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AGRICULTURAL EXPORTS TO THE EU: DOES PUBLIC SECTOR SUPPORT HAVE A SAY?

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INTRODUCTION

On 27 June 2014, Georgia and the EU signed the Association Agreement (AA), including the Deep and Comprehensive Free Trade Agreement (DCFTA), which fully entered into force on 1 July 2016. The goal of the DCFTA is to provide a framework for new trade opportunities, to enhance competitiveness in the business sector, and to support closer economic integration between Georgia and the EU based around reforms in trade-related fields. The DCFTA moreover regulates trade conditions and eliminates customs duties for the bilateral trade in goods. It has consequently widened the list of export products covered by the Generalized System of Preferences+ (GSP+) and set zero tariffs on all food categories,[1] including products such as wine, berries, and hazelnuts, among other key items (Economic Policy Research Center, 2014).

July 2023 will mark seven years since implementation of the DCFTA between Georgia and the EU, nevertheless the projected benefits have not yet materialized. Various studies have explored the reasons as to why Georgia has failed to fully utilize the potential benefits of the DCFTA. However, most research into this area either focuses on assessing general macro-economic, social, or environmental impacts on the Georgian economy and its separate sectors, or on analyzing the general challenges and opportunities associated with DCFTA implementation. The research conducted thus far has never provided an unequivocal answer regarding the rationality behind the lack of expected positive impacts. Effectively, the potential impact of governmental spending on agricultural exports to the EU has not yet been fully analyzed.

This policy note therefore investigates the relatively unexplored issue of the impact of public spending on agriculture in relation to its destination markets and the value of agricultural exports. It thereby attempts to ascertain whether trends in public spending influence the value of agricultural exports to the EU. The study furthermore provides an overview of the Georgian agricultural sector, with special emphasis on trade and governmental policies on agriculture. Based on these findings, this review delivers recommendations for capitalizing on the opportunities offered by the DCFTA to further enhance agricultural exports to the EU.

AGRICULTURAL POLICIES AND DEVELOPMENTAL PRIORITIES

POLICIES IN THE GEORGIAN AGRICULTURAL SECTOR

After food security concerns in 2012, the agricultural sector began to receive greater governmental attention, and it quickly returned to the policy agenda (Government of Georgia [GoG], 2012). Since this stage, significant changes within agricultural policy have been transpiring – particularly in terms of the strategic objectives, policy design, legislative amendments, and the implementation of state programs. Additionally, EU support and the integration of its framework have equally played an important role in furthering reforms in the sector.

Under the AA, alongside various other obligations, Georgia has committed to harmonizing its agricultural and rural development policies and its legislation with the EU regulatory

[1] With the exception of garlic, which remains under quota.

framework. Since adopting the Agreement, agricultural development policies have gradually been aligned with the provisions of the EU Common Agricultural Policy (CAP). Thus, the country is presently following the approximation plans, each with their respective deadlines, for adopting the appropriate regulations in food safety, and veterinary and plant protection.

Agriculture and rural development are naturally priority areas for EU representation in Georgia. Under the scope of the European Neighbourhood Program for Agriculture and Rural Development (ENPARD), the EU aims to achieve three core goals: (1) build capacity and support government institutions in reforming the agricultural and rural development sectors; (2) improve employment and living conditions for rural populations by strengthening cooperation and access to resources among farmers; and (3) promote diversified social and economic opportunities in rural areas, particularly for women and the youth, while also considering their environment and cultural heritage (European Union, 2023).

As part of the intervention framework, directed towards capacity building in state institutions, ENPARD has supported the development of several key documents; namely, the Agricultural Development Strategy 2015-2020, the Agricultural Extension Strategy 2018-2019, the Rural Development Strategy 2017-2020, and the Agriculture and Rural Development Strategy of Georgia 2021-2027.

The notable Agriculture and Rural Development Strategy 2021-2027, based on sustainable development principles, aims to diversify and develop economic opportunities within rural areas, while also improving social conditions and local quality of life (Ministry of Environmental Protection and Agriculture of Georgia [MEPA], 2019). In order to achieve these aims, it focuses on three priority areas: the expansion of competitive agricultural and non-agricultural sectors; sustainable natural resources use, ecosystem conservation, and climate change adaptation; and the development of efficient food and feed safety and veterinary and plant protection systems.

Within the first aspect, greater competitiveness has been prioritized, in both agricultural and non-agricultural sectors, under the following specific objectives: (i) raising the awareness and knowledge of farmers and entrepreneurs; (ii) developing value chains by focusing on diversification, innovative technologies, and cooperation, as well as supporting producers' unions and increasing access to various financial instruments; (iii) supporting the integration of farmers and entrepreneurs on the market; (iv) aiding young farmers and entrepreneurs in rural areas; (v) expanding access to infrastructure and services; (vi) improving irrigation and drainage systems; and (vii) developing rural tourism and tourism-related products.

Under the second priority, the sustainable use of natural resources, the focus is currently on the adoption of efficient, climate-smart agricultural practices, the maintenance of agro-biodiversity, and the development of eco-tourism.

The final aspect of the Strategy, related to food and feed safety as well as veterinary and plant protection, targets Georgia's legislative alignment with EU legislation, the adoption of sanitary and phytosanitary standards (SPS), while also improving capacity in laboratories and the quality of input supplies. These objectives are similar to those specified within the Agricultural Development Strategy of 2015-2020 and the Rural Development Strategy of 2017-2020. Consequently, MEPA revised and consolidated these documents into this single strategic blueprint – the Agriculture and Rural Development Strategy 2021-2027.

Agriculture and rural development are additionally within the focus of the governmental Toward Building a European State Program for 2021-2024 (GoG, 2020). This project aims to raise competitiveness in the agri-food sector; to boost the export of agri-food products; to reduce dependence on importation; and to ensure stable growth in the creation of high-quality products in food safety and in rural development. To achieve the objectives in agricultural and rural development, the government has committed to spending over one billion GEL within the program between 2021-2024.

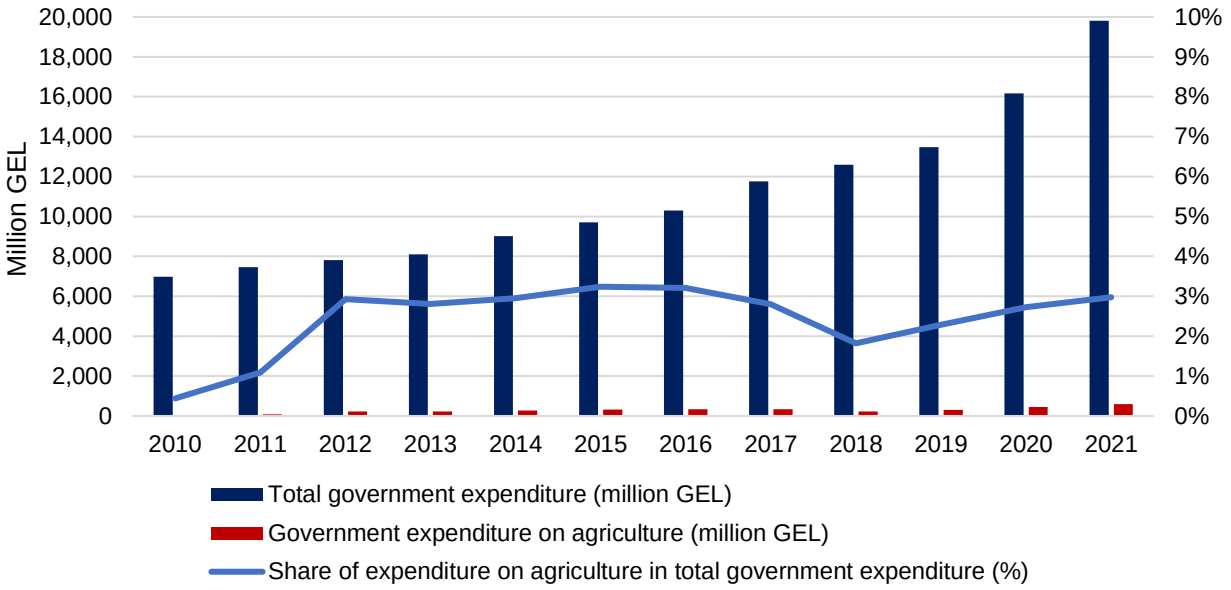
In 2021, the Government of Georgia presented its latest vision via the development of a 10-year strategic framework for environmental protection and agriculture, for which they established corresponding targets to be attained by 2030 (MEPA, 2021). Their principal objectives are to enhance self-sufficiency ratios; foster greater export potential within Georgian agricultural production; develop critical institutional capacity to bolster sustainable and competitive agriculture; and ensure sustainable development in the protection of environmental and natural resources.

Over the next three years, as underscored in the State Budget Note for 2023, the country will prioritize the obligations within agriculture and rural development, those envisaged in the framework of the AA between Georgia and the EU (Ministry of Finance of Georgia, 2023).

GOVERNMENTAL EXPENDITURE ON AGRICULTURE

Since 2011, public spending on agriculture has been increasing annually. Notably, the expenditure increased more than twofold in 2011 – from 30.6 mln. GEL (0.4% of total expenditure) in 2010 to 81.0 mln. (1.1% of total government spending) in 2011 (Figure 1). This sharp rise is predominantly connected to a governmental program on the distribution of wheat and maize to farmers. Thereafter, it was followed by a further substantial, almost threefold, increase in 2012 – which accounted for 2.9% of total governmental expenditure. This was primarily associated with election year spending and economic pressure from social programs. In 2013, the newly elected government placed agriculture high on the policy agenda, and since then related expenditure has remained significant – its share in total expenditure has remained around 2.5-3%. As of 2021, annual expenditure on agriculture reached 590 mln. GEL, which constitutes 3.0% of total government spending.

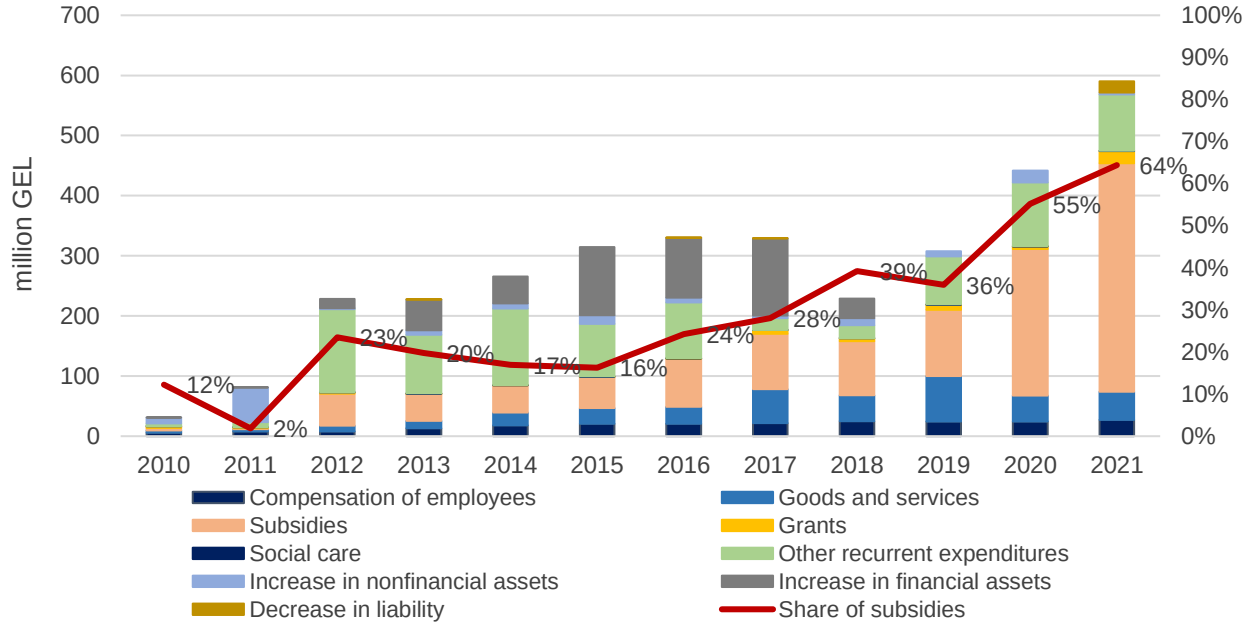
Figure 1. Total government expenditure and expenditure on agriculture, 2010-2021 (current prices)



Source: Ministry of Finance of Georgia, 2023

The share of subsidies in the composition of public agricultural expenditure also increased during this period (Figure 2). Subsidies presently account for the largest proportion of government spending on agriculture. Between 2010 and 2015, these subsidies equated to less than 20% of total agricultural spending on average, while the share of subsidies advanced beyond 20% from 2016 and had reached approximately 40% by 2018. In 2021, they accounted for more than half of total expenditure on agriculture (64%); with recurrent spending aimed at covering administrative costs, at around 30%, and a more modest 4% share on capital expenditure and investments in the sector. Over the years, capital expenditure has remained particularly low, and most public resources for the sector have been allocated to subsidies and administrative costs, for instance the compensation of employees, goods and services, or on social care. **The subsidies on interest rates and agricultural insurance co-financing account for approximately 36% and 3% of total subsidies, respectively, thus demonstrating that the GoG places notable priority on encouraging private investment via its support programs**.

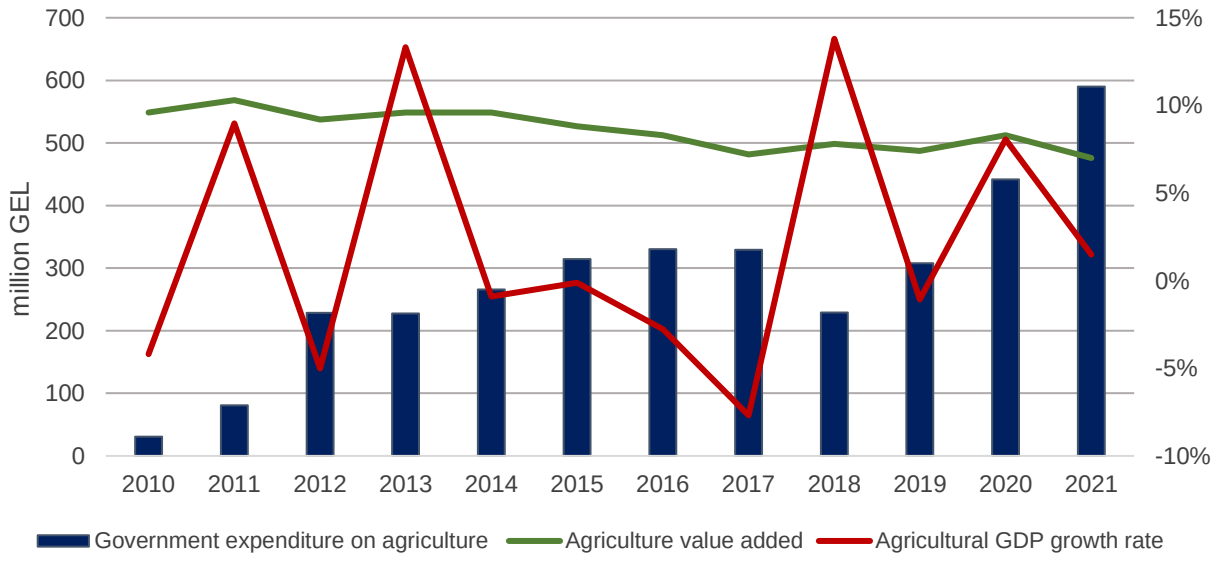
Figure 2. Agricultural spending by category, 2010-2021 (current prices)



Source: Ministry of Finance of Georgia, 2023

Notably, this escalation of governmental expenditure has not resulted in a corresponding increase in the economic contribution from agriculture. Although public spending in agriculture increased sharply in 2010-2021, from 30.6 mln. to 590 mln. GEL (current prices), and the share of agriculture value-added in total GDP decreased from 9.6% to 7.0% (Figure 3). Moreover, this additional expenditure was never accompanied by a perceptible rise in the agricultural GDP growth rate during the period. Contrarily, agricultural GDP actually declined in 2012, from 2014-2017, and again in 2019.

Figure 3. Governmental spending on agriculture, agriculture value added, and agricultural GDP growth rate, 2010-2021 (current prices)

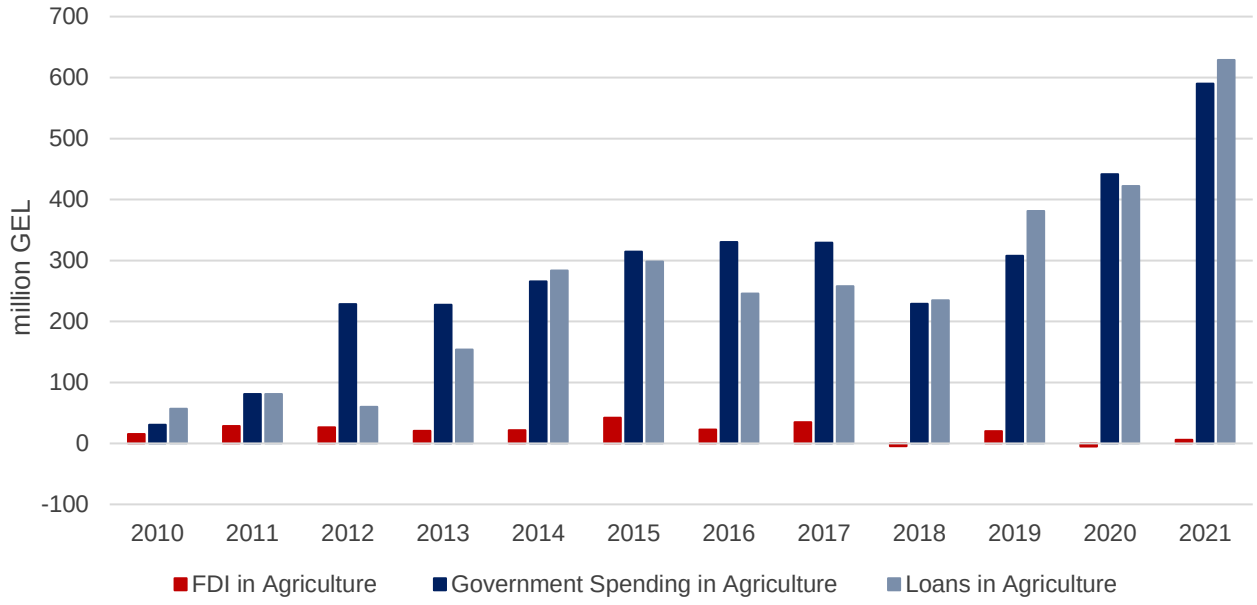


Sources: Ministry of Finance of Georgia; Geostat, 2023

The government's strengthened policy focus, its increased expenditure on agriculture, and the development of several support programs have however each encouraged private investment into the sector (Figure 4). After the prominent leap in agricultural expenditure between 2011-2012, the value of commercial bank loans in agriculture rose by 2.5 times in 2013. This particular increase predominantly relates to the interest rate subsidies provided under the government's Preferential Agrocredit support program. In total, from 2010-2021, the value of commercial bank loans for agriculture increased drastically – by more than 10 times – from 5.7 mln. to 629 mln. GEL (at current prices).

This prioritization of agriculture additionally led to increased Foreign Direct Investment (FDI), which ultimately could not be sustained. In 2017, the FDI increased from 15 to 34 mln. GEL, but in more recent years FDI in agriculture has largely been negative; although this is primarily due to negative external shocks like Asian Stink Bug (pharosana) infestations and the COVID-19 pandemic.

Figure 4. FDI in agriculture, loans in agriculture, government expenditure on agriculture, 2010-2021



Source: Geostat; Ministry of Finance of Georgia; National Bank of Georgia, 2023
Note: FDI has been converted into GEL based on the average exchange rate between USD and GEL in each corresponding year.

The Georgian government continues to work towards achieving these aforementioned objectives, and it primarily implements support programs via the Rural Development Agency (RDA), which acts under MEPA.[2] The Agency itself aims to strengthen competitiveness in the agricultural sector and the sustainable production of agricultural goods via the introduction of international food safety standards. As such, the RDA has implemented several programs and projects (Annex A2). While most of the Agency's budget is intended towards interest rate subsidies under the Preferential

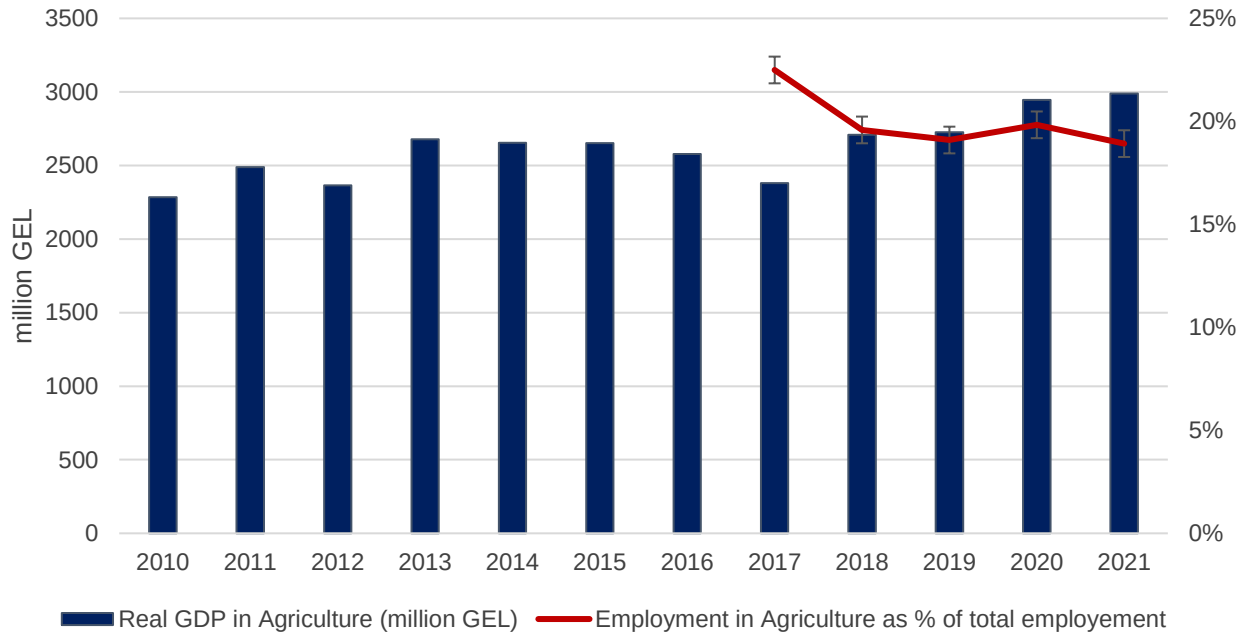
[2] In addition, the government, under the Enterprise Georgia scheme from the Ministry of Economy and Sustainable Development, subsidizes the interest rate on loans and provides an 80% subsidy on technical assistance for agribusinesses (excluding primary agriculture and services). Enterprise Georgia aims to support local entrepreneurs in the creation of new businesses, or the renovation or enlargement of existing enterprises; to promote competitiveness and export potential; and to highlight Georgia's investment climate.

Agrocredit program (around 60-65%), for subsidies in planting perennial crops under the Plant the Future Program (18-20%), and for subsidies that cover agricultural insurance co-payments (5-6%) (Ministry of Finance of Georgia, 2023).

KEY FIGURES IN THE AGRICULTURAL SECTOR

Agriculture plays a vital role in the Georgian economy. This is particularly pertinent as over 40% of the total population live in a rural area, and the majority of this population relies on agriculture as their main source of income. The sector also acts as the country's largest employer,[3] representing 18.9% of total employment and it accounts for 7.0% of the Georgian GDP (Figure 5). Furthermore, agricultural processing contributes to an additional 7-8% of the total GDP (World Bank, 2022).

Figure 5. Real GDP in agriculture and employment in agriculture, 2020-2021



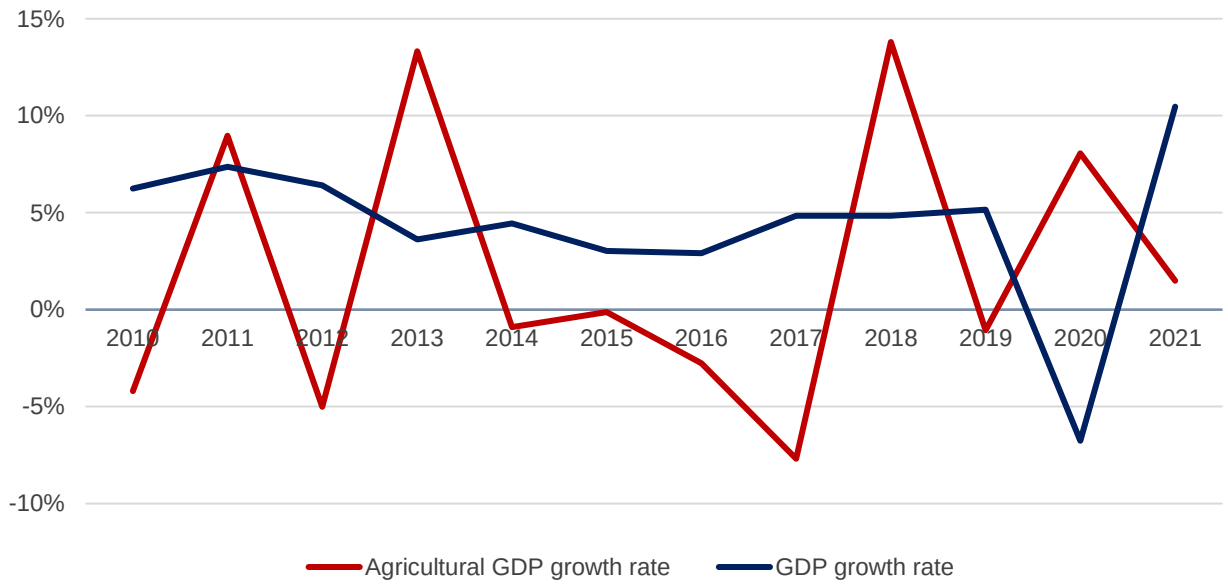
Source: Geostat, 2023

While the real GDP in agriculture grew between 2010 and 2021, **agricultural growth has been more volatile in Georgia**, particularly in comparison to the overall growth of the economy (Figure 6). Such fluctuations in agricultural growth can be explained by several factors. Namely, the Government of Georgia implemented a new program in 2011 on the distribution of wheat and maize; both of which are annual crops, thus the effect of this program was temporary and growth fell in 2012. In addition, the sharp 13% rise in agricultural GDP in 2013 can be attributed to (i) favorable weather conditions that significantly boosted local agricultural production; (ii) the Land-Poor-Farmers Assistance Spring Project (Agricultural Card Program), commencing in 2013; and (iii) the

[3] In 2020, Geostat updated its methodology for calculating employment and unemployment statistics in accordance with the International Labour Organization (ILO) Labour Force Statistics. Under the new methodology, those individuals who are not market-oriented and mainly produce (over 50 percent) agricultural products for their own consumption are no longer considered to be self-employed. Geostat has since recalculated these employment indicators from 2017 onwards.

lifting of the Russian trade embargo imposed in 2006 on Georgian exports, including agricultural goods. However, this trend was not sustained, and it was followed by a negative growth rate in subsequent years. For instance, there was a sharp fall in 2017 due to extreme weather events (the winter lasted longer than usual, spring frosts damaged fruit plantations, and periods of drought as well as heavy rains affected certain regions) and Asian Stink Bug (pharosana) infestations affecting crop yields. In 2018, the agricultural GDP rebounded by 14%, followed by a moderate 1% decrease in 2019. Although pandemic-related exogenous shocks impacted the Georgian economy in 2020, agri-food proved more resilient than other sectors and showed growth of 8% – chiefly due to favorable climate conditions. Moreover, certain experts suggest that numerous rural migrants returned to their ancestral villages in the spring of 2020 (in response to losing informal jobs in the capital) and started to cultivate, often small, plots of land. Agricultural GDP thereafter showed a moderate rise of 1% in 2021.

Figure 6. Agricultural GDP growth and GDP growth, 2010-2021 (2010 prices)

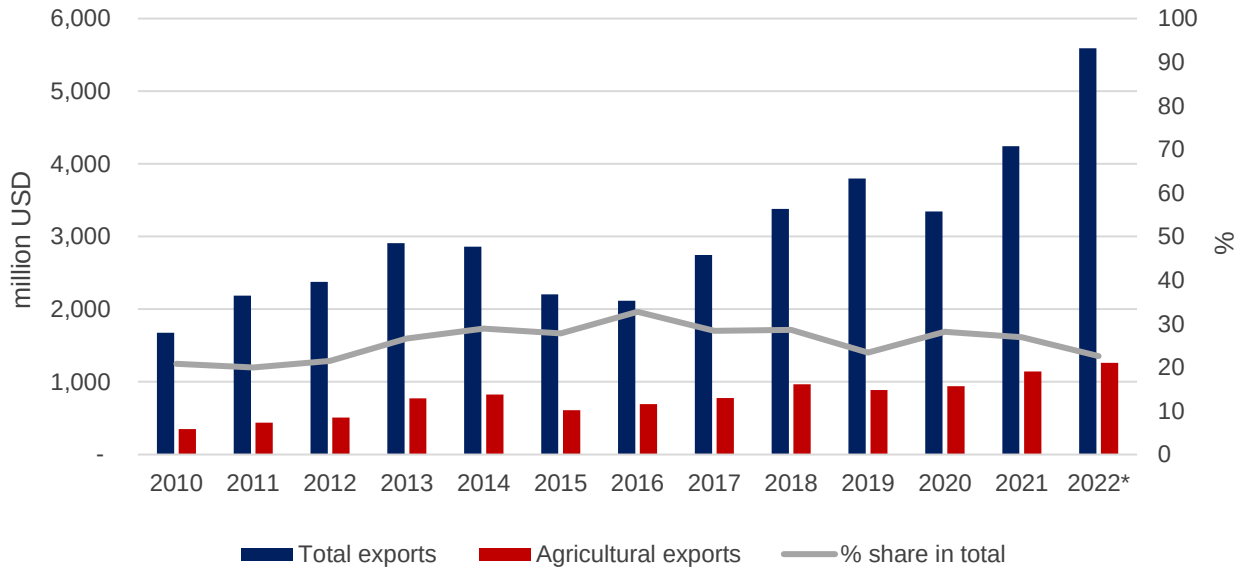


Source: Geostat, 2023

TRENDS IN INTERNATIONAL TRADE AND TRADE WITH THE EU

Although agriculture provides a modest share in the total GDP, it contributes to a significant proportion of export. Between 2010 and 2022, the sector contributed an average 25-30% to total export (Figure 7). Critically, total Georgian exportation increased from 2.1 bln. USD in 2016 to 5.6 bln. in 2022. Agricultural exports correspondingly rose from 0.7 bln. USD in 2016 to 1.3 bln. in 2022.

Figure 7. Total and agricultural exports, 2010-2022

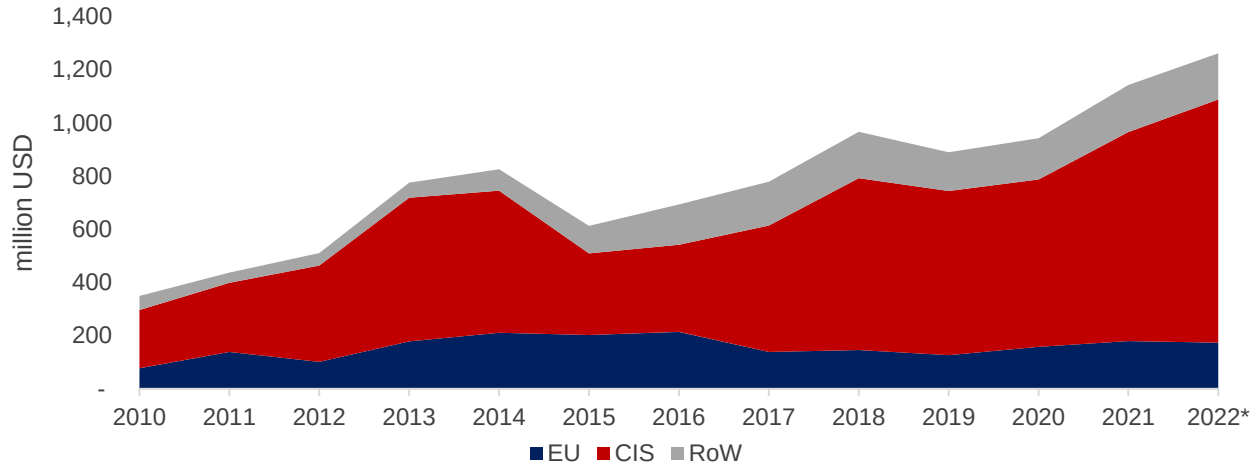


Source: Geostat, 2023
Note: Agricultural exports and imports, including food.

In terms of total export, trade to the EU has been declining, whereas the share of export to the CIS market has risen. The total exports to the EU have not increased in absolute value, while the EU share in total exports (including agricultural products) has been in decline – from 27% in 2016 to 15% in 2022 (Figure 8). Furthermore, the increase in absolute value was relatively moderate compared to the rise in exportation to other country groups (both the CIS and the rest of the world). For example, in CIS countries the share grew from 35% in 2016 to 48% in 2022, and rose by more than three times in value.

The proportion of agricultural exports to the EU also declined notably – from 31% in 2016 to 14% in 2022, and in absolute value it decreased from 214 mln. USD in 2016 to 173 mln. in 2022. Concurrently, the proportion of total agricultural exports to CIS countries jumped from 47% in 2016 to 73% by 2022, more than doubling in value. **Thus, exports towards the CIS market have been steadily increasing**.

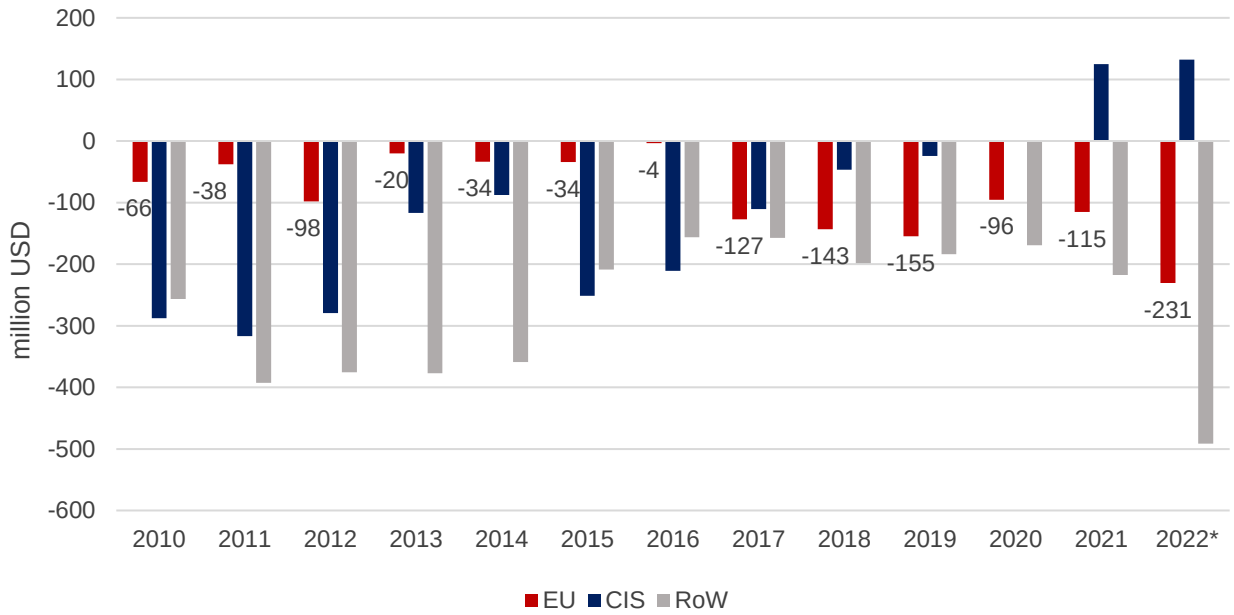
Figure 8. Agricultural export destination markets, 2010-2022



Source: Geostat, 2023

Georgia's trade balance with the EU and with CIS countries has also been experiencing contrasting trends over the last few years. Georgia is a net importer of agri-food products, despite the importance of agriculture in the value of the country's exports. Notably, the overall trade balance decreased from -371 mln. USD in 2016 to -590 mln. in 2022. **The trade balance with EU countries has also worsened significantly since 2016 (from -3.5 mln. USD in 2016 to -230 mln. in 2022). Whereas for CIS countries, the trade balance has shifted from negative to positive within the last two years** (Figure 9).

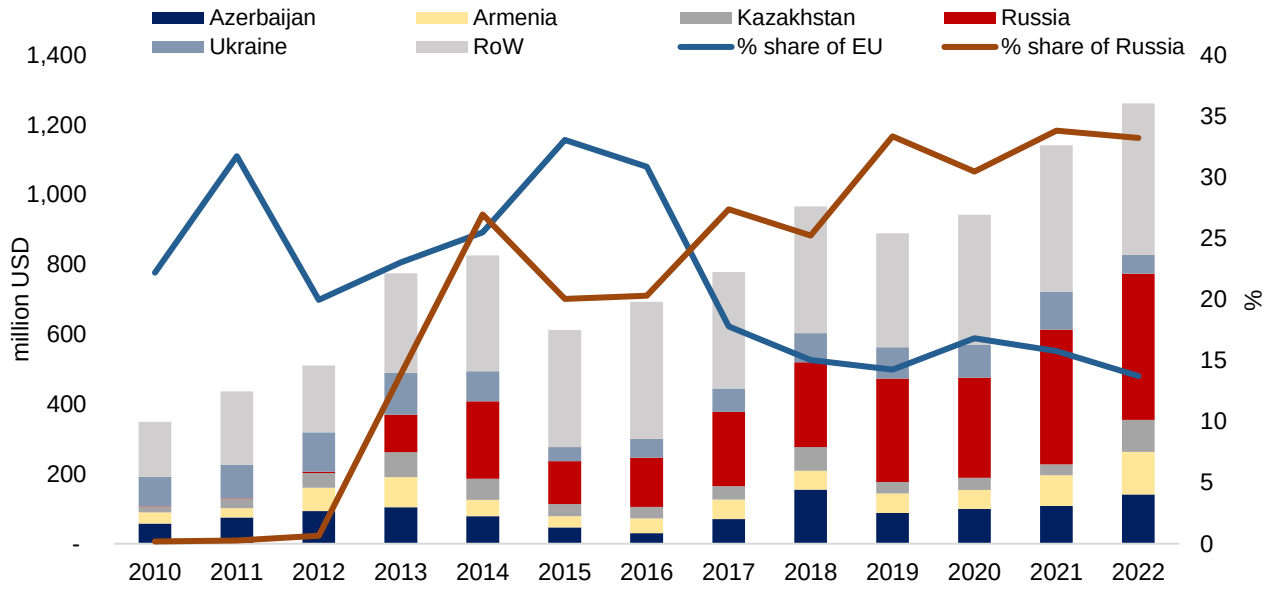
Figure 9. Agricultural trade balance by country groups, 2010-2022



Source: Geostat, 2023

Based on the average values for 2010-2022, the top destination markets for Georgian agricultural exports are Russia (24%), Azerbaijan (11%), Ukraine (11%), Armenia (7%) and Kazakhstan (6%).

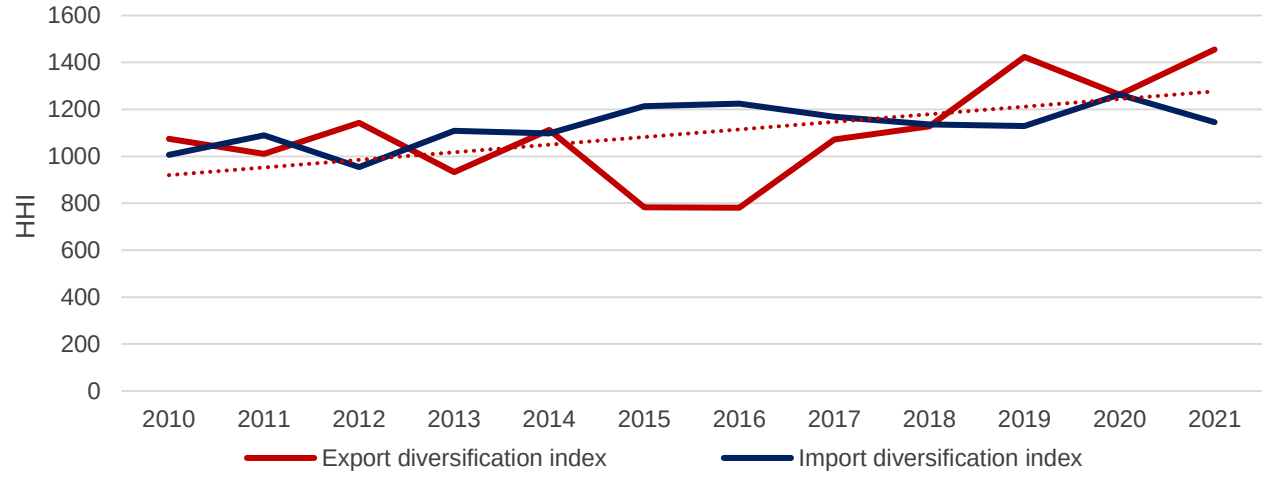
Figure 10. Top trading partners for agricultural exports, 2010-2022



Sources: Authors' calculations; Geostat, 2023

Regarding trade diversification, the Herfindahl-Hirschman Index (HHI) – measuring market concentration – identifies that Georgia's trade flows are well diversified (an HHI of less than 1,500 indicates competitive market shares) (Figure 11). **However, the HHI has been increasing in recent years and edging closer to the threshold of 1,500 and above, at which stage market shares are considered moderately concentrated**.

Figure 11. HHI by export destination countries, 2010-2021



Sources: Authors' calculations; Geostat, 2023

Georgia's top agricultural export products (2010-2022 value) are wine from fresh grapes (19%), hazelnuts (15%), spirituous beverages (13%), mineral waters (12%), and live bovine animals (4%). **The EU is the top destination market for Georgian hazelnuts, while the remainder of these key export commodities are primarily exported to CIS countries** (Table 1).

Table 1. Top five export products by destination country groups, 2010-2022

	EU, % share	CIS, % share	Russia, % share (within CIS)	RoW, % share
Live bovine animals	0	63	0	37
Hazelnuts and other nuts	72	17	23	11
Mineral waters	12	84	45	4
Wine from fresh grapes	11	78	67	11
Spirituous beverages	19	70	26	10

Sources: Authors' calculations; Geostat, 2023

IMPACT OF AGRICULTURAL PUBLIC SPENDING ON AGRI-FOOD EXPORTS AND DIVERSIFICATION

ASSOCIATION OF PUBLIC SPENDING IN AGRICULTURE WITH KEY ECONOMIC INDICATORS

To better comprehend the association between public spending in agriculture and the key economic outcomes for the 2004-2021 period, a correlation matrix has been constructed using the following variables: total agri-food exports, agri-food exports to the EU, agri-food exports to CIS countries, public spending in agriculture, agricultural GDP, rural population, agricultural land, precipitation levels, and the export ban in place from 2006 to 2012, when Georgian agricultural products could not be exported to Russia (Table 2).

Table 2. Correlation matrix

	Total exports	Exports to EU	Exports to CIS	Public spending	Rural population	Agricultural land	Agricultural GDP	Precipitation level	Export ban
Total exports	1.0000								
Exports to EU	0.75***	1.0000							
Exports to CIS	0.98***	0.66***	1.0000						
Public spending	0.90***	0.73***	0.85***	1.0000					
Rural population	-0.96***	-0.72***	-0.92***	-0.92***	1.0000				

Agricultural land	-0.89***	-0.64***	-0.87***	-0.82***	0.95***	1.0000			
Agricultural GDP	0.93***	0.65***	0.92***	0.92***	-0.91***	-0.85***	1.0000		
Precipitation level	-0.51**	-0.17	-0.57**	-0.45*	0.57**	0.52**	-0.50**	1.0000	
Export ban	-0.67***	-0.56**	-0.65***	-0.60***	0.56**	0.51**	-0.66***	0.16	1.0000

*Note: * refers to a 10% significance level; ** to 5% significance level; and *** to 1% significance level.*

Most of the indicators defined in Table 2 significantly correlate to each other, signaling high interdependence between these facets. Certain key statistically significant associations are:

- The strong positive correlation between the value of agricultural exports and public spending in agriculture (0.90) – over the years both total agricultural exports and public spending have been increasing and moving in the same direction.
- Public spending is positively correlated with exports to the EU (0.73) and exports to the CIS (0.85), and the correlation coefficient for exports to the CIS is higher, indicating that public spending might be playing a more important role in exports to CIS markets than the EU.
- Georgian trade is mostly directed to the CIS and exports to these markets are growing at a higher pace than to EU markets; as reflected in the higher correlation coefficients between total export and exports to the CIS (0.98), compared to the coefficient of 0.75 between total export and exports to the EU.

IMPACT OF PUBLIC SPENDING ON EXPORTS

The correlation analysis offers a helpful overview of the connection between the important variables, but it does not establish causal connections. Therefore, a regression analysis was also conducted to estimate the effect of government spending on total agricultural exports, diversification, and exports to the EU, while also controlling for other variables (Annex Table A1).

The analysis identifies that although public spending is positively correlated with the aforementioned indicators, **it does not have a statistically significant impact, either on total agricultural exports, export diversification, or trade to the EU** (Annex Table A1). Such a slight impact on agricultural exports is likely driven by the allocation of public expenditure in Georgia – where direct subsidies are disproportionately higher than capital investments, resulting in a limited effect on the sector's value-added and therefore exports.

Regarding export diversification and exports to the EU, the regression analysis is in line with the findings from the descriptive analysis. Effectively, in spite of increased public agricultural spending, Georgia's agricultural exports are still predominantly traded to CIS countries. This has significant implications in decision-making regarding the allocation of resources and the long-term effects of support programs in Georgia (Annex Table A1).

The analysis reveals that greater agricultural GDP leads to higher agricultural export. This is because a boost to GDP can lead to heightened demand, improved infrastructure, further

investment, greater access to markets, and higher quality products. Ultimately, higher GDP can create a more favorable environment for exportation and contribute to growth (Annex Table A1).

The analysis also underscores that the precipitation level significantly impacts agricultural exports, as it affects productivity, quality, and the availability of crops. Due to the lack of advanced production technologies in agriculture (irrigation systems, greenhouse production, climate-controlled storage, etc.), the sector is particularly dependent on weather conditions (Annex Table A1).

The analysis identifies that the export ban – the Russian embargo imposed from 2006 to 2012 on Georgian agri-food imports, including wine and mineral water – negatively impacted agricultural exports, yet it had a significant positive impact on export diversification. Although exports became more diversified because of the embargo, this trend might be difficult to sustain in the long-term, where the diversification level, measured by the HHI, has declined over the last decade (Annex Table A1).

CHALLENGES CAPITALIZING ON DCFTA OPPORTUNITIES

The agricultural sector in Georgia is facing numerous obstacles, those not solely related to DCFTA implementation rather those hindering small- and medium-sized farmers and agricultural cooperatives from fully leveraging the benefits of the agreement. Agri-food value chains in Georgia are inadequately developed, and producers are not fully utilizing the available land or production technologies, thus leading to poor productivity (World Bank, 2022). Georgian producers would benefit from supplying the EU market with large quantities of high-quality agri-food products on a regular basis. Nevertheless, large-scale production remains a challenge as most Georgian agricultural goods derive from hundreds of small-scale producers who cannot guarantee a fixed amount of production throughout the year. For most agricultural products, the lack of consolidated downstream buyers, for instance aggregators, appears to be an important structural deficiency, thereby preventing overall sectoral development and undermining export potential (ISET Policy Institute, 2019). In addition, the country has extremely limited, if non-existent, off-season production, and a significant part of agriculture is committed to conventional products and traditional farming practices (Gelashvili & Shengelia, 2021). There is also still a lack of appropriate machinery in the countryside, especially smaller equipment that would be suited for Georgian small-scale firms (ISET Policy Institute, 2018; ISET Policy Institute, 2015). To ensure stable export flows, it is therefore crucial to achieve higher levels of output and develop off-season production. This requires the introduction of innovative agricultural technologies, incentivizing cooperation, scaling up enterprises, increasing commercialization levels, and decreasing land fragmentation.

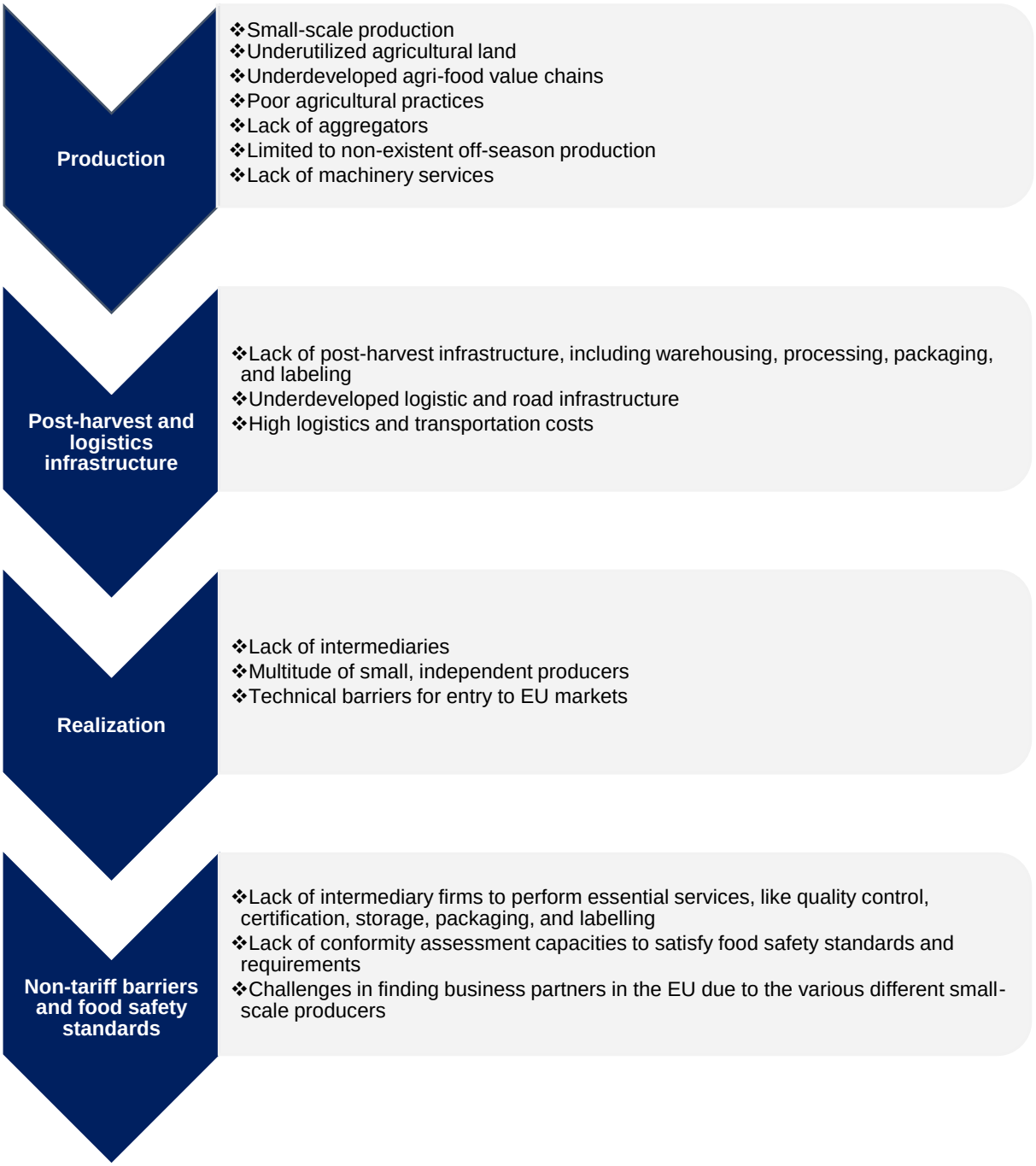
Poor post-harvest and logistic infrastructure also aggravate the challenges of integration throughout agricultural value chains. It is thus still necessary to upgrade every stage of the logistics: warehousing, processing, labeling, regional consolidation, and final customer services (Deisadze, Mamardashvili, & Zhorzholiani, 2019). According to the World Bank Logistics Performance Index, as of 2018, Georgia ranks 119th in the world with the score of 2.44 out 5 (World Bank, 2023). Furthermore, the country scores below average for most indicators, namely: customs (2.42 out of 5), infrastructure (2.38 out of 5), international shipments (2.38 out of 5), logistics competence (2.26 out of 5), tracking and tracing (2.26 out of 5), and timeliness (2.95 out of 5). Logistics infrastructure, including proper storage and transportation systems, is naturally crucial for allowing specific

agricultural goods (like fresh fruits and berries) to withstand transportation and handling and to arrive in good condition (United Nations Industrial Development Organization [UNIDO], 2021). Yet in Georgia, the internal and secondary road infrastructure remains limited, despite significant improvements to the primary road network (World Bank, 2022). Additionally, shipping goods to the EU is often time-consuming and expensive, and improvements to the transportation and logistics infrastructure are required to ensure that products reach the EU market in a timely and cost-effective manner.

While the DCFTA envisages the full elimination of trade barriers across certain sectors and products, liberalization is only limited in primary agriculture and food products (Adarov & Havlik, 2018). For certain exports from Georgia to the EU, there are constraints like tariff rate quotas (TRQ), “entry prices”, anti-circumvention mechanisms, and other provisions. On the path to European integration, the key challenge for Georgian agricultural exports is, notwithstanding, compliance with non-tariff barriers, such as food safety standards and SPS measures. Observing the stringent EU food safety and quality standards (consistency over time, homogeneity, traceability) is particularly challenging as most agricultural value chains are dominated by a multitude of small, independent producers, who are not directly linked to downstream buyers and have limited knowledge of distribution networks (ISET Policy Institute, 2019). Additionally, small and medium enterprises often have no capital to fulfill subsequent functions: quality control, certification, storing, packaging, labeling, and other processing (ISET Policy Institute, 2019). Most agri-food export chains simply lack the required conformity assessment capacities for food safety standards and for admission to EU markets (United Nations Industrial Development Organization, 2021).

Furthermore, many local agricultural markets are missing intermediary firms that could connect multiple small producers with foreign buyers, and which could perform essential services like quality control, certification, storage, packaging, or labelling (ISET Policy Institute, 2019). This also creates challenges for Georgian exporters during realization and in finding EU business partners; most foreign buyers are unwilling to purchase from numerous individual small farmers, as it requires a myriad of functions to ensure that food safety standards are met (Adarov & Havlik, 2018). Consequently, to improve the quality of agri-food exports, it is vital to implement sanitary and phytosanitary standards and regulations; develop other support infrastructure, like laboratories, alongside extension and mechanization services; and ensure the availability of proper infrastructure for storing and drying products in line with food safety standards. There are therefore high approximation costs for exporters, those which should be considered as long-term investments stimulating a structural transformation towards enhanced food safety systems, alongside an increased specialization in technology and labor-intensive products with a high value-added. Greater attention should also be placed on delivering consultations with farmers for better information sharing and regarding certification processes and standards.

Diagram 1. Challenges of agri-food exporters accessing EU markets



KEY FINDINGS

Since ratifying the AA and the DCFTA, the government has adopted numerous significant regulations in food safety and in veterinary and plant protection to harmonize its agricultural and rural development policies and its legislation with the EU regulatory framework. Georgia has moreover further liberalized its trade regime and has a notable level of trade openness.

Nevertheless, thus far Georgia has not managed to capitalize fully on the opportunities presented within the DCFTA. The share of agricultural exports to the EU has decreased notably since 2016, with exports primarily increasing towards the CIS market. The trade balance with the EU and with CIS countries has also been experiencing opposing trends in recent years. It significantly worsened for EU countries after 2016, whereas the balance has shifted from negative to positive for CIS countries over the last two years. The level of trade diversification also declined during this period. At present, Georgia's key export commodities are predominantly traded with CIS countries, with Russia remaining the top export market.

Exports to the EU are less diversified both in terms of products and markets, and the three main exported food commodities (hazelnuts, wine, and alcoholic beverages) accounted for 73% of Georgia's total agricultural exports to the EU in 2020. Exports dynamics to the EU are largely driven by the hazelnut trade. Deteriorating hazelnut export, precipitated by brown marmorated stink bug damage in 2016-2017, was a major driver of reduced trade with Europe in recent years. Nevertheless, the hazelnut sector is gradually recovering and, concurrently, EU imports of alcoholic beverages, natural wine, and mineral and carbonated waters are also progressively increasing (Agrarian Issues and European Integrartion Committees of the Parliament of Georgia, 2022).

In terms of destination markets, five EU member states (Germany, Italy, Lithuania, France, and Poland) accounted for 73% of total exports from Georgia to the EU in 2020 (Agrarian Issues and European Intergation Committees of the Parliament of Georgia, 2021). The Russian war in Ukraine has contributed to Russia remaining the top trading partner for agricultural exports; studies reveal that in the aftermath of the invasion of Ukraine trade with Russia has increased and that Georgia has recorded a significant rise in re-exports to the country (Chupilkin, Javorcik, & Plekhanov, 2023). This trend has also been observed in other post-Soviet countries as well as in Eastern Europe.

Governmental programs, together with donor funding, play a significant role in the development of the Georgian agricultural sector, and, if properly employed, could serve as an important tool for accessing the further benefits of the DCFTA and promoting export to the EU.

Since 2011, Georgia's public spending on agriculture has been increasing annually, however, it has not resulted in an increased contribution to the economy. Subsidies on interest rates, although distortive and fiscally costly, have been the principal vehicle for governmental support. While less attention has been paid to offering loan guarantees, other collateral substitutes, or providing seasonal financing. The focus on funding via interest subsidies has not yet proven to be a logical solution for ensuring access to finance, particularly for those small farms and agribusinesses that lack collateral. Under this approach, the use of public funds has failed to serve investments effectively – specifically in areas requiring eradication of the challenges associated with the export opportunities offered under the DCFTA.

Furthermore, several state support programs are regularly directed towards specific sectors (tea plantation rehabilitation, hazelnut support, wine sector subsidies) and thus "pick winners",[4] which results in rent-seeking by vested interests and the inefficient use of public funds.

Analyses on public spending in agriculture, on trends in international trade, and on the sector, itself demonstrate that agriculture faces many internal and external shocks, each of which challenge the

[4] The policy in which a government encourages certain economic sectors, or even particular companies.

effectiveness of public spending. Subsidies represent the largest share of governmental expenditure on agriculture, yet they are structured in such a way that only provides short-term boosts via support programs. Critically, they do not aid the removal of challenges hindering utilization of DCFTA opportunities, nor have they facilitated Georgian producers' ability to supply EU markets with large quantities of quality agri-food products on a regular basis. On the contrary, such short-term boosts distort producers' incentives and facilitate greater exportation to traditional CIS markets, which are less demanding in terms of quality, compliance with standards, and investments in innovation.

RECOMMENDATIONS

- **Improve the design and structure of public support in agriculture**. By changing the design of public support programs, while avoiding picking winners and distorting incentives, it may facilitate greater utilization of the opportunities offered by DCFTA. This may be in the form of reduced spending on traditional subsidies to shift the focus from short-term boosts towards addressing systemic challenges – for instance with irrigation and drainage, land consolidation, agricultural insurance, innovation, education, and with extension services among others – which may prove vital for **creating an enabling environment** for private, export-oriented investments in the agricultural sector.
- Expand on the design of public support programs while incorporating an appropriate **timeframe and exit strategy** for these programs. This would allow beneficiaries to focus to a greater extent on long-term outcomes and strategy through investing in more sustainable solutions.
- **Apply a more participatory and evidence-based approach in policy design**. It is recommended that a bottom-up approach be utilized when designing state support programs. While the government usually consults certain interested parties, this choice of parties is often limited to producer associations. **Thus, widening the range of stakeholders** and allowing for the participation of research organizations and other CSOs would improve the overall efficiency of state interventions.
- Design or redesign state interventions based on the findings of **policy analyses and research**, using an evidence-based approach. It is also recommended that **monitoring and evaluation systems** are established to allow for a critical evaluation of the progress of objectives, as well as an assessment of the cost-effectiveness and cost-efficiency of state support programs.
- **Invest public funds in export-oriented approaches**. Public funding should prioritize those applicants who **adopt innovative, environmentally friendly production technologies and food safety and hygiene standards; who have entered or plan to enter European market, or who target new markets; and those who focus on cooperation and aggregation in production**. It is also imperative that the criteria be regularly reviewed to ensure conformity with strategic objectives in the agricultural sector, with a particular focus on innovation, competitiveness, and market diversification.
- **Improve the availability of public information**. It is vital to provide agricultural producers and exporters with the transparent and timely delivery of information regarding the introduction of new regulations on food safety, as well as veterinary and plant protection.
- **Build the capacity of public agencies**. Public sector capacity is a critical aspect of good governance, and it is essential for delivering high-quality public services, designing efficient public support programs, and attaining strategic sectoral objectives with long-lasting impacts. In essence, well-trained and fully equipped public servants, with the necessary analytical skills and tools, are more likely to be efficient and effective in their work.
- **Promote digitalization in the sector**. Strengthening competitiveness in Georgian production and export requires the rigorous adoption of modern digital technologies. For instance, this may include the use of **e-certification** for trade and distribution; adopting **blockchain technology** for easier traceability and contracting; or applying **e-labelling** to provide extensive information about various agri-food products (ISET-PI, 2022).

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ANNEX

A1. REGRESSION RESULTS

The main regression model used in the analysis is presented below:

expdif$t$= b0 + b1lagspenddif + b2popdif + b3landdif + b4agrigdpdif +b5precip + b6$bant$ + εt

where:

Expdif is the first difference in total agricultural exports measured in GEL;

Lagspenddif is a lag of the first difference in the value of public spending measured in GEL;

Popdif is the first difference in the number of the rural population measured in persons;

Landdif is the first difference in the quantity of arable land measured in hectares;

Agrigdpdif is the first difference in the value of agricultural GDP measured in GEL;

Precip is the level of precipitation measures in mm;

Ban is a dummy variable which equals one in 2006-2012 inclusive and zero otherwise;

t is the year;

ε is an error term.

All data series, except precipitation, are non-stationary. The first differences were used in the analysis to make the series stationary. The OLS estimation technique was also used. Prior to applying the OLS, the following diagnostic tests were conducted: Breusch-Godfrey test for serial correlation and the Breusch-Pagan test for heteroscedasticity. The variance inflation factor (VIF) approach was used to detect multicollinearity.

No serial correlation, heteroscedasticity, or multicollinearity were detected in the model.

The main model included total agricultural exports as a dependent variable and the other two models with the dependent variables – the export diversification index and agricultural exports to the EU were estimated respectively.

The regression models and estimation results are presented in Table A1.

Table A1. OLS estimation results

Independent variables	Dependent variable - Total agricultural exports	Dependent variable – Export diversification index (HHI)	Dependent variable – Exports to the EU
Lagged public spending	0.870 (0.542)	4.45 (9.54)	0.049 (0.143)
Rural population	-3998.865 (5451.261)	0.012 (0.010)	262.847 (1439.256)
Land	-626.242 (1575.728)	4.44 (0.003)	404.463 (416.028)
Agricultural GDP	0.286* (0.140)	1.75 (2.47)	0.120*** (0.037)
Precipitation	411428.2 (308580.1)	-1.63** (0.54)	207366.6** (81472.1)
Ban	-7909122 (6.77)	242.844* (119.184)	4128509 (1.79)
Constant	-4.95 (3.64)	2894.099 (641.315)	-2.27 (9.62)
Number of observations	16	16	16
R squared	0.51	0.56	0.71

*Note: * refers to a 10% significance level; ** 5% significance level; *** 1% significance level; and standard errors are in parenthesis.*

*A*2. RDA programs and their objectives

Plant the Future	• The purpose of this program is to cultivate agricultural lands for the effective use of planting perennial crops, with the result of replacing imported products and increasing export potential.
Agroinsurance	• The purpose of this program is to develop the insurance market in the agricultural sector, to promote agricultural activities, to retain income for individuals under the occupation of the activities denoted, and to reduce risks.
Preferential Agrocredit	• The purpose of the program is to improve primary agricultural production processes, processing, storage, and sales by providing legal and natural entities with cheap, affordable, long-term, and preferential funding.
State Co-financing Program of Refrigerated Storage Facilities for Berry Crops in Agricultural Cooperatives	• The purpose of this program is to promote agricultural cooperation and to ensure the storage of harvests from those orchards planted under the berry crop financing subcomponent of the perennial gardens co-financing component, each within the Plant the Future state program.
State Program of Rational Use of State-owned Pastures in Mountainous Regions	• This program aims to promote the development of livestock and the production of local products by establishing milk processing infrastructure; increasing the quality and quantity of processed honey and livestock products; and by improving the socio-economic situation of rural populations.
Program for Supporting Hazelnut Production	• The purpose of the program is to support the primary production of hazelnuts in Georgia by stimulating hazelnut orchard owners and proprietors via the subsidizing of goods necessary for the care and production of hazelnuts.
Georgian Tea Plantation Rehabilitation Program	• The main objective of the program is to ensure the maximum potential of Georgian tea and to promote high-quality tea production, including the production of bio (organic) tea, and as a result, to raise self-sufficiency levels and export capacity.
Industrial Apple Sale Promotion Program	• This program aims to promote the sale of apple harvests for natural persons employed in the field of fruit growing.
Bioproduction Promotion Program	• This program aims to support bioproduction and ensure growth in the production of bioproducts.
State Program for Technical Assistance	• This programs offers beneficiaries of RDA programs support in consulting services and training; product branding and packaging; implementation of international food safety management systems and standards; and granting recognition to business operators producing and/or processing food of animal origin in order to increase the competitiveness of products and services for both domestic and foreign markets.
Integrated Development Program for Pilot Regions	• This funding program aims to support the establishment of new enterprises as well as the expansion and/or re-equipment of existing enterprises. The program is being implemented in four pilot regions: Imereti, Kakheti, Guria, Racha-Lechkhumi, and Kvemo Svaneti.

Source: RDA, 2023