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NATIONAL INNOVATION SYSTEM IN AZERBAIJAN: RISKS AND CHALLENGES WITHIN COVID-19

After the country's independence, the hydrocarbon sector saw a new revival, thanks to new exploration leading to the discovery of significant new oil and gas reserves. The resulting upsurge in the sector produced an extraordinary economic boom during the past decade, which has been unmatched in recent history on the global scene.

The new Innovation Policy Outlook (IPO) of the United Nations Economic Commission for Europe (UNECE) reviews and compares innovation performance and governance across the EESC sub-region. Complementing quantitative composite indices, the IPO compares innovation ecosystems in six countries with similar economic, structural, legacy and institutional features, challenges, and opportunities. It is an essential part of UNECE support for trade and economic cooperation among its member States.

The overreliance on fuel exports has left the economy undiversified and vulnerable to global commodity price fluctuations, such as the COVID-19 induced sharp fall of oil prices in 2020. This risk is compounded by low productivity in non-oil sectors and growing environmental concerns, undermining the long-term prospects of Azerbaijan for sustainable growth.

Trying out new ideas, or innovation, systematically will be vital to forge a solid, diversified and well-integrated foundation for long-term sustainable development in Azerbaijan. As the IPO shows, the country shows strong political commitment and investment into innovation infrastructure, such as high-technology parks. For example, Azerbaijan has recently launched high-level events, such as the annual InnoWeek, to foster synergies in innovation policy and unite stakeholders from the Government, the business sector, academia and international organizations. It is a global pioneer in hydrocarbons, and its exports from the massive reserves in the Caspian Sea remain the main driver of the economy, contributing to a well-endowed

sovereign wealth fund. To sustain growth, Azerbaijan needs to reinvest this revenue into innovation and diversify its economy by supporting and catalyzing entrepreneurship and research and development across a broad range of potentially successful economic activities in the non-oil sector.

Recognizing this need for innovation, Azerbaijan has taken several important steps to reform innovation governance over the past years. These include:

The active development of a national innovation system. The Government shows a high level of commitment to innovation by preparing the national innovation strategy and establishing government bodies in charge of innovation policy, such as the Innovation Agency. Azerbaijan has made progress in developing digital government platforms and public sector innovation.

Existing public-private partnerships work towards aligning support measures with current market needs and building synergies for creating a knowledge-based economy. The expansion of public provisions to innovative start-ups includes information and brokerage services, as well as access to international markets. Digitalization is a priority for policymakers, including initiatives for improving e-government, accessing and using data, and obtaining Government-to-business (G2B) services. The Azerbaijan National Academy of Sciences (ANAS) established a widespread network of scientific laboratories to support research activities. Recent efforts to improve the quality of Sciences, Technology, Engineering and Mathematics (STEM) education complement existing support measures to improve education.

A legal framework with requirements for preparing policy is in place. The Law on Public Participation provides a legal basis for public councils, hearings and consultations, written consultations on the internet, and public consultations on draft legislation, organized by the Parliament. Policymakers have started to apply foresight exercises in preparing policies. The examined Grant Scheme was coherent with the objectives of the National Strategy for the Development of the Information Society and supported by a project manual and a structured selection process.

Enabling and promoting innovation also involves tackling a range of systemic constraints in the economy. Despite the construction of high-technology parks,

commercialization efforts at higher-education institutions (HEIs) remain ineffective, impeding productivity in the labour market. To fully exploit its innovation potential, Azerbaijan needs to diversify its economy by increasing support for Small and Medium-sized Enterprises in the non-oil sector and foster innovative activities by supporting investment in R&D activities in the private sector and by improving SMEs access to finance.

The IPO points to three important areas to address:

Innovation support is not systematically implemented across sectors and coordination efforts between policy initiatives are underdeveloped. Government support concentrates on high-tech sectors and systematic efforts to support innovation in sectors with lower uptake of advanced technologies are lacking. Coordination of science and innovation policy initiatives is limited as public authorities with responsibilities for science and innovation develop their measures in silos. Some mandates for implementing science and innovation policy initiatives are missing or not enforced sufficiently.

The types of support for innovative start-ups, such as early-stage investment, as well as support for industry-science collaboration need to be strengthened. Low access to early-stage finance obstructs the implementation of innovative projects. Policy measures related to knowledge absorption do not sufficiently address the promotion of non-technological innovation in the public and private sectors. Mechanisms for stimulating mobility between academia and industry are limited and mainly cover separate projects within universities.

The quality of the analysis supporting new innovation policies and laws leaves room for further improvement. Monitoring and evaluation have only a tenuous link with future policy design and evidence-based policymaking is not yet fully established. Innovation foresight is not yet integrated systematically and tends to be done ad hoc, tied to specific policy design efforts.

In this spirit, recommendations of the IPO for Azerbaijan include:

Strengthen innovation governance across sectors and facilitate synergies between policies. Ensure that the Government provides sufficient support for R&D and innovation activities in the service sector and in industries with lower technological intensity, in addition to high-tech industries. Establish coordination working groups among government authorities with responsibilities for science and innovation.

Increase the support for start-up development and introduce policy instruments that facilitate industry-science linkages. Develop a venture finance mechanism, in cooperation with international donors, to overcome the early-stage financing gap and facilitate the growth of innovative projects and technological creativity. Promote organizational and managerial practices by extending measures for stimulating non-technological innovation. Support science-industry collaboration and stimulate commercialization of innovative ideas by introducing early-stage finance for non-competitive financial support, such as innovation voucher schemes. Consider reinstating a cooperative R&D grant programme to stimulate cooperation between innovative enterprises and public R&D institutions.

Establish a more systemic linkage of monitoring and evaluation to policy design, including in government bodies responsible for innovation policy. Integrate innovation foresight practices into the policy processes of relevant line ministries to capture future trends in and perspectives on research activities for incorporation in the long-term strategic direction of innovation development. Ensure that drafters use evidence-based policymaking systematically. Implement regulatory impact assessments systematically to enhance the quality of the flow and stock of laws and policies.

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