ANNEX 2 - Country Snapshots

(1) Armenia Snapshot

Harnessing the Armenian diaspora to boost innovation for sustainable development.

A substantially reformed business climate has underpinned strong economic growth, led by rapid expansion of the service sector, in Armenia over the past decade, pushing it up to the rank of an upper-middle-income country. For a small, landlocked South Caucasian country, having gone through a rocky transition and plagued by political instability and on-going territorial conflicts, this is a remarkable achievement. To sustain this momentum, several structural challenges loom. Its heavy reliance on remittances and unstable public finances make its economy vulnerable, especially as investment contracts and productivity levels are low.

Engaging the diaspora, one of the largest in the world, systematically poses a substantial opportunity: out of 11 million ethnic Armenians across the world, only 3 million live in Armenia itself. This diaspora, many members of which are highly educated and successful, is important not only as a source of personal remittances, but as sources of and intermediaries for investment, ideas, skills, and networks important for broad experimentation with new ideas. Although the diaspora has catalysed some innovation, such as the pioneering initiatives in the area of export-oriented ICT services, there is ample room for effective public support to exploit the potential further.

Far-reaching, though far from complete, reforms have ensured sustained growth in GDP and have ensured renewed dynamism in sectors such as tourism and information and communication technology services. But further progress towards a diversified, increasingly knowledge-based economy is constrained by several factors, including weak R&D investment, low levels of competitiveness and absorptive capacity in the private sector at large, declining quality of educational outputs and labour market skills mismatches.

Table 1 – Strengths and Weaknesses in Armenia's innovation performance

Progress made so far	Challenges ahead
✓ Good overall performance in knowledge and technology outputs on the global scale	✓ Enhance human capital and research capabilities and reduce the skills mismatch on the labour market.
✓ Rise in ICT services exports and ICT access and significant increase in exports of high-tech manufactured goods	✓ Stimulate business sophistication and knowledge absorption.
✓ Several successful examples of innovation resulting from engagement with the Armenian diaspora for investment and entrepreneurship	✓ Stimulate private sector R&D and improve data collection to monitor development and impact.
✓ Improved entrepreneurship environment, resulting in a rapidly growing start-up scene	✓ Ramp up efforts to engage the Armenian diaspora more systematically, especially for investment into new activities.

Check out the IPO recommendations to find out more on how Armenia can address the above-mentioned challenges in its innovation performance.

(2) Azerbaijan Snapshot

Spurring innovation will be central to diversifying away from Azerbaijan's strong reliance on hydrocarbon exports.

Azerbaijan, an upper-middle-income country in the South Caucasus, is a global pioneer in hydrocarbons. Its exports from the massive reserves in the Caspian Sea drove rapid, albeit volatile, growth over the past two decades. Significant infrastructure investment should increase this potential further.

The overreliance on fuel exports, however, translates into very low levels of export diversification and very large productivity gaps between the capital-intensive extractive sector and the rest. Coupled with its vulnerability to price fluctuations, such as the COVID-19 induced sharp fall of oil prices in 2020, the bleak long-term outlook for hydrocarbon exports, and growing environmental concerns, Azerbaijan urgently needs to use the revenue to invest in the innovation needed to diversify and upgrade the rest of the economy.

Despite strong political commitment and investment into innovation infrastructure, such as high-technology parks, and education, the impact has been limited so far – largely because of low levels of technical and managerial and absorptive capacities in the non-oil private sector. Azerbaijan needs to diversify its economy by supporting and catalyzing entrepreneurship and research and development (R&D) across a broad range of potentially successful economic activities.

Table 2 – Strengths and Weaknesses in Azerbaijan's innovation performance

Progress made so far	Challenges ahead
✓ Strong export revenue from and inward FDI into the extractive sector. ✓ Strong political commitment to innovation	✓ Enable and promote the digitalization of the economy. ✓ Improve access to finance in the private sector. ✓ Direct investment efforts to improving productivity and developing skills in the labour force. ✓ Strengthen absorptive capacities in the private sector and cooperation with educational institutions. ✓ Expand and improve data on private sector innovation to inform policy experimentation systematically.

Check out the IPO recommendations to find out more on how Azerbaijan can address the above-mentioned challenges in its innovation performance.

(3) Belarus Snapshot

Belarus' SD prospects could prosper if the dynamism seen in the rapid rise of the country's IT sector could spread to other parts of the economy.

Belarus is an export-oriented country in Eastern Europe with strong ties to the neighbouring Russian Federation, Poland, Ukraine, and the Baltic states. In contrast to most countries emerging from the Soviet Union, Belarus embarked on a cautious, highly gradual transition path and retained much of its diversified production structure and the strong role of the state in the economy with SOEs holding two thirds of fixed assets in the economy. This strong role, however, coupled with lacking investor protection, regulatory burdens and restrictions, underdeveloped markets, and ambitious but at times not efficient support mechanisms continue to constrain the emergence of a vibrant, competitive private sector.

Boosting broader experimentation with ideas to create value and increase productivity will be essential for Belarus to exploit the significant potential for innovation and innovation-driven economic development. It has a highly educated population and a skilled workforce, a strong tradition of fundamental and applied research in several important fields, and an expanding, export-oriented information and communication technology (ICT) services sector. These are remarkable achievements, given a large range of business environment deficiencies. A concerted programme of business climate improvement and reform to direct support mechanisms to better target innovation and subsidise its risks are essential for Belarus to catalyse the broad experimentation needed to sustain growth in the medium-term.

Table 3 – Strengths and Weaknesses in Belarus' innovation performance

Progress made so far	Challenges ahead
✓ Investment in R&D (still) relatively high compared with neighbouring countries	✓ Increase business sector innovation by strengthening the business climate, sectoral synergies, firms' absorptive capacities, their ability to cooperate with research institutions, and their access to risk financing.
✓ Strong science and research tradition and high tertiary education attainment rates, creating a pool of highly skilled human capital	✓ Match the skills acquired through education with the requirements and structure of the labour market.
✓ Relatively high share of high-tech exports in total trade, as well as medium- and high-tech manufactures	✓ Further increase high-tech imports and FDI to boost international knowledge transfer and diffusion.
✓ Rapidly growing ICT sector with a strong international competitive position in services exports	✓ Expand data collection on firms' innovation activity to include indicators of non-technological innovation.

Check out the IPO recommendations to find out more on how Belarus can address the above-mentioned challenges in its innovation performance.

(4) Georgia Snapshot

Harnessing innovation to sustain reform momentum and shift to higher value-added activities can help Georgia reach its sustainable development objectives.

Georgia is a small, upper-middle-income country in the South Caucasus, connecting Europe to the Middle East and Central Asia. After independence in 1991, civil war and territorial disputes made the transition to a market economy particularly challenging. After an impressive spate of reforms in the 2000s, however, Georgia turned into one of the most open and well-governed countries in the region, underpinning close to two decades of strong albeit volatile growth. The economy relies heavily on the low value-added resource and commodity exports, making the country vulnerable to fluctuating export prices. To sustain growth, innovation is needed to transition towards higher value-added production and a well-diversified export portfolio.

Georgia needs to make better and systematic use of its potential, moving from a model of filling essential gaps to one based on ensuring innovation through broader experimentation with new and better ideas, business models, technology and governance arrangements. This is a major challenge, given the weak education system, skills mismatches in the labour market, limited firm capabilities, low public funding of research and development (R&D), and scarce industry-science linkages. Innovation inputs not only are insufficient but often do not translate into outputs at an efficient rate, suggesting room for improvement in innovation policy support. With the right mix of that support, Georgia's favourable business environment, institutional and governance reforms, openness to trade and investment, good integration into international science networks and vibrant start-up scene form a solid basis for innovation-driven diversification and sustainable economic growth.

Table 4 – Strengths and Weaknesses in Georgia's innovation performance

Progress made so far	Challenges ahead
✓ Development of a business-friendly environment with adequate investor protection	✓ Improve the commercialization of scientific results and establish systematic industry-science linkages.
✓ Significant improvement in institutional quality	✓ Increase the incentives for the private sector to invest in R&D.
✓ Strong commitment to education, as shown, inter alia, by setting up GITA	
✓ Good performance in attracting foreign investment	✓ Enhance the quality of the education system, particularly in science, technology, engineering and mathematics (STEM).
✓ Good integration into international academic networks, resulting in foreign funding and internationally relevant publications	✓ Reduce and mitigate the mismatch of skills between the labour force and the labour market.
✓ Introduction of an enterprise survey on national innovation activity	✓ Promote higher levels of business sophistication, especially managerial practices, to allow for the absorption of new ideas.
✓ Vibrant start-up scene	✓ Increase innovation overall, both technological and non-technological.

Check out the IPO recommendations to find out more on how Georgia can address the above-mentioned challenges in its innovation performance.

(5) Republic of Moldova Snapshot

In the Republic of Moldova, existing economic integration and diversification provide fertile ground for innovation to contribute to further reaping the benefits of trade and investment opportunities.

Neighboring Romania and Ukraine, the Republic of Moldova is a lower-middle-income economy in Eastern Europe. The country has faced a series of socioeconomic challenges over the past two decades, including economic and financial crises, drought, territorial conflict, and political instability. Declining macroeconomic stability is compounded by a mounting fiscal deficit, deindustrialization and heavy reliance on volatile flows of remittances. Yet, with its ready access to markets in the European Union and the Commonwealth of Independent States, the country has started to reap benefits from economic integration, with several competitive sectors emerging, including automotive supplies.

Sustainable, long-term growth will require economic stability and diversification through innovation Moldova has made significant progress towards improving the business environment, integrating into the international community and attracting foreign investment. This creates opportunities to develop the sphere of innovation across all sectors of the economy, drawing on the economy's biggest asset – human capital. To transform this capital into a knowledge-based economy, however, the country must address the low demand for innovation, increase funding for research and development (R&D). Further, a skills mismatch in the labour market and an outdated education system obstruct the further development of an enabling environment. These factors are intensified by weak commercialization of innovative results, unevenly developed ICT infrastructure and low engagement of the private sector in R&D.

Table 5 – Strengths and Weaknesses in Republic of Moldova's innovation performance

Progress made so far	Challenges ahead
✓ Innovation investments are efficiently translated into outputs	✓ Support further the development of technological and creative outputs.
✓ High level of tertiary education enrolment and government expenditure on education as share of GDP	✓ Modernize the education system to respond accurately to the needs of the labour market.
✓ ICT access and use are facilitated, while trade in ICT services has developed significantly	✓ Increase governmental and private sector R&D expenditure, and attract foreign investments in R&D. ✓ Strengthen industry-science linkages to improve research commercialization and collaboration.

Check out the IPO recommendations to find out more on how the Republic of Moldova can address the above-mentioned challenges in its innovation performance.

(6) Ukraine Snapshot

Investing in soft and hard infrastructure will be essential to boost and diffuse broad experimentation with the ideas that will underpin sustainable development in Ukraine.

Ukraine is a lower-middle-income economy in Eastern Europe, neighbouring the Russian Federation, Belarus, Poland, the Republic of Moldova and Romania. The country has faced significant turmoil in recent years: the Maidan Revolution, continuous protests, political upheaval and conflicts. Lower prices for steel, one of its largest export products, and lower investment levels overall, both foreign and domestic, have led to a contraction in industrial output, including manufacturing. Political and economic instability, corruption and the low quality of institutions and overall governance continue to constrain Ukraine's sustainable economic growth.

To fully exploit the country's potential, innovation – the ability to enable and promote the broad experimentation with ideas and technology – is essential to put its economy on a solid, diversified and well-integrated foundation for long-term sustainable development. Strengths of the country lie in its human capital, specifically a well-educated labour force, a long tradition of science and technology resources, natural endowments, market access, a large and successful diaspora, and a nascent but successful ICT sector. Regulatory and institutional restrictions stemming from the volatile political and economic environment of its recent past, however, hinder its competitiveness and the efficient translation of these capabilities into stronger innovative performance. The business sector's low involvement in research and development (R&D), the modest share of high-tech exports and the weak ability to commercialize innovative ideas all impede the transition to a knowledge-based economy, obstructing Ukraine from efficiently and effectively capitalizing on its innovation output capacities.

Table 6 – Strengths and Weaknesses in Ukraine's innovation performance

Progress made so far	Challenges ahead
✓ Relatively strong performance in technology and creative outputs	✓ Increase the share of high-tech and medium-high-tech goods in total manufactures.
✓ Significant enrolment in tertiary education, contributing to the country's large pool of talent	✓ Increase public and private investment in R&D, strengthen industry–science linkages and encourage technology upgrading.
✓ Substantial growth of the ICT sector in recent years, with high shares in total trade of ICT service and high-tech exports	✓ Commercialize more innovative ideas by stimulating demand in the domestic market.
✓ Satisfactory performance on intellectual property revenue from abroad	

Check out the IPO recommendations to find out more on how Ukraine can address the above-mentioned challenges in its innovation performance.