Manufacturing in Wartime Ukraine: New Challenges Uncover Weak Points of Industries

Yevhen Anhel, Senior Research Fellow

Institute for Economic Research and Policy Consulting (Kyiv, Ukraine)

Introduction

In the recent decades many experts have emphasize 'deindustrialization' of the Ukraine's economy. Manufacturing remained underdeveloped and massively dependent on the Soviet-built industries. For decades, the sector lacked investment in innovations. As a result, Ukraine's manufacturing demonstrated stagnation and low technological development. The Russian full-scale invasion of Ukraine, launched on 24 February 2022, uncovered the weak points of the sector.

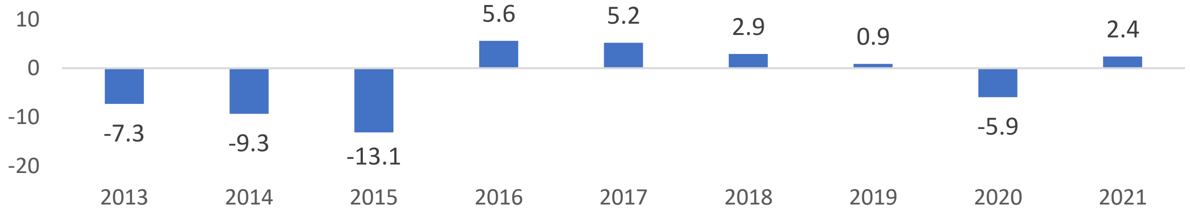
Active military operations caused a shocking downfall of manufacturing in March – May 2022. Maritime blockade interrupted the traditional exported routs, especially important for food, chemical, and metalworking industries. The war also destroyed traditional logistical and export schemes. Several regions have been occupied by Russian troops and in other regions production facilities have been heavily damaged. Manufacturing is expected to decline by 45% in 2022, according to the assessment by the Institute for Economic Research and Policy Consulting (IER). Nevertheless, selected industries have demonstrated better resilience and recovery progress since early summer.

Brief Overview of the Manufacturing Sector Before 2022

According to the State Statistical Service of Ukraine, in 2021 manufacturing provided only 12% of total value added. In contrast, the sector paid more than 70% percent of taxes on production and imports. Altogether, the sector contributed 21% of the Ukraine's GDP in 2021. This signals that Ukrainian economy is still dependent on manufacturing companies. However, the value added of the sector has been produced predominantly in low-technology industries like food production, metallurgy, and light industry. At the same time, the machine building lags behind the EU countries as the size of the industry can be compared to the respective industries in small EU-members[1]. The sector became stuck its underdevelopment.

The annual index of industrial production (reflects changes in comparison to the previous year) clearly illustrates the stagnation of the Ukraine's manufacturing. In 2013, right before the first stage of the Russian aggression, manufacturing decreased by 7.3%. In 2014, the Russian annexation of the Crimean Peninsula and limited invasion of the Donetsk and Luhansk regions deepened the manufacturing crisis, as Ukraine lost vast production facilities in the respective regions. After active economic recovery in 2016-2017, the growth rates of manufacturing were mostly 'within statistical error'. The COVID-19 pandemic also contributed to the negatives dynamics of manufacturing with -5.9% decrease in 2020. In the end, the industrial production has decreased cumulatively by 12% in 2014-2021.

Chart 1. Index of industrial production* (only for manufacturing industries), *changes to the previous year



Source: State Statistical Service of Ukraine

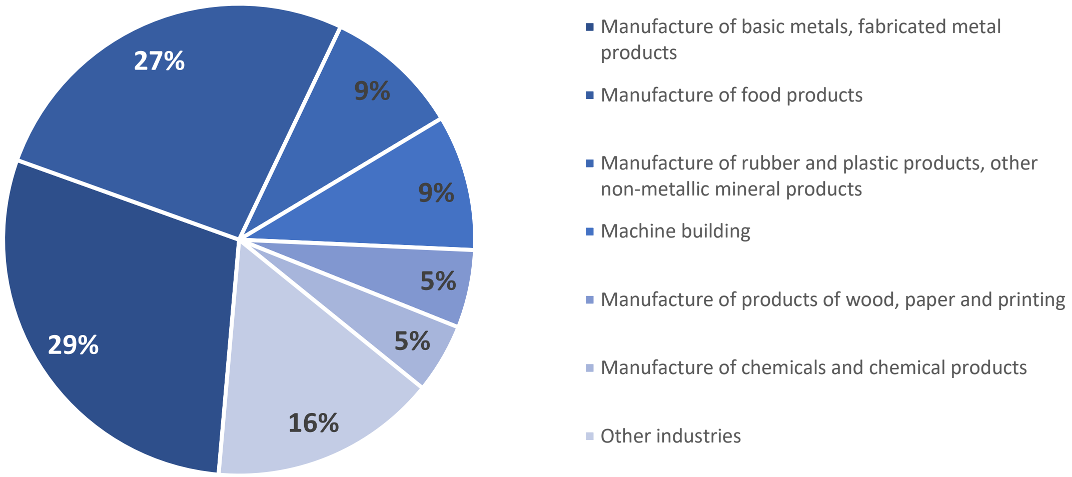
[1] See https://zn.ua/ukr/macrolevel/yaka-promislova-politika-potribna-ukrayini-dlya-perehodu-do-industriyi-4-0-307765_.html.

Other statistics testify that the manufacturing sector has decreased its input in the Ukraine's economy. In particular, the sector reduced its share in employment of the business sector from 21% in 2013 to 17% in 2021. The share in turnover of business entities also gradually decreased from 22% in 2013 to 19% in 2021.

Analysis of Key Sectors

After 2013, few manufacturing industries have demonstrated stable growth. In the corresponding period, the sawmilling and planning of wood was the only industry that grew every year except 2020 when the pandemic started. The cumulative growth reached 57% in 2014-2021. Manufacture of wooden products increased by 18% in the same period. Basically, production was boosted by ban on unprocessed wood export, allegedly a protectionist measure introduced in 2015.[2] In addition high domestic demand and devaluation of Ukrainian currency stimulated manufacture of furniture (including wooden and of other materials). The furniture industry grew by 36% percent in the last 8 years. Nevertheless, the mentioned fast-growing but low-technology industries comprise in total only circa 4% of manufacturing turnover. Therefore, they have limited impact on manufacturing.

Chart 2. Turnover of manufacturing industries (% of total manufacturing turnover)



Source: State Statistical Service of Ukraine

In contrast, the agrifood industry is one of the pillars of Ukraine's economy, yet manufacture of food products has experienced uneven growth. In 2021, 27% of manufacturing turnover belonged to the food-producing companies. At the same time, the production declined by 5.4% in comparison to the previous year. In fact, the production remained almost at the same level since 2014 (only 3.6% cumulative growth), except manufacture of oils and fats, processing fruit and vegetables, processing of meat and production of meat products.

Metalworking and manufacture of metal products have traditionally dominated the manufacturing sector. In 2021, the industry reported the highest share of turnover, 29% of total volume in manufacturing. Nevertheless, metallurgy has declined since 2014 by 27%. The machine building industry, one of Ukraine's strongest sides in the past, has also declined by 24% in the same period. Its share in the sector's turnover made just 9% in 2021.

The exports statistics also prove that manufacturing is dominated by low-technology industries. Agrifood goods constituted 41% of total exports in 2021. However, only a minor share belongs to finished food products (6%). Metallurgy contributed 24% of the total exports along with additional 11% of ores, slags, and ashes. Wood and articles of wood and furniture provided circa 4% of exports. In contrast, products of

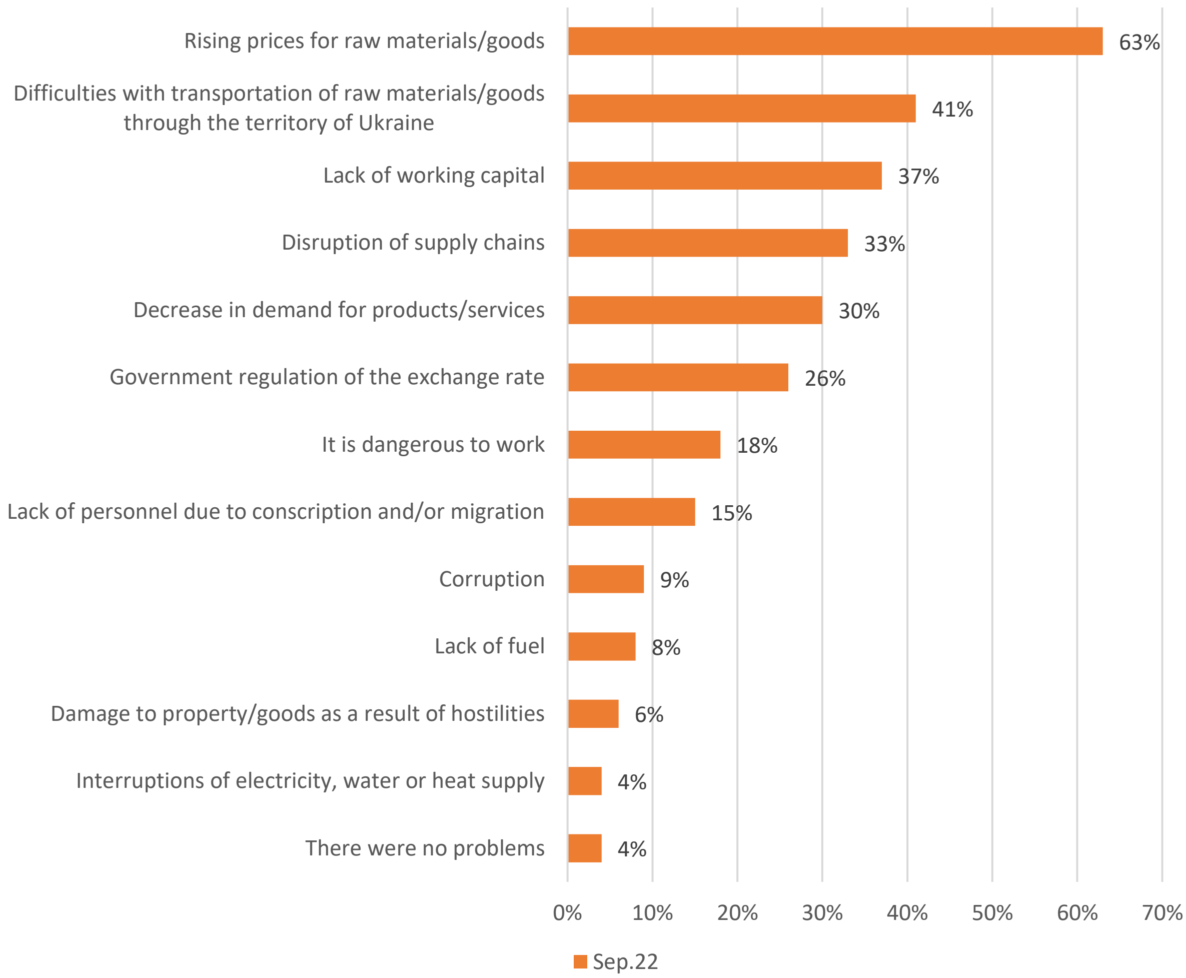
[2] See https://3dcftas.eu/op-eds/results-of-ukraines-2015-wood-moratorium-trade-protectionism-vs-forest-protection.

machine building made only 8% of exported goods. According to the Global Innovation Index 2022, high tech exports make only 2% of total trade in Ukraine.

Key Challenges to Manufacturing

The Russian invasion raised overwhelming security concerns due to the active military operations and missile attacks. However, security issues do top the list of the most important impediments to business. As of September 2022, only 18% of business managers argued that it is dangerous to work in Ukraine. 6% of respondents reported damage to property / goods[3]. However, in early October 2022, Russian army started massive missile and drone attacks around Ukraine that harshly damaged the energy sector (30% of energy infrastructure since 10 October). For the moment, several regions experience troubles with electricity supplies, thus raising economic concerns. The recent developments might change the projections for recovery of manufacturing.

Chart 3. Main impediments to business after 24 February 2022 (start of the Russian full-scale invasion), % of respondents



Source: IER New Monthly Enterprises Survey[4]

[3] The survey took place only in 21 out of 27 regions of Ukraine where enterprises can be accessed (no active military operations, no occupation by Russian forces).

[4] The Institute for Economic Research and Policy Consulting conducts a new monthly enterprise survey using the Business Tendency Survey approach to quickly collect information on the current economic state at the enterprise level. The survey was conducted within the project "For Fair and Transparent Customs", financed by the European Union and co-financed by the International Renaissance Foundation and Atlas Network.

Until September, the majority of enterprises put more attention on overall economic difficulties as the war has drastically changed the economic environment. Rising prices of raw materials / goods remained the main challenge to enterprises. Manufacturing companies lacked working capital, fuel, or personnel, also experienced low demand for their goods.

Logistical issues are top-2 impediment as 41% of surveyed businesses experience difficulties with transportation of raw materials/goods through the territory of Ukraine. The issue is even of higher priority for international shipping of goods. Exporters often mention lines at the western borders, marine blockade, and lack of railway wagons/trucks/drivers as main impediments to exports. The Black Sea grain corridor eased the situation for land transportation, helped Ukraine's agriculture sector, but did not solve the challenges for the manufacturing industries.

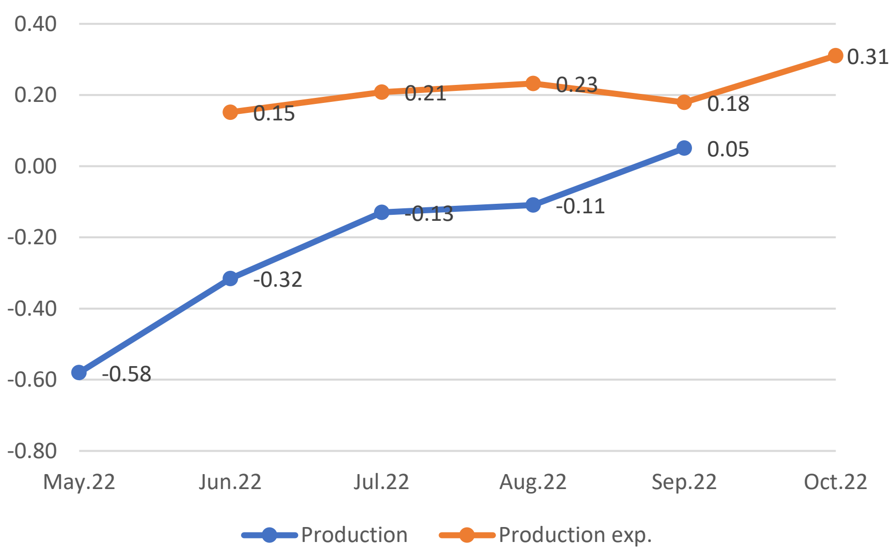
Assessment of Recent Manufacturing Trends

Business surveys demonstrate that Ukrainian manufacturers are recovering production despite the war. On one side, only 8% of enterprises operated at full capacity in September (15% in May). On the other, 41% of enterprises operated at 75-99% of the pre-war capacity. The share more than doubled compared to May (17%). The capacity utilization level clearly proves recovery of production in the sector.

In May, the index of changes in production was -0.58, as most manufacturers reduced production. Yet, it gradually recovered and reached positive results in September (+0.05). This demonstrates that already more manufacturing companies increase their production than decrease. At the same time, manufacturers have also retained mostly positive expectations. Typically, more companies planned increase of production than decrease in the next three months. The expectations have also significantly improved in September when index of expected changes in production reached +0.31. Positive changes and expectations accompanied positive news about successful counter-offensive operations of the Ukrainian army.

Few manufacturing industries have demonstrated positive trends. Industries that provide basic human needs hold the best production results. The index of changes in production reached +0.26 for the food industry and +0.24 for light industry (predominantly manufacture of clothes and shoes). The index was also positive for the printing industry (+0,11). At the same time, in other industries enterprises tend to reduce production. The index was -0.44 for metalworking, -0.35 for woodworking, -0.17 for chemical industry, and -0.03 for machine building. Nevertheless, all industries remain positive about future.

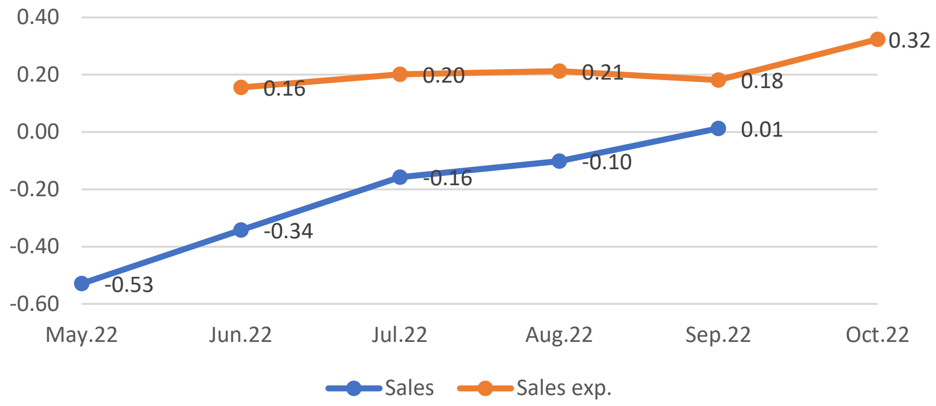
Chart 4. Index of changes in production



Source: IER New Monthly Enterprises Survey

The index of changes in sales mirrors the positive trends regarding production. In September, more Ukrainian manufacturers increased sales than decreased for the first time. However, the index is only +0,01 reflecting ambivalent situation in different industries. On one side, food industry (+0.19), light industry (+0.20), and printing industry (+0.17) tend to recover their sales. In other industries enterprises more often indicate reduction of sales. Therefore, the respective index is negative for machine building (-0.08), chemical industry (-0.21), and metalworking (-0.44). The expectations are positive for all industries

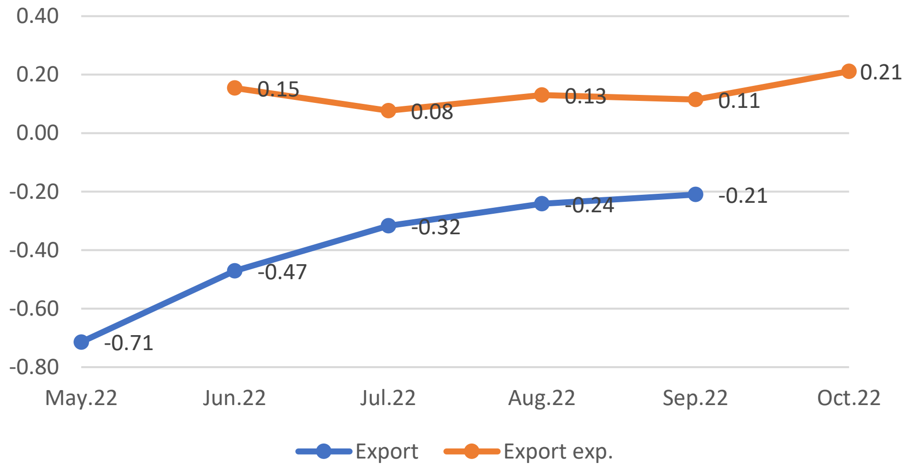
Chart 5. Index of changes in sales



Source: IER New Monthly Enterprises Survey

Ukrainian manufacturers are also getting back on the export track. After 24 February more than a half of exporters paused their activities on the foreign markets. However, in September only 16% of exporters have not resumed their export activities (47% in May). The index of changes in exports has grown from shocking negative -0.71 in May to -0.21 in September. Food (+0.05) and light (+0.05) industries are more likely to recover their export activities. Both industries also tend to have better export expectations.

Chart 6. Index of changes in export



Source: IER New Monthly Enterprises Survey

The regulations of the wartime forbid publication of major economic statistics, including industrial output and other business indicators. However, trade statistics are freely available for analysis. In January-July, the agrifood sector provided almost half of Ukrainian exports or 45% of total value of goods (almost at the same level as in the previous year). The agrifood exports are dominated by agricultural raw materials. Nevertheless, food sector, luckily promoted in the previous decades, holds high potential for recovery. On the other hand, metalworking and chemical industry have sharply decreased exports.

Conclusion

The manufacturing sector has faced the Russian full-scale invasion with deep-rooted difficulties in most industries. The sector stagnated as few industries demonstrated stable annual growth. As a result, only selected industries have demonstrated high war resilience which is proven by surveys. Enterprises admit recovery of main indicators, including production, sales, and exports. In addition, Ukrainian manufacturers keep optimistic over the near future. The food industry and light industry are leading in the recovery process.

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