**JEL Classification: F4****EVOLUTION OF INTERNATIONAL TRADE IN THE LIGHT OF THE  
WAR IN UKRAINE****Jitaru Dorina,***PhD, Associate Professor**ORCID 0000-0002-8335-9742**International Business Department,**ASEM, Chisinau, Republic of Moldova*

**Abstract:** *The article focuses on the analysis of the main changes in trade policies and international trade flows in the light of the war in Ukraine, and the impact of other factors such as rising interest rates, inflationary pressures in many countries on international trade and challenges for global supply chains in the short- and medium-term perspective. In particular, the case of Republic of Moldova and other countries in the region will be analysed, highlighting the main socio-economic effects of the latest events and developments on the economies in the region.*

**Keywords:** *international trade, trade policy, war, supply chains, inflation.*

After 83 years since the beginning of the second world war, it was hard to imagine that Europe will see another war in the twenty first century. Nevertheless, it is a horrible reality, a tragedy that affects not only Ukraine that was attacked in a cruel, barber, unfair and unprovoked way by an aggressor country that is Russian Federation, but also the neighbouring countries, as well as the whole continent and world economy in general.

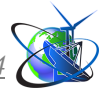
Although the war in Ukraine is impacting international trade, supply chains, logistic networks, commodities markets, international investments, food security, energy security worldwide, definitely the degree of impact varies across countries and sectors. Obviously, the countries with lower income are the ones that are exposed to a greater extent to the negative effects deriving from the war in Ukraine, with less possibilities of compensating internally the associated losses.

Needless to say, that the war in Ukraine came when the world economy was still struggling with two years Covid-19 pandemic, thus putting additional pressure on the international trade, investments, supply chains, logistic networks and commodities markets.

The highest negative impact is felt in such markets as the one of fuels, food and fertilizers, where Ukraine and Russian Federation have a high share in international trade.

Overall, the effects of the war in Ukraine on international trade range from deficit of food products, raw materials and components faced by a number of countries to cancelled trade routes, changes in demand and significant increase of prices for agricultural products, energy and metals, thus determining a higher inflation rate worldwide.

Looking from microeconomic perspective, the war in Ukraine has direct effects on the companies operating in Russian Federation and Ukraine and on firms relying on suppliers from those markets (Winkler et al. 2022). Nevertheless, the shock caused by the war goes far beyond Russian Federation, Ukraine and



Belarus, as geopolitical risks have increased significantly at the global level. The global Geopolitical Risk Index (Caldara and Iacoviello 2022) has more than doubled since the beginning of the year. Additionally, it is recorded considerable modifications of geopolitical risks in selected countries that are integrated to a greater extent than Russia and Ukraine in global value chains, that include in particular, China, Finland, Sweden, Taiwan, among others, pointing to changing perceptions on the risks of future conflicts and sanctions.<sup>1</sup>

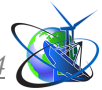
Significant negative effect on international transportation is determined by the increase in the fuel costs that determine higher freight rates, that have already reached record highs during the COVID-19 pandemic. Additionally, economic sanctions against Russia and safety concerns have disrupted land and air transport routes via Ukraine and Russia. Rerouting these connections is expensive. More than that there are limited possibilities to divert shipments via the already disrupted maritime transport sector. Correspondingly, there are fewer Black Sea trade routes, thus even countries that do not have trade restrictions may face difficulties to import from the region.

According to World Trade Organisation (WTO), the merchandise trade volume growth is expected at 3.0% in 2022 and 3.4% in 2023, but these estimates are subject to changes due to the fluid nature of the war. Global GDP at market exchange rates is expected to grow by 2,8% in the year 2022 following an increase of 5,7% in the year 2021, and for the year 2023 the estimation is for a growth rate of 3,2%, thus no fundamental changes in the trade to GDP ratio are expected in the years 2022-2023 in comparison with the corresponding ration registered in the previous decade. As for the regions that are expected to register a decline in trade flows, as per WTO estimations, CIS is foreseen to have a 12% decline in imports in 2022, but on the export side it is expected to register an increase of 4,9% due to still considerable exports of energy from Russian Federation, the growth being determined mostly by the increase of prices in energy resources. It is also expected for regional disparities to narrow due to weak import demand in Europe and Asia. According to WTO forecasts in 2022 export volume growth per regions is expected as follows: 3,4% in North America, -0.3% in South America, 2.9% in Europe, 4.9% in the CIS, 1.4% in Africa, 11.0% in the Middle East, and 2.0% for Asia. On the import side it is estimated an import growth of 3.9% in North America, 4.8% in South America, 3.7% in Europe, -12.0% in the CIS, 2.5% in Africa, 11.7% in the Middle East and 2.0% in Asia. As for estimations for 2023, except for the Middle East, according to WTO all regions are expected to register downward evolution. Trade costs increase in the short run as a result of sanctions, export restrictions, energy costs and disruptions in transport. Considering the world trade in services, it is estimated that it will also be impacted by the war in Ukraine, in particular transport sector covering container shipping and passenger air transport. The sanctions applied on Russian businesses and individuals are likely to have a strong effect on commercial services trade.<sup>2</sup>

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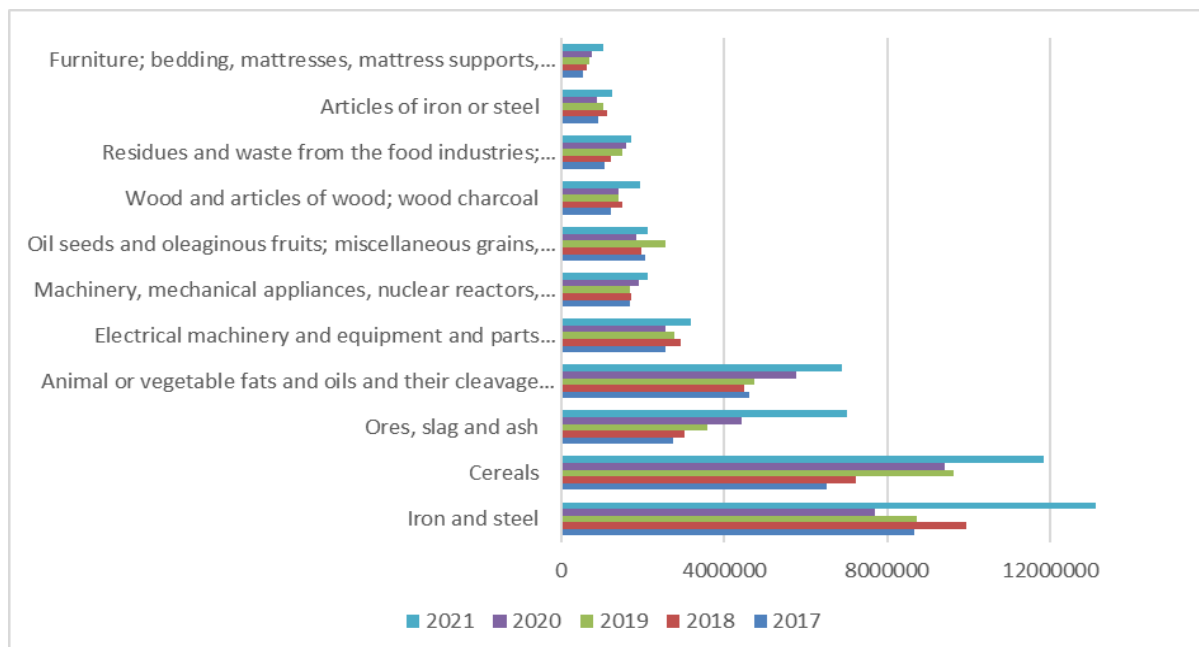
<sup>1</sup> Caldara, D and M Iacoviello (2022), "Measuring Geopolitical Risk", American Economic Review 112(4): 1194-1225

<sup>2</sup> WTO, [https://www.wto.org/english/news\\_e/pres22\\_e/pr902\\_e.htm](https://www.wto.org/english/news_e/pres22_e/pr902_e.htm) (accessed on 4.10.2022)



In the short run, the direct economic impact of the crisis was a considerable increase in commodity prices. Being given the fact that Russia and Ukraine have a significant share of the exports of some essential goods such as food, energy, and fertilizers, the corresponding supplies are now threatened by the war. Another serious concern represent the grain shipments through Black Sea ports have already been halted, with potentially terrible consequences for food security in low income developing countries with high dependence on imports.

According to UNCTAD data, in the year 2021 Ukraine had registered revealed comparative advantage (RCA) for over 60 groups of products, nine of which registered an RCA higher than 10: in particular for fixed vegetable fats and oils, crude, refined, fraction, RCA – 37,9, for maize it registered an RCA of 36,9, Barley, unmilled, RCA – 35,5, wheat RCA – 26, ingots, primary forms, of iron or steel – 25,5, fuel wood and wood charcoal, RCA – 16,9, pig iron and spiegeleisen, sponge iron, powder RCA – 15,7<sup>3</sup>. It is to be highlighted that from the total number of groups with RCA higher than 1, about 64% are manufactured goods or goods with certain degree of processing (semi-finished and finished goods).

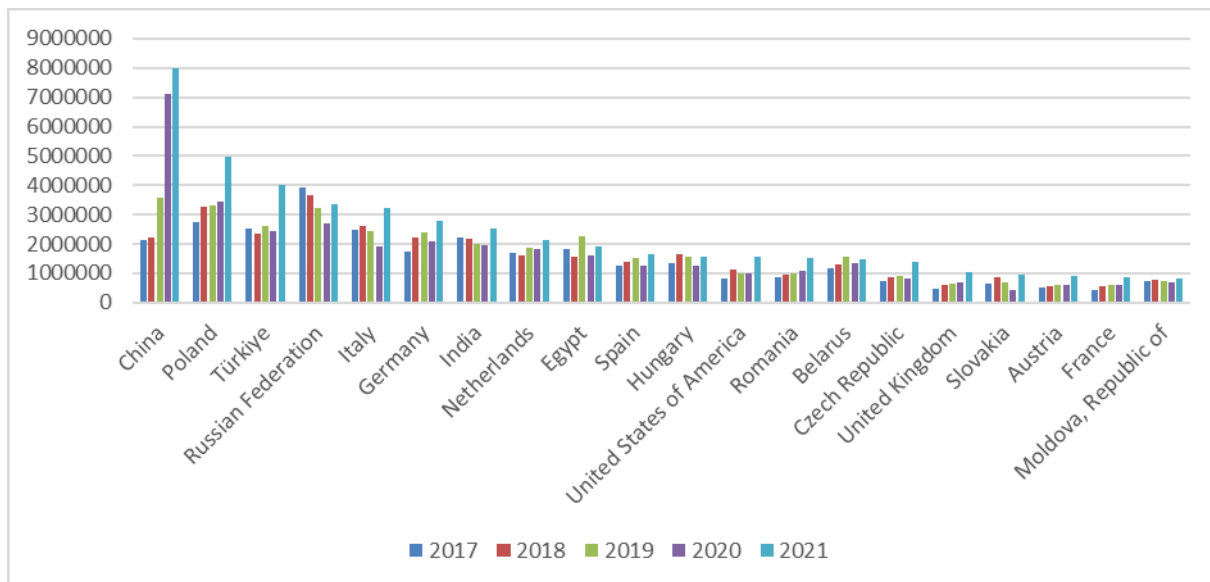
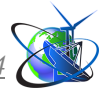


**Figure nr. 1. Evolution of Exports of Ukraine by main group of products in 2017-2021, thousands USD**

Source: elaborated by the author based on data from ITC ([trademap.org](http://trademap.org))

The greatest share in Ukrainian exports in the year 2021 is held by iron and steel that registered an increase of more than 30% in 2021 in comparison with 2020, followed by cereals that similarly in 2021 registered a sound increase in exports in comparison with the year 2020 around 12,5%. The following groups of products that registered the highest share in exports similarly increased the volumes of exports in 2021 heating the highest values registered in the period 2017-2021, the only exception being oil seeds and oleaginous fruits, for which the record was registered in the year 2019.

<sup>3</sup> UNCTAD, Revealed Comparative Advantage RCA Radar Plots, <https://unctadstat.unctad.org/en/RcaRadar.html> (accessed on 5.10.2022)



**Figure nr. 2. Main importing countries of Ukraine merchandise exports in 2017-2021, thousands USD**

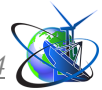
Source: elaborated by the author based on data from ITC (trademap.org)

Analysing the geographical distribution of Ukraine exports of merchandise, among the most important partners in 2021 were: China, Poland, Turkey, Russian Federation, Italy, Germany, Romania being on the 13<sup>th</sup> place, Belarus – on the 14<sup>th</sup> place and Republic of Moldova – on the 20<sup>th</sup> place. Thus, following the invasion of Russia in Ukraine with the support of Belarus, and consequent restrictions imposed by Ukraine to the aggressor countries: Russia and Belarus, the exports to these countries in 2022 will register a dramatic decrease, correspondingly the imports from these countries will have a similar evolution.

As a response to Russian Federation’s invasion in Ukraine, a number of countries have applied temporary trade measures as part of the economic sanctions applied to Russian Federation, Belarus and other countries. In this context export restrictions/bans were applied by 57 countries by October 2022 according to ITC Market Access Map.

There were 151 trade measures related to the War in Ukraine in force on 28 October 2022, as per ITC Market Access Map data.

All applied liberalizing measures were directed towards supporting Ukraine’s exports, for example, Australia starting with 4 July 2022 for a 12-month period, applies free rate of duty for goods that are the produce or manufacture of Ukraine. Similarly, Canada, starting with May 2022 has removed tariffs for a one-year period, thus supporting Ukraine’s economy by ensuring that Ukrainian goods are able to enter Canada duty-free. United Kingdom starting with April 2022 decided to cut tariffs on all goods from Ukraine to zero under the UK-Ukraine FTA, providing much-needed economic support to Ukraine. Similar measures were applied by EU, starting with April 27, 2022, the European Commission suspended for one-year import duties on all Ukrainian exports to the European Union, including the suspension for a period of one year of all EU anti-dumping and safeguard measures in place on Ukrainian steel exports. Furthermore, on May 24,



2022, the Council of the European Union adopted a regulation allowing for temporary trade liberalisation and other trade concessions with regard to specified Ukrainian goods. In May 2022, United States of America United have temporarily suspended 232 tariffs on Ukrainian steel for one year. A number of other countries have applied similar supporting liberalizing measures towards Ukrainian products.

At the same time, in order to ensure availability at reasonable prices of basic products and products of vital importance in the manufacturing process, countries all over the world have introduced a series of liberalization measures on imports. Some countries have applied zero customs duty rate for the import of selected goods, like agri-food products, in an effort to reduce the increase of prices of these goods. For example, Brazil starting with March 2022 until 31 December 2022 applies 0% import customs duty for the following products: coffee, margarine, cheese, macaroni, soybean oil, ethanol and sugar. Similarly, Dominican Republic, starting with April 27, 2022 enacted a Law to temporarily remove import taxes from 67 tariff subheadings of basic products.<sup>4</sup> These measures are taken to counter the increases in the prices of basic necessities and fuels that have risen further after Russia's invasion of Ukraine.

Simultaneously, the majority of countries have applied restrictive measures on the aggressor countries: Russian Federation and Belarus, in order decrease their military capacity and indirectly contribute to the reduction of the war magnitude or even its eventually, these measures were applied together with other support measures, including military and economic support provided by the majority of countries to Ukraine, including support offered to refugees from Ukraine.

Canada has withdrawn the Most-Favoured-Nation (MFN) tariff from goods that originate in Russia or Belarus since March 2022. Correspondingly all goods originating from Russian Federation or Belarus will be subject to the General Tariff rate of customs duty of 35%.

European Union since Russia's invasion in Ukraine has imposed a wide range of sanctions on Russian Federation and Belarus, eight packages of sanctions were adopted and applied until October 2022 for a wide range of products.

Since March 2022, Japan has designated 200 items and technologies to an export ban on Russia and Belarus. It prohibits the export of general-purpose products that are thought to contribute to strengthening the military capabilities of the Russian Federation. Additionally, Japan bans the export of high-end cars and other luxury goods to Russia starting from April 2022. Similar measures were applied in respect to Belarus. Additionally, Japan starting with April, May 2022 has announced measures to reduce its reliance on Russia for energy, which includes phasing out and banning Russian coal and oil imports. Since September 2022, Japan bans exports to Russia of chemical weapons-related goods and exports to 21 organizations.

In a similar mode, New Zealand has imposed export restrictions on 25 February 2022 for military and other goods that have a civilian use but that are intended for military use to Russian Federation, and on March 15, 2022 - the

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<sup>4</sup> ITC <https://www.macmap.org/ukraine> (accessed on 11.10.2022)



measure was extended to Belarus. On August 1, 2022 were announced further sanctions on the armed forces and military-industrial complex of the Russian Federation and Belarus.

Starting with March 2022, United Kingdom applies export prohibitions to critical-industry, dual-use, military goods, as well as luxury vehicles, high-end fashion, works of art, aviation and space related goods to Russian Federation.

From March 2022 USA imposed restrictions on the export, reexport, and transfer of luxury goods to all end users in the Russian Federation and Belarus. Also export prohibition on goods related to the oil industry to Russian Federation was imposed from March 2022. Additionally, USA imposed embargo on the importation into the United States of the following products of the Russian Federation: crude oil, petroleum, fuels, coal, other specified products, fish, seafood, alcoholic beverages, non-industrial diamonds, other products. The United States also imposed further export controls on specified items that can support Russian and Belarusian military, such as military and other dual-use goods, starting with 15 September 2022.<sup>5</sup>

As a result of implementation of the above-mentioned restrictive measures, it was registered in the period July 2021 and July 2022, a decline of the share of the Russian Federation's total exports to countries with restrictive measures by 24% (to 32%), with the value of exports to countries with restrictive measures falling by \$4.6 billion, and the value of exports to countries without restrictive measures increasing by \$8.5 billion. Over the same period, the share of the Russian Federation's total imports from countries with restrictive measures registered a decline of 24% (to 26%), with the value of imports from countries with restrictive measures falling by \$4.4 billion, and the value of imports from countries without restrictive measures increasing by \$1.2 billion. So, we can observe that the difference between increase of exports and imports to and from countries without restrictive measures vary significantly in favour of exports of Russian Federation towards these countries.

If to analyse the share of Belarus's total exports to countries with restrictive measures in the same period, July 2021 and July 2022, it has declined by 21% (to 34%), with the total value of exports to countries with restrictive measures registering a decline by \$231 million, and correspondingly the value of exports to countries without restrictive measures declining by \$30 million. In July 2021-July 2022, the share of Belarus's total imports from countries with restrictive measures declined by 6% (to 46%), with the total imports' value from countries with restrictive measures declining by \$79 million, and the imports' value from countries without restrictive measures registering an increase by \$4.5 million.<sup>6</sup> Thus, in case of Belarus, exports have declined for both countries with and without restrictive measures, and for imports while the imports from countries with restrictive measures declined, the imports from countries without restrictive measures have increased.

<sup>5</sup> ITC data <https://www.macmap.org/ukraine> (accessed on 12 October 2022)

<sup>6</sup> ITC <https://tradebriefs.intracen.org/2022/9/series> (accessed on 14.10.2022)



Additionally, the transportation networks were considerably affected, first of all Russian Federation connections to European ports have been cut, and goods exports to other destinations have been constrained. Secondly, Ukraine's Black Sea ports have been blockaded or occupied, leaving the country few routes for its commodity exports. Thirdly, the war brought reciprocal closures of air space between Russia and 36 countries, having as a consequence longer routes and higher prices for air freight between Europe and East Asia. As a consequence, disruptions to global and regional supply chains have caused input deficits and price increase.

A significant area of concern is the commodity markets of food and fuels, being given the fact that Russian Federation and Ukraine are global players in agri-food markets and that they account together for 53% of the share of global trade in sunflower oil and seeds, 27% of the share of global trade in wheat, and 23% of the share of world trade in barely.

The degree of dependence on Russian Federation and Ukrainian agri-food products varies among countries, with some being particularly dependent on imports from the Russian Federation and Ukraine, such as Turkey – 25,9%, China – 23% and India – 13% of total imports of wheat, corn, barley, colza, sunflower oil and seeds.

The highest concern is raised in relation to lower income countries that are the most exposed to the shortage of agri-food products. Based on UNCTAD calculations, on average, more than 5% of the import basket of the poorest countries are products that are likely to face a price increase resulting from the ongoing war in Ukraine. While the share is below 1% for richer countries.

An example of highly dependent market on the exports from Russian Federation and Ukraine is the wheat market. In 2018–2020, Africa imported \$3.7 billion in wheat, representing 32% of total African imports from Russian Federation and \$1.4 billion from Ukraine, representing 12% of total African wheat imports. The corresponding imports by the least developed countries of wheat from were, respectively: \$1.4 billion (29%) from Russian Federation and \$0.5 billion (10%) from Ukraine. Analysing closer the dependence of African countries, including the least developed countries, reveals for some countries a much higher dependence on the wheat imports from Russian Federation and Ukraine. Around 25 African countries import more than one third of wheat from Ukraine and Russia, the highest share of wheat imports from these two countries belong to the following countries: Somalia – 100%, Benin – 99%, Lao People's Democratic Republic – 93%, Egypt – 81%, Sudan – 75%.<sup>7</sup>

Overall, the war in Ukraine will have the highest negative impact and correspondingly the GDP contractions are estimated by IMF to be registered for countries actively involved in the war, thus in 2022 it estimated that GDP decline for Ukraine will be equal to -35%, the GDP decline for Russian Federation will be -8,5% and for Belarus -6,4%.

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<sup>7</sup> UNCTAD, The Impact on Trade and Development of the War in Ukraine, UNCTAD Rapid Assessment, 16 March 2022



At the same time there is a high dependence of some countries on the exports markets of Ukraine, Russian Federation and Belarus, in this regard, the example of Guinea that exports 100% of its aluminium oxide, and 99% of its fresh fruits to these countries reveals the high dependence of some countries on these markets.<sup>8</sup> These countries would have to value the unrealized export potential on other markets besides these countries, but this is something that would require time and investment.

Concerning Republic of Moldova, it can be highlighted that besides the countries directly involved in the war, Moldova is the one most significantly affected, facing indirect consequences of the war in Ukraine, being the neighbour of Ukraine, having tight trade relations with Ukraine and Russian Federation, as well as Belarus, having the political issue of unresolved Transnistria region status. Also, Republic of Moldova received over 400 thousand refugees from Ukraine, and nearly 100 thousand of them decided to settle in the country until they will be able to return safely to their homes in Ukraine. Despite being one of the poorest and smallest nations in Europe, Moldova was able to quickly provide refuge to over 100 thousand Ukrainians.

Nevertheless, Republic of Moldova did not join the sanctions against Russian Federation. The Moldovan officials motivated the corresponding decision by the fact that joining the anti-Russian sanctions would not harm Russia and yet significantly jeopardize Moldova's gas imports from Russia [Ukrinform.net, 2022]. The supply of natural gas is one of the most sensitive issues in the country, the country relying 100% on the imports of natural gas from Russian Federation. Republic of Moldova is one of the European countries that were most hardly hit by the increase in natural gas prices and the recent sharp increase in gas prices became most likely one of the most acute economic problems for the population. For the time being, Republic of Moldova has no alternative for Russian natural gas, and the price of supply from other channels, for the time being, would be higher than that of Russian Federation. Although the Government of Moldova is currently actively looking for alternatives and substitutes of gas and energy supplies dependent on Russian natural gas.

More than that, it is to be highlighted that Russian Federation still accounts for a significant share of market for Moldova's exports. Nearly 8% of Moldova's exports are directed towards Russian Federation. In some sectors of the Moldovan exports, the share of Russian Federation is very significant. For example, Russian Federation accounts for almost half of all agricultural exports of the Republic of Moldova [UN Comtrade, 2021].

Moldova imports over 90% of its seeds, fuel, and fertilizer from Ukraine and Russia. Because of the war almost 33,000 small- and medium-scale Moldovan farmers were left without the vital elements of their activity: seeds, fertilizers etc. In the absence of fertilizers, the production of selected crops was about 30% lower in the year 2022.<sup>9</sup>

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<sup>8</sup> IMF, World Economic Outlook, July 2022

<sup>9</sup> <https://statistica.gov.md/en/statistic-indicator-details/19> (accessed on 16.10.2022)





The war in Ukraine has increased food and energy prices, which fuel Moldova's already high inflation (28,5%) In 2022. Therefore, financial support from external partners plays a key role for Moldova. Moldova is expected to register a growth of GDP of about 0% in 2022, and a budget deficit of 7,5% of GDP.<sup>10</sup>

The war in Ukraine impacts international trade, supply chains, logistic networks, commodities markets, international investments, food security, energy security worldwide, but the degree of impact varies across countries and sectors. The country that is suffering the most is Ukraine, but if to consider other countries excluding aggressors like Russian Federation and Belarus, the countries with lower income are the ones that are exposed to a greater extent to the negative effects deriving from the war in Ukraine, with less possibilities of compensating internally the associated losses. In this regard, it is to be highlighted the negative effects, and risks associated with increased rate of hunger of some African countries, but also if to focus on the neighbouring countries, Republic of Moldova is the one suffering most because of inflationary pressure and energy crises. More than that, it has limited internal capacity to cope with associated risks, including security risk.

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<sup>10</sup> IMF data, <https://www.imf.org/en/Countries/MDA> (accessed on 17.10.2022)