



United Nations

Committee for
Development
Policy

2024

Innovation ecosystems for development, structural change and equity*

Summary

The Committee analysed the challenges and opportunities of innovation ecosystems for development, structural change and equity. Innovation can be a powerful driver of sustainable development, yet that potential remains vastly under-realized, particularly in developing countries but also for public interest purposes across the world. The current global crises and shifts in the global economy and innovation landscape are reshaping challenges and opportunities for harnessing technology for sustainable development. That requires a reassessment of science, technology and innovation policy frameworks by national Governments and global institutions to create an effective national and global innovation system fit for the twenty-first century. Intellectual property rights are one of the key policy levers in a functioning innovation ecosystem to advance development, structural change and equity, and build resilience to crises. Developing countries require policy frameworks for innovation tailored to their specific priorities and could make more effective use of the existing policy space to pursue priorities for development, equity and productive capacity. The global system in place to support innovation for development needs to be reassessed to be made fit for purpose to ensure innovation for global and regional public goods and for countries to address the challenges of the twenty-first century.

In the Political Declaration adopted at the 2023 Sustainable Development Goals Summit, Member States committed to “bridging the science, technology and innovation divides and the responsible use of science, technology and innovation as drivers of sustainable development and to build the capacities necessary for sustainable transformations” and to “take action to enhance the ability of developing countries to benefit from science, technology, and innovation and address the major structural impediments to accessing new and emerging technologies”. The Committee has analysed the challenges and opportunities of innovation ecosystems for development, structural change and equity. Harnessing the opportunities while overcoming the challenges will be essential for achieving the objectives of the theme of the 2024 session of the Economic and Social Council and the high-level political forum on sustainable development, “Reinforcing the 2030 Agenda for Sustainable Development and eradicating poverty in times of multiple crises: the effective delivery of sustainable, resilient and innovative solutions”.

Potential of technological innovation for development is underutilized, which requires a reassessment of domestic and international policy frameworks

Technological innovation can be a powerful driver of sustainable development, yet that potential remains vastly under-realized, particularly in developing countries but also for public interest purposes across the world. At the same time, contemporary global crises, shifts in the global economy and the evolving innovation landscape are reshaping challenges and opportunities for harnessing technology for sustainable development. That requires a reassessment of science, technology and innovation policy frameworks by national Governments and global institutions to create an effective national and global innovation system fit for the twenty-first century.

* Excerpt from Committee for Development Policy, Report on the twenty-sixth session, See Official Records of the Economic and Social Council, 2024, Supplement No. 13 (E/2024/33)

Technology can increase productivity, advance inclusion, build resilience against crises, and address urgent global priorities such as climate change, infectious diseases, food insecurity, and gender and other social inequities. The importance of technological innovation is recognized throughout the 2030 Agenda for Sustainable Development and in the Political Declaration adopted at the 2023 Sustainable Development Goals Summit. However, that potential has not been fully realized, particularly for the structural transformation of developing countries, the transition of least developed countries out of systemic vulnerability, and inclusion and equity in all countries.

Critical gaps include the undersupply of technologies for many development priorities; extreme concentration of global science, technology and innovation investments and capacity in a few countries; and weak science, technology and innovation capacity and knowledge assets in most developing countries, despite the emergence of China and other global South countries as poles of innovation. Policy arrangements for the transfer of technology have been unfavourable, and the diffusion of technologies to address global climate and pandemic challenges has been inadequate. Existing frameworks and institutions are often inadequate to incentivize innovation in a dynamic setting where the drivers of innovation are continuously evolving, and to ensure access to the products of innovation, especially in responding to emergencies. There are severe inequities, including social and gender inequities, in both access to science, technology and innovation opportunities, such as education in science, technology, engineering and mathematics, and the outputs of science, technology and innovation systems.

For developing countries, the long-standing challenges remain acute, but are aggravated in the twenty-first century knowledge economy driven by knowledge assets and dominated by intellectual property monopolies. We are at a juncture in which Governments are still working to address the long-standing challenges while confronted with a new generation of global shifts and trends. There are ongoing transformations in how and where innovation, research and development take place, and in the drivers of productivity growth. Those include the shifts in the global economy with the rise of financialization and the increasing importance of intangibles; the advance of the fourth industrial revolution; demographic changes, such as ageing populations in countries at various stages of development and the untapped potential of a youthful population in many developing countries; climate change; new geopolitics tied to, among other things, the distribution of critical minerals for the energy transition; and developments in global agriculture.

Those developments have great potential, but present equally great challenges. Depending on how they are harnessed in domestic and global science, technology, and innovation policy frameworks and corresponding legislation, they can work for or against public priorities, defining how the benefits of the new economy are distributed.

The current context demands a fundamental discussion about national and global innovation ecosystems, which should lead to a reframing of policy discourse and policy on innovation and innovation ecosystems. The Committee's work in 2023 and 2024 addresses those challenges and focuses on issues related to intellectual property rights as an important part of a well-functioning innovation ecosystem.

Intellectual property rights are one of the key policy levers in a functioning innovation ecosystem that can advance development, structural change and equity, and build resilience to crises

Innovation is not an end in itself but serves multiple ends that extend beyond economic growth, including structural change, meeting social and environmental goals and building resilience against crises. Intellectual property rights are a public policy tool in innovation ecosystems. The objective of such rights is to incentivize innovation and ensure the dissemination of its benefits. The myth that the stronger the patent protection, the better, is not grounded in evidence. Strong patent protection can also create obstacles to innovation and limit the diffusion of the benefits of scientific progress.

The current intellectual property system (national, regional and international frameworks) is dysfunctional in many ways for the purposes of equitable and sustainable development. The existing rules and institutions were not formulated with a view to supporting innovation or the dissemination of new technologies for development purposes or for facing planetary-scale shocks. They are biased towards rewarding innovators over users. Intellectual property protection often far exceeds what would be necessary to incentivize innovation, leading to high prices and an undersupply of public goods and reducing the global dissemination of the benefits of innovation, which contributes to new inequalities.

Existing international agreements leave Governments the policy space to balance the goals of innovation and access in the form of flexibilities such as compulsory licensing and government procurement, and to formulate and implement intellectual property frameworks and policies fit for their national priorities. Flexibilities are well established in legal frameworks and practice in technologically advanced economies, to meet public objectives. This is exemplified in the use of compulsory licences for pandemic countermeasures in many countries with well-established intellectual property frameworks and innovation ecosystems. Yet developing countries face obstacles in making use of flexibilities owing to gaps in information, trade sanctions and other forms of political pressure, and incompatible national legal frameworks.

Developing countries can make more effective use of the existing policy space to pursue priorities for development, equity and productive capacity

Countries require policy frameworks for innovation that are tailor-made to their specific priorities. Countries at different stages of science, technology and innovation development require different approaches.

All countries have policy space to use a range of intellectual property policy tools and approaches to pursue national development priorities. There are considerable opportunities to make more effective use of intellectual property rights as an incentive for stimulating local innovation in developing countries, such as through copyright in creative industries, utility models for small and medium enterprises, and the protection of indigenous knowledge in design. Similarly, flexibilities can be utilized more proactively for public priorities, for example to reduce the cost of medicines as part of a pandemic response strategy. The first step would be to review the administrative and legal obstacles to the effective implementation of flexibilities.

The new generation of industrial policies, ushered in by the coronavirus disease (COVID-19) pandemic and the climate crisis, will need to use intellectual property rights, and the policy space available in international frameworks, as tools for building local technological and innovative capacities. Ongoing debates on policy space for industrial policy and trade are an opportunity for an integrated approach to those issues.

Digital creative industries are an example of knowledge industries that are growth areas that contribute to the structural diversification of economies, creating new opportunities for income generation. They face the challenges of copyright management, negotiations, and the distribution of revenue between platforms and creators.

Energy transition in developing countries, particularly least developed countries, will require meeting the objectives of both expanding access to clean energy and deploying clean energy infrastructure. That requires considering multiple challenges, including limited finance, concentration of clean technology intellectual property rights and supply chains, and unilateral environment-related trade measures. A feasible approach would be technology co-development and co-ownership with mechanisms rooted in equity and transparency, innovative finance for technological development, and using clean technology solutions to improve livelihoods and build the resilience of vulnerable communities.

Global system to support innovation for development needs to be reassessed to be made fit-for-purpose to ensure innovation for global and regional public goods and for countries to address the challenges of the twenty-first century

The international intellectual property system was developed in the 1980s and 1990s and did not address the critical need for openly accessible technology as a global public good for addressing the planetary shocks (climate change, pandemics) of the twenty-first century. Better models of collaborative research and development are needed to address challenges such as climate change and to promote the expansion of research and development in developing countries. One example is the CGIAR model, in which research is patented but access to technology is free. There are multiple other forms of collaboration and financing models for innovation, research and development, each presenting solutions and lessons for different situations.

The potential for South-South and regional frameworks that incentivize innovation in and for developing countries is large and growing but underexploited. The African Continental Free Trade Area is illustrative of an opportunity to develop a coherent regional intellectual property rights policy that is supportive of the goals of structural transformation, inclusion and equity, addressing issues such as traditional knowledge, traditional expression and genetic resources, and realizing the use of utility models. More investment is needed in policy research and the sharing of experiences on approaches that have worked in developing countries.

The implementation of Trade-Related Aspects of Intellectual Property Rights (TRIPS) provisions for technology transfer and to support development have not had the desired impact. The challenges of science, technology and innovation and the role of intellectual property frameworks are a neglected issue in international organizations with a mandate for development. Such organizations should provide developing countries with proactive support at the country level for the development of intellectual property architecture and policy frameworks, for the deployment of intellectual property as a development policy tool, and for the implementation of TRIPS flexibilities and other measures to pursue public interest. That includes providing policy analysis on alternative approaches. International organizations should also expand their work on global governance for the ethical use of new technologies.

The importance of innovation and intellectual property rights needs to be elevated in the least developed country graduation process, including in graduation impact assessments and in the development of smooth transition strategies and development strategies beyond graduation. Those should include a stronger focus on the role of intellectual property as both a catalyst and obstacle to innovation and access, and as a policy tool for structural transformation and equity including strategic management and use of flexibilities.