

# Economic security of the southern Caucasus: opportunities and challenges

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The southern Caucasus is one of the most interesting and, at the same time, vulnerable regions of the world. Different confessions, national traditions, lifestyles, human philosophies, economic approaches and a lot of other fundamental values are united here in a single contradictory node. At the same time, strategic interests of the USA, the EU, Russia, China, Turkey and Iran contradictorily intersect here. After the collapse of the USSR and a huge economic crisis, the southern Caucasus states manifested picturesque and intense social and economic development: within several years all three southern Caucasus countries have left the group of low-income countries and joined the upper-middle income states. The region has some of the most developed infrastructure in the world: the total length of pipelines in the region is 9,873 km; the total length of roads equals 53,315 km; and that of the railway network equals 4,556 km. More than 8.8 million people passed through the three Azerbaijani, three Georgian and one Armenian international airports in 2017, and 11.7 million people visited the three states (including 7.6 million visitors to Georgia). For their accommodation the regional hotel industry possesses 62,111 beds, and this number will increase to 75,860 in 2021. Georgia has close bilateral commercial relations with both Armenia and Azerbaijan but no partnership of Armenia, neither with Azerbaijan nor with Turkey, is possible. Exports of goods and commodities from the three southern Caucasus states complement each other and a synergetic approach to foreign trade may significantly improve the exports' added value. Further development and economic security of the region would greatly depend on both the increase of hydrocarbon exports with involvement of their resources from other countries and the implementation of modern trade technologies. From this point of view the foundation of the Caucasus Commodity Exchange and affiliated bank institutions seems to be of crucial importance. Application of futures and options trade and hedging would at least double the capitalization of companies and the liquidity of the regional market. Without such innovations the economy of the region will begin to slow down. In so far as far as the stability in the region has a huge impact on international security, the international community will be deeply be implicated in these matters.

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## 1. Introduction

Within the concept of security,<sup>1</sup> economic security implies the situation of having a stable source of financial income that allows for the ongoing maintenance of one's current standard of living.<sup>2</sup> In the globalized world international<sup>3</sup> and/or regional<sup>4</sup> economic security refers to the synergetic coexistence of stakeholder countries, which allows all of them to maintain a national economic security policy. It is easy to understand that the best tool to maintain economic security is cost-effective development.<sup>5</sup>

The southern Caucasus (Fig. 1) is one of the most interesting yet vulnerable regions of the world. Different confessions, national traditions, lifestyles, human philosophies, economic approaches and a lot of other fundamental values are united here in a single contradictory node. In addition, the strategic interests of the USA,<sup>6</sup> the European Union,<sup>7</sup> Russia,<sup>8</sup> China,<sup>9</sup> Turkey<sup>10</sup> and Iran<sup>11</sup> contradictorily intersect here. Moreover, the southern Caucasus is a region of frozen latent conflicts between both Azerbaijan and Armenia in Nagorniy Karabakh and Georgia and Russia in Abkhazia and South Ossetia. The international community feebly tries to participate in a solution of these conflicts, which represent a challenge for regional and global security, but until today all the envisaged scenarios<sup>12</sup> seem to be useless.

<sup>1</sup> Baldwin, D.A. (1997). The concept of security. *Review of International Studies*, Vol. 23, pp. 5–26.

<sup>2</sup> Mankiw, N.G. (2012). *Principles of Economics* (6 ed.). Mason, Ohio: South-Western Cengage Learning.

<sup>3</sup> Cable, V. (1995). What is international economic security? *International Affairs*, Vol. 71, pp. 305–324.

<sup>4</sup> Kaher, M. (2012). Regional economic institutions and East Asian Security. In: A. Goldstein and E.D. Mansfield (eds.) *The Nexus of Economics, Security, and International Relations in East Asia*. Stanford: Stanford University Press, pp. 66–97.

<sup>5</sup> Stewart, F. (2004). Development and security. Working Paper 3. Centre for Research on Inequality, Human Security and Ethnicity, CRISE. Oxford: Queen Elizabeth House, University of Oxford, 28 pp.

<sup>6</sup> Baban, I. and Shiriyev, Z. (2010). The U.S. South Caucasus strategy and Azerbaijan. *Turkish Policy Quarterly*, Vol. 9, No 2, pp. 93–103; Nichol, J. (2010). *Armenia, Azerbaijan, and Georgia: political developments and implications for U.S. interests*. Washington DC: Congressional Research Service, 41 pp.

<sup>7</sup> Nuriyev, E. (2007). *EU policy in the South Caucasus: a view from Azerbaijan*. Brussels: Centre for European Policy Studies (CEPS), 30 pp.; Alieva, L. (2008). *EU and South Caucasus*. Gütersloh: Bertelsmann Group for Policy Research, 19 pp.; Simão, L. and Freire, M.R. (2008). The EU's neighborhood policy and the South Caucasus: Unfolding new partners for cooperation. *Caucasian Review of Foreign Affairs*, Vol. 2(4), pp. 47–51; Efe, H. (2012). Foreign policy of the European Union towards the South Caucasus. *International Journal of Business and Social Science*, Vol. 3, No 17, pp. 187–199.

<sup>8</sup> Hedenskog, J., Holmquist, E. and Norberg, J. (2018). *Security in the Caucasus: Russian policy and military posture*. Stockholm: Swedish Defence Research Agency, 100 pp.

<sup>9</sup> Pipinashvili, D. (2011). Sino-Russian geopolitical interests in Central Asia and South Caucasus. *Georgian National Academy of Sciences Bull.*, Vol. 5, No 2, pp. 144–148; Hovhanesian, H. and Manasyan, H. (2014). *South Caucasus—People's Republic of China bilateral free trade agreements: why it matters*. ADB Working Paper Series on Regional Economic Integration. Manila: Asian Development Bank, 60 pp.; Inan, F. and Yayloyan, D. (2017). *New economic corridors in the South Caucasus and the Chinese one belt one road*. Ankara: The Economic Policy Research Foundation of Turkey (TEPAV), 89 pp.

<sup>10</sup> Oskanian, K. (2011) Turkey's global strategy: Turkey and the Caucasus. In: N. Kitchen (ed.) *IDEAS reports—special reports*, London: London School of Economics and Political Science, pp. 23–27.

<sup>11</sup> Weiss, A. and Zabanova, Y. (2017). *The South Caucasus and Iran in the post-sanctions era*. Berlin: Stiftung Wissenschaft und Politik, 8 pp.

<sup>12</sup> See, for instance, Sammut, D. and Paul, A. (2011). *Addressing the security challenges in the South Caucasus: The case for a comprehensive, multilateral and inclusive approach*. Brussels: European



Figure 1. Geopolitical map of the southern Caucasus and its neighborhood.

It is true that after the collapse of the USSR and a huge economic crisis,<sup>13</sup> the southern Caucasus states manifested picturesque and intense social and economic development.<sup>14</sup> However, further advance of the region is impossible without interstate collaboration.

From this point of view different approaches were proposed. The International Monetary Fund sees a solution in development of both free market relations and a democratic civil society.<sup>15</sup> German researchers consider the possible development of three scenarios: bad, when political contradiction will result in military conflicts; good, when interstate collaboration will develop; and medium, when the *status quo* will remain.<sup>16</sup> Italian political analysts foresee further development of collaboration between Azerbaijan, Georgia and Turkey for hydrocarbon transit and believe that this trend will determine regional development in the near future.<sup>17</sup> At

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Policy Centre, 4 pp.; Eide, E.B. and Rösler, P. (eds.). (2014). *Scenarios for the South Caucasus and Central Asia*. Geneva: World Economic Forum, 48 pp.

<sup>13</sup> Tvalchrelidze, A. and Gogoberidze, I. (1995). Desintegración económica e integración: los Estados de la ex URSS ayer y mañana. *Cuadrenios Americanos. Nueva Época*. Vol. 5, pp. 209–215.

<sup>14</sup> Korganashvili, L., Mammadova, N., Tsotskolauri, P., and Kochlamazashvili, L. (2017). Transformation of South Caucasus countries during 25 years of independence. *European Journal of Social Sciences, Education and Research*, Vol. 4, Issue 4, pp. 253–262.

<sup>15</sup> *The Caucasus and Central Asia: Transitioning to emerging markets* (2014). Washington, DC: The Middle East and Central Asia Department, International Monetary Fund, 79 pp.

<sup>16</sup> Diez, T., Ahrens, B., Rehklau, I. and Schäffer, S. (2018). *The EU and the Caucasus in 2030: envisioning the future*. Tübingen: Universität Tübingen, 38 pp.

<sup>17</sup> Frappi, C. and Valigi, M. (2015). *Patterns for cooperation in the Southern Caucasus area: Azerbaijan, Georgia and Turkey triangular diplomacy in the shadow of energy strategy*. Working Paper no. 57, 30 pp. Milano: Istituto per gli Studi di Politica Internazionale (ISPI).

the same time, it has been noted that such collaboration opposes the strategic interests of Russia in the region and this factor should be taken into account.<sup>18</sup>

It is obvious that all doctrines of national security and economic development of the southern Caucasus states shall take into account the geopolitical framework and interests of foreign partners.<sup>19</sup> Simultaneously, paradoxically all concepts issuing from Armenia, Azerbaijan or Georgia considering partnership with Western countries, practically ignore regional collaboration between the states of the region. The most prominent manifestation of this feature is given by publications under the umbrella of the Konrad Adenauer Foundation, in which the political and economic development of Armenia, Azerbaijan and Georgia are considered separately.<sup>20</sup> In addition, these researches are based on general philosophical, political and economic approaches, in which the real economic framework is set aside. The present article represents practically the first investigation based on actual economic realities.

## 2. General comparative economic analysis

For avoiding incompatibility in statistical reporting,<sup>21</sup> in this chapter we have processed the World Bank World Development Indicators,<sup>22</sup> and calculated GDP per capita as GDP in current USD divided by population. At the same time, here and below, the US convention is used; e.g., the word “billion” means  $10^9$  as used in the World Bank indicators. Table 1 provides information on some essential social and economic indicators for Armenia, Azerbaijan and Georgia in 2017, and Fig. 2 illustrates the increase of GDP per capita in those countries in the new millennium. It may be seen that in six years Armenia, Azerbaijan and Georgia have undergone intense economic development.

The sharp fast increase of GDP per capita in Azerbaijan in 2006–14 and the subsequent severe decline is determined by the economic peculiarities of this country, the welfare of which

<sup>18</sup> Kakachia, K.K. (2011). Challenges to the South Caucasus regional security aftermath of Russian–Georgian conflict: Hegemonic stability or new partnership? *Journal of Eurasian Studies*, Vol. 2, pp. 15–20.

<sup>19</sup> See, for instance, Mikhelidze, N. (2013). *Juggling security, democracy and development in the Caucasus: What role for the EU?* (2013). IAI Working Papers 13, Istituto Affari Internazionali, Rome; Istituto Affari Internazionali, 18 pp.; *National Security Concept of Georgia* (2013). Tbilisi: Office of the President of Georgia, 28 pp.; *Georgia's Long-term Economic Development Concept* (2013). Tbilisi: Business Association of Georgia, 51 pp.; *Social-economic development strategy of Georgia “Georgia 2020”* (2016). Tbilisi: Government of Georgia, 68 pp.; *Economic outlook* (2018). Tbilisi: Ministry of Economy and Sustainable Development, 12 pp.; Abesadze, O. (2015). The influence of European neighbouring policy upon the economic development of Georgia. *Procedia – Social and Behavioral Sciences*, Vol. 213, pp. 557–561, etc.

<sup>20</sup> *The South Caucasus 2018: Facts, Trends, Future Scenarios* (2013). Tbilisi: Regional Programme South Caucasus, Konrad-Adenauer-Stiftung.V., 370 pp.; Kakachia, K., Meister, S., and Fricke, B. (eds.). (2018). *Geopolitics and Security: A New strategy for the South Caucasus*. Tbilisi: Konrad-Adenauer-Stiftung e.V., Georgian Institute of Politics and German Council on Foreign Relations, 304 pp.

<sup>21</sup> Georgia has adopted the “System of National Accounts 1993” (SNA 1993) of the Commission of the European Communities, International Monetary Fund, Organization for Economic Co-operation and Development, United Nations, World Bank, Brussels/Luxembourg, New York, Paris, Washington D.C., 1993. <https://unstats.un.org/unsd/nationalaccount/sna.aspx>, whereas Armenia and Azerbaijan are using their internal (national) accounting systems.

<sup>22</sup> World Bank. World Development Indicators. <https://databank.worldbank.org/data/source/world-development-indicators#>



Table 1. Some social and economic indicators for the southern Caucasus states in 2017.

Indicator	Unit	Country		
		Armenia	Azerbaijan	Georgia
Surface area	km <sup>2</sup>	29,760	86,600	69,700
Population	people	2,930,450	9,862,429	3,717,100
Population growth	%	0.19	1.07	-0.06
Population, male	%	47.04	49.81	47.75
Population, female	%	52.96	50.19	52.25
Population density	people per km <sup>2</sup>	102.93	119.31	65.03
Life expectancy at birth	years	74.62	72.03	73.26
Infant mortality rate	per 1,000 live births	11.30	20.5	9.7
Mobile subscriptions	per 100 people	119.04	103.05	146.49
GDP	billions of current USD	11.54	40.75	15.16
GDP per capita	current US\$	3,936.80	4,131.62	4,078.25
Industry	% of GDP	25.29	49.58	22.06
Agriculture	% of GDP	14.94	5.63	7.02
Services	% of GDP	51.32	37.48	56.58
Other branches	% of GDP	8.45	7.31	14.34

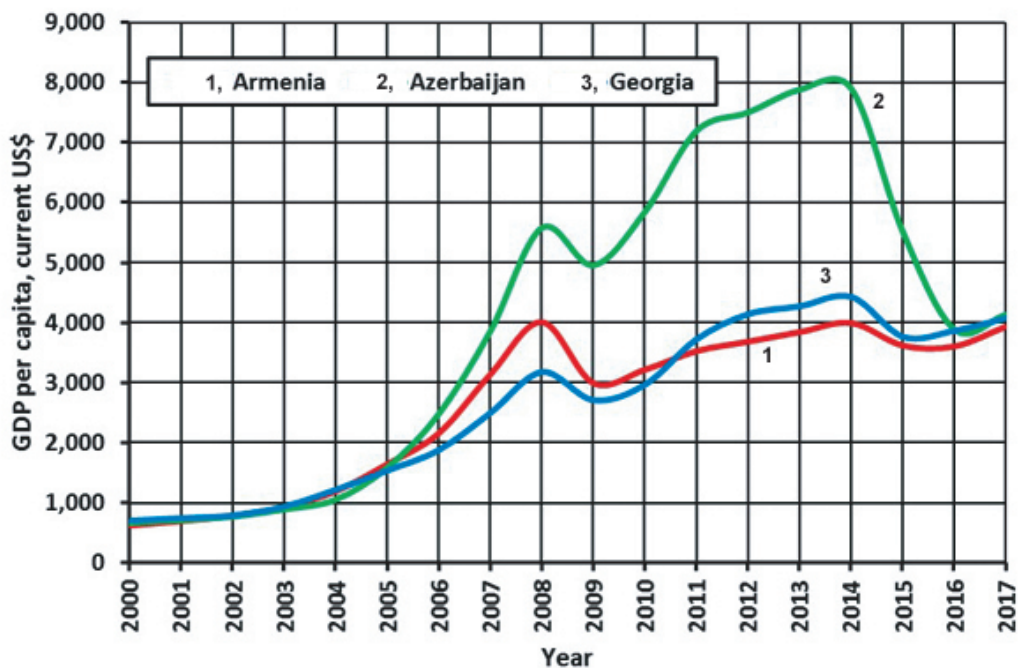


Figure 2. GDP per capita of the southern Caucasus states in the XXI century.

is entirely determined by hydrocarbon exports.<sup>23</sup> Correspondingly, the decrease of world oil prices in recent years<sup>24</sup> against a background of diminished oil production<sup>25</sup> determined not only the deterioration of economic indicators but also devaluation of the Azeri manat at the beginning of 2015.<sup>26</sup> Fig. 2 also demonstrates that all three southern Caucasus countries within several years have left the group of low-income countries, according to the World Bank classification,<sup>27</sup> joined the upper-middle income states. Their ranking among some other countries is shown on Fig. 3.

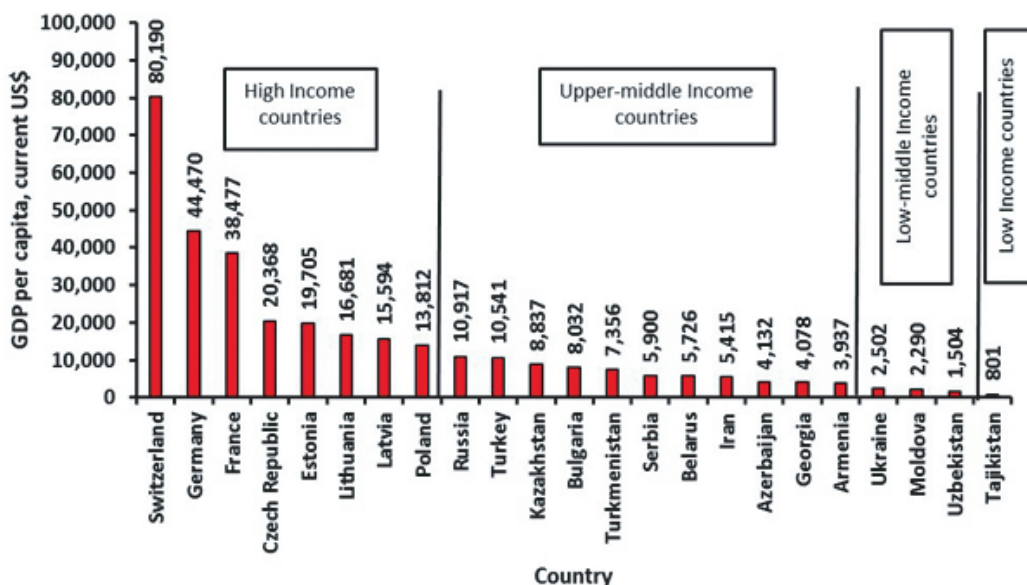


Figure 3. Classification of some states according to their income in 2017.

Fig. 4 explores unemployment dynamics according to the ILO guidelines.<sup>28</sup> It may be seen that the unemployment level is low in Azerbaijan, acceptable in Georgia and high in Armenia. However, by other indicators, as shown in Table 1 and on Figs 2 and 3, all the three countries have gained a worthy place in the world community.

<sup>23</sup> Tvalchrelidze, A. and Silagadze, A. (2013). Macroeconomic model for oil-exporting countries. *Central Asia and the Caucasus*, Vol. 14, pp. 118–145.

<sup>24</sup> See, for instance, Crude oil price history. <http://www.fedprimerate.com/crude-oil-price-history.htm>.

<sup>25</sup> BP Statistical Review of World Energy (67th edn). London: BP, 56 pp. (2018).

<sup>26</sup> *Devaluation of Azerbaijani national currency; causes and consequences* (2015). Baku: Centre for Economic and Social Development (CESD), 8 pp.

<sup>27</sup> New country classifications by income level: 2018–2019. The World Bank. <https://blogs.worldbank.org/opendata/new-country-classifications-income-level-2018-2019>.

<sup>28</sup> *Global employment trends* (2013). Geneva: International Labour Organization, 172 pp.

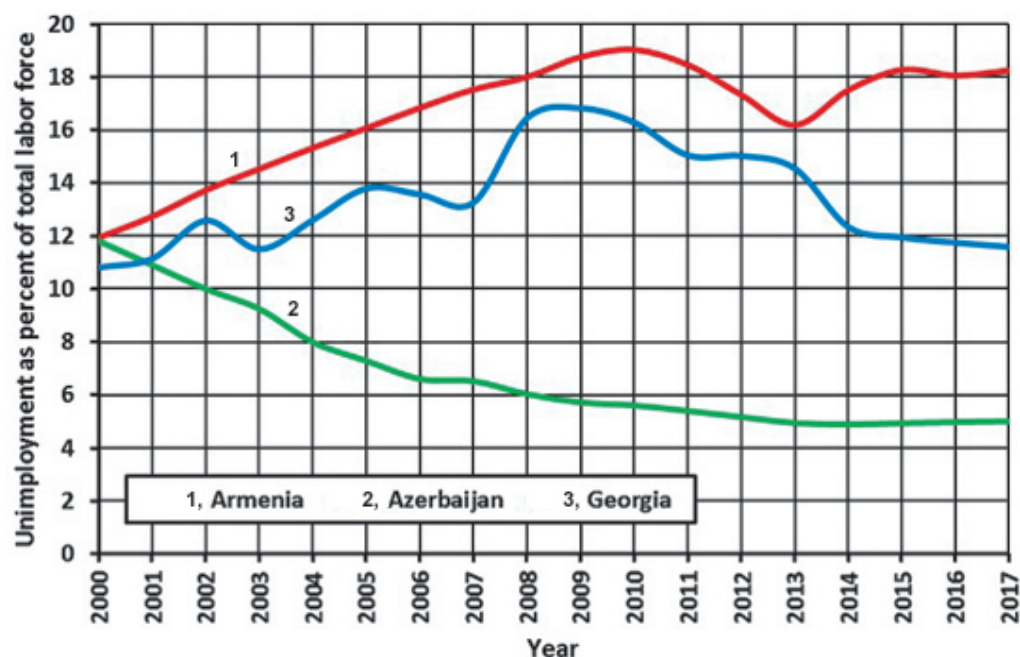


Figure 4. Dynamics of unemployment in the southern Caucasus states.

### 3. Infrastructure

The southern Caucasus has some of the most developed infrastructures in the world. In our previous article<sup>29</sup> we explored in detail the electric grid and the pipeline network of the region. That is why on the infrastructural map (Fig. 5) pipelines are shown in a generalized form. The total length of pipelines in the region is 9,873 km. Their gradation by destination and countries is shown in Table 2.<sup>30</sup>

Table 2. Pipeline length by destination

Country	Pipeline length / km			
	Oil	Gas	Condensate	Total
Armenia	0	2,233	0	2,233
Azerbaijan	1,424	3,361	1	4,786
Georgia	1,258	1,596	0	2,854
Total	2,682	7,190	1	9,873

<sup>29</sup> Tvalchrelidze, A.G. and Kervalishvili, P.J. (2015). Energy security of the Southern Caucasus: opportunities and challenges. *Nanotechnology Perceptions*, Vol. 11, pp. 88–105.

<sup>30</sup> Total length of pipelines for transportation by country. Charts.Bin. <http://chartsbin.com/view/1322>.

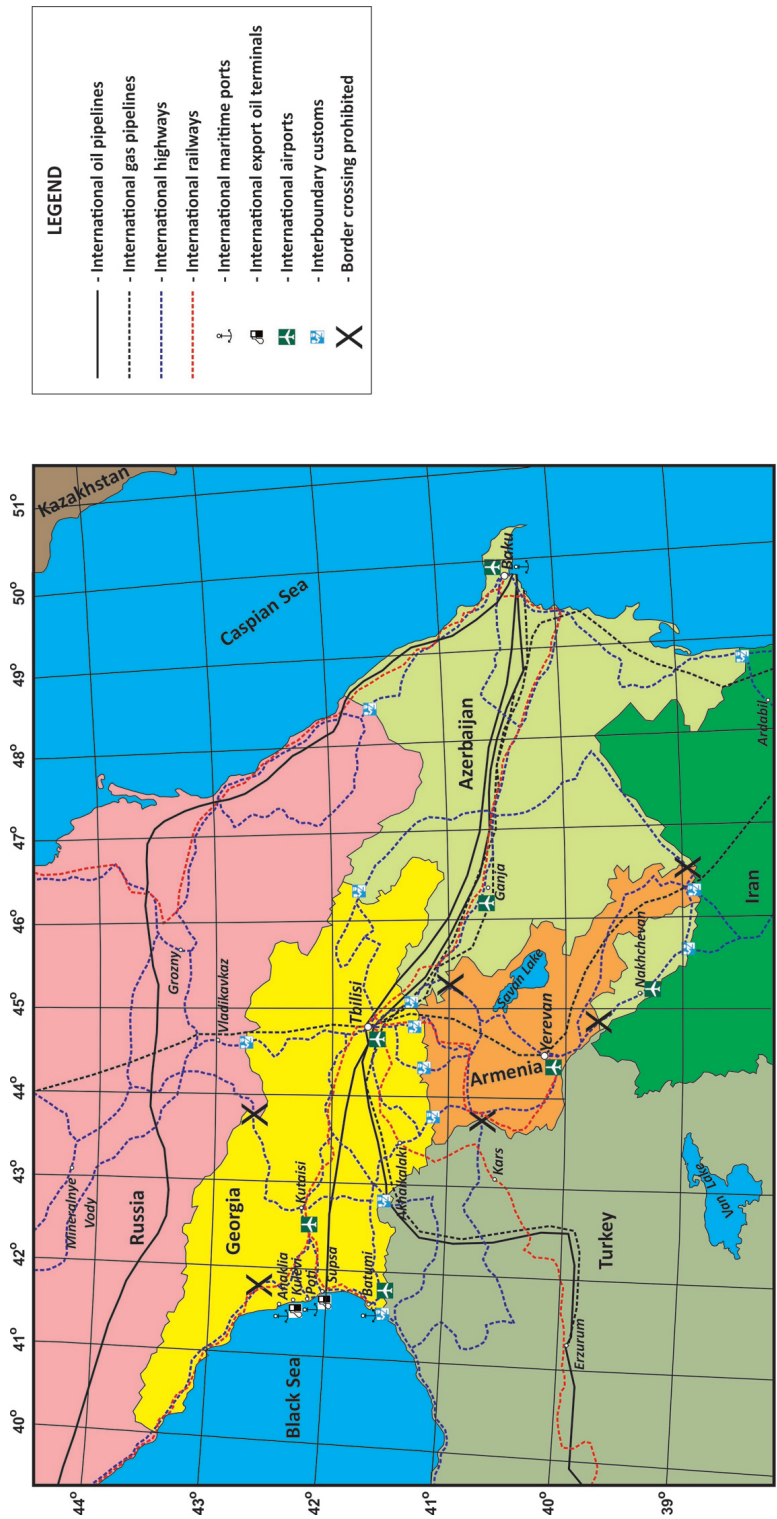


Figure 5. Infrastructure map of the southern Caucasus.

There are three transit oil pipelines in the region. Their features were described earlier.<sup>31</sup> The length of the Baku–Novorossiysk pipeline is 1,330 km. The State Oil Corporation of Azerbaijan (SOCAR) does not reveal the amount of oil annually shipped by this pipeline, indicating only that its maximum throughput capacity is 105,000 barrels a day.<sup>32</sup> However, thorough analysis of both oil production and consumption in Azerbaijan, as published by BP<sup>33</sup> and oil transportation by two other pipelines, as released by the Georgian Oil and Gas Corporation<sup>34</sup> and shown on Fig. 6, demonstrates that since 2007 this pipeline is empty and no oil is shipped to Novorossiysk.

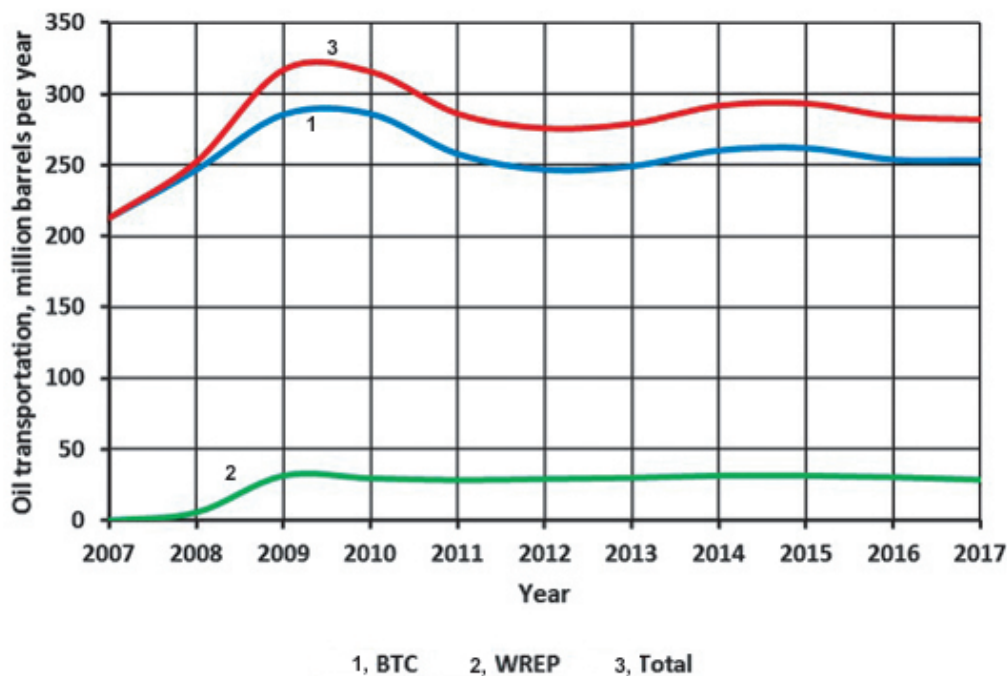


Figure 6. Dynamics of oil shipment by the BTC and WREP pipelines.

The length of the Baku–Supsa Early Oil Pipeline or of the Western Route Export Pipeline (WREP) is 833 km. It starts at Sangachal Export Terminal in Baku and extends to the Supsa terminal in Georgia. The Baku–Tbilisi–Ceyhan (BTC) Main Export Oil Pipeline is 1,768 km long. It starts also at Sangachal Export Terminal in Baku and terminates at Ceyhan Oil Terminal on the Mediterranean shore in Turkey. Fig. 6 describes dynamics of oil shipment by the WREP and BTC pipelines. There are two transit and two import gas pipelines in the region. Transit pipelines are (i) Baku–Tbilisi–Ersurum or South Caucasus Pipeline (SCP) and (ii) Stavropol–

<sup>31</sup> See Tvalchrelidze, A.G. and Kervalishvili, P.J. (2015). Ibid.

<sup>32</sup> Baku–Novorossiysk Oil Pipeline. SOCAR. <http://www.socar.az/socar/en/activities/transportation/baku-novorossiysk-oil-pipeline>.

<sup>33</sup> BP Statistical Review of World Energy. (67th edn) (2018). Ibid.

<sup>34</sup> Georgian Oil and Gas Corporation. <http://gogc.ge/en/transportation-stats>.



Yerevan (via Tbilisi) Pipeline System. Import pipelines implies the old but renewed Baku–Tbilisi Pipeline and Iran–Armenia Pipeline, which switches with the Stavropol–Yerevan Pipeline System near the capital of Armenia. Technical characteristics of these pipelines were described in our previous article cited above. Fig. 7 provides information on the volume of gas imported by Armenia and Georgia and shipped to Turkey.<sup>35</sup>

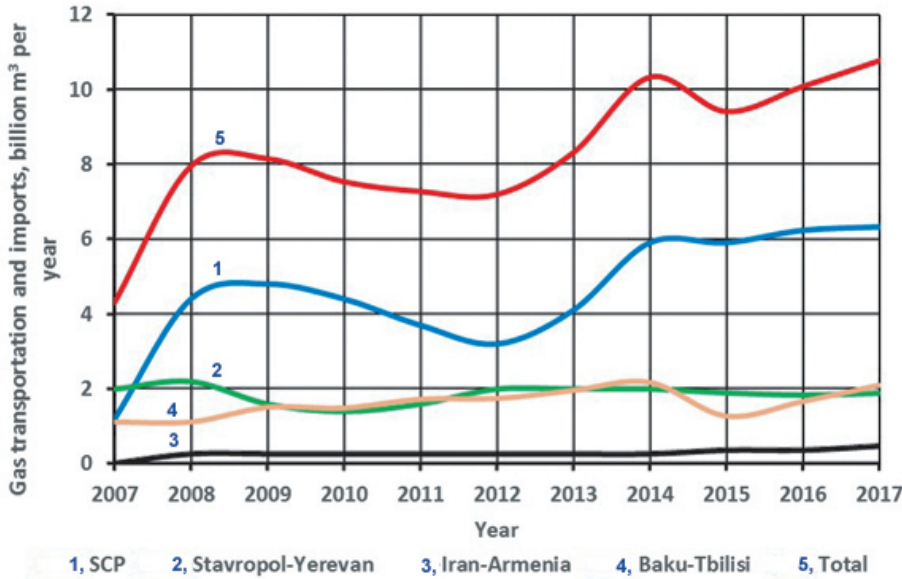


Figure 7. Volume of natural gas imported by and shipped through the south Caucasus countries.

Table 3 provides information on total length of the road and railway networks in the southern Caucasus states.<sup>36</sup> It should be noted that data on Georgia do not take into account the infrastructure of Abkhazia and South Ossetia, which are beyond the power of the present Georgian government. For comparing these data, we have simply calculated road and railway lengths per 1,000 km<sup>2</sup> (Fig. 8).

For assessment of these data we have compared them with analogous indicators in both economically developed and mountainous CIS states and with Russia, Kazakhstan and Ukraine. Results are displayed in Figs 9 and 10. Road and railway network lengths are given according to the World Factbook,<sup>37</sup> and country surface area is from the World Bank World

<sup>35</sup> Georgian Oil and Gas Corporation. Ibid; Armenia. The U.S. Energy Information Administration. <https://www.eia.gov/beta/international/country.php?iso=ARM>; Georgia natural gas imports. <https://www.indexmundi.com/g/g.aspx?v=139&c=gg&l=en>.

<sup>36</sup> Armenia road network. <https://dlca.logcluster.org/display/public/DLCA/2.3+Armenia+Road+Network>; Railways in Armenia. <http://www.sinfin.net/railways/world/armenia.html>; Azerbaijan Road Network. <https://dlca.logcluster.org/display/public/DLCA/2.3+Azerbaijan+Road+Network>; jsessionid=9AF512A1E4BC4A8E2F95DFE9837DC1B2; Railway transport. The State Statistical Committee of the Republic of Azerbaijan. <https://www.stat.gov.az/source/transport/?lang=en>; *Statistical Yearbook of Georgia* (2018). Tbilisi: National Statistics Office of Georgia, 280 pp.

<sup>37</sup> The World Factbook, CIA. <https://www.cia.gov/library/publications/the-world-factbook/>.

Table 3. Total length of the transport infrastructure networks in the southern Caucasus states.

Country	Length / km	
	Roads	Railways
Armenia	7,637	845
Azerbaijan	24,981	2,132
Georgia	20,697	1,579

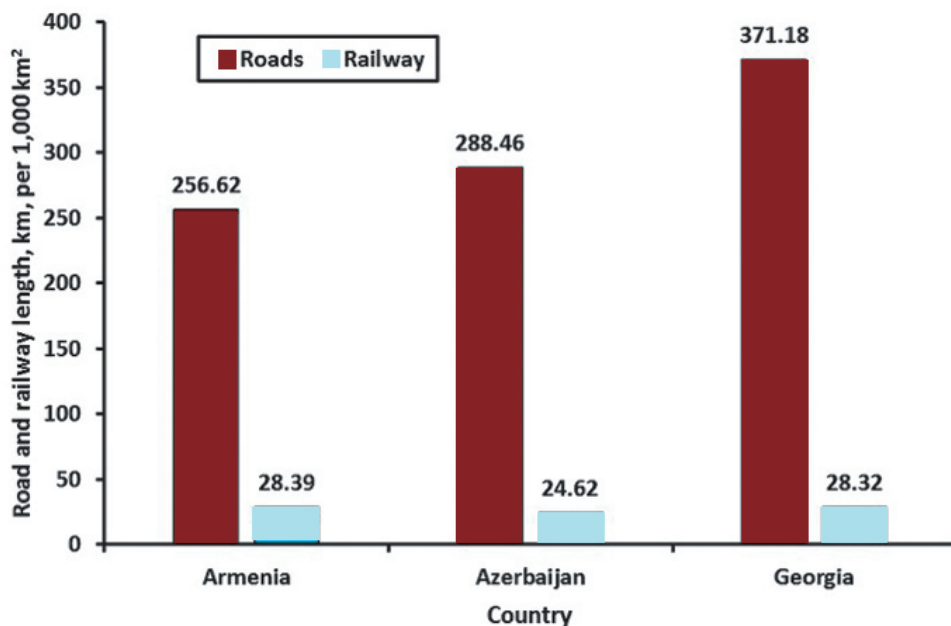


Figure 8. Road and railway lengths per 1,000 km².

Development Indicators. It may be seen that the southern Caucasus states are leaders among the ex-USSR countries. It is true that the railway network is more developed in Ukraine and Moldova, but those states are not mountainous.

It should be noted that the great majority of the road and railway networks were almost entirely inherited from the Soviet era. However, both in Azerbaijan and Georgia new highways of international quality have been constructed. The most important is the highway E60 Baku–Gazakh–Tbilisi–Samtredia–Batumi–Sarpi (on the Turkish border), 75% of which is constructed meeting international standards, and the highway will be entirely operational at the beginning of 2020. Highway E001 (Armenian territory)–E117 (Georgian territory), which links Armenia with the Russian Federation, is also extremely important. This main road also will meet international standards by 2020.<sup>38</sup>

<sup>38</sup> *Georgia transport sector assessment, strategy, and road map* (2014). Manila: Asian Development Bank, 37 pp.

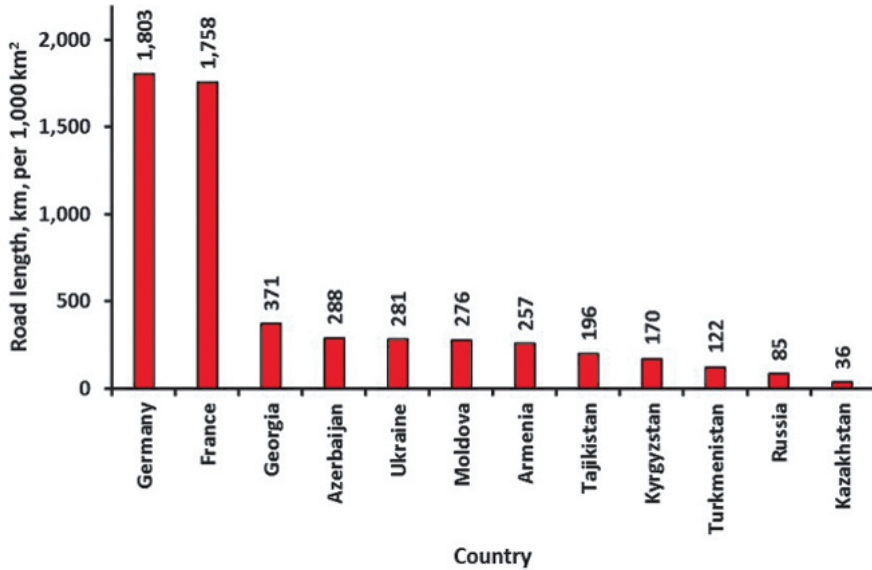


Figure 9. Road length per 1,000 km<sup>2</sup> in selected countries.

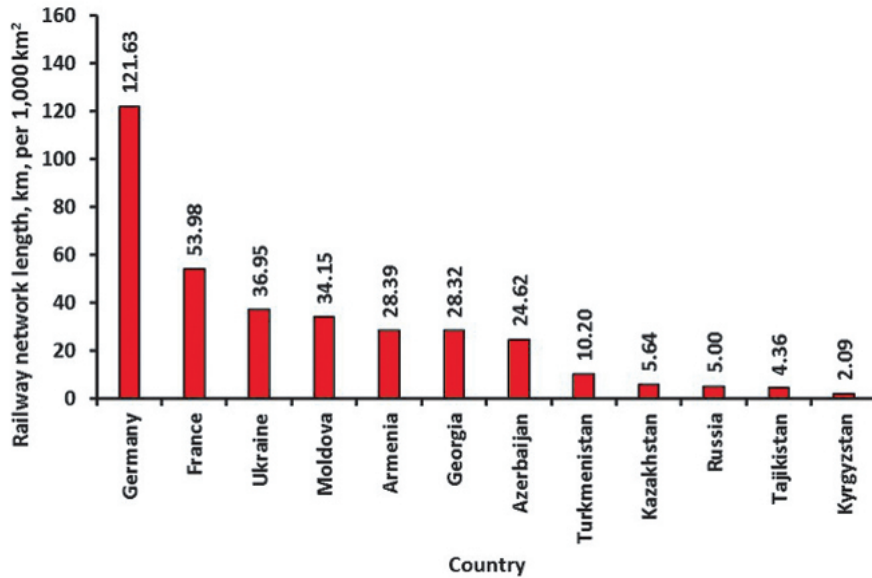


Figure 10. Railway network length per 1,000 km<sup>2</sup> in selected countries.

In recent years only the Baku–Tbilisi–Akhalkalaki–Kars (BTAK) railway branch has been constructed;<sup>39</sup> this railway has crucial importance for Azerbaijan, since it links it with friendly Turkey.

<sup>39</sup> Lussac, S. (2008). The Baku–Tbilisi–Kars railroad and its geopolitical implications for the South Caucasus. *Caucasian Review of International Affairs*, Vol 2 (4), pp. 34–46.

The railway became operational on 30 October 2017. In total 105 km of new line have been built between Kars and Akhalkalaki, with 76 km within Turkey and 29 km in Georgia. The existing railway line from Akhalkalaki to Marabda and on to Tbilisi and Baku has been modernized. Its total length is 826 km and it will be able to transport 1 million passengers and 6.5 million tons of freight per annum in the first stage. Capacity will later reach 3 million passengers and over 15 million tons of freight.<sup>40</sup>

For understanding customs policy in the region,<sup>41</sup> some geopolitical realities should be mentioned—latent conflict in Chechnya and two frozen conflicts in the region: (i) the Azerbaijan–Armenia conflict in Nagorniy Karabakh; and (ii) the Russia–Georgia conflict in Abkhazia and South Ossetia.<sup>42</sup> Unlike Azerbaijan and Armenia, Georgia maintains customs on the E117 highway and allows Russian citizens to visit Georgia without a visa. However, the road to Abkhazia is closed at Enguri Bridge, and the road from Russia via the Mamisoni Pass was closed in the early 1980s and has not been maintained on the Russian side. All customs posts between Armenia and both Azerbaijan and Turkey are closed and there is no traffic across the borders (Fig. 5).

Georgia has two customs posts with Turkey, one in Sarpi, near Batumi, and another in southern Georgia, near Vale. Three customs posts are operational along the Georgia–Armenia border, and two on the Georgia–Azerbaijan border. Armenia has one customs post with Iran, and two with Azerbaijan (one near the Caspian Sea and the other in the Nakhchevan Autonomous Republic), and one customs post with Russia.

Georgia is the sole country in the region that has access to an offshore zone via its maritime ports and oil terminals, shown in Fig. 5. Due to this feature as well as to the geopolitical framework mentioned above, both Armenia and Azerbaijan maintain good bilateral political and commercial relations with Georgia, which gives access to its maritime ports to those countries' cargo. Highway E001–E117 is the main and practically the sole cargo freight provision possibility for Armenia from Russia, via the customs post on the Georgia–Russia border. The lion's share of cargo to Azerbaijan passes through Georgia using its ports, highways and railways. Fig. 11 shows the amount of cargo handled in Georgian ports, and Fig. 12 shows freight transported by all means of transport through Georgia.<sup>43</sup>

There are three international airports in Georgia, three in Azerbaijan and one in Armenia. Unlike Georgia, the state statistics authorities of Armenia and Azerbaijan do not publish official statistics on the numbers of passengers served in the airports. In Armenia these data are annually released by the Internet portal Panorama.am. In Azerbaijan, the state aviation authorities propose

<sup>40</sup> Baku–Tbilisi–Kars (BTK) Rail Line, Azerbaijan, Georgia, Turkey. <https://www.railway-technology.com/projects/baku-tbilisi-kars/>.

<sup>41</sup> Kochadze, T., Tsetskhladze, A. and Gudadze, A. (2017). The customs logistics concept for the South Caucasus Region transport technological systems. In: Scientific Proceedings of International Scientific Conference “High Technologies. Business. Society 2017”, Vol. 1. Sofia: pp. 17–19.

<sup>42</sup> See, for instance, Olikier, O. and Szayna, T.S. (eds.) (2003). *Faultlines of Conflict in Central Asia and the South Caucasus: Implications for the U.S. Army*. Santa Monica, CA: RAND, 379 pp.; Jansiz, A. and Hojaste, M.R. (2015). Conflicts in the Caucasus region and its effects on regional security approach. *Journal of Politics and Law*; Vol. 8, No. 1, pp. 83–93; Palonkorpi, M. (ed.) (2015). *The South Caucasus Beyond Borders, Boundaries and Division Lines: Conflicts, Cooperation and Development*. Turku: Aleksanteri Institute, 241 pp.

<sup>43</sup> Ministry of Economy and Sustainable Development of Georgia. <http://www.economy.ge/?page=ecoreview&s=26>.

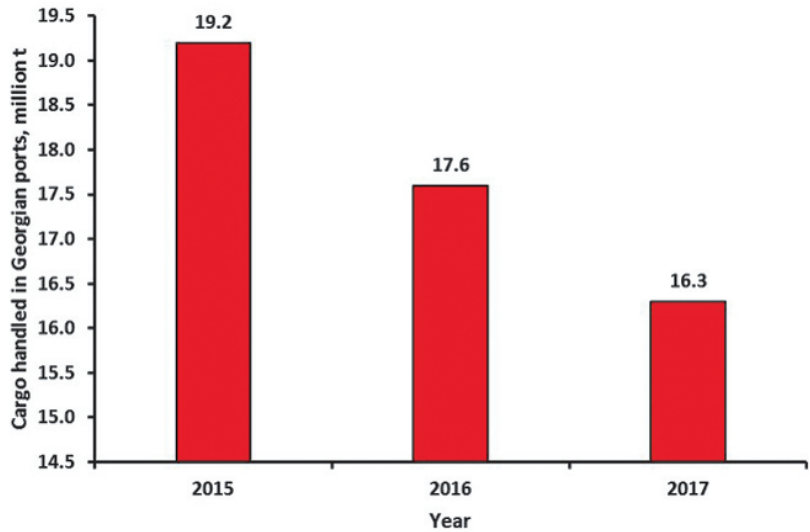


Figure 11. Cargo handled in Georgian ports.

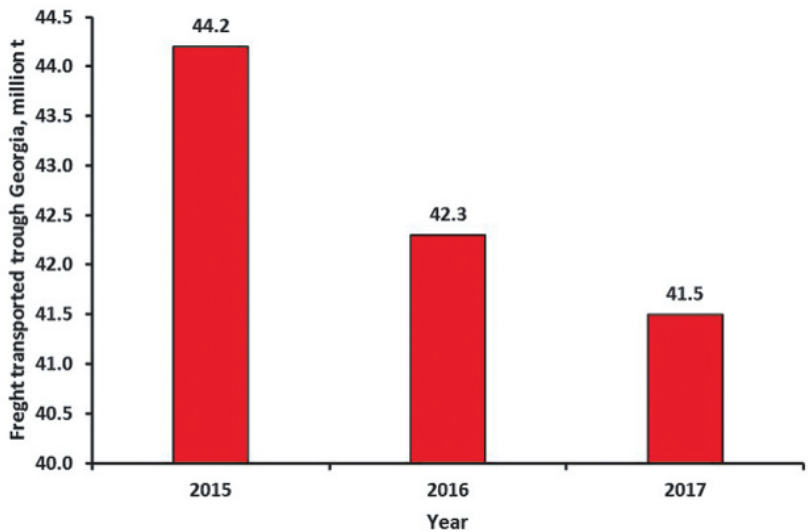


Figure 12. Freight transported through Georgia.

a link with World Bank World Development Indicators, from which we can infer that they believe these statistics are correct. Fig. 13, drawn based on existing information<sup>44</sup> (World Bank data for Azerbaijan), displays a significant increase of passengers in 2017, namely in Georgia, for which there is a possibility to analyse statistics for all three international airports in that country, as shown in Fig. 14. The data display a growing tendency of passenger numbers at these airports.

<sup>44</sup> Number of passengers served. The Civil Aviation Authorities of Georgia. <http://www.gcaa.ge/en/regular.php>; Panorama. <https://www.panorama.am/en/news/2018/01/10/Armenian-airport-passenger-traffic/1888660>.



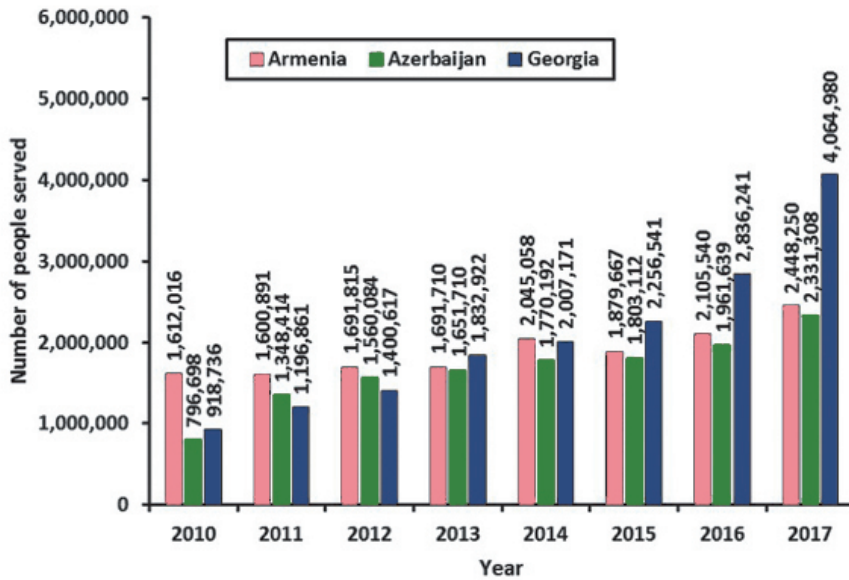


Figure 13. Airport statistics for Armenia, Azerbaijan and Georgia.

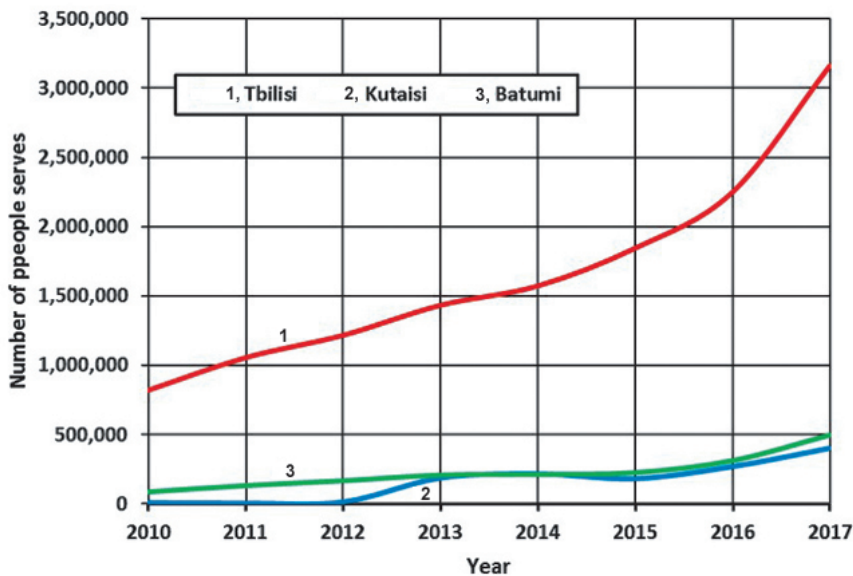


Figure 14. Passenger statistics for Georgia's international airports.

For analysing this trend we have undertaken a statistical analysis of tourists visiting the southern Caucasus states.<sup>45</sup> Results are given in Fig. 15. The dramatic increase of tourists to Georgia is followed by a slow growth of their number in Armenia and Azerbaijan.

<sup>45</sup> *Tourism sector—Armenia* (2018). Yerevan: State Tourism Committee of the Republic of Armenia, 23 pp.; Number of foreign arrivals to Azerbaijan by country. <http://www.stat.gov.az/source/tourism/en/>

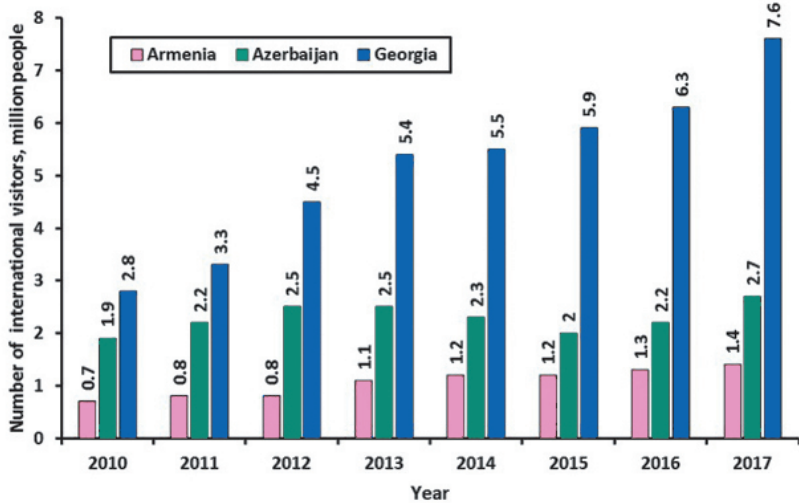


Figure 15. Numbers of international visitors to the southern Caucasus states in 2010–7.

Now, among other factors governing tourists’ inflow into a country, its size and infrastructural possibilities, and population, should be taken into account. Hence we have compared these data with the top ten tourist countries of the world<sup>46</sup> (according to the number of international visitors per inhabitants). Results are shown in Fig. 16. According to this index, Georgia is one of the world leaders in international tourism, and this statement is confirmed by the contribution of tourism to GDP<sup>47</sup> (see also Table 4<sup>48</sup>).

Table 4. Numbers of hotel rooms, present and forecast.

Country	Hotel room number	
	2017	2021
Armenia	14,000	19,000
Azerbaijan	20,778	22,773
Georgia	27,333	34,087

002\_4en.xls; Bochrishvili, E. and Samkurashvili, K. (2018). *Georgian tourism sector—tourism at full speed*. Tbilisi: Galt & Taggart Research, 36 pp.

<sup>46</sup> *UNWTO tourism highlights* (2018). Madrid: World Tourism Organization, 20 pp.

<sup>47</sup> *Travel & tourism economic impact 2018 – Georgia* (2018). London: The Authority of World Travel & Tourism, 18 pp.

<sup>48</sup> *Tourism development of the RA: Vision. Strategy. Action plan* (2017). Yerevan: State Committee for Tourism of the Ministry of Economic Development and Investment of Armenia, 34 pp.; Number of rooms in hotels and similar establishments by types of property. The State Statistical Committee of the Republic of Azerbaijan. Tourism. <https://www.stat.gov.az/source/tourism/?lang=en>; *Hotel market in Georgia* (2017). Tbilisi: Collier International, 55 pp.

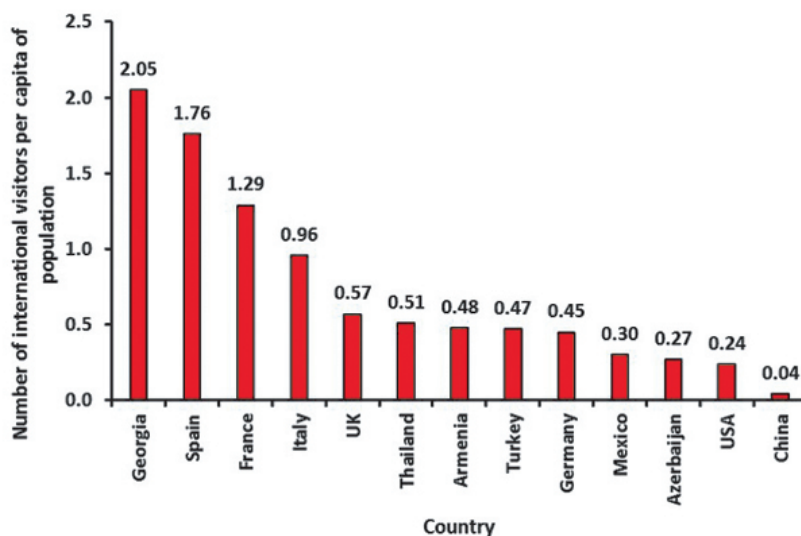


Figure 16. Numbers of tourists in the top ten tourist and southern Caucasus countries per indigenous head.

#### 4. Foreign and regional trade

Due to regional peculiarities, as has been noted, there are no economic relations between Azerbaijan and Armenia, but both countries maintain close partnerships with Georgia. Azerbaijan–Georgia political, business, commercial and trade relations have strategic importance for both countries and the region.<sup>49</sup> All active Azerbaijan pipelines pass through Georgia, as well as the Baku–Tbilisi–Kars railway. On the other hand, post-Soviet Armenia–Georgia relations developed slowly, and in the beginning of the new millennium Armenia was seriously concerned about its economic security.<sup>50</sup> However, subsequently bilateral relations have dramatically improved, and the sole present point of controversy is the reopening of the Russia–Georgia railway, which passes through Abkhazia.<sup>51</sup> Since presently all Armenian freight passes through Georgia, in order to improve its economic security Armenia tried to reopen the customs post on the Turkish border, but in spite of promising meetings and political declarations, without tangible results.<sup>52</sup>

For understanding international and regional trade peculiarities we have analysed a huge amount of statistical material<sup>53</sup> issued by the statistical authorities of all three southern Caucasus

<sup>49</sup> Shiriyev, Z. and Kakachia, K. (2013). Azerbaijani–Georgian relations. *SAM Review* (special double issue), Vol. 7–8 120 pp.; Tsereteli, M. (2013). *Azerbaijan and Georgia: strategic partnership for stability in a volatile region*. Central Asia–Caucasus Institute & Silk Road Studies Program—A Joint Transatlantic Research and Policy Center. Washington, DC: Johns Hopkins University, 61 pp.

<sup>50</sup> *Armenia and Georgia economic relations: unrealised opportunities* (2007). Yerevan: UNDP Armenia, 80 pp.

<sup>51</sup> Safaryan, S. (2016). *Trade relations between Georgia and Armenia: Getting close or distant?* Tbilisi: Konrad Adenauer Stiftung, 23 pp.

<sup>52</sup> Giragosian, R. (2009). *Changing Armenian–Turkish relations*. Tbilisi: Fridrich Ebert Stiftung, 5 pp.

<sup>53</sup> See, for instance, Statistical yearbook of Georgia (2018). Ibid; Workman, D. (2018). Armenia's top 10 exports. <http://www.worldstopexports.com/armenias-top-10-exports/>; *Foreign trade of the Republic*

states, paying special attention to trade balance and export data. Fig. 17 describes the main financial indices of foreign trade in Armenia, Azerbaijan and Georgia. It may be seen that in Azerbaijan, one of the main world oil and gas exporters, the trade balance is positive. In 2008, when world oil prices were maximal,<sup>54</sup> export value and trade balance were exceptionally high. In subsequent years those indices have dramatically deteriorated. In Armenia and Georgia the trade balance is negative. Fig. 18 displays the top ten commodities and goods exported from the southern Caucasus states in 2017. It may be seen that the range of commodities and goods is not antagonistic; on the contrary, product coverage by the three republics is complementary and a synergetic approach to foreign trade may significantly improve export value, as will be shown below. 86.16% of the value of Azerbaijan's exports is ensured by hydrocarbons (crude oil and natural gas), which are shipped via the already described pipelines through Georgia. Other exported items have negligible economic importance. Unlike in Azerbaijan, in Armenia the value of the top ten exported products comprises 77.40% of the total, and in Georgia only 63.19%. The most curious export article of Georgia, which has no automobile construction industry, is cars. This phenomenon is due to a difference in excise tax rates on cars between Georgia, and Armenia and Azerbaijan. In Georgia this tax on cars for private use is deductible from the tax base.<sup>55</sup> In 2015 Armenia acceded to the Russian-led Eurasian Customs Union, and correspondingly applied the Russian tax tariffs,<sup>56</sup> which for cars equals 3 EUR /cm<sup>3</sup> of engine. Thus, depending on engine volume, prices of cars in Georgia, on average, are USD 4,129–9,290 less than in Armenia. In Azerbaijan this excise tax equals:<sup>57</sup> 0.1 manats /cm<sup>3</sup> of engine for cars with engine volume  $\leq 2,000$  cm<sup>3</sup>; 400 manats + 1.5 manats /cm<sup>3</sup> of engine for cars with engine volume of 2,001–3,000 cm<sup>3</sup>; 1,900 manats + 4 manats /cm<sup>3</sup> of engine for cars with engine volume of 3,001–4,000 cm<sup>3</sup>, and so on. So, the rather ridiculous Georgian car export trade is based exclusively on nonharmonized fiscal rules in the three southern Caucasus states. Fig. 19 bears information on the main partner countries importing goods and commodities from the southern Caucasus states. It should be noted that in 2017 Armenia exported its production to 97 countries; Azerbaijan to 113 states, and Georgia to 114 jurisdictions. Among the basic commercial partners of both Armenia and Azerbaijan is Georgia (USD 153 and 471 million respectively), which, in turn, exported to Azerbaijan goods and commodities for USD 272 million and to Armenia for USD 210 million. Both Azerbaijan and Georgia maintain close economic relations with Turkey, but not Armenia. Both Armenia and Georgia export their copper ore concentrates to Bulgaria, where they are smelted in refineries. In addition, Georgia provides Switzerland with gold doré alloy bars for carat gold refining.

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*of Armenia in 2014–2017* (2018). Yerevan: Statistical Committee of the Republic of Armenia, 4 pp.; *Dynamics of foreign trade turnover* (2018). Baku: The State Statistical Committee of the Republic of Azerbaijan, 1 p.; *Exports by countries* (2018). Baku: The State Statistical Committee of the Republic of Azerbaijan, 5 pp.; *Exports of main commodities* (2018). Baku: The State Statistical Committee of the Republic of Azerbaijan, 1 p., etc.

<sup>54</sup> Tvalchrelidze, A.G. (2011). *Economics of Commodities and Commodity Markets*. New York: Nova Science Publishers, Inc.

<sup>55</sup> Exemption from import duties. Georgian Tax Authorities. [http://www.rs.ge/Default.aspx?sec\\_id=5342&lang=2#](http://www.rs.ge/Default.aspx?sec_id=5342&lang=2#).

<sup>56</sup> Armenia—Import tariffs. <https://www.export.gov/article?id=Armenia-import-tariffs>.

<sup>57</sup> *Excise and concept of excise goods* (2014). Baku: Ministry of Taxes of the Republic of Azerbaijan, 2 pp.

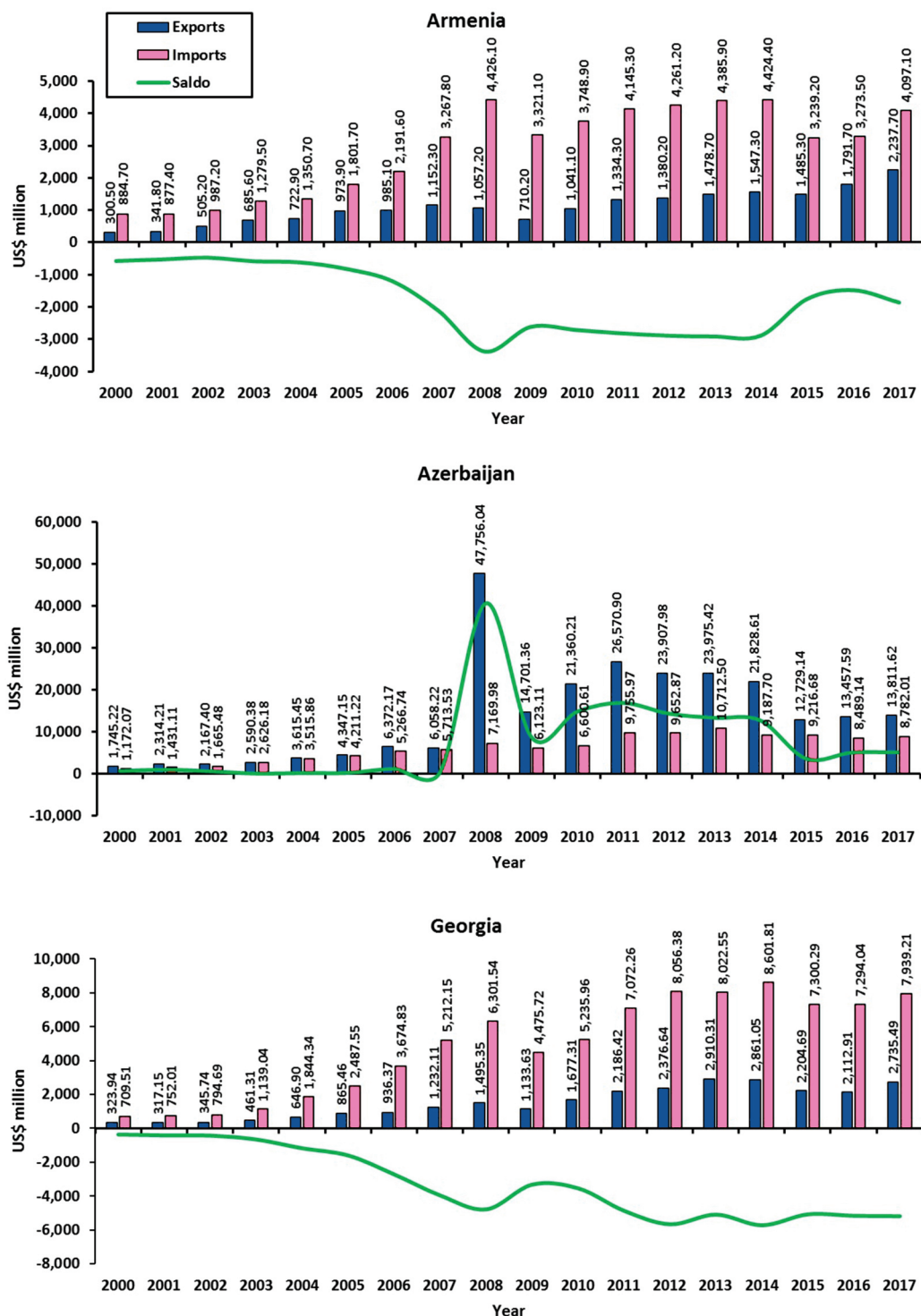


Figure 17. Foreign trade balances in Armenia, Azerbaijan and Georgia.



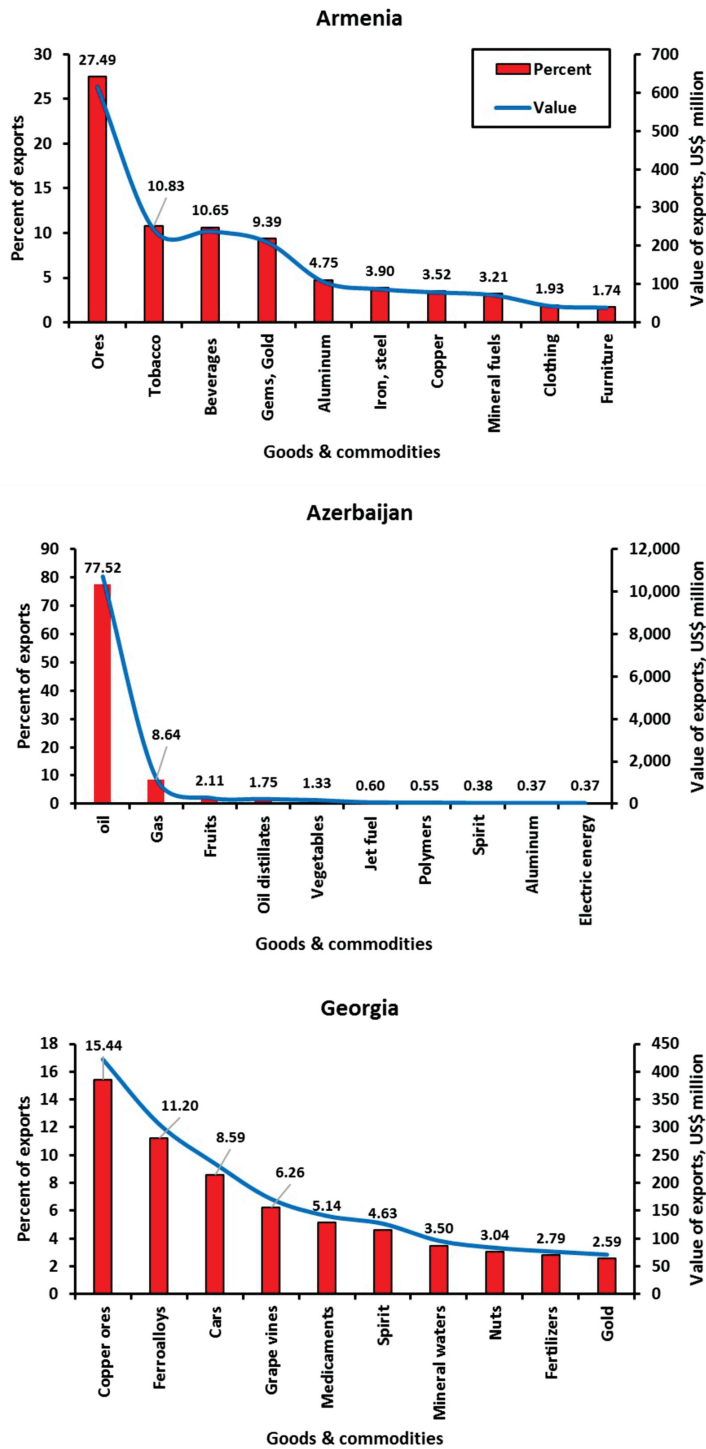


Figure 18. Top ten goods and commodities exported from the southern Caucasus republics in 2017.

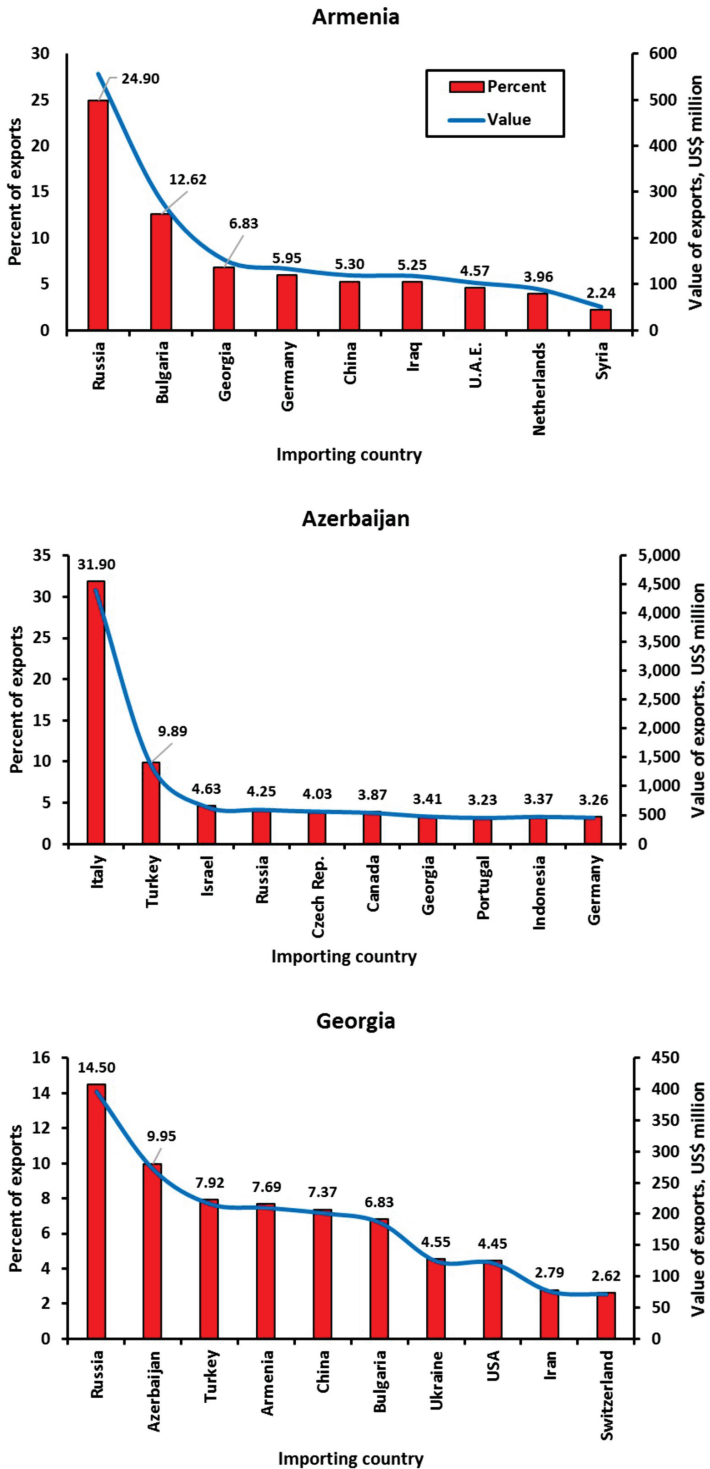


Figure 19. Top ten countries importing goods and commodities from the southern Caucasus states in 2017.

## 5. Possible trends of sustainable regional economic development

All the three southern Caucasus republics maintain bilateral regional economic relations using technologies of the mid-XX century. No modern financial instruments and institutions are deployed. Practically the sole exception from this sad tendency is the wholesale electricity market of Georgia, the electricity market operator of which proposes to the distribution companies a simplified model of futures contracts, and even this simple approach has allowed the country to engage in bilateral export/import of electricity with neighbouring countries,<sup>58</sup> to execute electricity transit from Azerbaijan and Russia to Turkey (Fig. 20), and to maintain a corresponding energy balance (Fig. 21).

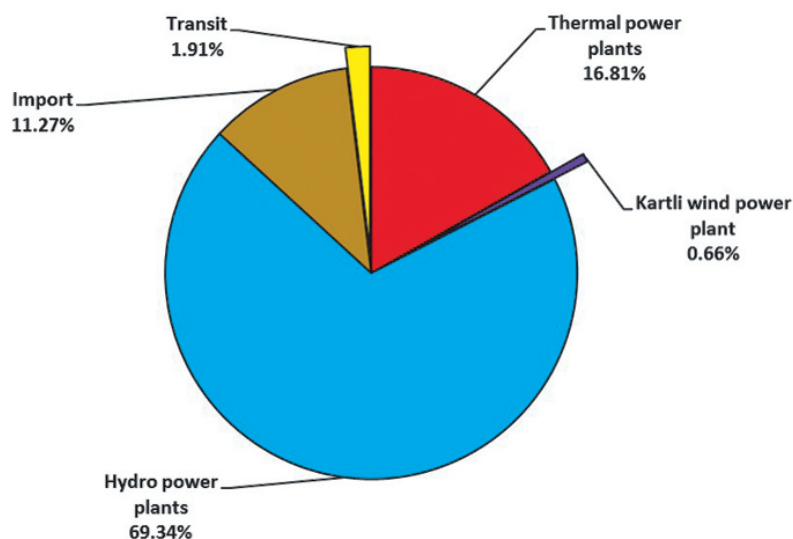


Figure 20. Electricity supply structure in Georgia in 2017.

<sup>58</sup> Energetic balance 2017. Electricity Market Operator. <http://esco.ge/en/energobalansi/>.

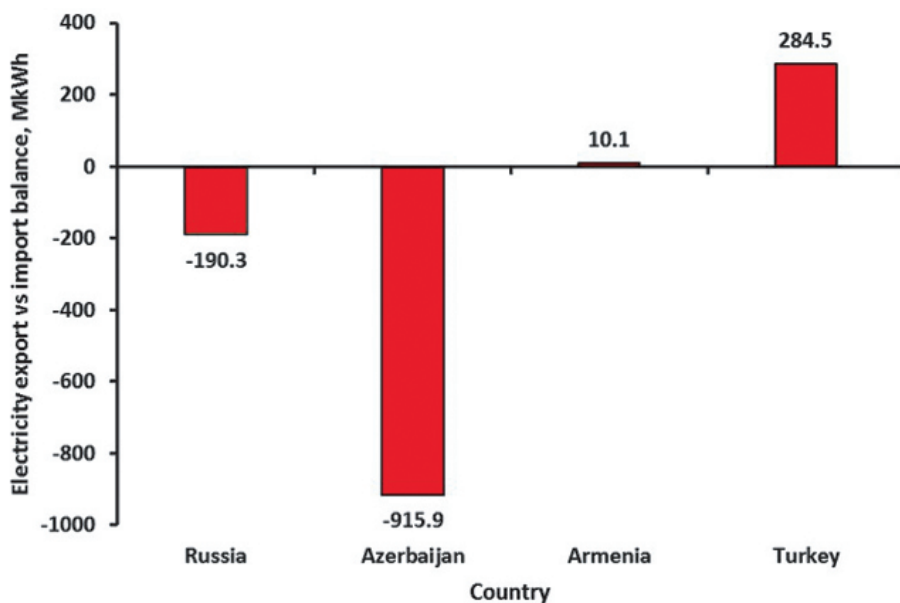


Figure 21. Electricity exports vs. import balance in Georgia in 2017.

In 1996, following some ideas of Zbigniew Brzezinski,<sup>59</sup> the INOGATE (Interstate Oil and Gas Transport to Europe) project was launched. Today INOGATE supports the Baku initiative for the construction of a Caspian–Black Sea energy corridor, which will supply Europe with natural gas and increase EU energy security.<sup>60</sup>

Moreover, if the Baku initiative is realized in its entirety, the region will become the basic energy supplier to Europe.<sup>61</sup> In 2009 INOGATE financed a feasibility study of the project, which was completed 2017.<sup>62</sup> Fig. 22 is a map of the project.

It is proposed to start the Trans-Caspian Pipeline<sup>63</sup> in Turkmenbashi (Turkmenistan) and terminate it at the Shah Deniz Terminal in Azerbaijan, the second stage of which is under construction.<sup>64</sup> The length of the pipeline would be 300 km in the offshore zone, and the cost about USD 2.4 billion. During the first stage the pipeline would be able to convey 9.9 billion m<sup>3</sup> of natural gas per annum.

<sup>59</sup> Brzezinski, Z. (1998). *The Great Chessboard: American Primacy and its Geostrategic Imperatives*. New York, Perseus Books.

<sup>60</sup> IEA *Energy Policies review: The European Union* (2008). Paris: OECD/IEA, 217 pp.

<sup>61</sup> Gültekin-Punsmann, G. (2008). *Black Sea regional policy approach: A potential contributor to European energy security*. Policy Brief, No 6, 13 pp.

<sup>62</sup> Pre-investment project for the Trans-Caspian–Black Sea Gas Corridor. <http://www.inogate.org/projects/pre-investment-project-for-the-trans-caspian-black-sea-gas-corridor?lang=en>.

<sup>63</sup> Yenikeeff, Sh.M. (2008). *Kazakhstan's gas: export markets and export routes*. Oxford: Oxford Institute for Energy Studies, 80 pp.; *Trans–Caspian gas pipeline* (2014). Austin: The University of Texas, 8 pp.; Vashakmadze, G. (2015). *Trans-Caspian gas pipeline—the project of common interest* No 7.1.1. Beijing: W-Stream, 9 pp.

<sup>64</sup> Shah Deniz Stage 2. [http://www.bp.com/en\\_az/caspian/operationsprojects/Shahdeniz/SDstage2.html](http://www.bp.com/en_az/caspian/operationsprojects/Shahdeniz/SDstage2.html).



Figure 22. Map of the Trans-Caspian, South Caucasus, Trans-Anatolian and Trans-Adriatic gas pipelines.

The Trans-Anatolian natural gas pipeline project (TANAP)<sup>65</sup> was launched on 11 November 2011, when Azerbaijan and Turkey founded the TANAP consortium. The pipeline will be 1,841 km long. It will start in Erzurum, at the end of the South Caucasus Pipeline and terminate at the Greek border with a bifurcation towards Bulgaria. The initial capacity of the pipeline will be 16 billion m<sup>3</sup> of gas per annum. Shareholders of the consortium are SOCAR, Azerbaijan (58%), BOTAS, Turkey (30%) and BP, UK (12%).

The Trans-Adriatic gas pipeline project<sup>66</sup> was announced in 2003 by the Swiss company EGL Group (now Axpo). In November 2008 this group signed a memorandum with Norway's Statoil on the foundation of the Trans-Adriatic Pipeline AG consortium. The pipeline length will be 878 km, and during the first stage it will be able to ship 10 billion m<sup>3</sup> of natural gas a year. Shareholders of the consortium are BP, UK (20%), SOCAR, Azerbaijan (20%), Snam, Switzerland (19%), Fluxys, Belgium (19%), Enagás, Spain (16%) and Axpo, Switzerland (5%).

Among these pipelines, only the South Caucasus Pipeline is operational, and construction of the Trans-Caspian Pipeline is extremely problematic, because it is strongly opposed by Russia and, frankly speaking, the Turkmenistan administration is unenthusiastic. Without

<sup>65</sup> Trans-Anatolian Natural Gas Pipeline Project (TANAP), Turkey. <http://www.hydrocarbons-technology.com/projects/trans-anatolian-natural-gas-pipeline-project-tanap/>.

<sup>66</sup> Trans-Adriatic Pipeline. <http://www.tap-ag.com/>.



additional gas reserves Azerbaijan will be unable to ensure a sustainable gas flow based on the Shah Deniz gas field only. The existing gas resources of this field are 1,200 billion m<sup>3</sup> with extractable reserves of 850 billion m<sup>3</sup>. Even now, the field is unable to fill the maximum capacity of the South Caucasus Pipeline, as was shown in Fig. 7. The sole way out of this deadlock is the involvement of Iranian gas resources in the project. Iran has the biggest gas reserves in the world but exports only a couple of billion m<sup>3</sup> per annum.<sup>67</sup>

However, successful development of this and other projects, mentioned below, is feasible only by corporations without the involvement of state administrations, taking into account the existing geopolitical situation in the region and the new US sanctions regimen against Iran. In addition, the gas trade structure should be changed. Today, Azerbaijan trades gas using the obsolete Soviet approach, which is based on interstate agreements with fixed prices for the volume of gas provided, whereas throughout the rest of the world gas is traded according to futures contracts in commodity exchanges with pricing pro rata according to heat capacity measured in British thermal units (BTU). According to the cited BP statistical yearbook, 1 kilojoule (kJ) equals 0.948 BTU. Gas benchmark prices are established once a day by the New York Mercantile Exchange (NYMEX). It should be noted that nowadays the world's gas futures markets are developing very fast.<sup>68</sup>

That is why, for sustainable development, foundation of a Caucasus Commodity Exchange is necessary. For geopolitical reasons, such an exchange can only be founded in Georgia.

The existing Georgian Stock Exchange (GSE) is unable to serve as such an institution for two basic reasons. Firstly, the GSE was founded in 1999 according the Law of Georgia on Securities Market No 1745-IIS of 28 December 1998.<sup>69</sup> Both elaboration of the law and the foundation of GSE were entirely financed by USAID, which invited the Barents Group as the major consultant. The latter was extremely active in the post-Soviet and CIS geopolitical space. In 2000 this group was acquired by Bearing Point Europe Holdings B.V. from Amsterdam.<sup>70</sup> The mentioned law is the sole directive regulating the capital market in Georgia. From the very beginning a huge mistake was made: the law gives definitions only to the securities market and security transactions as the basic and practically the sole financial instrument. The legislation does not recognize futures contracts, options, hedging and other modern financial instruments widely used in international capital and mercantile markets.

Secondly, GSE, founded under the auspices of the Barents Group, covers the national capital market only. That is why only a couple of dozen companies subscribe to the stock exchange, the turnover of which is minor. According to the GSE, in December 2018 its turnover was a mere 14 GEL (Georgian lari).<sup>71</sup>

However, the total value of commodities exported by the southern Caucasus states in 2017 was 16,076.7 million USD, as shown in Fig. 23.

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<sup>67</sup> *BP Statistical Review of World Energy*. (67th edn) (2018). Ibid.

<sup>68</sup> *An Introduction to Global Natural Gas Markets, Drivers, and Theory* (2014). Washington DC: U.S. Energy Information Administration, 68 pp.

<sup>69</sup> The Law of Georgia on Securities Market No 1745-IIS (1998). English translation. Tbilisi: USAID Georgia, 47 pp.

<sup>70</sup> *Connecting the dots* (2018). Amsterdam: Bearing Point, 68 pp.

<sup>71</sup> About GSE. <https://gse.ge/en/about-gse>.

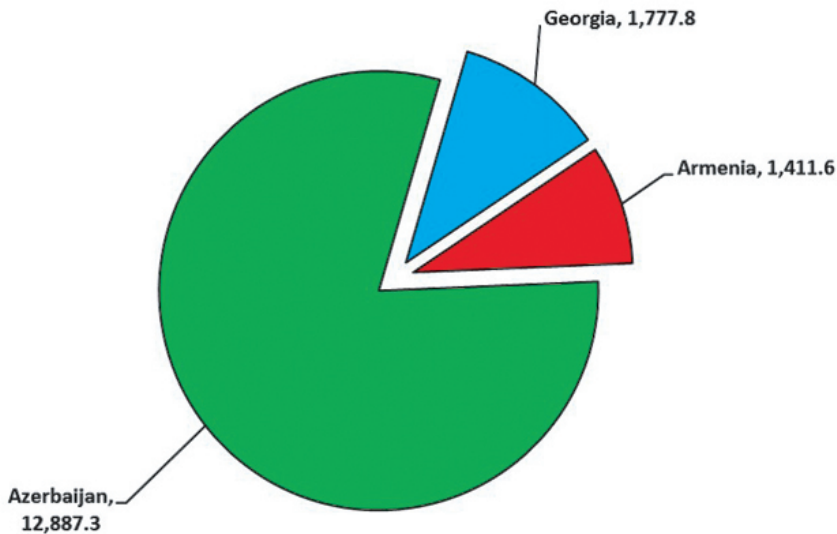


Figure 23. Commodity exports from the southern Caucasus states in 2017 (in USD million).

Improvement of Georgian legislation and amendments to the mentioned law with articles stipulating a commodity exchange, spot and futures contracts, options, hedging etc. and adoption of rigid regulations (cf. NYMEX) would make this project feasible. In this case USAID also may be implied but the main consultant must be a worldwide commodity exchange, NYMEX for instance, which could be the Caucasus exchange's operator.

The Caucasus commodity exchange would need corresponding warehouses. From this point of view construction of regional gas storage, as discussed in our previous article,<sup>72</sup> acquires crucial importance. Crude oil storage capacities at the Ceyhan, Supsa and Kulevi terminals seem already to be adequate. As well, copper concentrate and gold bar storage of the RMG Group will be sufficient for metal trading.

The existence of the Caucasus Commodity Exchange will allow:

1. Incorporating commodities issued from other countries (e.g., gas from Iran) into the commodity markets;
2. Maintaining flexible and, therefore, profitable pricing policy using modern technologies, namely, price fixing via auctions;
3. Adding liquidity and, therefore, perspective to commodity trading;
4. Through intermediate futures contracts of speculators doubling, at least, the capitalization of exporting companies;
5. Via strategic partnership of the Caucasus Commodity Exchange with the leading world exchanges like NYMEX, COMEX, LME, SHFE etc., giving access to local investors to the world commodity and capital markets;
6. Under the umbrella of the Caucasus Commodity Exchange, founding targeted ETF funds etc.

<sup>72</sup> Tvalchrelidze, A.G. and Kervalishvili, P.J. (2015). Ibid.

The new commodity exchange would need strategic partnerships with corresponding banks and financial institutions where all financial settlements would be concluded. In so far as no partnership between Azerbaijan and Armenia is possible within the same financial institution, two—Georgian–Azeri and Georgian–Armenian—banks should be founded. Fortunately, their functions would be different. Then first would be responsible for hydrocarbon deals and the second for ores and metals settlements. At the second stage, the Georgian wholesale electricity market may be expanded to the entire region and merge with the commodity exchange.

Without such innovations the economy of the region will begin to brake. In so far as the stability in the region has a huge impact on international security, the international community should be deeply involved in this project.

## **6. Conclusions**

1. The southern Caucasus region is one of the most interesting and, at the same time, vulnerable regions of the world. Different religious, national traditions, lifestyles, human philosophies, economic approaches and a lot of other fundamental values are united here in a single diverse node. In addition, the often contradictory strategic interests of the USA, the EU, Russia, China, Turkey and Iran intersect here.

2. The southern Caucasus is a region of frozen latent conflicts between both Azerbaijan and Armenia in Nagorniy Karabakh and Georgia and Russia in Abkhazia and South Ossetia.

3. After the collapse of the USSR and a huge economic crisis, the southern Caucasus states manifested picturesque and intense social and economic development: all three countries within a few years left the group of low-income countries and became upper-middle income states.

4. The southern Caucasus region has one of the most developed infrastructures in the world. The total length of pipelines in the region is 9,873 km; the total length of roads equals 53,315 km; and of railway lines, 4,556 km. More than 8.8 million people were served in three Azerbaijani, three Georgian and one Armenian international airports. In 2017 11.7 million people visited the three states of the region including 7.6 million visitors to Georgia. For their accommodation the regional hotel industry possesses 62,111 beds, and their number will increase to 75,860 in 2021.

5. There are close bilateral commercial relations of Georgia with both Armenia and Azerbaijan but no partnership of Armenia, neither with Azerbaijan nor with Turkey, is possible. All customs posts at their borders are closed and traffic is prohibited. Exports from the three southern Caucasus states of goods and commodities are not antagonistic but complementary.

6. Further development and economic security of the region greatly depends on both an increase of hydrocarbon exports and the implementation of modern trade technologies. Foundation of the Caucasus Commodity Exchange and affiliated banking institutions is of crucial importance. Introduction of futures and options trade and hedging would at least double the capitalization of companies and the liquidity of the regional market.

7. Without such innovations the economy of the region will begin to brake. In so far as the stability in the region has a huge impact on international security, the international community should be deeply involved in this project.