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**Joint Report by the Office to the President  
of the Republic of Armenia and UNCTAD**

# ARMENIA

**INVESTMENT PROMOTION STRATEGY IN TIMES  
OF THE GLOBAL CRISIS AND BEYOND**



PRESIDENT OF THE  
REPUBLIC OF ARMENIA



UNITED NATIONS  
UNCTAD

## Preface

In November 2019, the United Nations Conference on Trade and Development (UNCTAD) published an Investment Policy Review (IPR) of Armenia, following a request of His Excellency the President, Mr. Armen Sarkissian. Based on the country's efficiency profile, characterized by a well-educated workforce, a strong skills heritage, competitive salary levels and market access to key trading blocks, the IPR identified several export and efficiency-seeking industries that could aim for billion-dollar export sales in the next 10 to 20 years. It also provided recommendations meant at removing key obstacles to investment in those sectors, as part of a long-term strategy for promoting and benefiting from foreign and domestic investment.

In the few months since the IPR was published, the Coronavirus disease (COVID-19) epidemic has turned into a pandemic crisis that is altering the world economy and will continue to do so for the years to come. COVID-19 poses a number of threats and policy challenges to all economies, ranging from the shocks to the health system, the disruption of local and international production and distribution networks, the collapse of domestic and global demand, and the resulting rise in unemployment, debt and macroeconomic instability. The pandemic has also severely impacted on the operations of multinationals, trade and foreign direct investment (FDI) flows. Trade has been hit by simultaneous supply, demand and trade cost shocks, resulting in the sharpest and deepest contraction in a generation. FDI flows are also slowing dramatically. The latest estimates project a decline of 30 to 40 per cent in global flows during 2020–2021, the lowest level of the past two decades (UNCTAD, *World Investment Report 2020 – International Production Beyond the Pandemic*, June 2020). Because of the integrated nature of trade and investment, especially in global supply chains, declining FDI could have knock-on effects on trade, and vice versa.

In line with the vision set forward for the country to make Armenia a worldwide hub for innovation, ever more relevant in the context of the current crisis, this joint report, at the request of President Sarkissian, aims to assist the authorities in identifying priority actions to contain divestment and support new and existing investors, based on the comparative advantage in high-tech, software and engineering activities, with a special focus on artificial intelligence (AI), data science and deep technology, as well as food safety and security.

## Introduction

Armenia's economy is highly dependent on international demand for goods and services. The pandemic crisis is likely to have a significant impact on exports to key markets, including the Eurasian Economic Union (EAEU) and the European Union (EU). FDI inflows have already been on a declining trend since 2008 and a “wait-and-see” attitude associated with the recent political transition prevailed among investors before the explosion of COVID-19. Unless prompt actions are taken, FDI flows risk flattening and divestment, already an issue in some sectors, may extend to others. In this context, more than ever, promising sectors cannot be sustainably developed solely based on Armenia's existing efficiency profile – modernizing investment is required and policy actions needed to reassure existing investors.

To follow up on the IPR and based on the analysis and information gathered for its preparation, in this report UNCTAD and the Office to the President of Armenia make observations and recommendations to provide the pointers of a strategic approach utilizing investment policy tools to overcome some of the threats posed by the COVID-19 crisis. The priority actions identified focus on measures and tools that Armenia could adopt fast to mitigate the impact of the crisis on investment flows and the economy.

## Priority Actions

### 1. Establish a Quick Investor Response Taskforce

Armenia is significantly under-promoted to international investors. *Business Armenia*, the investment promotion agency (IPA), was recently dissolved, as part of a Government-wide streamlining programme. *Business Armenia's* functions were to be absorbed by the Ministry of Economy, but the institutional arrangements for investment promotion had not been settled at the time of finalizing the IPR. The Review recommended that whatever the institutional shape of investment promotion, the functionality should meet certain tests, such as:

- Visibility and accessibility;
- Adequate provision for four key roles – promotion, facilitation, aftercare and advocacy;
- Control of national branding;
- Coordination within ministries and with industry initiatives;
- No regulatory or incentive powers;
- Separation of investment and export promotion functions.

IPAs are key agents in the economic fight against the consequences of the pandemic (box 1), and the IPR recommendations in this area, more relevant than ever, should be pursued as soon as feasible. The COVID-19 pandemic and its foreseen economic impact also call for the immediate adoption a more urgent and flexible institutional investment promotion arrangement: a “Quick Investor Response Taskforce” (QIRT). Composed of a small number of high-level government officials from the ministries in charge of key economic sectors, as well as industry experts with private sector background, the QIRT should be placed at the highest level of Government and act in close cooperation with economic partners, including in the framework of presidential initiatives. It would complement the emergency business support measures adopted by the Government and should be tasked with three main functions: 1) investment retention, re-investment support and re-orientation of existing investment; 2) strategic investor targeting; and 3) strategic partnerships.

Its mandate and operations should be reviewed periodically for the entire duration of the pandemic. The need to target export promotion may also be considered. The functions of the QIRT may continue after the situation regarding the pandemic is stabilized.

In this context, the Armenian National Interests Fund (ANIF) can also provide support, being a foreign direct investment fund operating under the Government of Armenia. ANIF's mission is to generate sustainable returns to facilitate Armenia's economic development, capital growth and income generation, to create and deliver value in the long term and bolster an economic transformation and advance Armenia's communities across generations. Given its mandate of being a proactive investor and partner in the region to generate and facilitate investments in crucial sectors of the economy and infrastructure, it could co-invest alongside top global investors and industrial partners in large-scale projects in the country.

In its *investment retention* role, the QIRT would engage in a dialogue with key domestic and foreign investors. The aim is to identify policy support measures to assist them overcome the economic shock associated with the COVID-19, retain their investment in Armenia, or help them in converting local production towards goods and services that may directly be needed during the pandemic (e.g. the production of sanitizing equipment, masks and protective gear, or medical and pharmaceutical items). The QIRT should be enabled to move fast and offer tailored solutions as well as customised assistance packages, including fiscal, financial or other incentives, as may be opportune to perform its retention role. All assistance packages negotiated by the QIRT should be temporary in nature, targeted at supporting investor retention and re-investment as well as at re-orientating/re-purposing investment towards COVID-19-related production (box 1).

For the strategic investor-targeting function, the QIRT should identify a Principal to lead investment promotion in each key industry targets, including the priority sectors identified in the IPR and the activities discussed in the last section of this note. The Principal would be the authorised government official within the QIRT to lead and coordinate investment promotion. Since each target industry has a different set of promotional needs, the Principal should be required to develop and implement a industry-specific short action plan for meeting the targets and challenges. Each action plan should include:

- the identification of target companies and investors;
- the outreach strategy, including for the diaspora;
- coordination arrangements with other government entities concerned with the industry;
- mechanisms for engagement with local business.

The *strategic partnership* role assigned to the QIRT involves high-level networking with key trading partners, development partners, international financial institutions, non-governmental organizations, the diaspora and private equity groups. This should be targeted at securing support for Armenia in accessing markets, developing assistance, and establishing strategic alliances that can help the country to position its products and services (including the digital services discussed in the following sections). Special attention should be paid to major capital-exporting countries that have no Armenia diaspora, meaning the Asian leaders in particular.

A special role in the implementation of the above initiatives is reserved to the diaspora, which is Armenia's key competitive advantage.<sup>1</sup> A list by the Ministry of Diaspora identifies 108 business leaders across 20 countries as belonging to the Armenian diaspora. This presents special opportunities for investor targeting and strategic partnerships. Pro-active targeted promotion intended for the diaspora and direct contact with industry insiders could be especially beneficial for high-tech and innovation activities (as discussed in the sections below), and also in pharmaceuticals, education, wine, food processing and fashion.

## Box 1. COVID-19 responses by investment promotion agencies

Investment promotion agencies (IPAs) and ministries dealing with investment promotion and facilitation have reacted rapidly to the COVID-19 pandemic. Even if an increasing number had to close their offices, 64 per cent of IPAs surveyed by UNCTAD (between 23 March and 3 April 2020) responded to the pandemic by continuing to serve clients through online tools. Several IPAs have opened dedicated information portals to sensitize businesses on the Government support mechanisms. For instance:

- *Invest India* created a comprehensive Business Immunity Platform and developed a Business Continuity Planning toolkit. The aim is to inform investors and businesses on COVID-19-related developments with daily updates, share information on health and business-related responses by Indian companies, deliver webinars, and reply to online inquiries from businesses.
- *APEX Brazil*, an agency that promotes investment and trade, lists online COVID-19-related measures for businesses. It has dedicated a platform with a COVID-19 market intelligence tool that gives economic and trade updates by sector, a model action plan for businesses in crisis as well as tools and checklists for exporters.
- The Ministry of Investment of Saudi Arabia set up a COVID-19 Response Centre with a frequently asked questions window and an online COVID-19 Business Continuity Guide.
- The *Australian Trade and Investment Commission* is organizing webinars for companies on the effects of the virus on Australian-based businesses.
- *Invest in Denmark's* website offers an array of COVID-19 related information for businesses, including government support measures and links.

IPA are also finding new ways to continue service investors during these challenging times. Several of them have reallocated resources towards helping investors to continue their operations, by adopting a specific support and investment retention focus, or by supporting industrial reconversions to supply pandemic-related appliances. Examples include:

- *Invest in Estonia* and Switzerland's *SECO SME* have created a chat box for businesses and investors, which provide information on aid packages and offer cooperation with businesses to fight the COVID-19-related challenges.
- *Germany Trade and Invest* developed a COVID-19 special window with information on economic developments, updates on government measures for business and industry, and organizes online seminars on new developments, including on the novel "fast-track programme" for medical applications to respond to the growing demand for digital solutions in the German healthcare system.
- *Invest Italia* has adopted a novel approach. During the crisis, the IPA is responsible for managing the *#CuraitaliaIncentivi* initiative. It grants incentives to companies to temporarily transform or extend their production towards medical and individual protection devices to fight the pandemic. Requests for incentives are submitted through Invest Italia's online platform. The number of approved requests is monitored every hour and available on the website.

Source: UNCTAD (2020). *Investment Promotion Agencies: Striving to Overcome the COVID-19 challenge*, The IPA Observer, Special issue 8, April.

The QIRT should not work alone, as investment promotion is a shared responsibility to be coordinated within Government and with industry. ANIF may also be well positioned to contribute to this function. Their action should supplement and complement the efforts and expertise of other ministries and industry associations. For example, mining and energy specialists are usually well equipped to structure and present investment opportunities and will always be the first port of call for investors. On the other hand, some ministries, such as education and health, generally have little investment promotion expertise. They should welcome professional assistance. Armenia's Ministry of Foreign Affairs has a well-meaning attempt to promote education through a website – "Study in Armenia" – but it lacks the impact that professional help from a specialist operation would provide.

It will also be important, after the emergency phase and the establishment of the full investment promotion unit that the IPA does not retain regulatory or incentive powers.

## 2. Promote eGovernment

There are many ways to adopt and strengthen eGovernment platforms and help countries address the challenges associated with the pandemic (box 1 contains examples from IPAs). Online business facilitation tools can promote business continuity during the containment and confinement phase by ensuring a smooth running of the interface between businesses and the public administration. This includes leveraging on IT platforms to facilitate permits and approvals for business establishment, operation and trading procedures, and also safeguarding supply chain continuity through the efficient functioning of the customs, while applying appropriate COVID-19 preventive measures. eGovernment solutions can also be deployed to implement COVID-19-related fiscal rescue measures, such as the administration of social security for temporarily retrenched workers or the processing of business grant requests. In March 2020, for instance, Benin, with the assistance of UNCTAD, turned its business registration processes 100 per cent digital. This critical move, just before the spike in the number of global infections from the Coronavirus, means that businesspeople can open a company in under two hours, from the safety of their home or office. During the first week of closure, 182 businesses were created online.<sup>2</sup>

Reforms have been implemented in the e-Government system of Armenia since its creation. They have had a positive impact on the development of electronic document circulation systems, electronic registry for registering businesses, e-cadastre, electronic payments, online budgeting, electronic licensing, online government applications, online reporting to tax authorities, electronic photo galleries and identification cards. As regards business facilitation, through the UNCTAD's eGovernment programme - eRegistrations launched in June 2018 with the assistance of UNDP and funding from the Government of Austria - 10 key business procedures have been fully mapped and listed online, including all requirements for starting a business, obtaining residency, registering intellectual property and other property rights.

At the same time, Armenia should continue expanding eGovernment services by following the examples of Estonia, Singapore (box 2) and Rwanda. Beyond the positive impact on the investment climate, particularly in the context of COVID-19, the adoption and expansion of eGovernment solutions constitute an opportunity for the Armenian high-tech industry to develop expertise in the provision of services and solutions that can be then exported to the region and beyond.

Efforts to accelerate the digitisation of trade can also create opportunities for micro, small and medium-sized enterprises (MSMEs) by further lowering trade costs and helping them overcome disrupted supply chains. They can allow them to tap into a wider range of international buyers and suppliers, and to more easily manage end-to-end interactions. Adopting advanced digital solutions will also help MSMEs become more resilient to future economic disruptions.

### Digital education services (EdTech)

One of the sectors that will see faster development during (and probably also after) the COVID-19 pandemic is that of digital education. As of mid-March 2020, 165 countries had closed schools nationwide, impacting over 1.5 billion children and youth, according to UNESCO (the United Nations Scientific and Cultural Organization). Several countries are studying solutions to ensure that confinement policies do not preclude access to education, but existing solutions are often inadequate, particularly from the security standpoint, or need scaling up. This creates a market that Armenia could tap into, in light of the vibrant software development community in the country and also given the language skills of the population, which gives the country access to both Russian- and English-speaking markets. In this

## Box 2. eGovernment solutions: the Estonian and Singaporean experiences

**Estonia** has had great success in streamlining bureaucratic procedures to provide effective government services to its people. The E-Gov strategy was born out of necessity in the mid 1990s, when Estonia did not have the resources to maintain physical offices and pay functionaries. Hence the idea of a centrally-managed distributed integration software. Since then, the country has continued adopting bold new digital initiatives. In 2019, 99 per cent of the public services were available online, and 30 per cent of Estonians used i-Voting, with massive savings in terms of human and financial resources. To help other countries and export its solutions, Estonia created a Global Digital Society Fund, managed by Enterprise Estonia, the national IPA – the e-Estonia Briefing Centre (e-Estonia, 2020).

Estonia's achievements are based on key technical, institutional and legal initiatives. The country digitized all registries held by public bodies to provide the necessary information to support e-services. It also built a platform (X-Road) to connect different systems used by the public and private sectors, and allow them to share information and access online services. Legal instruments were adopted to ensure that the Estonian e-government ecosystem provides users with a secure and protected framework for personal data. Finally, Estonia addressed the digital divide with the vital help of the Estonian private sector, by jointly facilitating an independent and decentralized application development by public and private institutions to replace conventional public services with digital ones.

**Singapore** accelerated the development of eGovernment services in the early 2000s. Like Estonia, it had to overcome several problems during the initial phase, including the need to transform the mindset of civil servants, the digital divide and a lack of technical capabilities and financial resources. Singapore's success in tackling these problems is attributed to strong leadership, the thorough implementation of successive strategic action plans, the latter of which is the Digital Government Blueprint of 2018, and the continued focus on engagement of citizens as stakeholders. Apart from being able to access every single government service online, Singaporeans will also be able to complete between 90 and 95 per cent of transactions with the Government digitally by 2023. Through a single application and a few clicks, they will be able to pay bills, sign documents, apply for public housing, buy and sell homes and cars online.

Singapore is also pioneering innovative e-government solutions beyond those aimed at streamlining the interface between the public and private sectors. The future plans include the adoption of tools to better plan bus routes and improve carpooling and bike sharing through the use of smart lamps, so that commuters can plan their journeys, save time and have a better, safer experience getting around the city for work or leisure. To enable this transformation, about 20,000 public servants – or one in seven of the public sector workforce – will be trained in data science by 2023. All public servants will receive basic digital skills training, such as how to safeguard themselves against phishing. The core group will also be trained in more advanced areas, such as data visualisation and predictive analytics.

*Sources: TechRepublic (2019), World Bank (2016), Ke and Kee Wei (2004), Tham (2018).*

regard, while Armenia may not be well-positioned to be an exporter of traditional education services within the region, it could become a key player in EdTech, i.e. the development and servicing of e-learning platforms, content and other digital education services for the local and regional markets.

In order to boost domestic e-learning capabilities, the QIRT could promote a partnership between national and local administrations, the private sector and civil society, following the examples of China or the United Kingdom.<sup>3</sup> It could, for instance, mobilize all major telecommunication service providers in the country to boost internet connectivity services for online education, particularly for the underserved regions. It could also mobilize society-wide resources for the provision of online courses, with the aim to promote the development of digital media literacy and critical thinking skills. It could for this purpose capitalize on existing university-industry collaborations in IT – such as the Microsoft Centre and the Synopsys collaboration with the National Polytechnic University, to develop e-learning solutions for the region.

The Armenian diaspora, with its estimated 7.2 million members, largely exceeds the 3 million domestic population and maintains relationships that contribute equally to the national dynamism and to a positive perception of the country abroad. A national digital education plan could solidify the domestic/diaspora relationship by favouring collaborative learning activities across domestic and dispersed learners.

A national digital education plan could take benefit of a reinforced expertise creation in the field of “Digital Skills with IT” in addition to the focus on “Digital Skills for IT”. Based on the model of the national digital education plan, the implementation of digital education programmes could be successfully extended to the region.

The role of startups will amplify in the new situation. The changes taking place in the world market will create opportunities in all areas, e.g. the agricultural sector, the services sector or the financial instruments. There will be work to be done in many fields. Both the education system and the creation of an appropriate environment are essential for the development of startups and new technologies.

### **3. Position Armenia on the Digital Solutions Value Chain**

The pandemic has intensified the role of ICT in every aspect of human life, and IT services have become increasingly pervasive, ranging from communication to teleworking, e-commerce, digital education or entertainment. While world merchandise trade is forecast to decline from 12 to 32 per cent in 2020, and several services sectors, such as tourism, will suffer dramatically, some modern services that rely on digital supply are likely to be more resilient or, in some cases, even to see an increase in demand. Services such as telecommunication, computer services, digital entertainment and professional services can be traded across borders without face-to-face interaction. They are likely to be less adversely affected, or even expand in the short run due to social distancing. Indeed, one of the few certainties in the current situation is that the post-pandemic world will rely even more on digital solutions. Armenia has all the assets needed to partake in this new economy by playing a leading role. It can tap on its engineering and problem-solving skills, high-tech entrepreneurial ecosystem, high-quality IT infrastructure and diaspora network to become a key supplier in the “Digital Solutions Value Chain”.

Skills-wise, Armenia has a particular efficiency profile of a well-educated workforce at attractive pay levels with a strong skills/cost profile in high-tech areas. The latter is most prominent in ICT and engineering but is also expressed as R&D competence in industry and pharmaceuticals. The Armenian diaspora is an asset also in this field, and has, for example in the Silicon Valley, played a key role in the development of the high-tech sector in the country, which is booming, supported by Government initiatives and international venture capital.

About 800 ICT companies are operating (including internet service providers) in Armenia, generating a turnover of \$922 million in 2018, up 20.5 per cent from 2017. Most of these companies (95 per cent) were started since 2000, out of which 150 in 2018 alone. Software and services companies accounted for \$730 million of industry turnover in 2018, out of which about \$393 million was exported. Industry employment was around 16,000 people, with the industry growing at 20 per cent a year. About 30 per cent of Armenia’s ICT companies are foreign-owned, including by global leaders in the field. Half of these are United States-owned, and there is also significant presence from European (23 per cent) and Russian investors (17 per cent). Currently, the main business areas in Armenia in this sector are customised software, web design and development, IT services and consulting, mobile app development and system design and atomisation. Other business lines are chip design and testing, computer graphics, multimedia and games. Looking forward, Armenia aims to deepen the sector and become a leading hub for innovation, data science and AI.

Armenia is well positioned to provide R&D and testing solutions for companies worldwide. It offers skilled professionals at competitive cost with multilingual ability (supplemented, if necessary, by returning diaspora). It is able to expand its contract R&D up to the point of



producing prototypes. It can also offer “sandbox” solutions, which involve testing software and prototypes in isolated conditions before integration. An engineering cluster is emerging, capped by the construction of the high-tech Engineering City on the outskirts of Yerevan, which will augment this capability. The Project envisages the establishment of several units, including a business acceleration working area, an engineering centre, laboratories, workshop studios and small-scale sample production workshop factories. Technological companies will also be allocated land in the City. In this environment, engineering teams are developing prototype optical systems for autonomous driving vehicles and showing that Armenia can also credibly aim at becoming a world leader in AI and data sciences.

Armenia can also rely on high-quality IT infrastructure. International internet bandwidth per internet user is the best in the EAEU (excluding Belarus), and VEON Armenia has begun to roll out a 100Mbps fixed-broadband service. Mobile broadband has expanded strongly with large investments in modernisation during the roll out of 4G, and the Government has started planning the introduction of 5G. In 2017, investment in telecommunication services represented 3.4 per cent of gross fixed capital formation, higher for example than in the Russian Federation (1.7 per cent).

With supporting policies and the assistance of the QIRT, Armenia could aim at integrating the Digital Solutions Value Chain in various segments, including:

### **R&D up to prototype stage and “sandbox” interventions**

The ATOM (Advanced Tomorrow) Presidential initiative could be well-positioned to become one of the main actors in this area. It aims at the development of technologies, science and education in Armenia. Taking into account the high-quality human capital, good educational and technological base of Armenia, the programme is directed at making Armenia a leading centre in the areas of artificial intelligence and mathematical modelling. It envisages, in particular, the creation of the Museum of the Future and the first amusement park in Armenia based on AI.

This multicomponent project also strives to bring to Armenia leading information and high-tech international companies to work on the development of artificial intelligence, mathematical modelling and management of large volumes of data, research in the area of cybersecurity, machine teaching and implementation of educational programmes. In the framework of the ATOM, together with major international technological companies such as IMB, Dassault Systems, THALES Group, Elettronica, Safran, Leonardo and the universities of Heidelberg, Cambridge, and Skolkovo, scientific and research centres will be created. The goal is to become not just consumers of the products of these companies but their partners in the creation of new technologies in the areas of AI and machine building. It will be a platform where Armenian and international companies, research centres and universities will cooperate and implement jointly scientific projects. This initiative might become another “hill” to create a “mountain”.

Armenia should adopt an AI development strategy based on three pillars: 1) *the enabling framework*, to promote the adoption of regulations which are key to support STI, including frontier technologies, while ensuring that the development of such technologies is transparent, explainable and non-discriminatory; 2) *the clustering dimension*, to promote the establishment of innovation clusters within Armenia, and between Armenia and the innovation hubs worldwide; and 3) *the promotion dimension*, to position Armenia as a worldwide hub for AI and related activities. The QIRT would help speed up the adoption of the most urgent measures, including by retaining fiscal competitiveness in the area, increasing R&D funding and government procurement, promoting the roll-out of 5G and broadband technologies, as well as pro-actively engaging the diaspora not only in financing science and technology-intensive start-up projects through an “Angel network”, but also

in complementing the domestic skills' base via the attraction of international talent. QIRT should also increase the profile of existing initiatives, such as the "Virtual Bridge", which aims to make Armenia a "regional Silicon Valley" by connecting virtually the Armenian ICT/engineering companies to the international market and the world's leading companies.

### **Logistics, food safety and food security**

According to the FAO (Food and Agriculture Organization), as the Coronavirus spreads and protection measures tighten (including border closures and quarantines), the risks of facing a global food crisis are considerable. To date, disruptions have reportedly been limited, as food supply has been adequate during the very first period of the pandemic. However, challenges are emerging in terms of logistics bottlenecks, market supply, demand behaviours, supply chain and trade disruptions. These risk to further restrict people's access to sufficient/diverse and nutritious sources of food, especially in countries hit hard by the virus or with already precarious and high levels of food insecurity. The pandemic, which initially started as an emergency but gradually evolves into a food security and socio-economic crisis, requires a prompt response. The international community is looking for solutions to keep the global food supply chains alive and mitigate the pandemic's impact across the food system.<sup>4</sup> In this context, Armenia could be part of the solution: leveraging on its technological expertise, human and natural resources potentials, investments in food security have the potential to drive economic growth, improve the health of populations, modernize agribusinesses and support food security. This can be achieved by investing in food systems that will boost domestic food production, create income-generating job opportunities, support the establishment of regional logistic hubs and the creation of new national and international market opportunities.

Given Armenia's well-developed services sector and IT infrastructure, the country could also aspire to serve as a logistics hub. It could provide efficient online management of goods in transit through the multimodal transportation systems in parts of the Middle East or Commonwealth of Independent States (CIS) region, with the involvement of domestic and international investors. In particular, Armenia, supported by the high-tech profile of the country, could become a hub for the production and processing/transformation of food products, elevating their quantity, quality and safety standards to create new market opportunities for national and international markets. This requires developing and applying innovative IT solutions, as well as investing in green technologies across the value chain. For instance, the use of blockchain technology could facilitate the process of recording transactions and tracking assets across the regional network, or establishing modern production and processing systems. Profiling Armenia for this role would require a stronger national quality infrastructure and the enhancement of standards and quality controls. For the QIRT, this would also entail targeting and attracting additional investments from multinational enterprises to assist reduce non-tariff barriers in certain markets – for instance, agricultural fresh products.

Armenia possesses adequate potential and capacities to play a significant role related to the production and supply of high-quality water and food in the region and in an interconnected world. Investments would stimulate the quantity and quality of domestic production, while establishing a regional hub for the collection, assembling and transformation of food products. Armenia is a member to the EAEU, it closely cooperates with the EU and signed the Comprehensive and Enhanced Partnership Agreement (CEPA) in 2017. Furthermore, the logistical conditions are being created with China in the framework of the One Belt, One Road Initiative. It could thus be viewed as a trade platform and gateway to cater to markets with rising food demand, and to establish a regional platform for food security. Concept papers and action plans have been elaborated, extensive work is being done in the roll-

out of assessments and definition of business models. Preliminary agreements have been reached with some countries, including Gulf Countries and particularly the United Arab Emirates, with the forthcoming signature of strategic partnership agreements, and with specialized international organizations, such as the World Food Programme (WFP). WFP is among the first responders in emergency situations, including with this pandemic. WFP has been developing together with the Government of Armenia a model of nutrition-sensitive food value chains to channel investments in the country with the aim to improve food security, modernize Armenian agribusinesses, support economic growth and improve the health of the population.

In order to mitigate the food security concerns posed by the COVID-19 pandemic, Armenia should also promote a more productive use of private land to fully unlock the potential of the country and provide new drivers of regional and national growth. Nearly a third of arable land in private hands is considered unused or abandoned. It is estimated that there are about 340,000 very small-farm holdings (between 1.2 and 1.4 hectares) created through privatizations after the Soviet era.<sup>5</sup> Reports highlighted poor agricultural practices in small holdings, including inappropriate storage, application of fertilizers and pesticides, and inadequate choices of planting materials, as well as inefficiencies throughout the processing and marketing chain. The potential for more productive use of private land is therefore significant. The Government's goal of fostering inclusive growth and addressing the impact of the COVID-19 crisis requires continued attention to this sector, not only as an income source, but also as a source of food for many people. In the longer run, there will be consolidation of small holdings and population may decline in rural areas. But for now, raising productivity and facilitating market access for small farmers must go hand-in-hand with plans for investment in larger and modern units. A recent study found that the area under greenhouses had expanded rapidly – from 510 hectares in 2011 to 1,220 hectares in 2016.<sup>6</sup> Still, only 10 per cent of the area under greenhouses was covered by modern glass structures, thus reducing productivity, food safety and quality standards, thus limiting availability of Armenian food products throughout the year in national and international markets. In general, there is also a large difference between practices in small and medium-sized greenhouses and those of larger scale. Investments will be required at the structural level with the provision of modern technologies and machineries, and also for the transfer of know-how and business models for small-scale and larger-scale agribusinesses.

Investments in food security via food systems have the potential to achieve multiple results: ensure the sustainability of the country's food production, reduce the exposure to market shocks, increase the availability of nutritionally diversified high-quality food available to the population at affordable prices, and create income-generating job opportunities that will lift out of poverty and vulnerability the population amidst the pandemic. It will also regenerate MSMEs and broader economic activities that will lead the country's economy to emerge stronger from this global crisis. Furthermore, agricultural development and the mitigation of food security concerns would support decentralization, notably with respect to the geographic distribution of the population, which is a priority for economic growth and the sustainable development of Armenia.

Growth in the industry, however, cannot just rely on investment in advanced technology. The capital requirements are too large, and FDI on the required scale will not be forthcoming. Simply to double the current area with modern greenhouses would require at least \$120 million. Armenia's thousands of smallholders are a latent resource if they can be assisted with low-cost productivity and quality improvements. This is where packers and processors working with outgrowers can make a crucial difference. The QIRT's FDI promotion effort should focus on attracting these investors as the nucleus of the industry. FDI is needed for the whole package of capital, expertise, established distribution channels and extension

support to contract growers. Proper road infrastructure is also vital for the successful development of the agricultural sector and the related decentralization objectives. It necessitates the improvement of major local roads and could be achieved by emphasizing the development and approval of a uniform programme for construction and repair of the road network.

Ambitious policy support measures should be considered, including stronger incentives to attract investors with appropriate commitment to working with smallholders to reduce rural poverty. These could range from tax exemption and tax allowances to grants of improved or unimproved land. In addition to ongoing land consolidation initiatives, the Government could also consider: 1) amending legislation on land lease to allow for longer contract periods; 2) creating a land bank that facilitates matchmaking and expedites transactions between rural owners and foreign investors. Such types of institutions may take multiple set-ups. The recent experience of Business Armenia in identifying plots could help inform the one that is best suitable for Armenia; 3) introducing a concession scheme in which the Government offers long-term leases of serviced land at low cost to qualified investors. The concession scheme would set out the terms of the support and protections to be given to participating smallholders; 4) addressing regulatory impediments to industry investment, including complex import procedures for agriculture sector inputs and cadastral classification of greenhouse structures (see: World Bank, 2018, cited above); and 5) promoting actively a demographic decentralization through regional support measures, including tax facilities and also the enhancement of programmes aimed at strengthening education, healthcare, social security, sport, culture and other services in the less developed areas of the country.

In its strategic partnership role, the QIRT could also promote the signing of mutual recognition agreements with third-country authorities regarding the conformity assessment of regulated products. Finally, Armenia's role as a logistics hub could also be greatly increased by the vast needs of managing the logistics created in the framework of ongoing international transport initiatives. International transport projects, which aim at increasing possibilities for the South Caucasus to become a hub on the China-Europe trade route, will also stimulate logistics and communications not only on East-West but also West-East and North-South directions. In this context, Armenia should continue promoting the introduction of a Persian Gulf – Black Sea multimodal transport corridor, connecting the Islamic Republic of Iran with Europe via Armenia and Georgia, in the One-Belt-One-Road initiative. The project would help overcome the constraints posed by the country's landlocked geographic position.

## Conclusion

Disruptions to international trade and investment driven by the current health crisis and closely tied economic upheaval and state interventions are likely to have repercussions on the future configuration of global value chains. In the context of such increased uncertainty about the economic and social landscape generated by the COVID-19 pandemic, Armenia can rely on solid assets to help mitigate the impact on its economy and prepare it for the post-pandemic world. The dynamism of the high-tech sectors, a unique combination of strategic thinking and scientific skills, and the resources of the vast diaspora network can all be leveraged to position Armenia to contribute to the reconstruction of the world's economy. The investment policy tools presented in this report can contribute to and accelerate the achievement of this objective. UNCTAD stands ready to support Armenia in their implementation.

## Endnotes

- <sup>1</sup> There are an estimated 7.2 million Armenians living in 137 countries. The largest population is in the Russian Federation (2.6 million), followed by the United States (1.6 million) and France (700,000). The Middle East is well represented with sizable populations in the Islamic Republic of Iran (120,000) and Lebanon (140,000). So is Latin America, especially Argentina (128,000) and Brazil (100,000).
- <sup>2</sup> See: <https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2310>
- <sup>3</sup> See: <https://news.itu.int/covid-19-how-digital-learning-solutions-are-taking-shape/>
- <sup>4</sup> See: <http://www.fao.org/2019-ncov/q-and-a/en/>
- <sup>5</sup> See: World Bank (2018). An Opportunity to Unlock Armenia's Potential – Country Economic Update. Washington D.C.
- <sup>6</sup> See: World Bank (2016). Export Supply Chain of Greenhouse Crops: Armenia. Washington D.C.