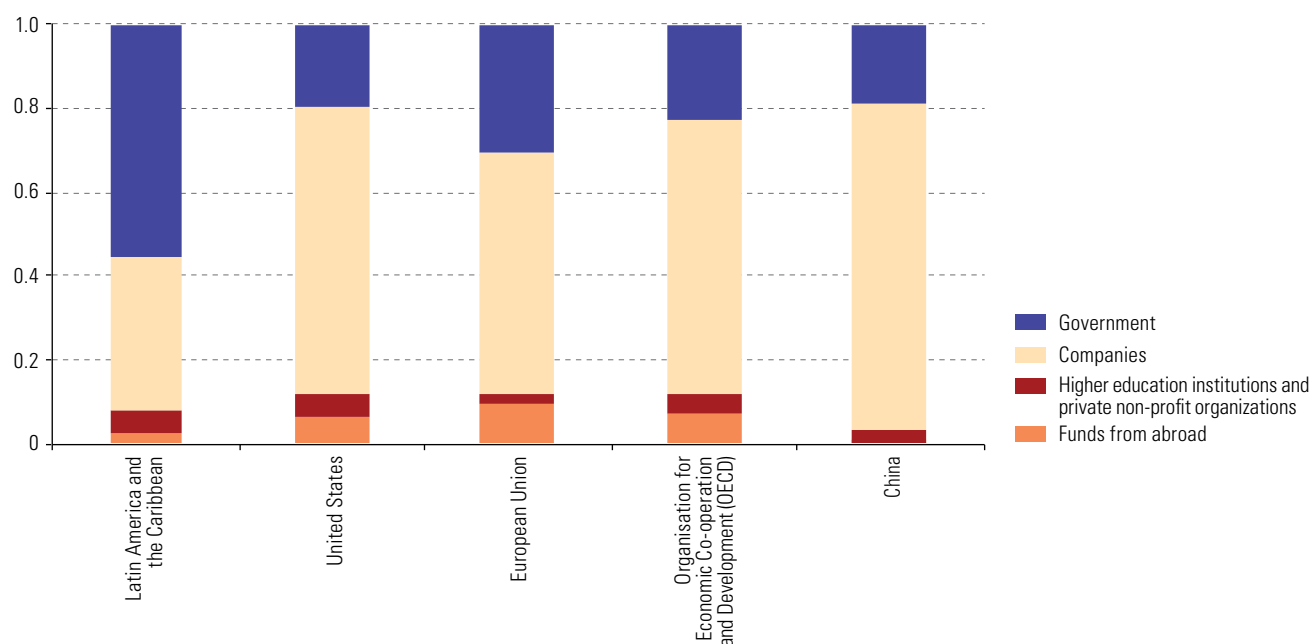
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Ibero-American Network on Science and Technology Indicators (RICYT) [online] <http://www.ricyt.org/en>.

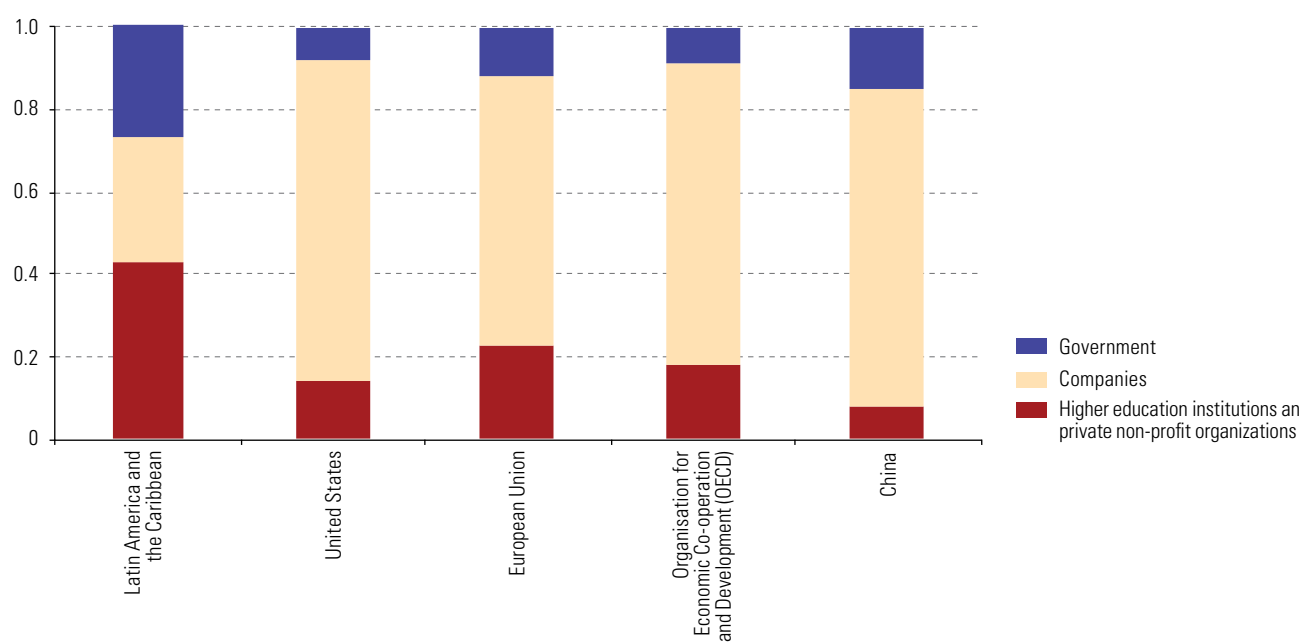
Note: The data for Latin America and the Caribbean are estimates.

Figure A1.3
Selected countries and blocs: research and development spending, by funding sector, 2021
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Ibero-American Network on Science and Technology Indicators (RICYT) [online] <http://www.ricyt.org/en> (for Latin America and the Caribbean); and Organisation for Economic Co-operation and Development (OECD), OECD.Stat [online database] <http://stats.oecd.org/> (for the United States, the European Union, OECD and China).

Figure A1.4
Selected countries and blocs: research and development spending, by target sector, 2021
(Percentages)

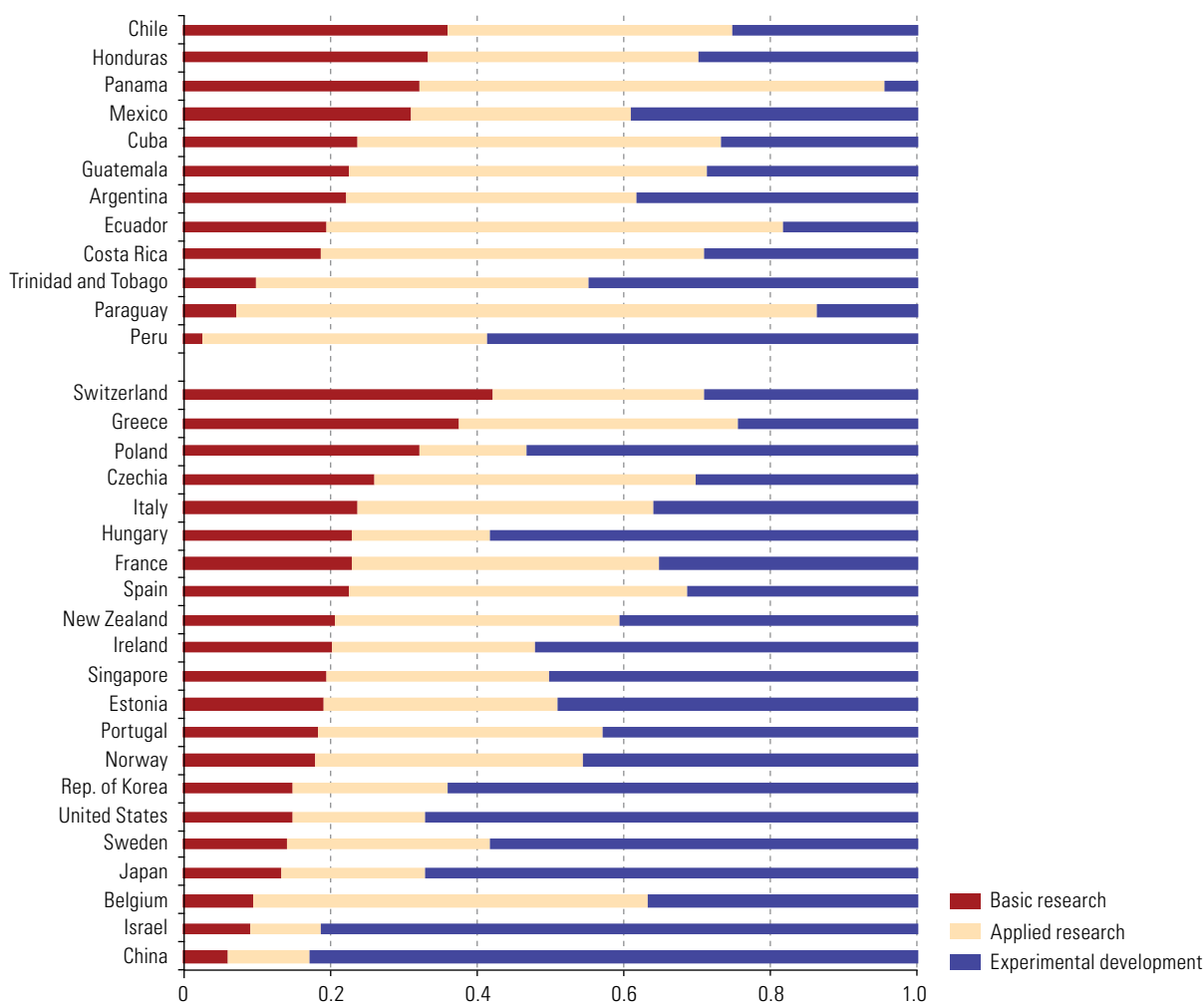


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Ibero-American Network on Science and Technology Indicators (RICYT) [online] <http://www.ricyt.org/en> (for Latin America and the Caribbean); and Organisation for Economic Co-operation and Development (OECD), OECD.Stat [online database] <http://stats.oecd.org/> (for the United States, the European Union, OECD and China).

Figure A1.5

Latin America and the Caribbean (12 countries) and other selected countries: research and development spending, by type of activity, around 2021

(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from Ibero-American Network on Science and Technology Indicators (RICYT) [online] <http://www.ricyt.org/en> and UNESCO Institute for Statistics (UIS), UIS.Stat [online] <http://data.uis.unesco.org/>.

The Conference on Science, Innovation and Information and Communications Technologies is a subsidiary body of the Economic Commission for Latin America and the Caribbean (ECLAC) and, as such, is a permanent forum for policy and technical dialogue that convenes high-level authorities responsible for science, technology and innovation policies to coordinate action and share knowledge to improve the quality and effectiveness of policies in these areas.

The workstreams and areas of cooperation of a regional agenda for 2024–2025 will be determined during this fourth meeting of the Conference.

With a view to providing input to the discussion and laying the groundwork for the agenda, this document proposes four priority workstreams focused on intensifying and improving science, technology and innovation efforts within the framework of productive development policies: (i) science, technology and innovation instruments for sustainable and inclusive productive development; (ii) science, technology and innovation governance; (iii) science, technology and innovation with a territorial approach; and (iv) strategic sectoral and technological agendas.