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**Research Report**

## The impact of the war on the economic development of Ukraine

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## DIW Roundup

Politik im Fokus

Deutsches Institut für Wirtschaftsforschung

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# The Impact of the War on the Economic Development of Ukraine

Nataliia Slaviuk and Tetiana Bui

# The Impact of the War on the Economic Development of Ukraine

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As of summer 2022, the war in Ukraine has lasted more than three months, caused the deaths of thousands of people, and ruined the lives of millions. It has impacted the world economy and affected Ukraine severely, ruining industries as well as causing massive migration, a decrease in household income, and an increase in the budget deficit and government debt. As the war continues, it will deepen the negative effects on the economy. We think that one of the reasons for Russia's aggression is Ukraine's desire to integrate into the Western world and its economic development over the last years. We believe that joint efforts of the Ukrainian government, European institutions, and civil society will help end the war and rebuild the country.

## General overview

According to World Bank and IMF projections, Ukraine's GDP will decline by 45 percent or 40 percent, respectively, in 2022.<sup>12</sup> As of mid-May 2022, the total losses caused by the war have been estimated at 564 to 600 billion USD<sup>3</sup> by the Kyiv School of Economics (with the support of the Office of the President, the Ministry of Economy, and Ministry of Infrastructure).

## Business activity and household income

War massively affects business activity and people's income. According to data from the National Bank of Ukraine (NBU), 32 percent of enterprises stopped activity in March 2022; this figure decreased to 17 percent in April and to 14 percent in May.<sup>4</sup> Despite the moderate recovery, capacity remains at 40 percent compared to the pre-war period. At the end of May, one third of respondents mentioned the decrease in activity was due to supply chain issues, while almost 53 percent mentioned it was due to the loss of markets. Indeed, the number of businesses that have lost their markets has been increasing during the last few months. Businesses are unable to export their goods and consumption has dropped rapidly, which may have a long-lasting negative

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<sup>1</sup> Kristalina Georgieva, "Opening Remarks by the Managing Director," transcript of speech delivered at the Ukraine Roundtable, April 21, 2022 (available online).

<sup>2</sup> World Bank, "Russian Invasion to Shrink Ukraine Economy by 45 Percent this Year," press release no. 2022/ECA/79, April 10, 2022 (available online).

<sup>3</sup> Kyiv School of Economics, *Direct damage caused to Ukraine's infrastructure during the war has reached over \$94 billion (2022)* (available online).

<sup>4</sup> National Bank of Ukraine, *Macroeconomic and Monetary Review, June 2022 (2022)* (available online).

effect. The most damage was caused to the metallurgy, mining, and engineering sectors. Fewer losses can be observed in the food; textiles, clothing, and footwear; and pharmaceutical sectors. Energy infrastructure has mostly been restored in the regions that have been retaken by Ukraine and electricity exports have resumed.

An increase in unemployment and reduced wages also negatively affect social and economic recovery. According to the NBU data, 54 percent of enterprises had to decrease staff and 34 percent were paying lower wages at the end of April. Industrial, trade, and construction enterprises are among those who cut their activities and salaries;<sup>5</sup> salaries in the state sector were also decreased. The unemployment rate decreased from 41 percent in April to 35 percent in May<sup>6</sup> according to polls by Gradus Research. However, there is constant growth in labor supply and job searches.

Notably, a large number of businesses in Ukraine are donating to the army. According to polls by the European Business Association, 47 percent of companies are sending products to the military forces, while 44 percent are helping financially, 25 percent with services, and 18 percent with medicine.<sup>7</sup>

To support business activity, the Ukrainian parliament, *Verkhovna Rada*, adopted changes to the tax code in March 2022. The smallest firms (1<sup>st</sup> and 2<sup>nd</sup> groups) were temporarily exempted from paying the single tax and the 3<sup>rd</sup> group (small and medium-sized enterprises) received a tax cut. The property tax for the occupied territories was canceled, as was the excise tax and VAT for oil and oil products.<sup>8</sup> However, as businesses recover, it is very important for small and medium-sized enterprises to begin paying taxes again.

## Trade

Ukraine is the largest exporter of sunflower oil in the world, the fourth largest producer of corn (13 percent of world export), and the sixth largest producer of wheat (9 percent of world export).<sup>9</sup> Ukraine also exports a large amount of ferrous and non-ferrous metals, mineral products, machinery, and equipment.

Due to the closure or blockade of seaports, rail is becoming an important method of transport for exports. However, strikes on railroads and important centers are intensifying. According to BBC reporting, there are long queues at the border. The Ukrainian railway system is wider than the EU's, so goods must be transferred to new wagons at the border, a process that can take anywhere from 16 to 30 days.<sup>10</sup> At the same time, Romanian and Lithuanian ports had been preparing for the export of Ukrainian goods.<sup>11</sup> Falling export numbers lower domestic prices, which positively impacts consumers but causes a decrease in farmers' income. The sowing of cereals and legumes at the end of May was 78 percent compared to 2021. Although many efforts were made by the farmers and the government in agriculture, problems are expected at harvest time as a result of the fuel deficit and price increases caused by

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<sup>5</sup> National Bank of Ukraine, *Macroeconomic and Monetary Review*, May 2022 (2022) (available online).

<sup>6</sup> Економічна правда, "Україні повертаються до роботи та додому – опитування," June 2, 2022 (in Ukrainian).

<sup>7</sup> EBA, *Almost half of the EBA companies have resumed full operation* (2022) (available online).

<sup>8</sup> State Tax Service in Ukraine, *News* (2022) (in Ukrainian; available online).

<sup>9</sup> BBC News, *Як вторгнення Росії обвалить бюджет України та вдарить по економіці Європи - прогнози МВФ* (2022) (in Ukrainian; available online).

<sup>10</sup> Stephanie Hegarty, "How can Ukraine export its harvest to the world?" BBC, May 26, 2022 (available online).

<sup>11</sup> National Bank of Ukraine, *Macroeconomic and Monetary Review*, June 2022.

the destruction of oil depots. This sector needs assistance from the European Union to avoid further price increases for agricultural products.

## Migration

IOM reported that as of May 23, 2022, 7.1 million persons were internally displaced within Ukraine, most of whom fled to Western and Central Ukraine.<sup>12</sup> However, as people are not registering and there is a constant flow of refugees, the actual number could be much higher.

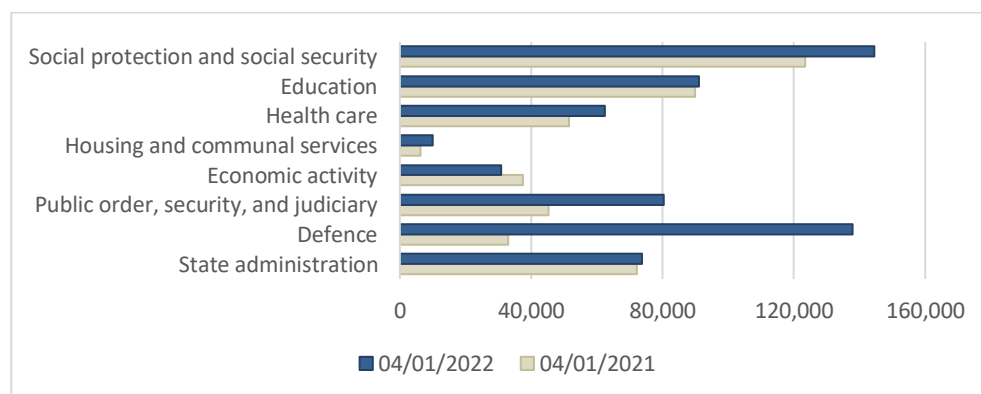
As of June 21, 2022, UNHCR reported that 8,000,714 people have left Ukraine since February 24, 2022 (some are volunteers who cross the border many times). At the same time, 2,836,563 people have returned since February 28, 2022. In Europe, there are 5,261,278 officially recorded refugees, while 3,514,970 of them have registered for temporary protection. Most of the refugees are officially registered in Poland (1,180,677), Germany (780,000), Czechia (379,669), Turkey (145,000), Italy (137,385) and Spain (124,052), and Moldova (85,797).<sup>13</sup>

Migration has numerous negative effects on a country: the loss of young people who can contribute to the country's development, a decrease in specialists, and brain drain. Ukrainians are spending around two billion USD every month abroad without influencing consumption and business activity inside Ukraine. The migration from Ukraine totaled nearly 15 percent of its population. Although people are returning, the continued war and worsening economic conditions can influence this trend negatively.

## State budget

According to the State Treasury of Ukraine, state budget expenditures amounted to 783.6 billion hryvnias from January to May 2022 and the general fund reached 74.4 percent of the planned expenditures (Figure 1). The budget deficit from January to May amounted to 263.2 billion hryvnias (or approx. nine billion USD).<sup>14</sup>

**Figure 1: Expenditures, four months of 2022 compared to four months of 2021, in million hryvnias**



Source: National Bank of Ukraine, *Macroeconomic indicators* (2022) (in Ukrainian; [available online](#)).

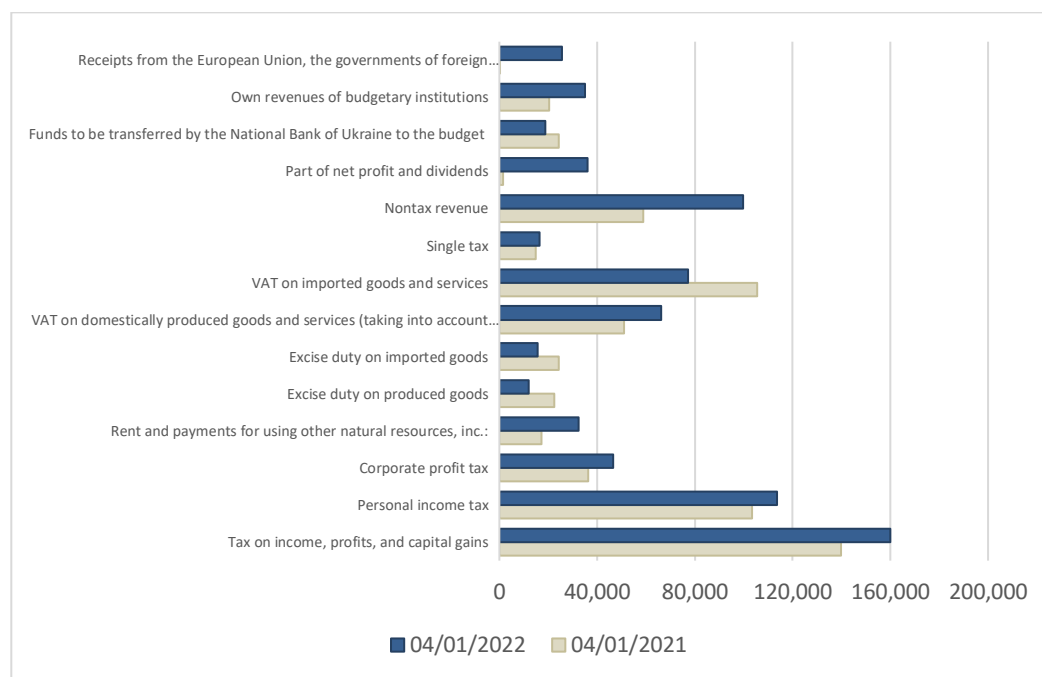
<sup>12</sup> Migration Data Portal, *Crisis Movements* (2022) (available online).

<sup>13</sup> UNCHR, *Operational Data Portal, Ukraine Refugee Situation* (2022) (available online).

<sup>14</sup> Економічна правда, "Бюджет травня звели з дефіцитом у \$4 мільярди: звідки бралися гроші," June 2, 2022 (in Ukrainian; available online).

Since the start of the war, tax revenues have totaled 54 to 56 billion USD per month, which covers only around 30 percent of expenditures.<sup>15</sup> Although businesses are paying taxes appropriately, there is a decrease in VAT and excise tax due to the decrease in imports and government cancellation of some payments (Figure 2). The increase in expenditures cannot be covered by budget income.

**Figure 2: Revenue, four months of 2022 compared to four months of 2021 by categories, in million hryvnias**



Source: National Bank of Ukraine, *Macroeconomic indicators*.

As a result, government borrowing to fund the state budget of Ukraine amounted to 376.6 billion hryvnias, or 170.5 percent of the planned borrowings, for the period of January to May 2022. A large part of budget funding was raised through the issuance of internal government bonds (including 120 billion hryvnias in NBU investments in military obligations, or 32 percent of all government borrowings).<sup>16</sup>

According to state law during the war, expenditure should be made in the following order: pensions and military salary, defense, social expenditure (including salaries in education and health care), and reconstruction and humanitarian aid. Reconstruction is financed for critical objects only. As Finance Minister Sergii Marchenko reported, 80 percent of the current budget is allotted to the military.<sup>17</sup> On May 31, 2022, Prime Minister Denys Shmyhal announced that Ukraine has received support in the amount of seven billion USD in grants and credits.<sup>18</sup> However, budget deficit financing is crucial.

<sup>15</sup> Ukrainian Ministry of Finance, "Інтерв'ю Міністра фінансів Сергія Марченка виданню Mind," (2022) (in Ukrainian; available online).

<sup>16</sup> Ukrainian Government Portal, *У травні 2022 р. до загального фонду державного бюджету надійшло 101,3 млрд грн* (2022) (in Ukrainian; available online).

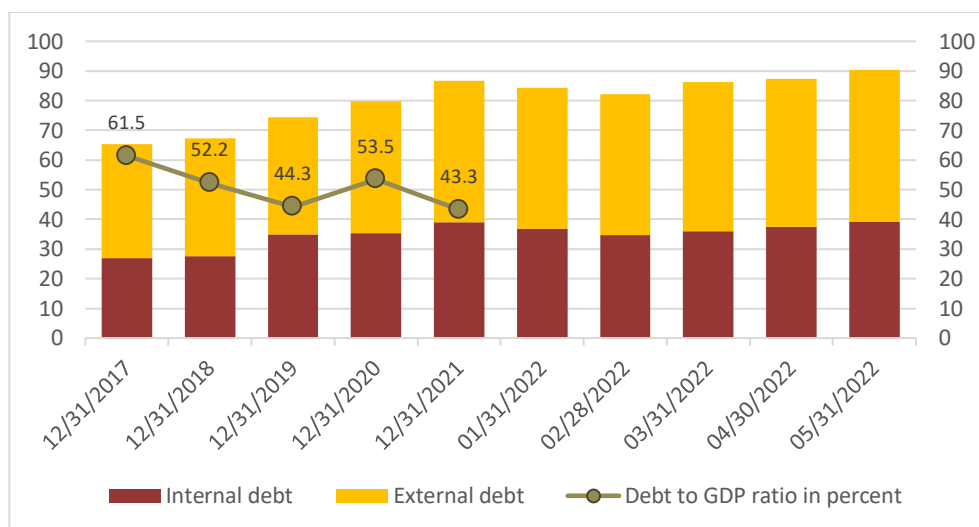
<sup>17</sup> Ukrainian Ministry of Finance, "Інтерв'ю Міністра фінансів Сергія Марченка виданню Mind."

<sup>18</sup> Ukrainian Government Portal, *Ukraine has received USD 7 billion from its allies in three months, says Denys Shmyhal* (2022) (available online).

## Government debt

At the end of 2021, the debt-to-GDP ratio was 43.28 percent, amounting to 86.61 billion USD. It decreased in February 2022, but a further increase in government debt was observed when the war began (90.44 billion USD in May 2022).

**Figure 3: Ukrainian government debt, 12/31/2017 to 05/31/2022, in billion USD, debt-to-GDP ratio in percent**



Note: The debt-to-GDP ratio can only be presented for up to and including the year 2021, as the GDP data for 2022 are not yet available.

Source: Ministry of Finance of Ukraine, *State debt and state guaranteed debt* (2022) ([available online](#)).

The main issue with receiving financial aid is that it increases a government's indebtedness. According to the Marshall Plan, around 90 percent of funds were grants.<sup>19</sup> The loans from international financial organizations that Ukraine is currently receiving are increasing the government debt. During wartime, government expenditures grow, and debt service and payments are becoming a burden for the economy. The US House Committee on Financial Services has proposed a debt relief program that would suspend payments,<sup>20</sup> but no decision was made. Payment of government debt is thus scheduled until 2047 with high peaks in 2022 and 2023.

## Inflation

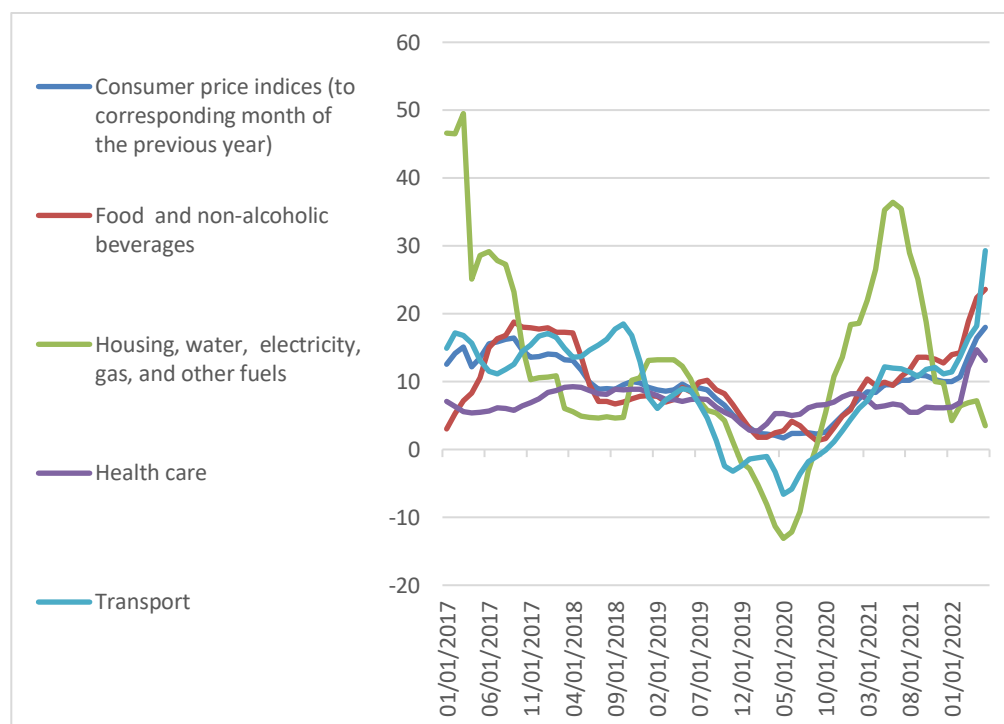
Inflation is variable across the country and highly influenced by the supply chains, increases in costs for business, and physical damage to companies, as reported by the NBU. In May 2022, CPI amounted to 18 percent (raw food prices increased by 28.9 percent, fuel by 57.8 percent) (Figure 4).<sup>21</sup>

<sup>19</sup> Torbjörn Becker et al., "A Blueprint for the Reconstruction of Ukraine," *Rapid Response Economics* 1 (CEPR Press: 2022) ([available online](#)).

<sup>20</sup> Clemence Landers and Mark Plant, "Making IFI Debt Relief for Ukraine Work," *Center for Global Development*, April 5, 2022 ([available online](#)).

<sup>21</sup> National Bank of Ukraine, *Macroeconomic and Monetary Review*, May 2022.

**Figure 4: Consumer price indices to the corresponding month of the previous year, 01/2017 to 05/2022**



Source: National Bank of Ukraine, *Macroeconomic indicators*.

On June 2, 2022, NBU increased its main interest rate from 10 to 25 percent. Before that, currency depreciation in the market had been observed in May. The increase in the main interest rate aimed to stabilize the exchange rate and increase the attractiveness of investments in Ukrainian assets. In our opinion, such a decision was also influenced by the massive NBU interventions (from two billion in March and April to 3.4 billion USD in May, which decreased the international reserves to 25.1 billion USD in May<sup>22</sup>) and by the need to purchase government debt obligations to finance the budget deficit. Thus, this will influence the interest rates of loans for businesses and yields on government bonds, which are negative factors in terms of business activity and debt service.<sup>23</sup>

### Ukraine: Reconstruction

How Ukraine will rebuild is already a relevant question. It is clear that a reconstruction plan for a country following a war is very complex and requires extensive research and evaluation. We would need more than a brief article or paragraph to fully investigate such a plan.

As Tzifakis (2022) mentions, literature on reconstruction after a conflict is mostly devoted to security measures and concentrates on political policy. He critically analyzes the available research and points out the lack of economic investigations.

<sup>22</sup> National Bank of Ukraine, *International Reserves at USD 25.1 Billion in May (2022)* (available online).

<sup>23</sup> National Bank of Ukraine, *NBU Raises Key Policy Rate to 25% (2022)* (available online).



Scientists agree that post-conflict economic recovery is unique for every country and has special conditions.<sup>24</sup>

The European Commission and the Ukrainian government are preparing their plans for economic reconstruction. Papers on the topic have been published already, such as the notable “A Blueprint for the Reconstruction of Ukraine” by Becker et al. This plan focuses on the establishment of a special agency with functions similar to the Economic Cooperation Administration, which governed the Marshall Plan. According to the scientists, the agency should be created as quickly as possible to conduct three stages of reconstruction and minimize damage. They also argue aid should be provided in the form of grants, not credits.<sup>25</sup> Becker et al. (2022) estimated the reconstruction plan for Ukraine would require 200 to 500 billion USD. The amount depends strongly on the war period and the damage it will cause.

As mentioned by Rodrigues-Pose and Bartalucci (2022), the principles important in reconstructing Ukraine include assessing local conditions, establishing monitoring systems, maintaining a strategic focus, controlling corruption, designing coordination mechanisms, and capacity building.<sup>26</sup>

### **We would like to focus on the following aspects of the possible reconstruction plan:**

*Planning and monitoring.* It is important to develop a long-term strategy and detailed reconstruction plan based on the propositions of European organizations, the Ukrainian government, and foreign and Ukrainian practitioners and researchers. Planning, organization, and monitoring of expenditures is essential. It is obvious that good governance influences growth (Hoeffler, Shahbano Ijaz, Billerbeck, 2010).<sup>27</sup> The models used, the organization of institutions, and the sectors that receive resources are all important (Barackat and Zyck, 2009)<sup>28</sup>.

*Institutional reforms.* Establishing institutional reforms is crucial for the success of the reconstruction plan. Court reform, combating corruption, and other reforms should take place and be controlled by the civil society, which currently has a high desire for change and EU integration (Becker et al. 2022). The high participation of Ukrainian people in volunteering will positively impact the monitoring of government expenditures and the process of rebuilding the cities. We consider it necessary to use strict administrative and criminal penalties when the law is broken, especially when connected to humanitarian aid.

*Fiscal sector.* Under the current conditions, it is very important to monitor the budget deficit and government debt. Ohno (2017) pointed out the negative impact of the monetization of fiscal deficit in the case of post-war Japan.<sup>29</sup> At the same time, the decrease in households' income may influence further migration. Measures should be

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<sup>24</sup> Nikolaos Tzifankis, “Post-Conflict Economic Reconstruction,” *Encyclopedia Princetoniensis* (available online).

<sup>25</sup> Torbjörn Becker et al., “A Blueprint for the Reconstruction of Ukraine.”

<sup>26</sup> Andrés Rodríguez-Pose and Federico Bartalucci, *Towards achieving ‘strategies of gain’ in post-war Ukraine* (2022) (available online).

<sup>27</sup> Anke Hoeffler, Syeda Shahbano Ijaz, and Sarah von Billerbeck, *Post-Conflict Recovery and Peacebuilding* (Washington, DC: World Bank, 2011) (available online).

<sup>28</sup> Sultan Barakat and Steven A. Zyck, “The Evolution of Post-conflict Recovery,” *Third World Quarterly*, vol. 30 (2009): 1069-1086 (available online).

<sup>29</sup> Kenichi Ohno, *The History of Japanese Economic Development* (Routledge, 2017): 118-130 (available online).

taken to stimulate business and prevent increases in gas and housing prices for the winter period. It is obvious that Ukraine must spend resources on the military and defense in every optimistic scenario, but military expenditures do not decrease the economic growth after the war (Hoeffler, Shahbano Ijaz, Billerbeck, 2010).<sup>30</sup> The case of Israel shows that military expenditure may influence an economy's innovative development as well. It is clear that education and health care expenditure, which are crucial for the further development of a country, also influence innovative development.

It is important to continue the decentralization process that has been successfully implemented during the last years. Local budgets' revenue sources are key indicators for financial independence and stability of a municipality from national transfers. They make it possible to achieve the positive goals of decentralization reform and increase the quality of life.

*Industry.* The post-war recovery may be the time to remake industry into a sustainable sector focusing on the environment. In addition, Ukraine should reorient itself from the export of raw materials to the production of high-value-added goods. The government should not rely only on financial aid; transparency and accountability can stimulate foreign direct investment (Moore, 2021).<sup>31</sup> Both elements are important for economic development. There are positive reforms in digitalization in Ukraine as well as a steady increase of IT specialists; this trend can be an important part of future development.

Although the reconstruction efforts should begin more quickly, the current pressing issues—military assistance, the budget deficit, exports, lack of fuel, harvesting—should be solved urgently to avoid any negative future impact on the economy. Every possible effort of every single person matters; the economy is created by people. Right now, the unity of the world community is more important than ever to give Ukraine hope for a European future.

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<sup>30</sup> Hoeffler, Ijaz, and von Billerbeck, *Post-Conflict Recovery and Peacebuilding*.

<sup>31</sup> Robert J. Moore, "Emerging from war: Public policy and patterns of foreign direct investment recovery in postwar environments," *Journal of International Business Policy* 4 (2021): 455–475 (available online).

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