



A STATE-LED WAR ECONOMY IN AN OPEN MARKET

Investigating state-market relations
in Ukraine 2021 - 2023

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The Peace and Conflict Resolution Evidence Platform (PeaceRep) is a research consortium led by the University of Edinburgh Law School. Our research is rethinking peace and transition processes in the light of changing conflict dynamics in the 21st century.

PeaceRep's Ukraine programme

PeaceRep's Ukraine programme is a multi-partner initiative that provides evidence, insight, academic research and policy analysis from Ukraine and the wider region to support Ukrainian sovereignty, territorial integrity and democracy in the face of the Russian invasion. PeaceRep's Ukraine programme is led by the London School of Economics and Political Science (LSE) partnering with the Kyiv School of Economics (KSE) in Ukraine, the Leibniz Institute for East and Southeast European Studies (IOS) in Germany, the Institute of Human Sciences (IWM) in Austria and Jagiellonian University in Poland. Through our collaboration with KSE we work closely with researchers, educationalists and civic activists in Ukraine to ensure that policy solutions are grounded in robust evidence and are calibrated to support democratic outcomes.

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Introduction

Since February 2022, Ukraine has been fighting an all-out-war with Russia to protect its independence, democracy and territorial integrity. The Russian Federation has fundamentally recalibrated its economy in this period, developing a conventional state coordinated war-economy that directs labour and capital centrally to needs of the war-effort.¹ In tandem with its materially greater level of resources (including labour power) and delays in the provision of US military aid in the first half of 2024, this appears to have been a factor in giving Russia a sense of momentum on the battlefield. Russia's development of a war-economy contrasts with the situation on the Ukrainian side where the economy remains relatively open with only limited centralisation. Nonetheless, the reality of fighting an all-out-war has pushed Ukraine in the direction of a policy evolution that few would have anticipated prior to the full-scale invasion. Free market preferences and libertarian tax policies have fallen out of favour amid a turn to industrial policy and tax revenue mobilisation.² As the war badly disrupted markets, the state has stepped in by providing firms, for example, with funds for relocation from frontline areas and emergency credit lines.

PeaceRep's Ukraine programme has analysed the challenges posed by the Russian invasion as a simultaneous supply and demand crisis.³ The physical destruction wrought by the war along with the vastly increased risks of investment has - like in all conflict environments - disrupted market activity. This poses a need for the state to intervene into both supply (by supporting investment in the labour force) and demand (to support consumption). The nature of all violent conflict inevitably develops a 'war-economy' of some kind. In situations of intractable violence, such as those PeaceRep studies in other conflict environments like Syria and Sudan this takes the form of what Alex de Waal calls 'protracted conflict economies'.⁴ In such scenarios an incentive structure develops in which a proliferation of actors have a material interest in the reproduction of violence. This involves rent-seeking, criminality and the predatory extraction of resources from the civilian population, often with the support of a myriad of intervening powers. This comparative context provides a warning to the Ukrainian side. The first Russian invasion in 2014 could be interpreted as an attempt to actively bring about such a condition inside Ukraine (making impossible its future membership of the European Union and NATO).⁵ Not only did the ensuing conflict have some of the features of a situation of intractable violence but Ukraine's broader socioeconomic profile as a state in relatively subordinated position in the global economy makes it inherently vulnerable to this development. Seen in these terms the question becomes

¹ On this see Volodymyr Ishchenko, Ilya Matveev, and Oleg Zhuravlev, 'Russian Military Keynesianism: Who Benefits from the War in Ukraine?' (Washington, D.C.: Elliott School of International Affairs, the George Washington University, 2023).

² Luke Cooper, 2024, 'Ukraine Is Quietly Abandoning Neoliberalism', *International Politics and Society*, <https://www.ips-journal.eu/topics/economy-and-ecology/ukraine-is-quietly-abandoning-neoliberalism-7282/> (Accessed 21 May 2024).

³ Luke Cooper, 2022, 'Market Economics in an All-out War? Assessing Economic Risks to the Ukrainian War Effort (PeaceRep Report)', London: London School of Economics and Political Science. <https://peacerep.org/publication/market-economics-ukraine/> (Accessed 21 May 2024); Luke Cooper, 2023, 'Insourcing the War-Economy: Building a Resilient Ukraine Means Maximising Its Domestic Output (PeaceRep Report)', London: London School of Economics and Political Science <https://peacerep.org/publication/insourcing-the-war-economy-ukraine/> (Accessed 21 May 2024).

⁴ De Waal, A. 2019. 'Sudan: A Political Marketplace Framework Analysis', LSE Conflict Research Programme https://eprints.lse.ac.uk/101291/1/De_Waal_Sudan_a_political_marketplace_analysis_published.pdf (Accessed 21 May 2024).

⁵ Mary Kaldor, 'Commentary on Kögler: Analysing the Ukraine War through a "New Wars" Perspective', *European Journal of Social Theory* 26, no. 4 (27 April 2023): 479–89; Mary Kaldor and Luke Cooper, 'In Europe's Gift: How to Avoid a Ukraine "Forever War"', *European Council on Foreign Relations* (blog), 26 September 2022, <https://ecfr.eu/article/in-europes-gift-how-to-avoid-a-ukraine-forever-war/>.

not whether Ukraine develops a war-economy, which is inevitable in an all-out-war,⁶ but the extent to which the specific form it takes is calibrated to support its democracy and societal resilience.

How the state is interacting with markets becomes a key consideration in this context. A critical question concerns whether the state can develop the capacity to correct market failures in order to support the security and wellbeing of the population and answer the challenges of the on-going war.

This research report seeks to address this question by investigating the relationship between market and state in the contemporary Ukrainian economy. The report is published as part of a collaborative partnership between Ukraine Industry Expertise and PeaceRep's Ukraine programme. It builds upon previous work that demonstrated how Ukraine had a range of in-country assets that could be mobilised to 'insource the recovery' through the adoption of policies designed to support and maximise domestic output.⁷

The present report examines how the role of the state in the Ukrainian economy has changed between 2021 and 2023 (including the year prior to the full-scale invasion provides a point of comparison). We investigate the impact of the state on the formation of domestic aggregate demand through the growth of budget expenditures at the local, regional and national levels. In the current circumstances, industry and Ukraine's potential re-industrialisation assumes a particular importance. This applies not only to weapons, but also to a range of civilian products such as clothing, footwear, construction materials, food products, etc. The interaction between the state and industry plays a crucial function in meeting the wide range of demands and needs of the Armed Forces of Ukraine in the conflict.

The research report also examines the impact of the state on the formation of industrial demand and purchasing levels at the level of sectors and individual enterprises. We investigate whether state orders have been able to compensate for the decline in domestic private demand. As Ukrainian industry is predominantly private, an increase in state orders will support the resilience of these enterprises, including many that are of small and medium size.

In turn, growing industrial enterprises will generate tax revenues. Under Ukraine's current tax system industry carries the highest tax burden. Therefore, when the state provides industry with regular orders it also contributes to its own economic sustainability and finance needs in the war.

⁶ On this see de Waal, forthcoming, 'Hunger in War Economies: Geo-strategies, burden shifting and the politics of famine'.

⁷ Volodymyr Vlasiuk and Brian Milakovsky, 2023, "'Insourcing' the Recovery: Ukrainian Manufacturers in Reconstruction Efforts (PeaceRep Report)", London: London School of Economics and Political Science; <https://peacerep.org/publication/insourcing-the-recovery-ukrainian-manufacturers/>; Cooper, 'Insourcing the Ukrainian War-Effort'; Luke Cooper, 2023, 'Insourcing the War-Economy'; Brian Milakovsky, forthcoming, 'Re-industrialization as a key element of Ukraine's recovery' Inna Dzhurynska and Luke Cooper, 'Is the "Buy Ukrainian" Policy Legal? (PeaceRep Report)' (London: London School of Economics and Political Science, 27 September 2023), <https://peacerep.org/publication/is-the-buy-ukrainian-policy-legal/>.

Executive Summary

An extended version of this text can be found in 'Conclusion and recommendations'.

Between 2021 and 2023 Ukraine transitioned to a state dominated war-economy but in a peculiar form. It is not autarchic but highly open to external markets and dependent on inward financial flows from its allies and donors. The state's share in the formation of aggregate domestic demand increased from 10.5% to 26.8%, including in the purchase of goods and services from 9% to 21%.

The state has become a significant purchaser in a number of sectors and has considerable 'buyers power', especially in the context of the fall in private sector demand in the course of the war. The state increased purchases of goods and services from USD 17.4 billion in 2021 to USD 45.4 billion in 2023. This was driven by an increase in spending on defence-related goods and services ('special purchase') from \$1.4 billion USD to \$30.8 billion USD per year. The purchase of civilian goods and services slightly decreased from \$16 billion USD to \$14.7 billion USD per year (nominal i.e., non-inflation adjusted).

Between 2021 to 2023 we observe significant growth in state procurement of construction materials (excluding roads), medicines and medical devices, garments and automotives. An analysis of state procurement in the Prozorro system shows that the volume of procurement of these 5 groups of goods increased the most: construction materials (indirect procurement through state procurement of construction services, excluding roads), food, vehicles, garments and footwear, medicines and medical equipment. The rise in purchases of these goods reflect the needs of the administrative state through the course of the war. With the exception of medicines, the growth in purchases in these product groups was large. For example, for food, it was +8338%, up to \$793 million USD in 2023. We also identified commodity items for which state procurement increased by a thousand percent or more. These indicate product lines where the intervention of the state as a customer makes it possible to scale up domestic production, potentially significantly.

Construction materials is an outlier in the study as it shows an overall decrease from 2021 to 2023 in terms of the state's share of domestic consumption of goods. With the perhaps surprising exception of construction materials, 2023 has seen a significant increase in the role of the state in the domestic markets of the goods under study. For example, in the garments market, the share of the state as a buyer increased from 0.3% in 2021 to 7.4% in 2023, and in the food market from 0.04% to 5.4%. In the market for construction materials, the state's share actually decreased from 32.7% to 27.7% (Graph 12), even though the size of the market itself fell by more than half (Graph 6). This provides a clear indication – ahead of the Ukraine Recovery Conference in Berlin – that rebuilding the Ukrainian economy and critical infrastructure is not yet the state's priority, and the focus remains resolutely on the goal of winning the war. Policymakers will need to be alert to this reality which reflects the on-going risks to infrastructure, housing, roads and bridges from the Russian war-machine.

The data is consistent with what we would expect from an economy that contracted so sharply in 2022 and shows the state has largely not compensated for falling demand. Despite the growing role of the state, the apparent consumption of the surveyed goods in the domestic market in dollar terms decreased between from 2021 to 2023 for all groups except automotives. Our research shows that state procurement did not compensate for the decline in private demand in all sectors apart from automotives (where it benefited importers due to the weakness of the Ukrainian sector).

Ukrainian producers are losing domestic market share to international competitors that are not operating in conditions of war. This unequal competition (the lack of a 'level playing field') is still getting insufficient attention among policy-makers. The research report shows the growing share of imports in covering domestic demand for all product groups, except for medicines. This applies, in particular, to those goods with well-developed production in Ukraine. For example, in the construction materials sector, the share of imports increased from 14% to 23% and in the food sector it did so from 23% to 35%. The loss of market share for these internationally competitive sectors is concerning for Ukraine and an illustration of how its relatively open economy (especially to the European Union through the Association Agreement) is poorly suited to wartime conditions. In light of the attention given to the protectionist political activism of Polish farmers over grain imports from Ukraine, the loss of domestic market share for Ukrainian food producers at home has been badly overlooked.

In the markets that we surveyed (excluding automotives) the state has emerged as an important customer. According to the survey results, the majority of research subjects (71%, or 22 out of 31 participants) confirmed the presence of state procurement in their sales (or the reports of members of the business association).

The picture for state generated demand at the micro level is consistent with macro-level analysis of the state's fiscal constraints. The vast majority of respondents who have state orders (73% or 16 out of 22) reported that they had seen changes in these orders between 2021 and 2023. These reports are consistent with the analysis of macro-level trends insofar as they convey a picture of a state that is experiencing high level of demands for spending on both the war effort and to support markets that are contracting sharply, but lacks the fiscal capacity to do on a scale that would be sufficient to compensate the fall in private sector demand. Indeed, all survey respondents noted a decline in private demand that was not offset by state procurement.

Markets have proven surprisingly resilient, but their growth prospects will remain weak while the war is on-going. Despite the ongoing Russian invasion, market relations continue to exist in the country in all areas and there are no restrictions on market functioning. In this sense, Ukraine has developed a state-dominated market economy but one that is rather uneven: the expansion of public sector salaries (the military) and the expanded role of the state in defence procurement has gone alongside stagnation and decline in its civilian procurement activity. In addition, these civilian firms are not being instructed to recalibrate their operations around the needs of the war-effort and the state has not involved itself in their operations. Markets have therefore proven resilient, perhaps surprisingly so, but their growth prospects should be considered weak while the war is on-going. In this situation the growth of state procurement of goods and services from Ukrainian private companies should be seen as an important tool for increasing the resilience of the Ukrainian economy during the war, supporting productive capacity and jobs. In this way, state intervention can actually help maintain the market character of the economy as a whole and the ability of the private sector to manage the shocks of the war, while preparing for the future recovery and reconstruction.

Within this context we would make a number of recommendations:

Ukraine's external trading environment remains poorly calibrated to the war-effort. Donors and allies should support a 'localisation offensive' to secure and expand domestic capacities.

- Allies should signal their strong support for the Ukrainian Government's Made in Ukraine subsidy scheme aimed at growing domestic production.
- Allies and donors should lead by example on 'localisation' making local content and purchasing requirements a condition of financial aid provided to Ukraine, as far as possible seeking to 'spend aid for Ukraine in Ukraine'. As noted in the report Denmark, Canada, the United Kingdom and the United States have all indicated their support for this policy direction and in some cases announced new programmes. This should also include state-led efforts at technology transfer into the Ukrainian economy.
- Should Ukraine decide that it needs to either pre-emptively, or in the context of a legal dispute, declare a 'national security exemption' to WTO rules and the EU Association Agreement (as they can in relation to both), then allies and donors should publicly back Ukraine's right to do so.
- Allies and donors should encourage cooperation between their companies and Ukrainian ones in the production of military and civilian goods (e.g., joint ventures, consortium, contractual manufacturing), providing such activities with instruments of war risk insurance and favourable funding. This can support the war time resilience of Ukrainian economy and contribute to its smarter integration in global production chains.

Develop an industrial policy that is calibrated to Ukraine's resilience in the war.

Donors and allies should support Ukraine's efforts to develop an industrial policy to meet the economic challenges of the war. An industrial strategy will need to focus on the potentials and existing productive bases that Ukraine has (e.g., unlikely to be in civilian automotives) with tailored policies to improve labour productivity in these sectors, to fill the gap in capacities in processing of local raw materials which are plentiful in Ukraine, and generate value added export growth.

Developing state capacity and supporting broad based income growth. Given the resource demands entailed by the war and the challenging environment for private sector investment, the Ukrainian state and its institutional capacity will be critical for supporting the economy, through both the war and future recovery. As the private sector will receive support from the state through procurement and subsidy programmes which are as expansive as fiscally possible, it is important that, in return, the goals of an inclusive society, economic wellbeing and broad-based income growth in the population are prioritised. In tandem with this, the Ukrainian state is faced with the crucial question of finding the balance between economy and frontline needs, particularly between citizens as workers and soldiers. This requires due diligence in procurement and subsidy processes, which, in turn, means using the growing state role in the economy to improve its capacity as a public authority.

Research Methodology

We examined the period 2021-2023 to determine the changing role of the state in the economy. Research was conducted at both the macroeconomic level (that of the entire economy) and the microeconomic level (that of sectors and individual enterprises). The macroeconomic research was conducted by analysing the Consolidated Budget of Ukraine, which includes national and local budgets.

Domestic aggregate demand is formed by final consumer expenditures and capital expenditures of all economic agents (state, households, non-financial and financial entities). The share of private and public consumption in aggregate demand in Ukraine is derived from the System of National Accounts. The bulk of public expenditures (over 85%) are made through the consolidated budget of Ukraine.

To calculate the change in the ratio of private and public demand in the economy we consider both the direct impact of public spending through the purchase of goods and services and the indirect impact through the payment of wages to state employees, including members of the Ukrainian Armed Forces (UAF).

The next step was to analyse state procurement data for 2021-2023 to identify the production sectors whose goods have experienced the greatest increase in state demand. A sample of companies from these sectors were then interviewed to verify the preliminary findings.

The interview questions were formulated to ascertain the role of the state in shaping orders for private companies, as well as whether state demand compensated for the drop in private demand since the start of the war.

Section 1: Investigating the ‘quiet rise’ of Ukraine’s state-led economy: intervention by the state has mitigated falling private sector demand

Dynamics of public spending and its share in Ukraine's GDP in 2021-2023

In the context of Russia's military aggression the expenditures of the Consolidated Budget of Ukraine increased by 80% from 2021 to 2023 to USD 121.4 billion⁸, and their share in the country's GDP doubled to 70% (Table 1). So, as the economy overall underwent a sharp contraction in GDP (falling by 28.8% in 2022, National Bank of Ukraine), public expenditures provided a critical lifeline and meant that the state dramatically increased its influence on the national economy. This increase in state spending is related to the financing of defence needs. Public spending on the purchase of goods and services (mostly arm and ammunition) increased by 2.6 times, while labour remuneration (mostly military personnel) increased by 2.1 times.

By category of purpose of spending, the largest growth was in defence (11 times) and public order (2.4 times) (see Annex 1). In other categories state spending decreased, most notably on environmental protection (-63%) and business support and economic infrastructure (-44%), a pool of funds that encompasses a broad category in Ukraine, including agri-subsidies, equipment compensation programmes, and road building.

Table 1: Changes in state expenditures in Ukraine in 2021-2023, USD (millions)

Indicators	2021	2022	2023.	2023 to 2021, % change	2021	2022	2023
	million USD				in % of GDP		
GDP	199 835	160 501	173 413	87%	100	100	100
Expenditures of the Consolidated Budget of Ukraine	67 621	94 121	121 437	180%	33,8	58,6	70,0
<i>including for the purchase of goods and services</i>	17 377	26 142	45 519	262%	8,7	16,3	26,2
<i>Labour costs (with accruals)</i>	18 913	38 341	40 447	214%	9,5	23,9	23,3

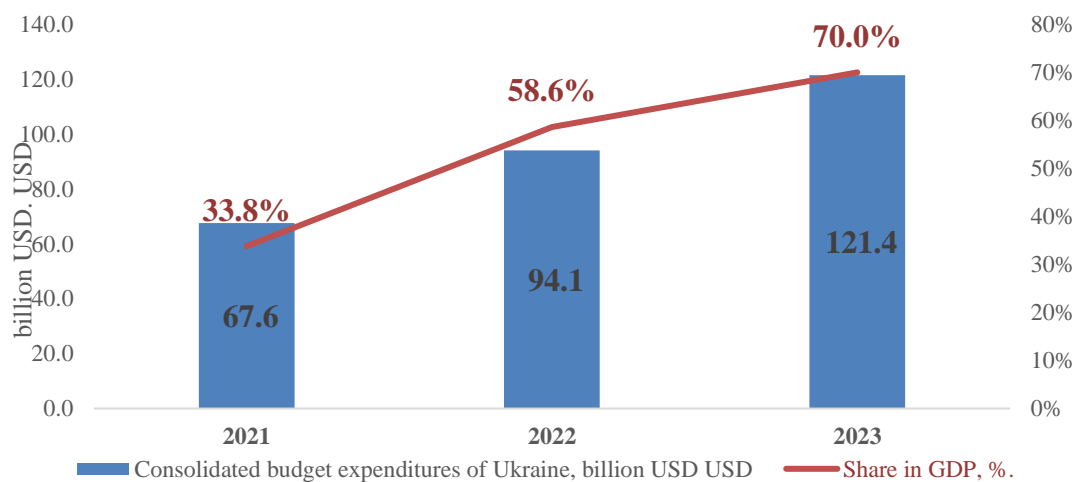
Source: International Monetary Fund (GDP), Ministry of Finance of Ukraine (Consolidated Budget in current prices)

The abnormally high share of the consolidated budget in GDP indicates that in its current state, the Ukrainian economy cannot generate enough funds to cover its expenditures. In fact, all budget revenues from the Ukrainian economy are absorbed by defence spending. The phase of the "industrial war" with Russia has commenced, and the Kremlin is increasing its spending on the war and weapons production. Ukraine has therefore been forced to follow suit, a policy that requires further militarisation of the economy and an increase in budget expenditures for these purposes. To make up for the

⁸ All data in the report is presented in US dollars converted from hryvnia using current prices. Readers should note that the data is not inflation adjusted. The following average annual values of the official NBU exchange rate were used to translate the figures into USD: 2021 - UAH 27.29/USD. USD; 2022 - 32.34 UAH/USD; 2023 - 36.57 UAH/USD.

shortfalls in financing, Ukraine has become heavily dependent on external financial assistance, especially, in 2024, from the European Union. The EU Ukraine Facility made a commitment of €50 billion over 2024 - 2027, but is being drawn down much faster than had been anticipated,⁹ generating a new discussion about mobilising the resources necessary for Ukraine's war-effort. This illustrates two important realities of the contemporary Ukrainian war economy; first, that it is increasingly state-dominated with central and local state assuming a critical coordinating function in efforts to maximise its domestic output; but, second, it is highly dependent on external economic assistance from its allies to meet its significant domestic financing needs.

Graph 1: State expenditures in Ukraine in 2021-2023 and their share in GDP



State influence on the formation of domestic demand in Ukraine in 2021-2023: the expansion of the state's role in the domestic market for goods and services

The total volume of aggregate demand² in Ukraine in 2021-2023 increased by 5% to USD 212 billion USD/year¹⁰ (Table 2). The structural proportion between consumer and capital expenditures did not change significantly, amounting to 86%/14%.

State capital expenditures increased by 12% in 2021-2023. However, there was a reallocation of these expenditures. Funds allocated for spending on road construction and repair were used for the purchase of military equipment and the construction of defence facilities.

State procurement now accounts for about 25% of domestic demand for goods and services. In 2021, this figure was 12% (Table 2). The expansion of state spending has played an important role in offsetting the decline in private consumption. While this can be taken as an illustration of the weaknesses in the private sector economy due to the war, it also underlines the scope for the Ukrainian state to make proactive use of public procurement policy to maximise domestic output, harnessing and growing local capacities to meet national development, defence and security needs.¹¹

⁹ Gregorio Sorgi, 2024, 'The EU's fund for Ukraine is already running low', Politico <https://www.politico.eu/article/the-eu-fund-for-ukraine-is-already-half-empty-sooner-than-expected/> (Accessed 21 May 2024).

¹⁰ Aggregate demand in Ukraine is formed by final consumer spending on goods and services and capital expenditures of all economic agents.

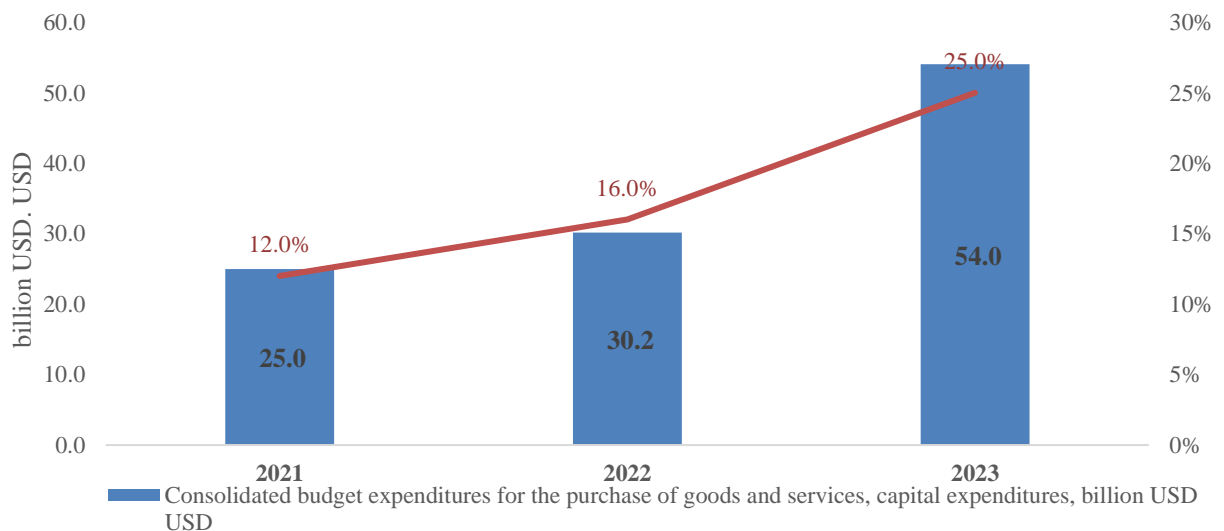
¹¹ Vlasiuk and Milakovsky, 2023. "'Insourcing' the Recovery: Ukrainian Manufacturers in Reconstruction Efforts (PeaceRep Report)'. See also, the state of Ukraine's "Made in Ukraine" strategy.

Table 2: Share of state expenditures in aggregate demand in Ukraine in 2021- 2023, USD (millions)

Indicators.	2021	2022	2023	2023 to 2021, %	2021	2022	2023
	million USD				in % of total demand		
Aggregate demand	202 377	193 502	212 050	105%	100	100	100
<i>including final consumer expenditure</i>	<i>173 480</i>	<i>169 118</i>	<i>183 020</i>	<i>105%</i>	<i>86</i>	<i>87</i>	<i>86</i>
<i>capital expenditure</i>	<i>28 897</i>	<i>24 385</i>	<i>29 030</i>	<i>100%</i>	<i>14</i>	<i>13</i>	<i>14</i>
Consolidated budget expenditures for the purchase of goods and services, capital expenditures	24 970	30 168	54 048	216%	12	16	25
<i>including the purchase of goods and services</i>	<i>17 377</i>	<i>26 142</i>	<i>45 519</i>	<i>262%</i>	<i>9</i>	<i>14</i>	<i>21</i>
<i>capital expenditure</i>	<i>7 593</i>	<i>4 026</i>	<i>8 529</i>	<i>112%</i>	<i>4</i>	<i>2</i>	<i>4</i>

Source: calculated on the basis of the SSSU data (Gross Domestic Product and SNA for the respective years), data of the Ministry of Finance of Ukraine (Consolidated Budget)

Graph 2: Consolidated budget expenditures for the purchase of goods and services, capital expenditures in 2021-2023, their share in aggregate demand



Assessing the indirect economic impact of the state: its growing role in household incomes

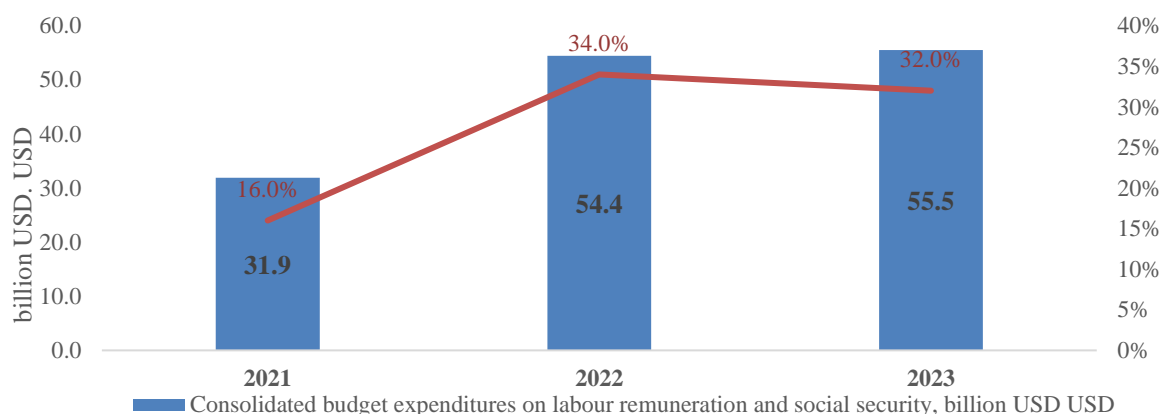
The state indirectly influences the formation of aggregate demand by providing income in the form of salaries to individuals employed in the public sector and through social transfers to the population, which constitute the main part of their income and are subsequently used to purchase goods and services. Between 2021 and 2023, consolidated budget expenditures on wages and welfare assistance almost doubled (to USD 55.5 billion), their share in total personal income increased from 19% to 39% (Table 3). The main increase was in wages and salaries (+114%). This was primarily driven by the huge increase in the number of army personnel. The state of Ukraine is aiming to grow its size to some 1.2m personnel in 2024 (an approximate quadrupling of its pre- full-scale invasion strength). Another important but secondary component were welfare payments, which increased by 16%, mostly due to payments made to internally displaced persons (IDPs). As Table 3 shows Ukraine's *fall* in GDP has gone alongside significant *increases* in the state contribution to effective demand with the public sector becoming a major employer in the economy.

Table 3: The state's influence on the formation of effective demand in Ukraine in 2021-2023, USD (millions).

Indicators	2021	2022	2023	2023 as a % of 2021	2021	2022	2023
					in % of TPI		
	million USD				in % of TPI		
Total personal income (TPI)	172 530	143 782	144 193	84%	100	100	100
... of which remuneration of employees	81 759	86 405	95 422	118%	47	60	66
.... of which gross profit/mixed income	90 771	57 377	48 771	54%	53	40	34
...of which state consolidated budget expenditures on labour remuneration and social security (combined)	31 919	54 432	55 517	174%	19	38	39
... of which state spending on labour remuneration with accruals	18 913	38 341	40 447	214%	11	27	28
... of which state spending on social security	13 007	16 092	15 069	115%	8	11	10

Source: International Monetary Fund (GDP), Ministry of Finance of Ukraine (Consolidated Budget), SSSU (wages and salaries and gross profit/mixed income).

Graph 3: Consolidated Budget Expenditures on labor remuneration and social security, 2021-2023, their share in total revenues



State expansion in aggregate demand in 2021-2023

In 2023, total demand in Ukraine amounted to USD 212 billion, a 5% increase over 2021. The growth was driven by final consumption expenditure (+5%),¹² while capital expenditures (investments) remained unchanged (Table 4). In contrast to state demand, aggregate private demand declined by 14%, and its share fell from 89.5% to 73.2%. Private final consumer spending declined the most (-17%), while private capital investment remained unchanged. The main reason for this decline in private consumption was a decrease in the population of Ukraine due to forced emigration (up to 6 million people) and the temporary occupation of part of the territory (3-4 million people). Private consumption per capita remained almost unchanged.

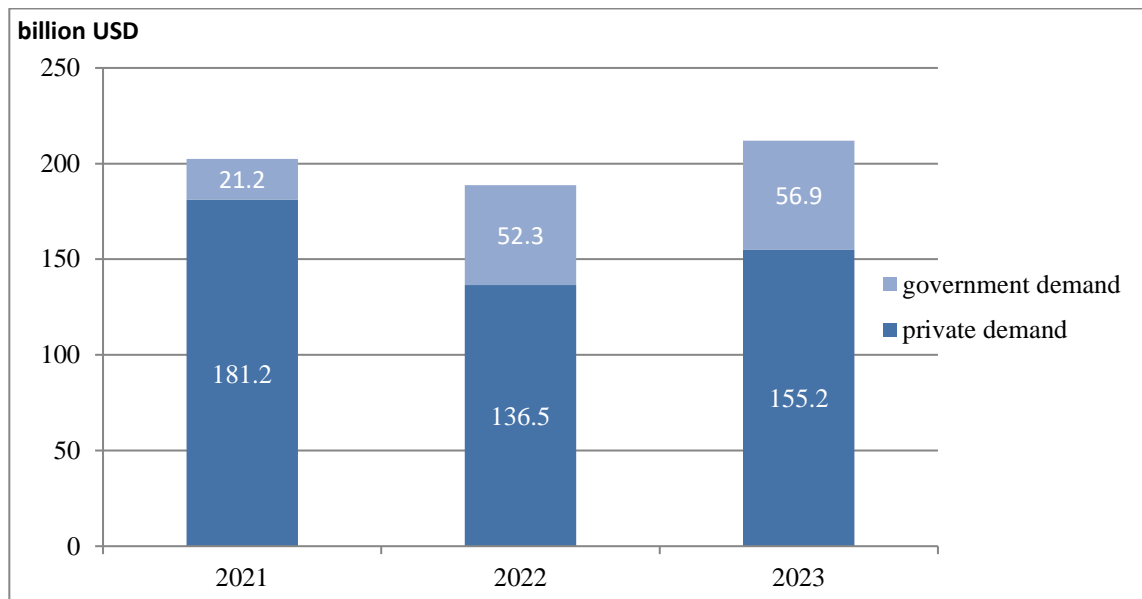
Table 4: The state's influence on aggregate demand in Ukraine in 2021-2023, USD (millions).

Indicators	2021	2022	2023	2023 to 2021, % change	2021	2022	2023
	million USD				in % of total demand		
Aggregate demand	202 377	188 741	212 050	105%	100,0	100,0	100,0
private	181 179	136 452	155 153	86%	89,5	72,3	73,2
state	21 198	52 289	56 897	268%	10,5	27,7	26,8
<i>Final consumption expenditure</i>	173 480	169 118	183 020	105%	85,7	89,6	86,3
private	157 766	120 260	131 605	83%	78,0	63,7	62,1
state	15 714	48 858	51 416	327%	7,8	25,9	24,2
<i>Gross capital formation</i>	28 897	19 624	29 030	100%	14,3	10,4	13,7
private	23 413	16 192	23 548	101%	11,6	8,6	11,1
state	5 484	3 432	5 481	100%	2,7	1,8	2,6

Source: calculated on the basis of the SSSU data (SNA for the respective years)

¹² Final consumption expenditure refers to meeting human needs and wants. This total figure is inclusive of final consumption expenditure in the Ukrainian economy as a whole and therefore that of state as well as households.

Graph 4: Changes in the composition of aggregate consumption in Ukraine in 2021-2023, USD (billions).



Drawing together this data Graph 4 illustrates the dramatically increased importance of the Ukrainian state as a driver of economic demand in the economy. The sharp fall in private demand was offset by an increase in state demand. As a result, aggregate demand in Ukraine grew by 5% in 2021-2023. At the same time, the structural growth in state demand was very uneven by the type of goods and services, with the largest share of spending absorbed by defence-related sectors. This means that the impact of the state in supporting private sector orders was not uniform across industrial sectors, and care should therefore be taken in the use of the aggregated figures. Nonetheless, this tendency for the state to ‘step in’ to offset the fall in private sector demand follows the classical pattern of state-led war economies and the importance of state capacity therein.¹³ The following sections are devoted to the analysis of the impact on individual sectors.

¹³ See Cooper, 2022, ‘Market Economics in an All-out War?’

Section 1 - Appendix A

Consolidated budget expenditures by functional classification

Indicators.	2021	2022	2023	2023/2021	2021	2022	2023
	USD (millions) in actual prices			%	in % of GDP		
National functions	9 697,9	7 683,2	9 547,2	-2%	4,9	4,8	5,5
Defence	4 720,4	35 348,3	57 359,1	1115%	2,4	22,0	33,1
Public order, security and the judiciary	6 643,7	14 052,5	16 172,6	143%	3,3	8,8	9,3
Business support and infrastructure	12 014,1	4 838,7	6 762,1	-44%	6,0	3,0	3,9
Environmental protection	469,2	161,6	174,9	-63%	0,2	0,1	0,1
Housing and utilities	2 323,0	1 272,7	1 925,0	-17%	1,2	0,8	1,1
Healthcare	7 727,5	6 656,6	5 945,3	-23%	3,9	4,1	3,4
Spiritual and physical development	1 716,8	1 041,4	1 052,0	-39%	0,9	0,6	0,6
Education	12 136,0	8 990,8	8 439,7	-30%	6,1	5,6	4,9
Social protection and social security	13 567,8	14 075,1	14 058,8	4%	6,8	8,8	8,1
Total expenditure	67 620,6	94 120,9	121 436,7	80%	33,8	58,6	70,0

Source: International Monetary Fund (GDP), Ministry of Finance of Ukraine (Consolidated Budget of Ukraine)

Section 1 - Appendix B

Consolidated budget expenditures by economic classification

Indicators.	2021	2022	2023	2023/2021	2021	2022	2023
	USD (millions) in actual prices			%	in % of GDP		
Current expenditure	60 028	90 095	112 908	88%	30,0	56,1	65,1
Payroll and payroll accruals	18 913	38 341	40 447	114%	9,5	23,9	23,3
Use of goods and services	17 377	26 142	45 519	162%	8,7	16,3	26,2
Debt servicing	5 681	5 013	6 943	22%	2,8	3,1	4,0
Current transfers	4 337	4 058	4 343	0%	2,2	2,5	2,5
Social security	13 007	16 092	15 069	16%	6,5	10,0	8,7
Other current expenditures	714	449	587	-18%	0,4	0,3	0,3
Capital expenditure	7 593	4 026	8 529	12%	3,8	2,5	4,9
Acquisition of fixed assets	3 584	2 430	4 788	34%	1,8	1,5	2,8
Capital transfers	4 008	1 596	3 741	-7%	2,0	1,0	2,2
Total expenditure	67 621	94 121	121 437	80%	33,8	58,6	70,0

Source: International Monetary Fund (GDP), Ministry of Finance of Ukraine (Consolidated Budget of Ukraine)

Section 2: The rise and development of the Ukrainian 'purchasing state' - investigating state procurement of goods and services

Total volume and structure of state procurement of goods and services

Just as the state has emerged as a critical *employer* in the Ukrainian economy, so too has it transformed into a vitally important *purchaser* of goods and services from the private sector. The war has brought about a dramatically increased expansion in the size of the public procurement market. State spending on the purchase of goods and services increased by a factor of 2.6 between 2021-2023, from USD 17.4 billion to USD 45.5 billion (Table 5). Specifically, spending on the purchase of special-purpose goods and services, which include defence products (weapons, ammunition, etc.) and numerous civil goods required for defence purposes (batteries, fuel, power generators etc.), increased by more than 20 times, to USD 30.8 billion in 2023 or 17.7% of GDP. The share of defence products in total procurement of goods and services increased 8.6 times, from 7.9% to 67.7%. These extraordinary figures underline the extent to which the Ukrainian economy has undergone a steep 'militarisation' since the full-scale Russian invasion. Indeed, this is further confirmed by the fact that the volume of other products procured through public procurement¹⁴ decreased by 8%, and their share in total procurement dropped by 3 times, from 92.1% to 32.3%. This illustrates how the state is driving a broader militarisation of the Ukrainian economy. With the Ukrainian state taking on an increased importance in overall aggregate economic demand (see section 1), and, in turn, expanding its public procurement by a factor of 2.5 but with a focus on military and defence needs, the private sector can be expected to adapt to this on-going militarisation. process. However, there is some uncertainty over the extent to which domestic producers are benefiting from the critical demand-side role that the Ukrainian state has assumed.

Table 5: State (Consolidated Budget) expenditures for the purchase of goods and services in 2021-2023, USD (millions).

Indicator.	2021	2022	2023	Change, 2023 to 2021	
				abs.	%
Expenditures for the purchase of goods and services (total)	17 374	26 131	45 519	28 145	162%
... of which purchases defence-related goods and services ('special purchase')	1 369	10 492	30 807	29 438	2150%
... of which purchases of non-defence related (i.e., civilian) of goods and services	16 005	15 639	14 712	-1 293	92%
Share of special purpose expenditures and activities	7,9%	40,2%	67,7%	60%	759%

*budget classification code

Source: Consolidated budget of Ukraine¹⁵

¹⁴ State procurement in Ukraine is divided into public (open) and special procurement (including defence procurement). More details in the Law of Ukraine "On Public Procurement" of 12.04.2016. Access mode: <https://zakon.rada.gov.ua/laws/show/922-19#n823>.

¹⁵ Access mode: <https://openbudget.gov.ua/national-budget/expenses?class=economic&view=table>

A key question is whether this growth in defence procurement has benefited the national economy or foreign firms. While Ukraine naturally needs advanced defence weaponry from the West, there is a risk that it may be importing items that it could source locally, thus in effect supporting skilled industrial jobs abroad rather than in the domestic economy where they are so desperately needed. Unfortunately, it is not possible for us to assess this for quite understandable reasons. Detailed information on expenditures on procurement of these special-purpose goods and services falls under the category of state secrets, so such procurement is not the subject of this study.¹⁶

Some sources in Ukrainian and international media suggest that the majority of these exceptionally large procurement funds have been spent on foreign-made defence goods. But, at the same time, Prime Minister Denys Shmyhal claims that defence production in Ukraine increased by three times in 2023 and could grow by six times in 2024.¹⁷ Still, Ukraine's Minister of Strategic Industries Oleksandr Kamyshin admits that production capability of the domestic defence industry (around \$20 billion USD of goods) far exceeds the purchasing power of the state budget (\$6 billion in 2024 for arms purchases).¹⁸ Most arms manufacturers are also currently prohibited from export, leaving them very reliant on this large but still ultimately insufficient Ukrainian state procurement budget.

In this context, there are some encouraging signs that Ukraine's allies are rallying behind the 'Made in Ukraine' agenda, supporting investment and technology transfer into the economy. Josep Borrell, the EU's most senior diplomat has backed the state of Ukraine's proposals to direct military aid to supporting the Ukrainian military industrial complex,¹⁹ and Denmark,²⁰ Canada²¹ and the United Kingdom²² have all indicated their support for this policy direction. The most significant move in terms of pledged funds to date, however, is the US Government that has created a \$2 billion USD fund for the purchase of Ukrainian-made arms following the passage of the Ukraine aid bill in May 2024.²³

Procurement and the sectoral shifts and transformations in the Ukrainian economy: evidence from the Prozorro public procurement system

According to Ukrainian legislation, public procurement of goods and services worth more than \$3k USD should be carried out through the electronic procurement system, Prozorro, with some exceptions for special cases.²⁴ Prozorro is an online platform²⁵ where state customers announce tenders for the purchase of goods and services, and

¹⁶ Clause 5 of Article 3 of the Law of Ukraine "On Public Procurement" provides a complete list of cases to which this law does not apply. Access mode: [hyperlink](#) to the article.

¹⁷ David L. Stern. 2024. Ukraine races to build weapons at home. Washington Post. <https://www.washingtonpost.com/world/2024/03/20/ukraine-weapons-industry-domestic-production/>

¹⁸ Elsa Note. 2024. Minister: Denmark first to buy military aid for Ukraine from Ukrainian manufacturer. *The Kyiv Independent*. <https://kyivindependent.com/denmark-first-to-buy-weapons-for-ukraine-from-ukrainian-manufacturer-in-deal-worth-28-5-million/>

¹⁹ Jacopo Barigazi, 2024, 'Ukraine wants to use EU money to grow its military-industrial complex', Politico <https://www.politico.eu/article/ukraine-want-use-eu-money-build-up-military-industrial-complex-oleksandr-kamyshin/> (Accessed 21 May 2024).

²⁰ Ibid

²¹ ibid

²² Yulia Svyrydenko, 2024. Report of meeting with Foreign Secretary David Cameron, LinkedIn https://www.linkedin.com/posts/yulia-svyrydenko-0522b745_over-the-past-two-years-of-war-the-united-activity-7169284278365700096-MOHu/?utm_source=share&utm_medium=member_desktop (Accessed 21 May 2024).

²³ Bryant Harris, 2024, 'US announces \$2 billion to help Ukraine make its own weapons', Defense News <https://www.defensenews.com/global/europe/2024/05/16/us-announces-2-billion-to-help-ukraine-make-its-own-weapons/> (Accessed 22 May 2024).

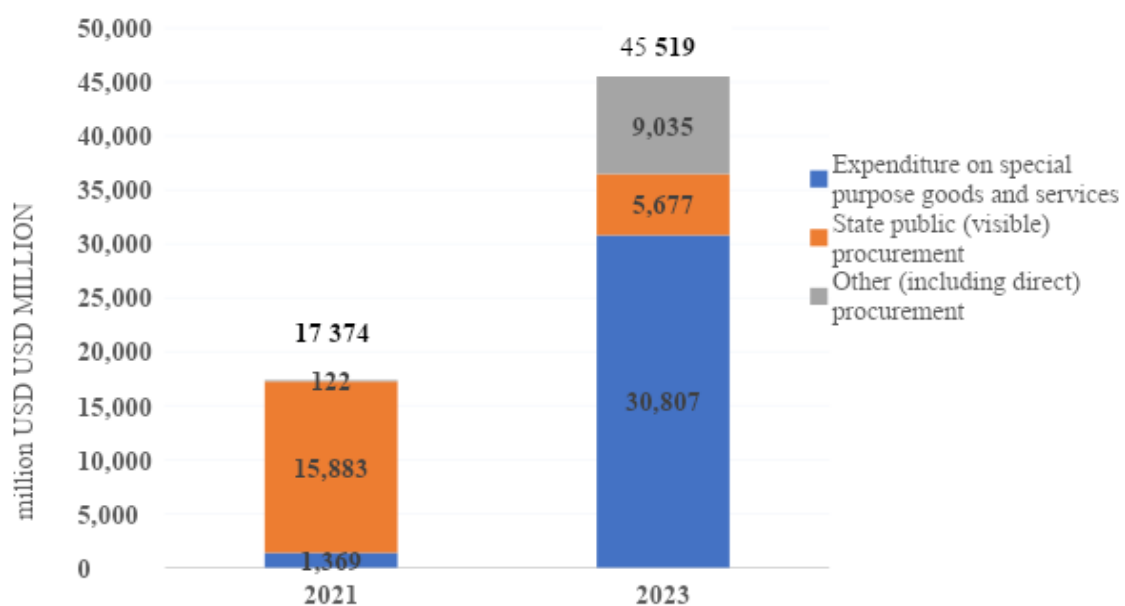
²⁴ Law of Ukraine "On Public Procurement" of 12.04.2016. Access mode: <https://zakon.rada.gov.ua/laws/show/922-19#n823>.

²⁵ Prozorro, Government of Ukraine, nd. <https://prozorro.gov.ua/uk> (Accessed 23 May 2024).

business representatives compete in open bidding.²⁶ There are applications available in Ukraine to analyse public procurement data, the most developed and popular of which is BI Prozorro.²⁷ We used this to analyse state procurement volumes for 2021 and 2023. The data for 2022 is excluded from the analysis as it is incomplete and, therefore, does not reflect the true picture. For example, in the early stages of the war the Ukrainian state allowed public authorities to purchase goods and services under direct contracts with suppliers.²⁸ This primarily concerned urgent procurements, such as food or medicines; repair or reconstruction of infrastructure facilities, etc. Disorganisation in the first months of the war (March-June) and blackouts at the end of 2022 (October-December) physically affected the ability to conduct electronic tenders. As a result, Prozorro held half as many tenders in 2022 as in 2021.

In 2023, after the stabilisation of the energy supply, the state and private business adapted to the new working conditions. Accordingly, the number of tenders through the Prozorro system increased, although direct procurement remained a significant part of state purchases.

Graph 5: State expenditures (consolidated budget) for the purchase of goods and services by type of procurement, USD (millions).



Sources: analysis of public procurement based on data from the [bi.prozorro](https://bi.prozorro.org) system and the Consolidated budget of Ukraine²⁹

²⁶ About the Prozorro system: <https://prozorro.gov.ua/about>

²⁷ Bi Pozorro, nd, <https://bi.prozorro.org> (Accessed 23 May 2024)

²⁸ CMU Resolution No. 169 of 28.02.2022, CMU Resolution No. 1178 of 12.10.2022.

²⁹ Access mode: <https://openbudget.gov.ua/national-budget/expenses?class=economic&view=table>

Using the bi.prozorro analytical module, we obtained all records of completed tenders (lots) for 2021 and 2023. The records were published by key state actors and their subdivisions: Ministries, Agencies, courts, administrations and other institutions recognised by law as spending units.³⁰ The database contains over 450 thousand records for 2021 and over 400 thousand for 2023. The data obtained are presented in the context of ~5.6 thousand commodity codes³¹, which correspond to the Unified Procurement Dictionary and can be summarised in 46 commodity groups.

The volume of state procurement of goods and services via prozorro in 2021 amounted to USD 15.88 billion, or 99% of the consolidated budget expenditures for this purpose (USD 16 billion) (Table 4.2). The difference is due to the fact that a part of these expenditures was spent on procurements below the sub-threshold value (USD 5 thousand per procurement).

In 2023, state procurement via prozorro totalled USD 5.68 billion. This is 2.8 times less than in 2021. How to explain this sharp decrease in the context of the other trends observed in this report towards the development of a state dominated economy? This reduction is explained by the following. In 2021, the President's "Grand Construction" programme was in place, which included the repair and construction of roads. Tenders worth over USD 11.3 billion were held for these purposes in 2021. This was 71% of all state spending at the time. In 2023, spending on road repairs and construction decreased significantly (-USD 7.6 billion), with the majority of the spending on restoration of damaged infrastructure. Also, in 2023, a part of state procurement (some \$9 billion USD) was carried out under direct contracts with suppliers, without using a tender procedure. The figure used in Table 5 ('purchases of non-defence related, i.e., civilian, goods and services') combines Prozorro tender with direct contracts. This distinction between these expenditures is illustrated in Graph 5.

Table 6: Volumes of publicly visible procurement of goods and services made by key spending units and their subdivisions through Prozorro in 2021 and 2023, USD million.

Title.	2021	2023
Volumes of publicly visible procurement of goods and services by budget spending units and their subdivisions through Prozorro	15 883	5 677

Based on the results of the analysis of public procurement databases for 2021 and 2023, a sample of 100 commodity items (goods and services) was formed to identify where the largest increase in state spending occurred. The resulting sample was aggregated into product groups based on the current Unified Procurement Dictionary.

³⁰The database is broken down by key spending units. Access mode: <https://zakon.rada.gov.ua/rada/show/v0011201-11#n44>

³¹ In Ukraine, a separate classifier of goods and services is used for public procurement purposes. Access mode: <https://zakon.rada.gov.ua/rada/show/v1749731-15#Text>

Table 7: Growth in state procurement of goods and services in 2021-2023 by product group, USD million. (based on the results of a sample of 100 commodity items with the largest cost increase)

Section (product group)	Classification of goods and services	2021	2023	Growth 2023 to 2021	
				million USD	%
45000000-7	Construction works and maintenance (except for roads)	219,8	1 029,8	810,0	369
	<i>incl. demand for construction materials (calculation)</i>	<i>154</i>	<i>721</i>	<i>567,0</i>	<i>368</i>
15000000-8	Food, beverages and related products	9,4	793,2	783,8	8338
34000000-7	Vehicles (heavy trucks) and transport equipment	38,2	248,7	210,5	551
09000000-3	Oil products, fuel (diesel), etc.	330,9	530,6	199,7	60
18000000-9	garments, footwear, bags and accessories (including military uniforms)	4,7	96,0	91,3	1943
33000000-0	Medical equipment, medicines, bandages	70,5	153,2	82,7	117
35000000-4	Security, firefighting, police and defence equipment (without military uniforms)	5,1	64,4	59,3	1163
63000000-9	Transport services (ground transport services)	309,1	350,8	41,7	13
41000000-9	Drinking water	0,5	24,8	24,3	4860
71000000-8	Construction services (construction supervision, consultancy)	16,5	39,7	23,2	141
38000000-5	Laboratory, optical and high-precision equipment (except for lenses)	0,1	15,3	15,2	15200
79000000-4	Business services (printing and security)	34,5	49,6	15,1	44
44000000-0	Structures and construction materials; auxiliary construction products and equipment	9,3	23,3	14,0	151
73000000-2	Research services	3,2	14,6	11,4	356
50000000-5	Repair and maintenance services	14,2	25,0	10,8	76
32000000-3	Telecommunication and related equipment and facilities (audio and video recording equipment, network equipment)	11,2	21,9	10,7	96
48000000-8	Software packages and information systems	23,1	31,3	8,2	35
31000000-6	Electrical and lighting equipment (including generators)	4,4	11,3	6,9	157
39000000-2	furniture, household appliances (except lighting equipment): water heaters, disposable catering equipment other	0,7	6,6	5,9	843
72000000-5	Information technology services (systems support)	5,9	11,2	5,3	90
43000000-3	Construction equipment (shovels, excavators, etc.)	0,3	5,1	4,8	1600
30000000-9	Office and computer equipment, equipment and supplies	20,2	23,7	3,5	17
64000000-6	Telephone, data and telecommunications services	12,3	15,4	3,1	25
60000000-8	Transport services: air transport	8,1	11,0	2,9	36
92000000-1	Film production services, etc.	0,6	3,4	2,8	467
75000000-6	Public security and law enforcement services, other	3,2	4,4	1,2	38
	Total	1 155,8	3 604,3	2 448,5	212

Source: analysis of public procurement based on data from the bi.prozorro system

The largest increase in state procurement occurred for the following commodities:

- Construction materials. The state rarely buys construction materials directly, but increased procurement of construction and repair services for recovery/reconstruction purposes indirectly increases demand for construction materials (the share of construction materials in the cost of construction and repair is about 70%).
- food products;
- automotives;
- garments (including uniforms) and footwear;
- medicines and medical devices.

These sectors will form the basis for the analysis developed in the next section investigating the extent to which these procurement contracts benefited foreign or domestic providers of goods and services. We have excluded oil from the above list and following analysis, despite it having also seen large increases (Table 7), because the only Ukrainian oil refinery has not been operational due to periodic missile strikes, and thus demand is covered almost entirely by imports.

There are a large number of manufacturers in Ukraine for most of these selected items (see discussion of 'automotives' below for an important exception). Accordingly, it is reasonable to expect that this increase in the state order book will have an impact on their production volumes.

Before moving to this analysis it is also worth noting that the study identified commodity items for which state procurement increased by a thousand per cent or more (Table 8). As it is unlikely that excess capacity in these sectors was at a scale that they could meet this expansion in state demand, this suggests a potential for investment to significantly scale up domestic production. In this context, further research is needed to investigate whether this has led to the emergence of new SMEs, or the development of domestic production to an internationally competitive level.

Table 8: The list of individual commodity items that showed a significant increase in state procurement volumes in 2023

Product description (group)	Procurement volume in 2023, USD (millions)	Increase (2023/2021), %, %
laboratory equipment (mass spectrometers);	15,3	15 200
medical kits	5,0	4 900
medical needles (cannulas)	3,6	36 000
prosthetic and orthopaedic equipment	3,2	8 000
special rubber footwear	2,2	220 000
generators	7,0	775

**rounded up*

The impact of state orders on the dynamics of output in these industrial sectors

To consider the impact of the state as a customer on domestic production, we will now assess market conditions in those sectors where there was a significant increase in state procurement to get an indication of the extent to which local producers have benefited or importers have gained market share. To analyse this, we calculated the apparent consumption of these goods and the share of Ukrainian production in that consumption in 2021-2023 across the identified industrial sectors.

Construction materials

In the construction materials sector the domestic market has contracted while Ukrainian producers have lost market share to importers.

The volume of apparent consumption of basic construction materials in Ukraine decreased by 56% in 2021-2023, to USD 3.2 billion in 2023 (Table 9 and Graph 6). In the structure of use, the share of domestic producers decreased by 9% (from 86% to 77%), and their production volumes fell by 59%. Imports declined at a slower pace (-29%), resulting in a 1.6-fold increase in their share of demand coverage, from 14% to 23%. So, Ukrainian producers have been losing market share to foreign firms in the domestic market in a situation where overall demand has fallen sharply.

As noted in the foregoing, the closure of the Grand Construction programme with the full-scale invasion led to an overall reduction in state procurement activity for the construction materials sector. This programme had generated significant demand from construction companies for construction materials. It is evident from the data presented in this report that the increase in demand for construction materials from the state in 2022-2023 to begin modest restoration of buildings damaged during the war did not compensate Ukrainian producers for the loss of demand from the Grand Construction programme or the decline in demand from private construction.

Table 9: Volumes and structure of the Ukrainian market of basic construction materials in 2021-2023, USD (millions).

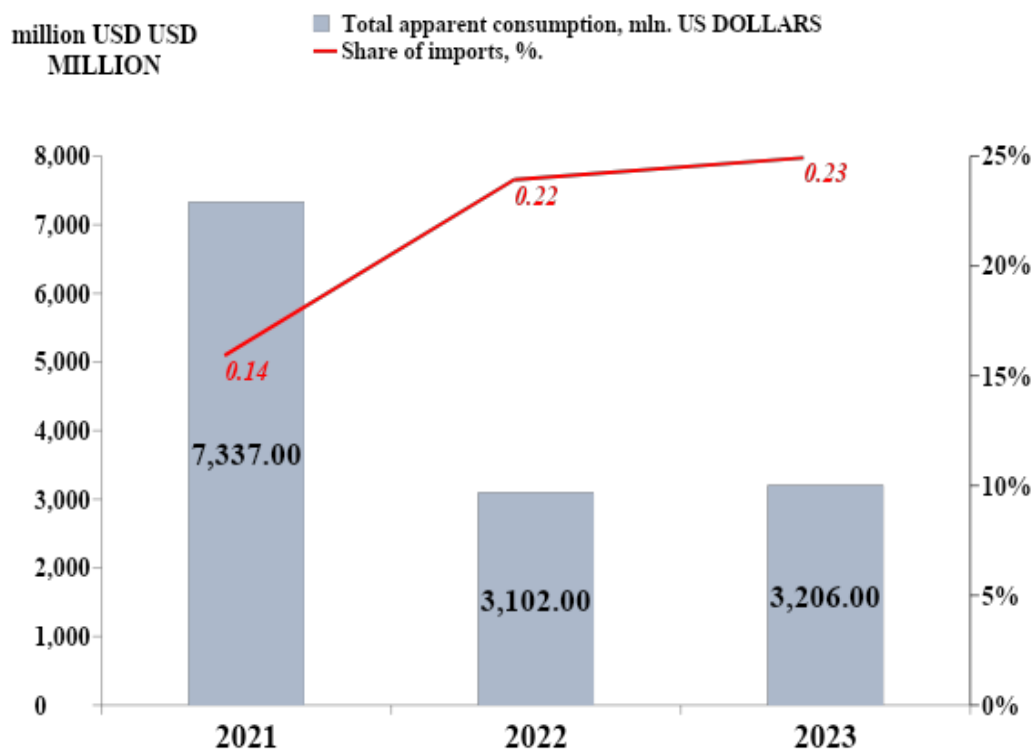
Indicator.	2021	2022	2023	Growth 2023/2021, % , in
Production	6 971	2 825	2 859*	-59
Exports	671	401	393	-41
<i>Share of exports in production, %.</i>	<i>10</i>	<i>14</i>	<i>14</i>	
Imports	1 037	677	740	-29
Volume of apparent consumption	7 337	3 102	3 206	-56
<i>Share of domestic producers in consumption, %.</i>	<i>86</i>	<i>78</i>	<i>77</i>	
<i>Share of imports in consumption, %.</i>	<i>14</i>	<i>22</i>	<i>23</i>	

**Includes the main non-metallic construction materials - cement, concrete, bricks, gas blocks, dry building mixes, glass, ceramic tiles, etc.*

*** - estimate based on data for 9 months. 2023 (latest available data at the time of report preparation)*

Source of information: State Statistics Service of Ukraine, State Customs Service of Ukraine

Graph 6: Dynamics of apparent consumption of basic construction materials in Ukraine in 2021-2023, USD (millions)



Food

The fall in Ukraine's population has led to a decrease in the size of the domestic market for food with exports becoming more important to Ukrainian producers. At the same time, the war has led to a fall in domestic market share for Ukrainian producers (though from a very dominant position).

The volume of apparent food consumption in Ukraine in 2021-2023 decreased by 41%, from 24.7 to 14.7 billion USD/year. USD/year (Table 10 and Graph 7). It is important to note that such a significant reduction in food consumption is largely due to the decline in Ukraine's population as a result of forced emigration and the occupation of part of the territory.

In the structure of demand coverage, the share of domestic producers decreased by 12% (from 77% to 65%), and their production volumes fell by 36%. Ukrainian producers have largely retained their positions in foreign markets, while exports decreased by 15% the share of exports in Ukrainian production rose from 39% to 52%. The significant decline in production (-36%) was mainly the result of a reduction in domestic demand in combination with the broader impact of the war. However, imports declined by only 10% over this period, i.e., a lower rate than domestic production, resulting in a one-and-a-half-fold increase in its share of demand coverage, from 23% to 35%. In 2023, food imports increased by 18% compared to 2022, while domestic production decreased by 11%. In short, imports have played an increased role in covering domestic demand.

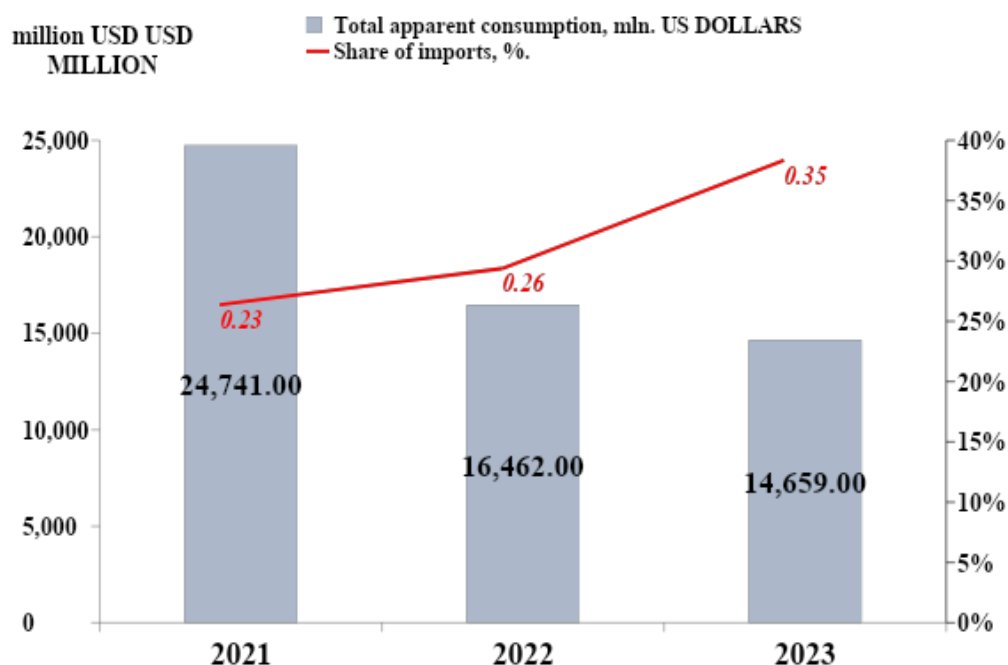
Table 10: Volumes and structure of the Ukrainian market of basic construction materials in 2021-2023, USD (millions).

Indicator.	2021	2022	2023	Growth 2023/2021, % , in
Production	31 328	22 386	19 986*	-36
Exports	12 244	10 249	10 425	-15
Share of exports in production, %.	39	46	52	
Imports	5 657	4 326	5 098	-10
Volume of apparent consumption	24 741	16 462	14 659	-41
Share of domestic producers in consumption, %.	77	74	65	
Share of imports in consumption, %.	23	26	35	

* - estimate based on data for 9 months. 2023 (latest available data at the time of report preparation)

Source: State Statistics Service of Ukraine, State Customs Service of Ukraine

Graph 7: Dynamics of apparent food consumption in Ukraine in 2021-2023, USD (millions).



Automotives

Domestic demand has held up in the course of the war, while imports still dominate.

In the motor vehicle segment, the volume of apparent consumption in 2023 exceeded the pre-war level by 2%, amounting to almost USD 6.0 billion. USD/year (Table 11 and Graph 8). Imports remain dominant in the structure of demand coverage (93% in 2023), while the share of domestic producers remains insignificant (7%).

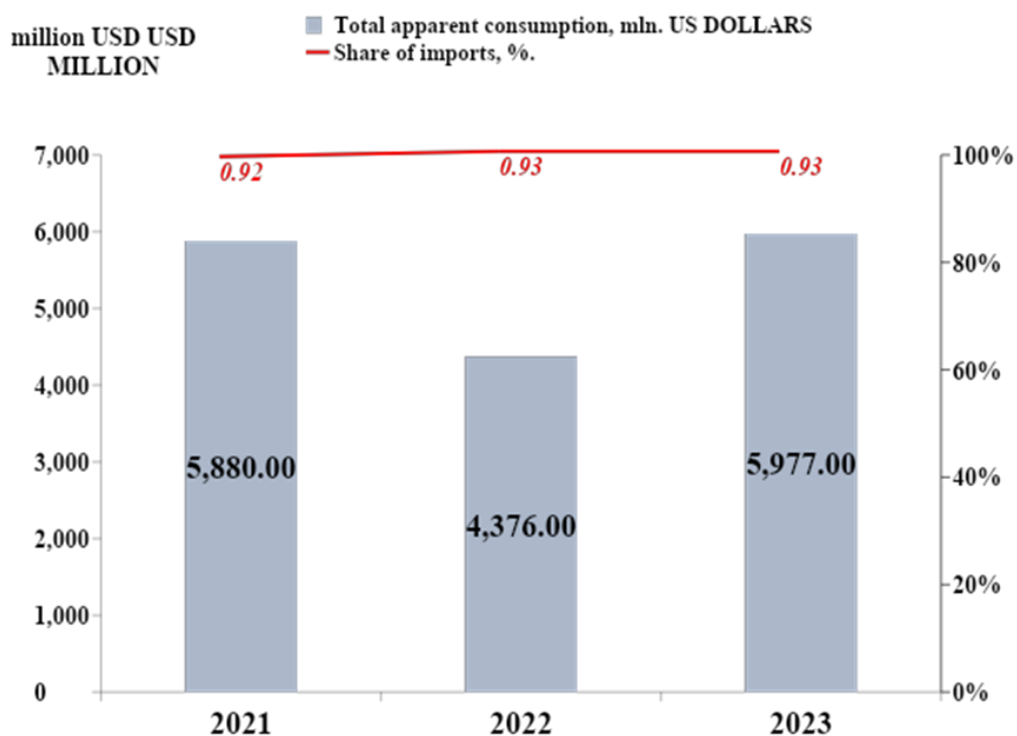
Table 11: Volumes and structure of the Ukrainian motor vehicle market in 2021-2023, USD (millions).

Indicator.	2021	2022	2023	Growth 2023/2021, % , in
Production	514	382	441*	-14
Exports	59	59	39	-33
Share of exports in production, %.	11	15	9	
Imports	5 424	4 054	5 575	3
Volume of apparent consumption	5 880	4 376	5 977	2
Share of domestic producers in consumption, %.	8	7	7	
Share of imports in consumption, %.	92	93	93	

* - estimate based on data for 9 months. 2023 (latest available data at the time of report preparation)

Source of information: State Statistics Service of Ukraine, State Customs Service of Ukraine

Graph 8 - Dynamics of apparent consumption of automotives in Ukraine in 2021-2023, USD (millions).



Garments

Ukrainian producers have lost domestic market share to foreign imports. The overall size of the Ukrainian market has proven relatively resilient in the context of the war and the sharp fall in the size of the Ukrainian population.

The volume of apparent consumption of garments in 2021-2023 decreased by 11% to USD 1.29 billion. USD/year (Table 12 and Graph 9). In the structure of demand coverage, the share of domestic producers decreased by 7% (from 29% to 22%), and their production volumes decreased by 51%. Import volumes in 2021-2023 amounted to USD 1-1.26 billion/year. Its share in demand coverage during this period increased from 71% to 78%.

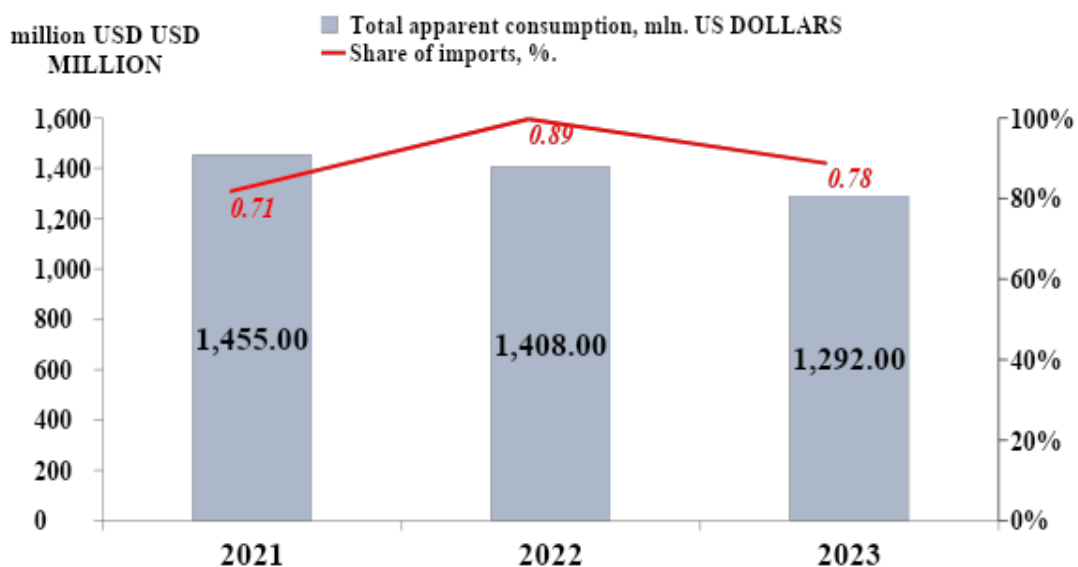
Table 12: Volumes and structure of the Ukrainian garments market in 2021-2023, USD (millions).

Indicator.	2021	2022	2023	Growth 2023 to 2021, %, in
Production	925	587	453*	-51
Exports	500	436	173	-65
Share of exports in production, %.	54	74	38	
Imports	1 030	1 257	1 012	-2
Volume of apparent consumption	1 455	1 408	1 292	-11
Share of domestic producers in consumption, %.	29	11	22	
Share of imports in consumption, %.	71	89	78	

* - estimate based on data for 9 months. 2023 (latest available data at the time of report preparation)

Source of information: State Statistics Service of Ukraine, State Customs Service of Ukraine

Graph 9 - Dynamics of apparent consumption in Ukraine in 2021-2023, USD (millions).



Pharmaceutical products

The Ukrainian pharmaceuticals sector has benefited from the falling value of the Ukrainian Hryvnia to grow its domestic market share, building on its successes of the last decade. While production did fall in 2022, it rebounded rapidly in 2023, exceeding the 2021 level.

The volume of apparent consumption of major pharmaceutical products and drugs in Ukraine in 2021-2023 decreased by 17% to \$3.9 billion USD (Table 13 and Graph 10). In the structure of demand coverage, the share of domestic producers increased by 8% (from 33% to 41%), and their output grew by 3%. Imports declined by 28% over the period, resulting in an 8 percentage point drop in their share of demand coverage, from 67% to 59%.

In 2023, imports of pharmaceutical products increased by 12% compared to 2022, while domestic production increased by a factor of 1.4. This indicates a significant increase in the importance of domestic production in covering domestic demand for pharmaceuticals in 2023. This can be explained by the price difference between domestic and imported products with the devaluation of the Ukrainian Hryvnia in combination with the relative strength and competitiveness of the pharmaceutical sector in Ukraine (at least in contrast to equivalent lower middle income economies). The devaluation led to higher prices for imports, advantaging domestic producers. This dynamic is also part of a longer trend for Ukrainian pharmaceutical companies to use devaluation to pursue import substitution policies, which has been critical to the sector's growth in the last decade.

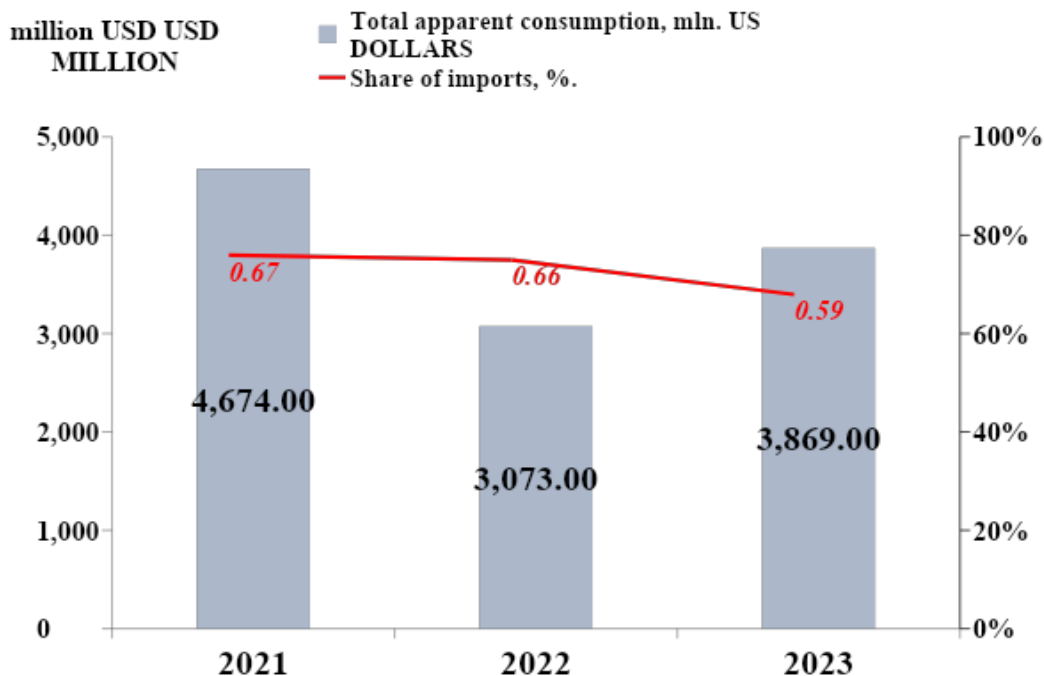
Table 13: Volumes and structure of filling the Ukrainian market of major pharmaceutical products and drugs in 2021-2023, USD (millions).

Indicator.	2021	2022	2023	Growth 2023/2021, % , in
Production	1 857	1 331	1 918	3
Exports	318	288	320	1
Share of exports in production, %.	17	22	17	
Imports	3 134	2 030	2 272	-28
Volume of apparent consumption	4 674	3 073	3 869	-17
Share of domestic producers in consumption, %.	33	34	41	
Share of imports in consumption, %.	67	66	59	

* - estimate based on data for 9 months. 2023 (latest available data at the time of report preparation)

Source of information: State Statistics Service of Ukraine, State Customs Service of Ukraine

Graph 10 - Dynamics of apparent consumption of major pharmaceutical products and drugs in Ukraine in 2021-2023, USD (millions).



Overall assessment

The results of the above analysis of the volumes and origin of goods in the Ukrainian market indicate a general decrease in domestic consumption of these goods in 2021-2023 and a growing reliance on imports to meet domestic demand (with the exception of pharmaceutical products). In Table 14, we calculate the proportion of private demand which was compensated for by an increase in state procurement in each sectoral group. According to these calculations, only in the motor vehicle sector was the increase in state demand large enough to compensate for the decline in private demand. However, while the state did not compensate for the decline in private demand in food, garments and pharmaceuticals, it did play an important mitigation role in each. Automotives is a sector where imports dominate (with a share of 93%). So, in this case the state has increased consumption of imported cars.

The construction materials sector requires special attention because the results may appear counterintuitive in the context of the wider discussion around Ukraine's recovery and reconstruction. In 2021-2023, the state significantly increased their use for the restoration and reconstruction of damaged buildings (+\$567 million), but significantly reduced their consumption for road construction (-\$2.08 billion). Accordingly, the total balance of apparent consumption of construction materials by the state during this period was negative (-1.52 billion USD). The broader results indicate the challenge Ukraine's state faces in mobilising to offset falling private demand:

- In food an increase in visible state procurement (+\$784 million) offset only 7% drop.
- In garments an increase in visible state procurement (+USD 91 million) offset more than a third of the drop in private demand (36%).

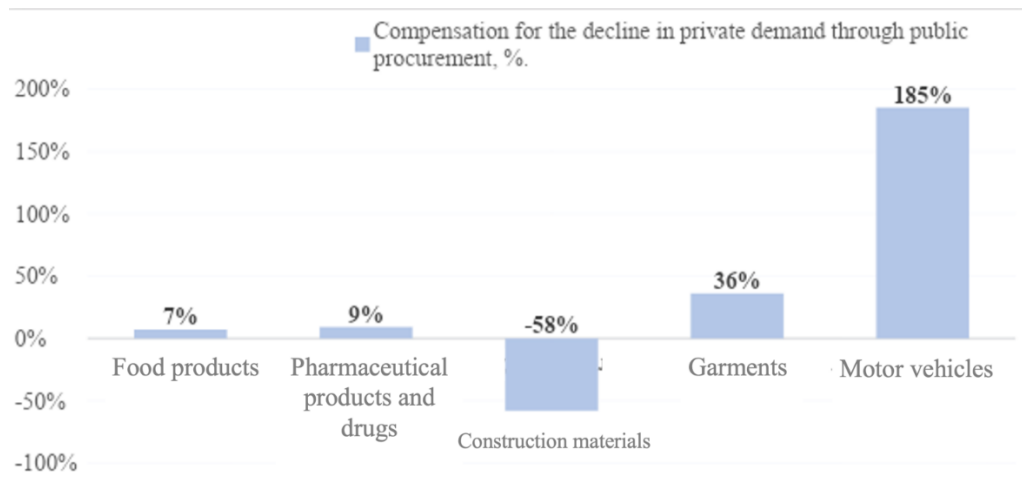
- In pharmaceuticals an increase in visible state procurement (+USD 83 million) offset only 9% of the drop in private demand.

It is important to add that the above figures for consumption in the selected groups of goods should be considered as minimum. In reality, they may be higher, because we have analysed contracts awarded through Prozorro public tenures. This excludes purchases made under direct contracts. At the same time, the latter purchases were primarily made to cover urgent needs in emergency situations arising from the war. These emergency cases included, for example, items necessary for the restoration of destroyed energy and transport infrastructure (transformers, switches, cables, generators, bridges, etc.). Accordingly, the bulk of the \$9 billion USD in expenditures was spent on the purchase of goods and services other than those of the groups under study, with the exception of construction materials. On the latter, it should be noted that spending on roads, bridges and transport infrastructure is a stated short-term priority of the Agency for Restoration and Recovery of Ukraine, owing to their importance for exports, and wider economic resilience. However, for now, there is no precise data for us to be able to say assuredly what proportion of the \$9bn figure which went on non-tenured 'direct purchases' was spent in the construction materials sector via these programmes.

Table 14: The share of private demand that was compensated for by visible state procurement by product group, USD (million).

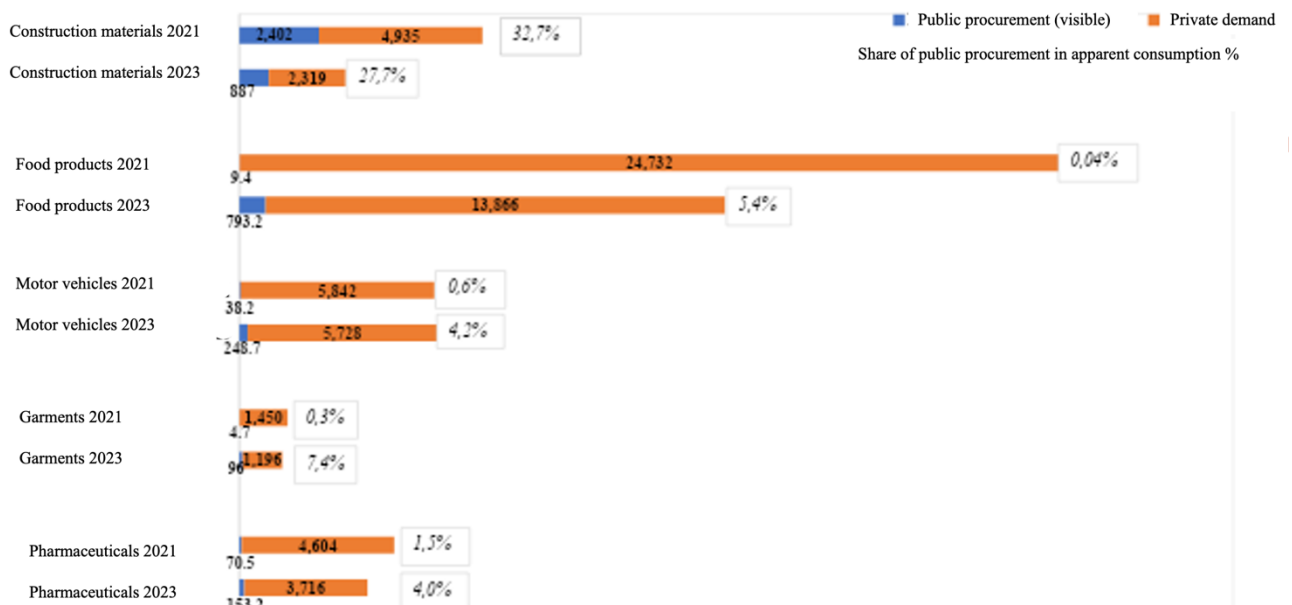
Indicator by market	2021	2023	Growth 2023/2021
Construction materials			
Apparent consumption	7 337	3 206	-4 131
Volume of state procurement (visible), excluding roads	154	721	567
Volume of state procurement (visible) for road construction	2 248	166	-2 082
Total state procurement of construction materials (visible)	2 402	887	-1 515
<i>Share of fall in private demand offset by increase in visible state procurement, %.</i>			-58%
Food			
Apparent consumption	24 741	14 659	-10 082
Volume of state procurement (visible)	9,4	793,2	783,8
<i>Share of the decline in private demand compensated by the state, %.</i>			7%
Automotives			
Apparent consumption	5 880	5 977	97
Volume of state procurement (visible)	38,2	248,7	210,5
<i>Share of the decline in private demand compensated by the state, %.</i>			185%
Garments			
Apparent consumption	1 455	1 292	-163
Volume of state procurement (visible)	4,7	96,0	91,3
<i>Share of the decline in private demand compensated by the state, %.</i>			36%
Pharmaceutical products and drugs			
Apparent consumption	4 674	3 869	-805
Volume of state procurement (visible)	70,5	153,2	82,7
<i>Share of the decline in private demand compensated by the state, %.</i>			9%

Graph 11: Share of decline in private demand offset by growth in visible state procurement of certain goods, %.



Graph 12 shows the change in the state's share of domestic consumption of the goods under study in 2021 and 23. The state increased its presence in all sectors, most notably in food (from 0.04% to 5.4%) and garments (from 0.3% to 7.4%) with the exception of the construction materials sector (in total i.e., including roads) where it reduced from 32.7% to 27.7%. We can note significant structural changes in the formation of the domestic market for certain goods. The state has substantially strengthened its role as a participant of the food, garments, automotives, and pharmaceutical markets, but this role still remains small in relation to the scale of private sector consumption.

Graph 12: The importance of state procurement in domestic consumption of the goods under study in 2021 and 2023.



Section 3: Surveying businesses in the construction materials, food, garments, pharmaceuticals and medical devices, and motor vehicle sectors

Drawing on the procurement data to inform a business survey

The above analysis allows us to draw a number of preliminary conclusions about the role of the state in the procurement of goods and services in 2021-2023. The state expenditures (from the consolidated budget) for the purchase of goods and services and capital expenditures increased by 2.2 times in 2021-2023 (to USD 54 billion in 2023), and the share of the state in the formation of aggregate demand in the country increased from 12% to 25%. If purchase of goods and services is considered alone (without capital expenditures), the majority of state spending was directed to defence needs such as weapons and ammunition (22% increase to 30.8 billion/year) while the volume of purchases of civilian goods and services decreased by 8% to USD 14.7 billion. In view of the above, for the next and final stage of the research project we undertook a business to investigate at the micro level how business decisions were interacting with these macro-level dynamics. Our business survey of companies and business associations focused on the five different sectors where the analysis in Section 1 (see Table 7) showed growth in procurement activity. We developed two research questions on the basis of the analysis presented above:

1. To what extent has the state mitigated or compensated for the decline in private demand in these civilian sectors, as observed at the micro level by these Ukrainian businesses?
2. How important have state purchases become in the order book of these companies and how does this compare to their private sector business?

For generating the survey we put together a list of 41 potential research subjects of which 31 responded to our requests for interviews. A detailed breakdown of our methodology and the profile of the interview subjects can be found in Appendix 1. Table 15 gives an outline of the sectoral profiles and response rate.

The questions we posed to the businesses and associations were as follows:

1. Does your order book include state purchases?
2. Who is the customer (from what level do you usually receive such orders)?
3. Can you estimate the proportion (percentage) of such orders in your total sales?
4. Have these orders changed since the start of the full-scale war in 2022?
5. Did such purchases affect production and employment levels at your company?
6. How important are state procurements for the economic stability of your company?

A sample survey questionnaire can be found in Appendix 2.

The survey was conducted in the second half of March and early April 2024. The timing of the survey and the number of completed questionnaires were affected by the security situation. For example, Stolichnyi Mlyn LLC (a flour producer), which was on the list of potential respondents, suffered a missile attack at the end of March 2024. As a result, the participant was not able to take part in the survey.

Table 15: Number of completed questionnaires by product group surveyed.

Product group/ (type of product)	Number of participants invited to the survey		Number of effective responses	
	Businesses	Associations	Businesses	Associations
Construction materials	15	3	12	3
Windows.	1	1	1	1
Lumber and wood-based panels	2		2	
Cement	2	1	1	1
Concrete and concrete products	3		1	
Brick	1		1	
Gas units	0	1	0	1
Fittings	1		1	
Ceramic tiles	1		1	
Construction mixtures	1		1	
Minvata	1		1	
Roofing materials (ondulin, metal tiles, slate, etc.)	2		2	
Food	8	3	8	
Processed and preserved fruit	1		1	
Disposable tableware*.			1	
Meat products: canned meat, dried and freeze-dried meat	1	1	1	
Bakery products: bread, biscuits, biscuits	1	1	3	
Cereals and pasta	2	1	1	
Dairy products: hard cheese, processed cheese	1		1	
Automotives	3	1	1	1
Passenger cars and light-duty (commercial) trucks	2	1	1	1
Trucks	1			
Garments (including military uniforms / footwear)	4	1	3	1
Medicines and medical devices	3		2	
Total	41	8	26	5

**Included in the survey due to the growing demand for dry rations*

Source: results of the survey conducted by the State Enterprise Ukrpromvnesheptiza

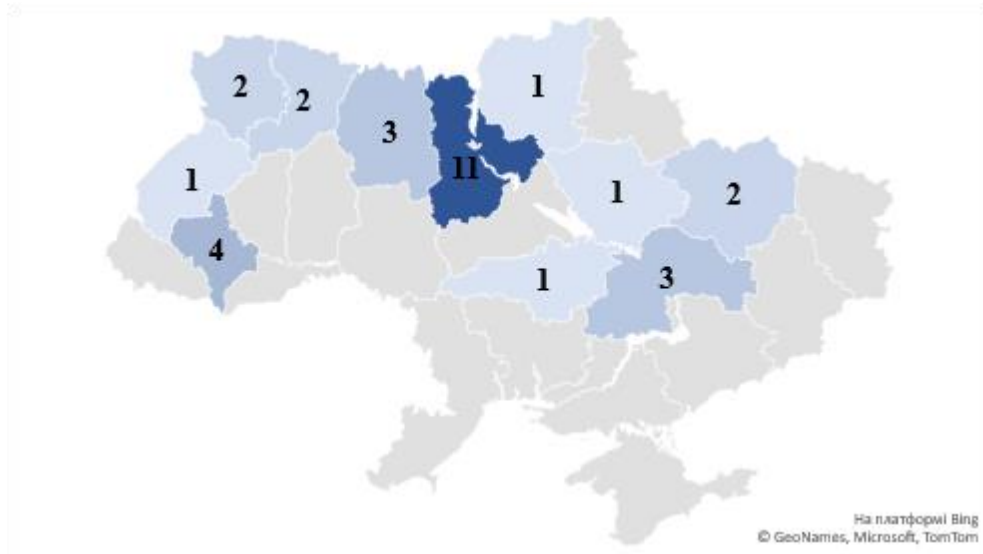
The total number of completed questionnaires was 31, including 5 responses from representatives of associations (Table 15). Map 1 illustrates the location of the participants who took part in the survey. The geography of receiving the resultant questionnaires, which is presented in Fig. 2.1, covers 11 oblasts.

The largest number of survey respondents are based in Kyiv and the region, in particular, where 5 associations have their headquarters. Among the respondents, there are producers operating near the frontline - in the cities of Kharkiv, Dnipro, Kryvyi Rih, etc. The interviews were conducted on a confidential basis. Accordingly, the results of the survey are disclosed below only in terms of the 5 product groups studied. While Appendix 1 contains a discussion of the survey respondents with some discussion of the market profile for each sector, we would note here that particular caution should be exercised regarding the automotive sector responses. In this case, there were only 4 potential survey participants (including 1 association). The sector has experienced long-term decline as part of Ukraine's sustained pattern of deindustrialisation³² and some of

³² Brian Milakovsky, 2024. 'Reindustrialization as a Key Element of Ukraine's Recovery (PeaceRep Ukraine Policy Brief)', Conflict and Civiness Research Group, London School of Economics and Political Science.

the last remaining firms have reorientated to the military industrial complex, making the work security sensitive and not part of this particular study.

Map 1: Geographical location of survey participants



Summary of survey results

The results of the survey are presented below.

1. Does your order book include state purchases?

Most of the survey participants (71% or 22 out of 31 participants) confirmed the presence of state procurement in their sales (see Table 16). The majority of the participants (73% or 16 out of 22) who reported having state orders say that the state purchases from them directly. The other 27% of respondents (6 out of 22) said that the state does not purchase construction materials directly, but their clients are various construction companies and general contractors that have won state procurement contracts.

Table 16: Number of completed questionnaires by product group surveyed.

Economic sector	No. of respondents	Answered 'Yes'	% 'Yes'	If 'yes' is it direct or indirect state procurement?	
				Direct	Indirect
Automotives	2	1	50%	1	
Construction materials (direct and indirect)	15	10	67%	4	6
Medicines and medical devices	2	2	100%	2	
Garments (including military uniforms)	4	3	75%	3	
Food	8	6	75%	6	
Total	31	22	71%	16	6

2. Who is the customer, i.e., from what level of government do you usually receive such orders?

The survey showed that state **orders can come from different levels**: national, regional, and local. However, the most frequently mentioned level was the national level (Table 17). The level from which state procurement comes also depends on the type of goods. For example, the procurement of automotives is carried out exclusively at the national level: customers are specialised ministries (e.g. the Ministry of Internal Affairs and its subdivisions).

Construction materials are purchased both at the national and local levels. However, since the beginning of the war, most orders have come from the national level, and are largely dependent on demand from the Agency for the Restoration and Development of Infrastructure of Ukraine. The respondents in this group also noted that before the war, the share of local state procurement in the total volume of state procurement was higher. This reflects the reorientation of the state budget from road construction to defence and reconstruction, as described in Section I of the report.

Respondents from the Medicines and Medical Devices and garments and Footwear product groups reported that they receive orders from different levels, but the vast majority of them are from the national level. In the food segment, orders most often come from the regional and local levels.

Table 17 shows the most typical answers of the survey participants regarding the level from which state procurement comes.

Table 17: "Who is the customer i.e., from what level of government do you usually receive such orders?"

Economic sector	Level of government / number of affirmative answers		
	National	Regional	Local
Automotives	National		
Construction materials	National		
			Local
Medicines and medical devices	National	Regional	
	National	Regional	Local
Garments (including military uniforms)	National		
	National	Regional	Local
Food	National	Regional	Local
	National	Regional	
		Regional	Local
	National		
		Regional	

It should be noted that the survey participants repeatedly complained about the overregulation and complexity of tender procedures. As a result, companies prefer other customers, such as international funds, if such a choice exists.

This is most relevant for the construction industry. Survey respondents note that there are a number of disadvantages to participating in and winning state tenders:

- To understand all the tender procedures, it is necessary to train staff separately. In other words, without knowledge of all the specifics of tender procedures, victory is unlikely.
- To become a tenderer, you need to obtain a bank guarantee. This is a paid service.
- The vast majority of tenders are announced on a post-payment basis. Some tenders, especially for large construction orders, specify that payment will be received only 90 days after the completion and acceptance of the work. As construction work can take a long time, the successful bidder must be prepared to finance all stages of the order on its own. This affects the company's working capital and increases the risk of unprofitability of such orders.
- Selling products with imported components through tender procedures can reduce a manufacturer's working capital. For example, Ukraine has no domestic production of glass for windows. Accordingly, the winner of the tender imports glass at their own expense. Prepayment for a state order may be delayed: for example, a tender is announced at the beginning of the year, and the prepayment is received in the second half of the year. In this case, the manufacturer is actually lending to the state. Prolonged freezing of working capital leads to a reduction in production. Therefore, window manufacturers are not interested in state orders. Instead, participation in tenders from

international funds with different payment terms and requirements is more attractive to them.

3. Can you estimate the proportion (percentage) of state orders in total sales?

The share of state orders in sales varies considerably by product group and by respondent

Almost a third of respondents (9 out of 31, or 29%) said they had no state orders in their sales (Figure 3.1). For one third of respondents (11 out of 31, or 35%), the share of state orders does not exceed 5% of sales. Only one survey participant has a 40% share of state orders in sales. For other survey respondents (10 out of 31, or 32%), the share of state orders is in the range of 5-18% (see Graph 13).

Graph 13: Breakdown of survey participants' answers by the share of state orders in sales, units

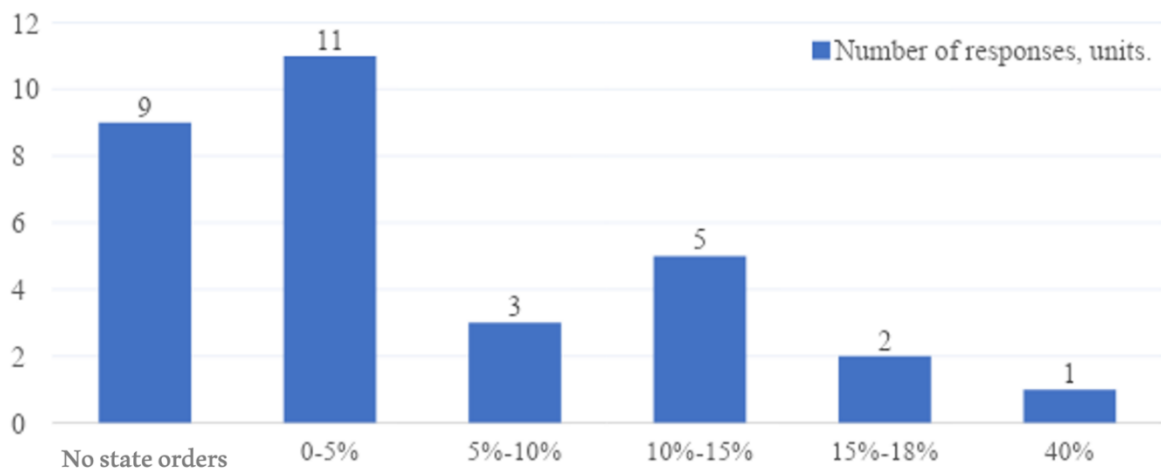


Table 18 shows the share of state procurement by product group. The share of state procurement is given in the form of a range of values: from the minimum to the maximum for the group. One survey participant from the garments and footwear group reported the largest share of state orders in sales among other respondents - 40%. State procurement is also important for the group of goods "medicines and medical devices". In this group the state is said to purchase about 12% to 18% of products.

Table 18: Share of state procurement in sales (range) by sectoral respondent group, %.

Economic sector	Range
Automotives	2%
Construction materials	1%-15%
Medicines and medical devices	12-18%
Garments (including military uniforms)	1-40%
Food	3-18%

4. Have there been any changes in state procurement since the start of the full-scale war in 2022?

Respondents who have state contracts had different answers to the question about changes in such orders since the beginning of the war. In particular, the overwhelming majority of such respondents (73% or 16 out of 22) confirmed that there have been changes. The remaining 27% (6 out of 22) did not notice any changes (Table 19). Among the survey respondents who reported changes in state procurement, the majority assessed the changes as favourable (81% or 13 out of 16), meaning that the state started to buy more of their products. The rest of the respondents (19% or 3 out of 16) noted a drop in the volume of state procurement and, accordingly, reported negative changes, see Table 19.

Table 19: "Have there been any changes in such orders since the beginning of the full-scale war in 2022?"

Economic sector	No. of respondents	'Yes we had existing state orders'	Of those that answered 'yes', have they seen growth, decline or no change in orders?		
			Growth in orders	Reduction of orders	No change
Automotives	2	1		1	
Construction materials	15	10	4	2	4
Medicines and medical devices	2	2	2		
Garments (including military uniforms)	4	3	2		1
Food	8	6	5		1
Total	31	22	13	3	6

Survey participants from different groups described changes in state procurement in different ways. In particular, favourable changes were characterised by the following answers:

- A survey participant from the garments and footwear group reported an increase in the share of state orders in sales from 20% to 40%;
- Some of the construction materials producers received direct orders from the state for the first time in the second half of 2022;
- One of the pharmaceutical manufacturers reported a 20%-30% increase in state procurement;
- State procurement increased by 17% and 40% for certain food producers.

Survey participants who reported negative changes said the following:

- Among the "automotives" sector responses, before the war, the state formed 5% of orders, with the outbreak of the war this volume decreased to 2%.
- Cement producers reported a reduction in state procurement. Before the war, the Grand Construction programme accounted for 5-7% of sales, but with the outbreak of war, this share dropped to 1-2%.

Importantly, it should be added that all survey participants noted a decline in private demand. At the same time, most of them stressed that they were not relying only on state orders, but were making efforts to restore and grow their private sales volumes.

5. Did such purchases affect the output and jobs at your company?

The survey results showed that state orders have a favourable impact on the performance of enterprises. Although they are not decisive, such orders are important for the survival of producers (Table 3.5).

Half of the respondents who have state orders (50%, or 11 out of 22) believe that state procurement has increased their output, primarily pharmaceutical and food producers. Some food producers, due to the growth of state orders, noted an increased need for new employees and the purchase of additional trucks for the transportation of bakery products.

The other half of the respondents who have state orders (50%, or 11 out of 22) believe that they do not have a significant impact on their company's operations. They attributed this to a significant drop in private demand, as well as a small share of state procurement in the sales portfolio.

At the same time, the majority of survey respondents (15 out of 22) reported that state orders played a special role in the second half of 2022 and helped companies to remain operational.

Table 20: "Did such procurement affect the output and jobs at your company?"

Economic sector	No. of respondents	Total active in state procurement market	'Yes, it impacted output and jobs'	'No, it has not impacted output and jobs'
Automotives	2	1		1
Construction materials	15	10	3	7
Medicines and medical devices	2	2	2	
Garments (including military uniforms)	4	3	2	1
Food	8	6	4	2
Total	31	22	11	11

6. How important are state procurements for the economic stability of your company?

The majority of survey respondents (73% or 16 out of 22) who have state orders consider them important (Table 21). Despite the small volume of purchases, such orders allowed them to maintain production volumes and had a positive impact on equipment utilisation. The majority of respondents also emphasised that such orders were critical for the survival of their companies in 2022.

The remaining 27% of respondents (or 6 out of 22) who have state orders currently consider them unimportant due to the small percentage of such orders in total sales.

Table 21: "How important are state procurements for the economic stability of your company?"

Economic sector	No. of respondents	Total active in state procurement market	'Yes, important'	'No, not important'
Automotives	2	1	1	
Construction materials	15	10	7	3
Medicines and medical devices	2	2	2	
Garments (including military uniforms)	4	3	2	1
Food	8	6	4	2
Total	31	22	16	6

** only bidders that have received state orders*

Domestic sectoral dynamics in the growth markets for state procurement: what do the survey responses tell us about micro level business-state relations in the Ukrainian war-economy?

Below is a separate description of the survey results by surveyed groups, as they characterise the state's influence on order volumes in different ways.

Automotives. Half (50%) of the respondents reported the presence of state orders in their total sales. They are characterised by the national level of state orders. The share of such orders in the sales portfolio is insignificant and amounts to 2%. Since the beginning of the war, the volume of state orders has fallen from 5% to 2%. This group is characterised by the weakness of domestic producers and their very low share of the local market, around 7%.

Construction materials. The majority (67%) of respondents have state orders in their sales (direct and indirect through the state purchase of construction services), which come mainly from the national level. The share of state orders in their order book ranges from 1% to 15%, and depends on the type of construction material. The majority of respondents (60%) reported changes in state procurement since the beginning of the war, with 40% reporting favourable changes and 20% reporting a decrease in orders. The majority of respondents in this sector consider state orders to be important for the smooth operation of their businesses during the war.

Medicines and medical devices. All surveyed respondents (100%) have state orders in their sales. Most state orders come from the national level. The share of state orders in total sales for the group is 12-18%, and is the highest compared to other groups. State orders have increased since the start of the war. These respondents consider the availability of state orders an important factor in their operations.

Garments. The majority (75%) of respondents have state orders in their sales, and they mainly come from the national level. The share of state orders in sales varies considerably (from 1% to 40%). Most of the group members confirm the importance of state orders and point to their growth since the beginning of the war. One of the survey participants noted an increase in the share of state orders from 20% to 40% of sales. The role of the state in the sector has increased.

Food. The majority (75%) of the group's respondents have state orders in their sales, which mainly come from the regional level. The share of such orders ranges from 3% to 18% and depends on the type of product. The majority of the Group's respondents noted favourable changes in state procurement since 2022. Different manufacturers reported an increase in state orders ranging from +17% to +40%. State procurement is seen as important by the majority of the group's respondents. The role of the state in the sector has increased.

Overall analysis of sectoral dynamics: the state emerges as a significant but not decisive purchaser

At the beginning of section 3, we posed the following questions (a) to what extent has the state mitigated or compensated for the fall in private sector demand; and (b) how important have state orders become to the order book of firms in the five sectors under study. The automobile sector is an outlier in the study as it has been at the sharp end of the long and sustained period of deindustrialisation (long prior to the years under study in this report, 2021 - 2023) that Ukraine has experienced with few remaining Ukrainian operators, while those that still exist have increasingly reorientated away from the civilian towards the defence sector (putting them outside the scope of this report).

Given the dominance of imports in the Ukrainian market, it would be imprudent to draw broader conclusions from the research subjects in the automobile sector that contributed to the survey. For the other sectors we can however say the following:

1. **State procurement has provided a lifeline but has not fully compensated for falling economic demand from the private sector.** In food, garments, medicines and construction we found that the state, despite a significant increase in the procurement of goods and services, mitigated but did not compensate for the decline in private demand in the Ukrainian civilian sectors. This illustrates the underlying fragility and vulnerability to shocks of the Ukrainians private sector and the limited fiscal capacity of the state to really drive forward demand in the civilian economy.
2. **Ukrainian firms in these sectors are still primarily responsive to shifts in market conditions, placing a clear limitation on the degree of 'state dominance' of the Ukrainian economy.** In food, garments, medicines and construction we found that the state's influence on the order book of Ukrainian producers of these firms remains less significant than their private sector business but not unimportant to their economic viability. Most of the respondents who had received state procurement orders (73% or 16 out of 22) considered them important with 10 of them considering it very important. Some 35% (11 out of 31) also considered state procurement to be meaningful for firms' economic performance and employment. At the same time, no firm reported that the majority of its order book volume had close to a majority of state orders. Only in the garment sector did the range of state purchases of order book volumes exceed 18% at the top end.

These findings bring nuance to the wider macroeconomic picture and the extent to which the Ukrainian war economy has become state dominated or dependent. It suggests that the Ukrainian economy perhaps should be considered a 'state-led' rather than dominated or dependent war economy. The state has sharply increased its role in supporting aggregate demand but the economy does not resemble the kind of centralised economic system associated, for example, with the allies in World War 2. Indeed, it is worth emphasising that these five sectors were selected because they were major growth areas for state procurement, but at this micro level firms report state orders as largely mitigating, not compensating, falling private demand. An uncertainty within this analysis, however, is how the militarisation of the Ukrainian economy and the shift from the civilian to defence procurement spending has driven adaptations by the private sector (for example, re-orientating from civilian to dual-use goods. With the exception of growth in military uniform and footwear demand in the garment sector our survey did not investigate these dynamics, and the firms that we spoke to were not reorienting to defence production. For the most part our findings appear to show that the civilian economy is being 'squeezed' by the refocusing of state procurement on the defence sector, rather than adapting to and reorienting around militarisation.

Conclusion and recommendations: how to calibrate Ukraine's state-led market economy to support underlying resilience in the war?

We can identify the following findings from the data.

Between 2021 and 2023 Ukraine transitioned to a state dominated war-economy but in a peculiar form. It is not autarchic but highly open to external markets and dependent on inward financial flows from its allies and donors. Macroeconomic analysis shows a large-scale increase in the state's presence in the goods and services market. The state's share in the formation of aggregate domestic demand increased from 10.5% to 26.8%, including in the purchase of goods and services from 9% to 21%.

The state has become a significant purchaser in a number of sectors and has considerable 'buyers power', especially in the context of the fall in private sector demand in the course of the war. The state increased the volume of purchases of goods and services from USD 17.4 billion in 2021 to USD 45.4 billion in 2023. This was driven by an increase in spending on defence-related goods and services ('special purchase') from \$1.4 billion USD to \$30.8 billion USD per year. The purchase of civilian goods and services slightly decreased from \$16 billion USD to \$14.7 billion USD per year (recall also that this is the nominal figure i.e., *not* inflation adjusted). A major factor in this decrease is the re-allocation of planned civilian infrastructure expenditure (the 'Grand Construction' programme that was closed in 2022) towards military and security needs. The rise of the Ukrainian procurement state is therefore much more developed in the defence than in the civilian sector. However, it is not possible to analyse defence using the methodology of the present paper due to state secrecy laws.

Between 2021 to 2023 we observe significant growth in state procurement of construction materials (excluding roads), medicines and medical devices, garments and automotives. An analysis of state procurement in the Prozorro system shows that the volume of procurement of these 5 groups of goods increased the most: construction materials (indirect procurement through state procurement of construction services, excluding roads), food, vehicles, garments and footwear, medicines and medical equipment. The rise in purchases of these goods reflect the needs of the administrative state through the course of the war. With the exception of medicines, the growth in purchases in these product groups was large. For example, for food, it was +8338%, up to \$793 million USD in 2023. We also identified commodity items for which state procurement increased by a thousand percent or more. These indicate product lines where the intervention of the state as a customer makes it possible to scale up domestic production, potentially significantly.

Construction materials is an outlier in the study as it shows an overall decrease from 2021 to 2023 in terms of the state's share of domestic consumption of goods. With the perhaps surprising exception of construction materials, 2023 has seen a significant increase in the role of the state in the domestic markets of the goods under study. For example, in the garments market, the share of the state as a buyer increased from 0.3% in 2021 to 7.4% in 2023, and in the food market from 0.04% to 5.4%. In the market for construction materials, the state's share actually decreased from 32.7% to 27.7% (Graph 12), even though the size of the market itself fell by more than half (Graph 6). This is due to the suspension of the Grand Construction road building programme in 2021 and the limited reconstruction programme to date. As noted in Section 2 it is also possible that this may reflect the evidence base that is publicly available. We used the visible procurement taking place on the Prozorro platform and not direct purchases (some \$9 billion USD in 2023). However, we do not know have access to the data on direct purchases that would allow us to ascertain whether and to what extent this impacted our findings. Still, overall, the data provides a clear indication – ahead of the

Ukraine Recovery Conference in Berlin – that the enormous challenge of rebuilding the Ukrainian economy and critical infrastructure has hardly begun, and the focus of the state remains resolutely on the goal of winning the war. Policymakers will need to be alert to this reality which reflects the on-going risks to infrastructure, housing, roads and bridges from the Russian war-machine.

The data is consistent with what we would expect from an economy that contracted so sharply in 2022 and shows the state has largely not compensated for falling demand. Despite the growing role of the state, the apparent consumption of the surveyed goods in the domestic market in dollar terms decreased between from 2021 to 2023 for all groups except automotives. The largest decrease was in the group of basic construction materials (-56%) and food (-41%), which was in both cases driven by the ‘demand crisis’ in the Ukrainian economy i.e., contraction in private demand. This is consistent with the GDP growth data. Our research shows that state procurement did not compensate for the decline in private demand in all sectors apart from automotives (where it benefited importers due to the weakness of the Ukrainian sector).

Ukrainian producers are losing domestic market share to international competitors that are not operating in conditions of war. This unequal competition (the lack of a ‘level playing field’) is still getting insufficient attention among policy-makers. The research report shows the growing share of imports in covering domestic demand for all product groups, except for medicines. This applies, in particular, to those goods with well-developed production in Ukraine. For example, in the construction materials sector, the share of imports increased from 14% to 23% and in the food sector it did so from 23% to 35%. The loss of market share for these internationally competitive sectors is concerning for Ukraine and an illustration of how its relatively open economy (especially to the European Union through the Association Agreement) is poorly suited to wartime conditions. These open market economy conditions are poorly calibrated to a situation where Ukrainian firms are not operating on a ‘level playing field’ with their European competitors, providing the latter with an asymmetric advantage domestically. In light of the attention given to the protectionist political activism of Polish farmers over grain imports from Ukraine, the loss of domestic market share for Ukrainian food producers at home has been badly overlooked.

In the markets that we surveyed (excluding automotives) the state has emerged as an important customer. According to the survey results, the majority of research subjects (71%, or 22 out of 31 participants) confirmed the presence of state procurement in their sales (or the reports of members of the business association). State orders may come from different levels: national, regional, and local. The national level was the most frequently mentioned by the survey participants. At the same time, survey participants noted the overregulation and complexity of tender procedures. As a result, companies express a preference for other customers, such as international funds, if such a choice exists. However, the share of state orders in sales varies considerably by respondent and sector. For one third of respondents (11 out of 31, or 35%), the share of state orders does not exceed 5% of sales. For another 10 respondents (32%), the share of state orders is 5-18%. The largest discrepancy is observed in the garments and footwear group. In particular, one participant in this group has a share of 40%, while another has a share of 1-2%. This illustrates some of the unevenness at the micro level in how the state is interacting with markets.

The picture for state generated demand at the micro level is consistent with macro-level analysis of the state’s fiscal constraints. The vast majority of respondents who have state orders (73% or 16 out of 22) reported that they had seen changes in these orders between 2021 and 2023. The majority of respondents (81% or 13 out of 16) described them as favourable, meaning that the state started to buy more of their products. The remaining respondents however (19% or 3 out of 16) noted a drop in state procurement. These are, in particular, manufacturers of construction

materials and automotives. These reports are consistent with the analysis of macro-level trends insofar as they convey a picture of a state that is experiencing high level of demands for spending on both the war effort and to support markets that are contracting sharply, but lacks the fiscal capacity to do on a scale that would be sufficient to compensate the fall in private sector demand. Indeed, all survey respondents noted a decline in private demand that was not offset by state procurement. Most of them are not relying solely on state orders, but are making efforts to restore their private sector based business. Within this context state procurement still has a favourable impact on the operations of enterprises and is important for the survival of manufacturers. This is confirmed by the majority of survey participants (15 out of 22). State orders played a particularly important role in the second half of 2022, as they helped companies remain operational.

Markets have proven surprisingly resilient but their growth prospects will remain weak while the war is on-going. Despite the ongoing Russian invasion, market relations continue to exist in the country in all areas and there are no restrictions on market functioning. In this sense, Ukraine has developed a state-dominated market economy but one that is rather uneven: the expansion of public sector salaries (the military) and the expanded role of the state in defence procurement has gone alongside stagnation and decline in its civilian procurement activity. In addition, these civilian firms are not being instructed to recalibrate their operations around the needs of the war-effort and the state has not involved itself in their operations. Markets have therefore proven resilient, perhaps surprisingly so, but their growth prospects should be considered weak while the war is on-going. In this situation the growth of state procurement of goods and services from Ukrainian private companies should be seen as an important tool for increasing the resilience of the Ukrainian economy during the war, supporting productive capacity and jobs. In this way, state intervention can actually help maintain the market character of the economy as a whole and the ability of the private sector to manage the shocks of the war, while preparing for the future recovery and reconstruction.

Within this context we would make a number of recommendations:

Ukraine's external trading environment remains poorly calibrated to the war-effort. Donors and allies should support a 'localisation offensive' to secure and expand domestic capacities. The loss of domestic market share for Ukrainian producers in food, construction materials and garments is an illustration of the challenges facing the economy. Ukraine's open trading environment with its neighbours (shaped in particular by the EU Association Agreement) provides a high level of market access to competitors that are not operating in a war environment 'at home'. For allies and donors this arrangement can also be self-defeating as it risks undermining Ukraine's domestic productive capacity and long-term economic growth prospects, thereby perpetuating its structural dependency on external financial assistance including in a future post-war environment. To avert such an outcome, we would propose the following:

- Allies should signal their strong support for the Ukrainian Government's Made in Ukraine subsidy scheme aimed at growing domestic production.
- Allies and donors should lead by example on 'localisation' making local content and purchasing requirements a condition of financial aid provided to Ukraine, as far as possible seeking to 'spend aid for Ukraine in Ukraine'. As noted in the report Denmark, Canada, the United Kingdom and the United States have all indicated their support for this policy direction and in some cases announced new programmes. This should also include state-led efforts at technology transfer into the Ukrainian economy.

- Should Ukraine decide that it needs to either pre-emptively, or in the context of a legal dispute, declare a 'national security exemption' to WTO rules and the EU Association Agreement (as they can in relation to both), then allies and donors should back publicly back Ukraine's right to do so.
- Allies and donors should encourage cooperation between their companies and Ukrainian ones in the production of military and civilian goods (e.g., joint ventures, consortium, contractual manufacturing), providing such activities with instruments of war risk insurance and favourable funding. This can support the war time resilience of Ukrainian economy and contribute to its smarter integration in global production chains.

Develop an industrial policy that is calibrated to Ukraine's resilience in the war.

Donors and allies should support Ukraine's efforts to develop an industrial policy to meet the economic challenges of the war. The procurement data outlined in this report identifies areas where state activism could support the 'crowding in' of private sector investment to grow productive capacity. For example, where state demand for individual goods has increased by more than 1000% in the course of the war (Table 8) it is unlikely that excess capacity in domestic production would be such that it could meet this significant expansion in demand. Subsidy schemes that match capital investment from Ukrainian firms (existing schemes such as that run by USAID on these lines) with grants could provide a template for rapidly scaling up domestic production capacity in these areas. Ukraine will need to invest significantly in the productive capacity of its economy but has constrained fiscal resources. While this means aid from allies will continue to be essential it also requires focusing domestic policy attention on where growth opportunities lie and how they can be activated. An industrial strategy will need to focus on the potentials and existing productive bases that Ukraine has (e.g., unlikely to be in civilian automobiles) with tailored policies to improve labour productivity in these sectors, to fill the gap in capacities in processing of local raw materials which are plentiful in Ukraine, and generate value added export growth.

Developing state capacity and supporting broad based income growth. Given the resource demands entailed by the war and the challenging environment for private sector investment, the Ukrainian state and its institutional capacity will be critical for supporting the economy, through both the war and future recovery. In exchange for the support for the private sector through procurement and subsidy programmes as expansive as fiscally possible, it is important that the goals of an inclusive society, economic wellbeing and broad-based income growth in the population are prioritised. In tandem with this, the Ukrainian state is faced with the crucial question of finding the balance between economy and frontline needs, particularly between citizens as workers and soldiers. This means for example foregrounding the principles of the ILO Decent Work Country Programme for Ukraine based on a) improved social dialogue, b) inclusive and productive employment, and c) working conditions and social protection. To align with this agenda due diligence in procurement and subsidy processes are key. This, in turn, raises a wider issue of using the growing state role in the economy to improve its capacity as a public authority.

Appendix: Survey Methodology

Investigating the state's compensation for the decline in private consumption

Creating a list of companies to interview

The five product groups were identified for the interviews on the basis of the procurement data analysed in Section 2: construction materials; food; automotives; footwear and garments (including uniforms); and medicines and medical devices.

41 potential survey participants were contacted with the goal of receiving at least 30 valid questionnaires (Table 1.1). Each of the five product groups under study should have at least two valid responses.

The number of potential interviewees in the Construction Materials group was the largest - 18 participants. The study group is represented by 15 manufacturers in terms of 11 main types of construction materials and 3 associations. The interviewed companies are producers of windows, lumber and wood-based panels, cement, concrete and concrete products, bricks, gas blocks, rebar, ceramic tiles, building mixtures, mineral wool, and roofing materials.

The involvement of 3 Associations of Construction Materials Manufacturers in the survey allowed the authors to obtain generalised information on sectors with a large number of manufacturers:

1. Association of Window and Facade Market Participants (AUROF);
2. Association of Cement Producers (Ukrcement);
3. Association of Gas Block Manufacturers (AGM).

The Food Products group had 11 potential respondents, including 3 associations (the Meat Industry Association, the Millers of Ukraine, and the All-Ukrainian Bakers Association). The group is represented by 5 main product lines: processed and canned fruit; meat products; bakery products; cereals and pasta; and dairy products.

The potential list of respondents for the automotives group includes 4 participants, including the Federation of Employers of the Automotive Industry of Ukraine. It should be noted that this sector is not sufficiently developed in Ukraine. In addition, since the beginning of the war, some manufacturers have shifted to repairing military equipment, and access to them is limited.

The garments and footwear product group has 5 members, including Ukrlegprom Association. The garments and footwear industry in Ukraine is predominantly represented by small and medium-sized businesses and has a large number of participants. Accordingly, the inclusion of Ukrlegprom Association, which unites 257 producers, provides a generalised view of the sector.

The Pharmaceuticals and Medical Devices product group is represented by 3 major pharmaceutical companies (there are 5 major pharmaceutical companies in Ukraine).

The interviewees are geographically located in different regions of Ukraine, including near the frontline. Given the security situation, the survey was conducted in person and over the phone. The duration of the interviews varied. In some cases, respondents provided extended answers, in which case the conversation took more than 1.5 hours.

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