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# EMPOWERING AGRICULTURAL DEVELOPMENT THROUGH DIGITAL TRANSFORMATION IN AZERBAIJAN

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#### Abstract

It is widely known that the level of Azerbaijan's non-oil export is significantly less than its existing potential. Accordingly, the government of Azerbaijan plans to increase its non-oil export to achieve export-led economic development. One of the important elements to achieve this goal is digital transformation of the economic activities, especially in non-oil sector such as agriculture. Agriculture plays an important role in economy of Azerbaijan in terms of ensuring food security, non-oil export, and non-oil GDP formation. Azexport.az portal and related e-trade infrastructure have been developed in order to contribute to this goal. Azexport.az helps for transition of the export opportunities of Azerbaijani companies, especially agricultural firms into real sales, thereby contributing to the creation of new jobs in the country, the strengthening of existing jobs and sustainable development. In this paper, we will provide information on opportunities how to use new innovative and alternative tools to join the global value chain, activities in this direction, measures taken to diversify exports across the non-oil sector, and boost export potential of agricultural products in Azerbaijan.

**Keywords:** agriculture, digitization, Covid 19, export, non-oil sector, Global Value Chain, Digital Trade Hub.

#### Introduction

The Republic of Azerbaijan, which gained independence in 1991, faced a severe economic crisis and carried out extensive economic reforms to get rid of the economic downturn. Since the early years of independence, Azerbaijan has made great efforts to achieve economic growth and join the Global Value Chain (GVC). The country signed a contract (*Product Sharing Agreement*) with world's largest oil companies regarding oil field exploration and production in the Caspian Sea in 1994 and 1995, began to implement agrarian reforms and distributed the land to the peasants and, as a result, from 1996 to 2016 GDP has grown dynamically. Only during the past 16 years, Azerbaijan achieved GDP growth by more than three times for per capita (World Bank, 2020a).

However, since the second half of 2014, the fall of oil prices in the world market and the deepening of economic downturn trends in key trading partners began to reflect itself in the economy of Azerbaijan. In 2015, the devaluation of the national currency for more than 100% was another challenge for the country economy, the service costs for foreign borrowings have led to additional pressure on the state budget. Due to the global commodity crisis such as drop in crude oil prices, Azerbaijani government planned to ensure the sustainable development of the non-oil sector and minimize the economy's dependence on the oil sector within about ten years. Certainly, due to a great economic potential, labor force, traditional advantages, agricultural sector took a special place in these reforms agenda.

Particularly, one of the important factors in the development of modern national economies is the implementation of programs and roadmaps (SRNEPRA, 2016) to stimulate trade and export. In these roadmaps besides other elements, innovation, human capital and access to finance through digital services have been identified as the main factors to develop economy of the country. There are different incentive mechanisms in the world, which is actively used by different countries today. Establishing special export processing zones, tax rebates, support for participation in foreign exhibitions and fairs, subsidies of agricultural exported goods, etc. is the partial list of the mentioned mechanisms. Thus, on December 6, 2016, Azerbaijan adopted new Strategic Road Maps for economic reforms in the country, which envisage comprehensive development of 12 key sectors (finance, agriculture, tourism, transport, logistics, etc.). The country's oil-focused economy is being diversified with the help of creating new business opportunities within the agricultural, construction, education, tourism sectors and ICT. As the mentioned above, agricultural sector was one of the significant part of these reforms and in this regard, relevant state agencies, thinks tanks and independent experts have come together to discuss, evaluate and analyze the existing conditions in agricultural production and processing and have designed the Strategic Roadmap for Agricultural Production and Processing in Azerbaijan. Implementation of the Strategic Roadmap for Agricultural Production and Processing in Azerbaijan will consisted of 9 strategic targets, such as increasing full-potential of agricultural production along the value chains, developing the agricultural input market and facilitating access to inputs including financial resources, developing the market infrastructure and ensuring free access of producers to markets, and improving rural welfare, etc.

Meanwhile, the economic stagnation has been eliminated as a result of economic reforms in Azerbaijan, while the GDP declined by 3.1 percent in 2016. Nonetheless, it started to show a positive sign since 2017 and in 2019 GDP growth rate was 2.2 percent (SSCAR, 2020). Prestigious international organizations (WB, ADB etc.) forecast economic growth more than 3 percent for 2019

and 2020. In 2019, the inflation rate in the country was 2.6%. Non-oil GDP saw an increase by 3.5 percent, non-oil industry by 13.9 percent, agriculture, forestry and fishing by 5,7 percent and exports by 16.5 percent. On the other side, these processes accelarated the importance of agrarian sector in the economic activities. For instance, in 2019, Azerbaijan exported \$ 760 million worth of agricultural products, and the share of this sector in non-oil exports was 39 percent.

External debt accounts for 17% of the GDP and country is ranked 9th in the world. Foreign exchange reserves have reached \$ 50 billion, rising \$ 4.5 billion over the year, which is 6 times more than the foreign debt and now Azerbaijan is ranked the first in the CIS for the quantity of foreign exchange reserves per capita. This was achieved by comprehensive social and economic reforms based on localization of the challenges of global trends in Azerbaijan and by updating the political and economic governance architecture. It is no coincidence that Azerbaijan is on top of the world in various prominent international reports. It is also testified by the World Bank's Doing Business reports 2018 and 2019 (World Bank, 2019; World Bank, 2020b), which ranked the country among the top 10 and top 20 reformist countries, respectively. These development achievements are endorsed by other respected reports, as well as by the dynamic results of the Global Competitiveness Report of the World Economic Forum (WEF, 2019) and the Economic Freedom Index of the Heritage Foundation (HF, 2020). Furthermore, Azerbaijan Digital Trade Hub (DTH) and Azexport.az projects are emphasized as the best practices in "cross-border paperless trade" in Asia and the Pacific in the 8th meeting of the Asia-Pacific Economic and Social Commission (UNESCAP).

## The necessity of creation of the Azexport.az portal

Taking into consideration, favorable sides of e-commerce, such as benefits for small firms, provision of new business opportunities, increasing participation in GVC and regional value chain, boosting private consumption and investment, Azerbaijan significantly improved its e-commerce potential. E-commerce not only encourages the startup of new businesses, but also can bring a positive social and economic benefits to the country, especially to rural areas. As e-commerce platform Azexport help farmers by reducing the costs of linking various actors of the agri-food system both within and across countries. Azexport provides additional opportunities for small farmers to export their products. Farmers place their products on this portal at no cost, and then, if they receive an order, they can get the necessary documents for export through the portal. This saves both intermediate costs and time. At the same time, Azexport helps users make more precise decisions about resource management through accurate, timely, and location-specific price, and agronomic data and information that is becoming increasingly important in the context of agricultural production. On the other hand, our analysis shows that most orders on the Azexport.az portal are related to agricultural and food products. In particular, hazelnuts, tomatoes, cotton, tobacco, pomegranates, poultry, chicken eggs, pomegranate juice, wine and other products produced in Azerbaijan receive orders from foreign countries.

To address main obstacles, financial services, infrastructure, access to internet, ICT facilities, logistics and delivery services, computer literacy and other issues have been improved substantially during these years. However, there are great potential improvement rooms in Azerbaijan's non-oil export, especially agricultural exports. In 2019 the export of non-oil products increased by 7,8 percent in real terms (SSCAR, 2020). According to the State Statistical Committee, the foreign trade turnover

of Azerbaijan amounted \$ 33,138 million in 2019, including export value - \$ 19,471 million, import - \$ 13,667 million, resulting in a positive trade balance of \$ 5,804 million (FTA,2020). Foreign trade turnover increased by 4.3 percent compared to 2018, including exports by 2 percent and imports by 6.5 percent. In real terms, the turnover increased by 3.7 percent. However, the total share of non-oil export was only 5.7 percent in 2017, 8.3 percent in 2018, and 10 percent in 2019 (SCCRA, 2020).

The way of joining to the GVC lies through next main steps – research and development, design, procurement, manufacturing, assembly, distribution, marketing and sales. Especially in modern "market driven" economy, marketing and sales level take one of the main place in this activity. Under such circumstances, there was a need for new support incentives and innovative approaches in order to increase access to new and traditional markets and accelerate the process of internationalization. That is why the government of Azerbaijan has supported the idea of establishing www.azexport.az internet portal, which from one side will accelerate the integration process and from another side ease the access to the markets. Azexport.az, launched as a single database for Azerbaijani product and services, but today it provides whole range of the e-trade services for the joining to the GVC.

Nowadays, Asia is the fastest growing region in the global market place. Actually, economic shocks triggered developing countries to launch special e-commerce programs in 2015. Vietnam's E-commerce Development Master Program, Digital India, Lao DPR Plaosme Website and other successful programs were realized (ADB, 2020). One of these programs is Azerbaijan's Azexport e-commerce portal. Azexport.az has been established under the presidential order on 21 September 2016 (OoP, 2016). Mission of Azexport.az is to provide information about products of Azerbaijani origin and become a beneficial platform for sales in foreign and domestic markets. Azexport.az is integrated with the world's most popular electronic trading platforms, making its products available to potential buyers from anywhere in the world. Services of leading global and local transport companies, as well as logistics companies, have been integrated into the system. Azexport.az offers fast and secure payments via VISA, MasterCard and American Express.

The success of the portal was implementing "reverse dropshipping" model first time in the world, which allows to represent Azerbaijani products on various popular online trading platforms, such as <a href="www.alibaba.com">www.alibaba.com</a>, <a href="www.alibaba.com">www.areadeindia.com</a>, <a href="www.alibaba.com">www.alibaba.com</a>, <a href="www

Due to this mechanism, great results were achieved in a short time. As a result, the presence of Azerbaijan's products on international online platforms increased more than 60 times, over 50 thousand unique orders and requests were received, export geography increased and reached to 116 countries. Valuable information in form of requests and inquiries from different countries has turned the portal into a powerful marketing tool. Based on the information collected, various analytical reports are preparing, including the monthly publishing "Export review", which has more than 600,000 subscribers and is the most popular economic magazine in Azerbaijan. "Export review" first time presented Azerbaijani TOP exporters ranking, which published monthly, and provide useful marketing and research material for different products and markets (Export review, 2020). Additionally, "Export review is sending to taxpayers' electronic cabinets and give them info about potential export markets and existing condition in Azerbaijani market and in main trading partners.

## Role of Azexport.az in non-oil export

E-services launched within Azexport based on the principle "Once Only" which lead on the basics of the electronic services of the European Union (EU, 2010). The EU wide Once-Only Principle can have a big impact in making life of citizens and businesses easier across the EU and could contribute to Digital Single Market. Main goal of the service is to simplify the export procedures. Everything as easy as click "Push2Export" button. Exporters fill out single online exporter application and could obtain all export-related documents (permits, certificates, custom declarations etc.) online. Azexport.az today is also the only authorized by government issuer of the Free Sales Certificate. Free Sale Certificate, creates new opportunities for Azerbaijan's food and cosmetics products to have access more than 30 new countries.

On the other side, as one of the main part of digitalization infrastructure, Digital Trade Hub of Azerbaijan (DTH) service section has been created (DoP, 2017). DTH is an all-in-one e-business service portal launched and guaranteed by the government. It offers a wide range of unique cross-border services for trade facilitation and doing business, including B2B and B2G services. It includes modern services like single exporter application, online customs clearance, online company formation, online bank accounts opening, getting e-signature and much more. The DTH put together and simplify everything related to international trade, business, e-commerce by digitalization and automating all processes, including documents flow, payments etc., and eliminating bureaucracy. All transactions carried out on the DTH are legally binding under partner country legislation. Private companies are involved in the development of the platform and building cross-border e-services. The Digital Trade Hub is integrated with global e-commerce players like Amazon, eBay, Alibaba, etc. It offers useful cross-border e-services including B2B and B2G services, customs operations between Digital Trade Hub partner countries, online company registration, online bank accounts and more.

The concept is very significant for creation of the single electronic and digital environment throughout the Silk Road as well as within Europe. It allows DTH to be an electronic "single window" for export, when any Azerbaijan exporter can go through all required procedures by means of a computer or any mobile device to prepare documents and processing of product exports without leaving the office. The user can access e-Trade services easily through various methods including web portals, solutions, e-services according to the different IT environments. Due to authorization requirements, transactions are safe from fraud, forgery and financial incidents. Having a proven way to authenticate identity and submit electronic signatures and recognition them internationally are the fundamentals of the DTH functions. This is what enables both foreign and local businesses to prepare and sign import/export documents and other agreements electronically. DTH will continue to address global interoperability issues through further research, conducted on the principles of trust and transparency, actively support the standardization process in relevant areas and provide trustworthy services for ease the use of electronic ID, mobile ID and electronic signature technology in real-world applications (DTH, 2020). DTH has a special importance for agricultural sector, especially, to boost export opportunities and DTH has a great potential to contribute attracting foreign investment to the agricultural sector. For example, agricultural exporters can apply for government incentives related to export, such as export promotion payments, through DTH.

## Importance of digitalization during the COVID-19 pandemics

Downward trends in production of agricultural goods and services have been observed in many countries, while an increasing number of economies are feared to go in recession. According to the estimates of World Trade Organization (WTO), world trade is expected to fall between 13% and 32% during the 2020. It is obvious that without significant digital transformation these figures would appear to be much worse than estimated. In fighting the adverse impacts of COVID-19 and enhancing societal and economic resilience, digital tools have emerged as an alternative. The coronavirus crisis has accelerated the uptake of digital solutions, tools, and services, speeding up the global transition towards a digital economy (UNCTAD). Accordingly, both developed and developing countries started to develop some strategies to cope the negative effects of the pandemic. These strategies include economic and social elements. Certainly, in the upcoming years, there is a need to increase the competitiveness and intensification of activities to join the GVC, with a higher level of economic growth. The creation of an electronic trading platform - the Azexport portal has greatly contributed to agricultural exports in Azerbaijan. For instance, before the beginning of cooperation with "Azexport", the export price for cotton fibre was approximately 1300-1350 US dollars. Thanks to the "Azexport", this price has increased by \$ 1,750. So, thanks to the foreign customers discovered by "Azexport", each ton of the cotton fibre is now sold about \$400-450 or 1/3 more expensively, which contributed to the flow of millions of additional export currency in the country (Azexport special review, 2019).

The fact related to the processes taking place in Azerbaijan's economy in 2016-2019 have been thoroughly analyzed and showed that the country is facing a number of challenges. There exist some challenges in agricultural sectors, which requires attention of government for joining Azerbaijan to the GVC in short perspective. As Azerbaijan faces new economic challenges, to mitigate the socioeconomic consequence of the COVID-19, the government adopted a special action plan that will be implemented during and after the pandemic period. For the implementation of the activities specified in the action plan government allocated overall 2 billion USD. The usage of digital solutions provided by Azexport.az portal has been increased, especially during the pandemic period. In order to be more successful at the current stage of agrarian reforms, special attention should be paid to digital transformation. Consequently, it is expected that the COVID-19 will accelerate Azerbaijan's digital transformation, and give a chance to farmers to access bigger markets which can be seen as an inevitable process.

#### Conclusion

Our observations show that, in recent years mega projects, regulative acts and other activities have been implemented by the government to support and increase non-oil and agricultural exports. Almost all important incentive mechanisms were launched in Azerbaijan. But most of them work and cover mainly traditional promotion activities, like support participation in fairs and exibitions. In this regard, the creation of the Azexport.az portal and the single online export application were the government activities which were delivered in time. This is expecially true during the COVID 19 times. These incentives have helped to reduce costs, easing the process, accessing and diversifying markets for the agricultural product exporters. Azexport.az helps for transition of the export

opportunities of Azerbaijani farmers into real sales, thereby contributing to the creation of new jobs in the country, the strengthening of sustainability existing jobs and growing national economy.

As a result, from January 2017 to January 2020, the total amount of export quotation requests and sales received from 136 countries reached up to \$1,6 billion. According to initial Key Performance Indicator (KPI) analysis, 0,7 USD spent for Azexport transferred into 1470 USD in form of quotation requests and sales which is very high result. The presence of Azerbaijani products in the different international digital trade platforms increased up to 2500 times and Azerbaijan had moved forward from the last position among the CIS countries to the second. As a result, manufacturers have found new markets and buyers for their products at the more affordable prices which promotes production and launching the new export-oriented projects.

Moreover, DTH is a completely new concept in the public services. It is very unique and in some aspects first in the world online services joining and offering different business services from single PC window. By providing additional opportunities for the local entrepreneurs at same time it stimulates foreign investments in Azerbaijan by the easing of process doing business. DTH is a smart service for business based on a single PC window principle that offers automate doing business processes, business management, automatically generates documents and processes for export and import clearance in accordance with the trade procedure. DTH saves companies' time and expense by replacing all offline procedures with single online integrating together all trade-related public services and activities.

At the end, we can say that this stage of digitalization for export-led and business development strategy was successful in Azerbaijan. It is also worth to state that digitalization of the economy can help to soften the adverse effects during the pandemic disrupts. In particular, agro-food chain can continue their usual activities along the value chain without interruptions, which is important to ensure food security.

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*İ.e.d.* Ramil Hüseyn, *Dr.* Rəşad Hüseynov, Ayaz Müseyibov İqtisadi İslahatların Təhlili və Kommunikasiya Mərkəzi

# Rəqəmsal transformasiya vasitəsi ilə Azərbaycanda kənd təsərrüfatının inkişafının sürətləndirilməsi

#### Xülasə

Azərbaycanın qeyri-neft ixracı potensialının mövcud səviyyədən dəfələrlə çox olduğu elmi araşdırmalarla təsdiqlənmişdir. Bunun üçün də Azərbaycan hökuməti ixrac əsaslanan iqtisadi inkişafa nail olmaq üçün qeyri-neft ixracatını artırmağı hədəfləyir. Bu məqsədə çatmaq üçün vacib elementlərdən biri iqtisadi fəaliyyətlərin rəqəmsal transformasiyasıdır, xüsusilə də bunun qeyri-neft ixracında mühüm paya sahib olan kənd təsərrüfatı sektorunda tətbiqidir. Kənd təsərrüfatı ərzaq təhlükəsizliyinin təmin edilməsi, qeyri-neft ixracı və qeyri-neft ÜDM formalaşması baxımından Azərbaycan iqtisadiyyatında mühüm rol oynayır. Bu məqsədə töhfə vermək üçün Azexport.az portalı

və əlaqədar elektron ticarət infrastrukturu formalaşdırılmışdır. Azexport.az portalı Azərbaycan şirkətlərinin, xüsusən də aqrar istehsalçıların ixrac imkanlarının artırılmasına, onların real satışa keçməsinə kömək edir. Bununla da ölkədə yeni iş yerlərinin yaradılmasına, mövcud iş yerlərinin qorunub saxlanılmasına və dayanıqlı inkişafa töhfə verir. Bu araşdırmada innovativ və alternativ alətlər vasitəsi ilə qlobal dəyər zəncirinə qoşulmaq imkanlarına toxunulur və bu istiqamətdə həyata keçirilən tədbirlər qiymətləndirilir. Eyni zamanda rəqəmsal transformasiyanın aqrar islahatların növbəti mərhələsində oynayacağı rol, qeyri-neft sektoru daxilində ixracın şaxələndirilməsi və aqrar məhsullarının ixrac potensialının artırılması ilə bağlı təkliflər irəli sürülür.

**Açar sözlər:** Kənd təsərrüfatı, qeyri-neft sektoru, rəqəmsallaşma, Covid-19, ixrac, Qlobal Dəyər Zənciri, Rəqəmsal Ticarət Qovşağı.

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# Содействия развитию сельского хозяйства через цифровую трансформацию в Азербайджане

#### Резюме

Широко известно, что уровень ненефтяного экспорта Азербайджана значительно меньше его существующего потенциала. Соответственно, правительство Азербайджана планирует увеличить ненефтяной экспорт для достижения экономического развития, ориентированного на экспорт. Одним из важных элементов достижения этой цели является цифровая трансформация экономической деятельности, особенно в ненефтяном секторе, таком как сельское хозяйство. Сельское хозяйство играет важную роль в экономике Азербайджана с точки зрения обеспечения продовольственной безопасности, ненефтяного экспорта и формирования ненефтяного ВВП. Портал Azexport.az и соответствующая инфраструктура электронной торговли были разработаны для достижения этой цели. Azexport.az помогает перевести экспортные возможности азербайджанских компаний, особенно сельскохозяйственных фирм, в реальные продажи, тем самым способствуя созданию новых рабочих мест в стране, укреплению существующих рабочих мест и устойчивому развитию. В этой статье мы предоставим информацию о возможностях использования новых инновационных и альтернативных инструментов для присоединения к глобальной цепочке создания стоимости, деятельности в этом направлении, мерах, принятых для диверсификации экспорта в ненефтяном секторе, а также о повышении экспортного потенциала сельскохозяйственной продукции в Азербайджане.

**Ключевые слова:** сельское хозяйство, цифровизация, Covid 19, экспорт, ненефтяной сектор, глобальная цепочка добавленной стоимости, узел цифровой торговли.