

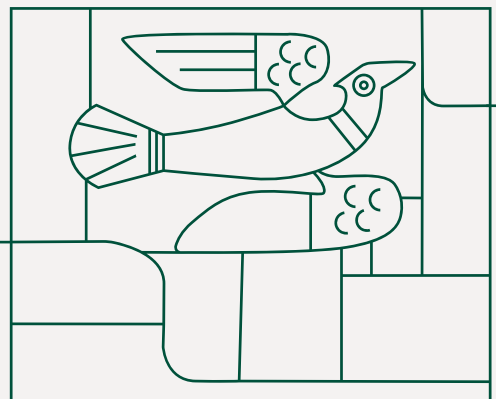


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Topical Research and Highlights

Competitiveness of Bulgarian Exports
of Goods after 2022

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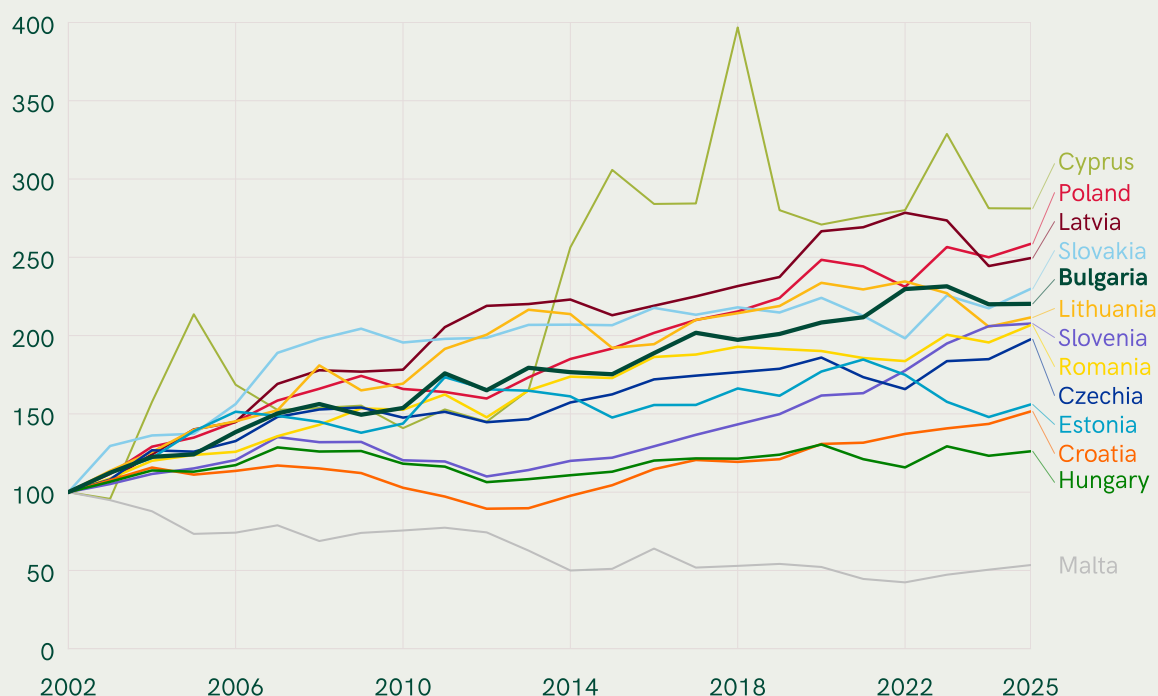
Competitiveness of Bulgarian Exports of Goods after 2022

Exports of goods have been among the main drivers of Bulgaria's economic growth and real convergence over the past two decades. Between 2002 and 2023, the country's share in world exports of goods more than doubled, outpacing most of the EU Member States that joined since 2003 (new Member States – NMS) (Chart 1). However, since 2023, real exports of goods have lagged behind the external demand for Bulgarian goods and services, and thus Bulgaria's market share in global trade has declined (Chart 2), while it continues to rise in the other NMS. In view of these developments, this topical research aims to analyse the extent to which the decline in exports of goods is due to temporary restrictions on the supply side and unfavourable external environment, and the extent to which it reflects a structural deterioration in the competitiveness of Bulgarian producers.

CHART 1

Market Share in World Exports of Goods, by Country

(index, 2002 = 100)



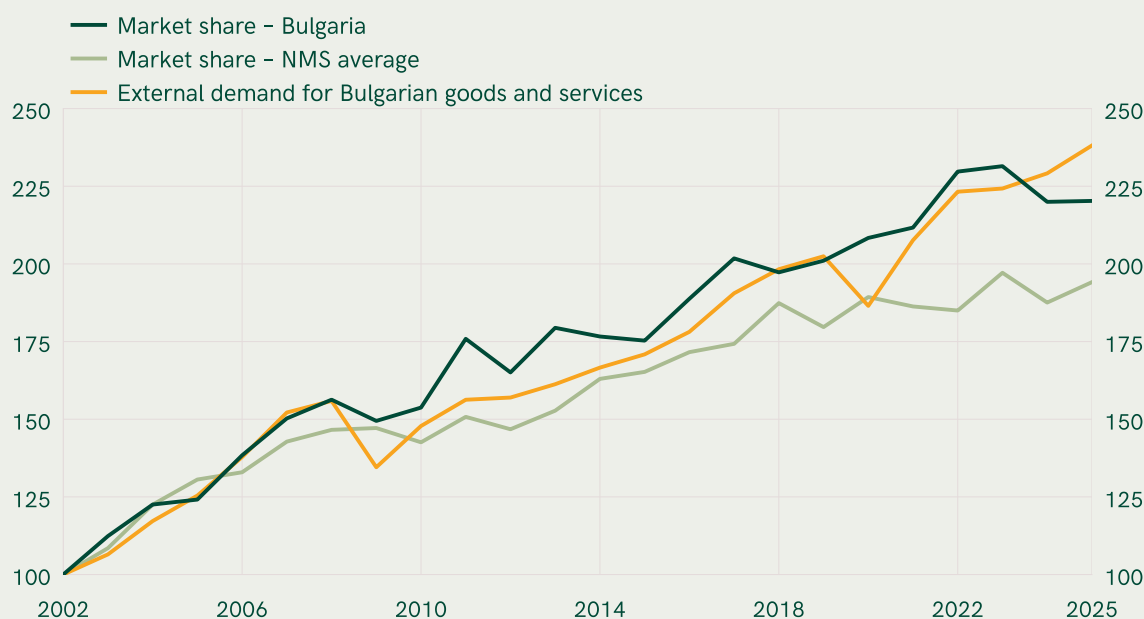
Note: The market share is the share of the exports of goods (FOB) of the respective country in world exports, according to AMECO data. The 2025 values are a forecast of the European Commission.

Sources: AMECO, BNB, own calculations.

CHART 2

Export Market Share of Bulgaria and New Member States Relative to Foreign Demand

(index, 2002 = 100)



Note: The market share is based on AMECO data. The 2025 values are a forecast of the European Commission. The average for the new Member States (NMS) is an arithmetic mean of the indices of the 12 countries that joined the EU after 2003, excluding Bulgaria. External demand is the real imports of goods and services of Bulgaria's trading partners, weighted by country share in Bulgarian exports.

Sources: AMECO, BNB, own calculations.

A significant part of the decline in exports of goods after 2022 has been concentrated in several commodity groups, affected by one-off factors in recent years (see Chart 3). In 2023, the fall in real exports of goods by 1.9 per cent was almost entirely driven by fuels, as a result of export restrictions on petroleum products produced from Russian crude oil¹, as well as non-ferrous metals, whose production was limited by repairs in the largest metallurgical enterprise. In 2024, the 2.6 per cent growth in exports of goods mainly resulted from the increased exports of electricity, while weak agricultural harvests² and the decrease in exports of machinery and transport equipment, related also to the slowdown in economic activity in European industry, contributed negatively. In 2025, almost all of the 4.1 per cent decline in real exports of goods was attributable to the limited production due to scheduled repairs in the two largest enterprises operating in the oil processing and metallurgy sector³.

However, adverse developments in exports of goods are not limited solely to groups affected by one-off factors. Even after the exclusion of fuels and non-ferrous metals, the contribution of the remaining groups to the annual change in total exports of goods was

¹ Since February 2023, petroleum products produced from imported Russian crude oil cannot be exported from Bulgaria according to the derogation from EU sanctions.

² According to the NSI, the volume of crop output decreased by 7.0 per cent in 2024 due to drought.

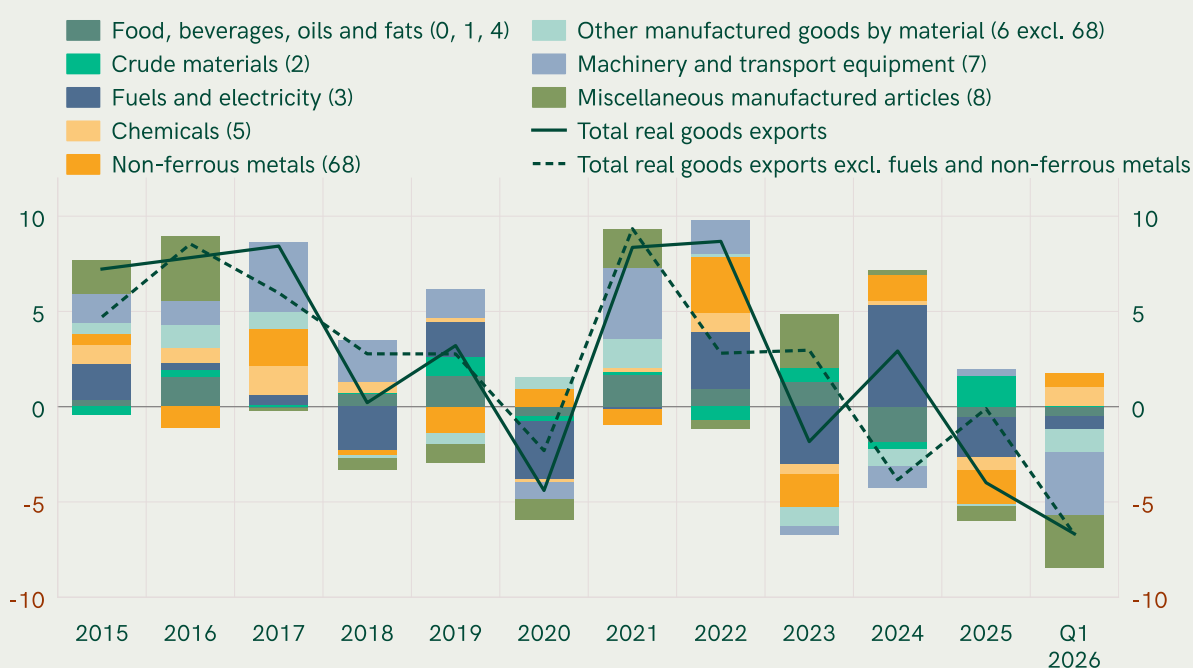
³ The repair in Lukoil Neftohim Burgas was carried out from 26 February to 26 May 2025, and in Aurubis Bulgaria from 12 May to mid-July 2025.

negative in 2024 (around -4 percentage points compared to a growth in external demand of 2.3 per cent), close to zero in 2025 (compared to external demand growth of 3.8 per cent) and strongly negative in the first quarter of 2026 (-6.7 percentage points compared to annual growth in external demand of 2.5 per cent in January-March 2026). Therefore, one-off factors in exports of fuels and metals could explain the decline in total exports in 2023 and 2025, but not its lag behind the growth in external demand observed since 2024, covering most commodity groups. This suggests that this trend may be underpinned by structural problems related to the price and non-price competitiveness of Bulgarian exporters.

CHART 3

Contribution to Real Goods Export Growth by Commodity Group

(per cent, percentage points)



Note: Standard International Trade Classification (SITC) groups. The group codes in the classification are indicated in brackets.

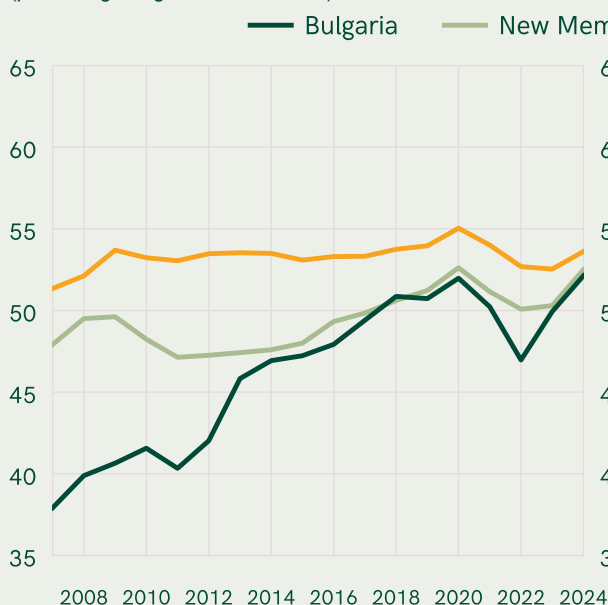
Sources: NSI, BNB, own calculations.

Standard indicators of price competitiveness point to continued increase in cost pressures in the Bulgarian economy. This is a long-term trend driven by the processes of real and nominal convergence of the Bulgarian economy. Over the past two decades, growth in compensation per employee in Bulgaria has outpaced labour productivity growth, with unit labour costs rising significantly faster than in the euro area and the real effective exchange rate deflated by them continuing to appreciate. At the same time, the share of compensation of employees in gross value added rose from around 38 per cent in 2007 to 52 per cent in 2024 and is already close to the NMS and euro area average (see Chart 4). The dynamics of these indicators point to a gradual decline in the competitive advantage of relatively lower labour costs in Bulgaria.

CHART 4

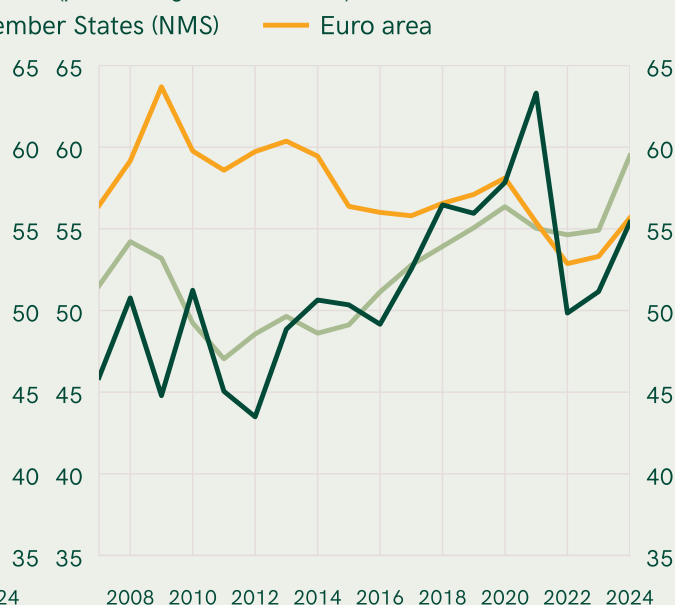
(a) Compensation of Employees as a Share of Gross Value Added in the Total Economy

(percentage of gross value added)



(b) Compensation of Employees as a Share of Gross Value Added in Manufacturing

(per cent of gross value added)



Note: The new Member States include the countries that have joined the EU since 2004, excluding Bulgaria.

Sources: Eurostat, own calculations.

However, aggregate labour cost indicators are not in themselves a reliable benchmark for the competitiveness of exports of goods. Ivanov and Ivanova study (2021)⁴ shows that the rise in labour costs in the Bulgarian economy is predominantly concentrated in the non-tradable sectors and largely reflects the process of economic convergence. Therefore, it is more indicative for the analysis of export competitiveness to track developments in manufacturing that accounts for the bulk of exports of goods and, in particular, to explore whether labour costs are growing faster than sales revenues, to what extent firms pass on rising costs to prices or absorb them at the expense of profits, and whether there are substantial differences across sub-sectors. The latest similar calculations by Ivanov and Ivanova (2021) are available for the pre-pandemic period. In the current analysis, these calculations have been updated and expanded using Orbis data⁵ on the financial statements of 2613 manufacturing enterprises in Bulgaria for the period 2015 to 2024.

Data show that personnel costs in manufacturing rose almost two and a half times over this period, with total number of employees almost unchanged, while the remaining costs of the sampled firms increased roughly in line with the growth of their sales⁶ (see Chart 5a). The gap between labour costs and sales dynamics widened between 2022 and 2024, when total personnel costs grew by about 25 per cent, while sales declined by 6.4 per cent. As a result, personnel costs as a share of these enterprises' sales rose from 11.0

⁴ Ivanov, E., Ivanova, N. (2021), 'Determinants of Bulgarian Exports: the Role of Price and Non-Price Competitiveness', BNB Discussion Paper DP/118/2021.

⁵ The panel includes 2613 of the largest manufacturing enterprises, with detailed reporting data for each year from 2015 to 2024, accounting together for around 60 per cent of turnover in Bulgarian manufacturing.

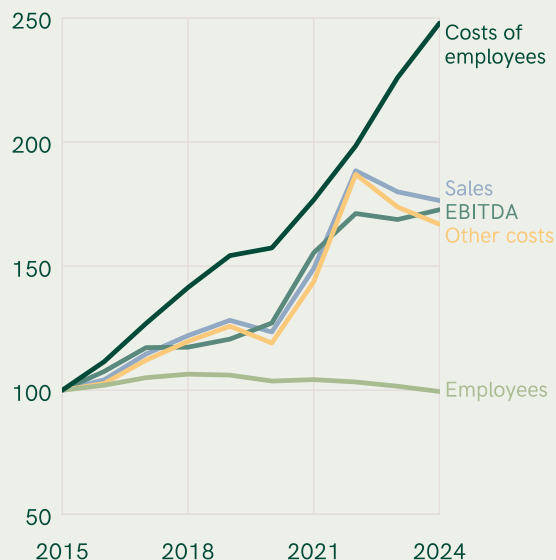
⁶ The analysis uses sales revenue (the 'Sales' indicator in Orbis) and not the total turnover ('Turnover' in Orbis), as turnover also includes financing revenues which do not reflect the competitiveness of production.

per cent in 2022 to 14.6 per cent in 2024 for manufacturing as a whole reaching its highest level over the entire period from 2015 to 2024 in all the sub-sectors under review. Data show that this share increased most in the textiles, clothing and leather and machinery, electrical and transport equipment sub-sectors (see Chart 5b).

CHART 5

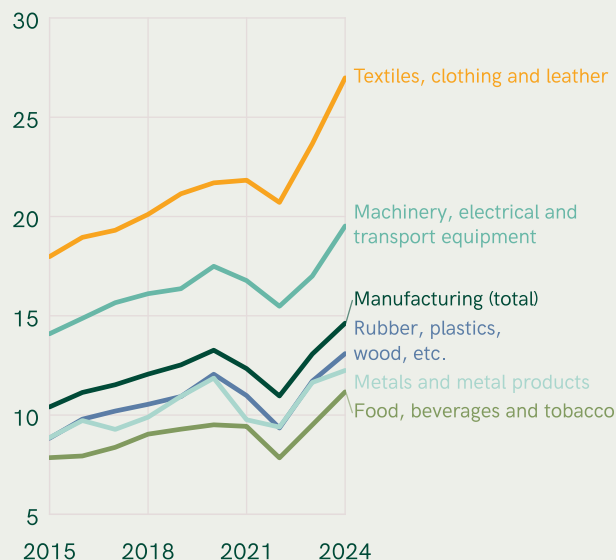
(a) Sales, Profit, Costs and Employment in Manufacturing

(indices, 2015 = 100)



(b) Personnel Costs as a Share of Sales by Sub-sector

(per cent)



Note: Indicators are in the standardised format of Orbis: sales are net sales revenue excluding VAT (Sales); staff costs include remuneration and social security contributions (Costs of employees); other costs include material costs (Material costs), other operating items (Other operating items, net), depreciation and amortisation (Depreciation & amortisation) and Interest (interest paid). EBITDA is earnings before interest, taxes, depreciation and amortisation. All indicators are calculated from the amounts for the undertakings in the panel, at current prices in euro.

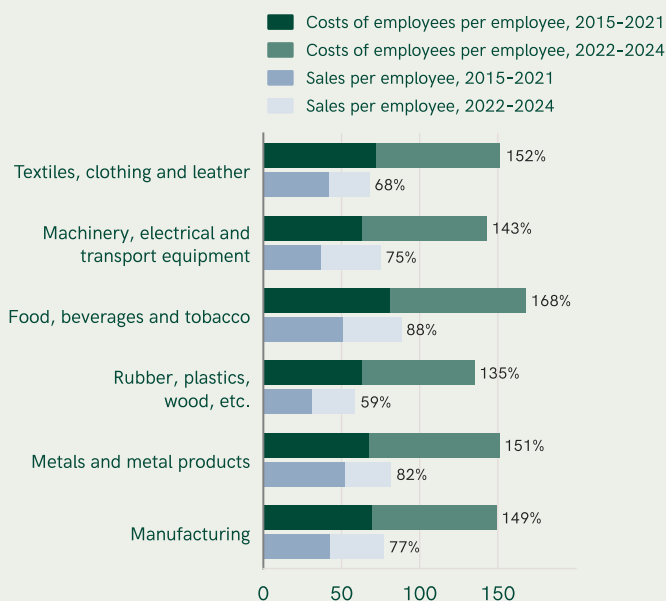
Sources: Orbis (Moody's), own calculations.

Between 2015 and 2024, personnel costs *per* employee grew faster than sales *per* employee in all the sub-sectors under review, with most of the gap accumulating over the last three years (see Chart 6a). An indirect benchmark of the pass-through of this pressure to sales prices is the producer price index for the external market, which records the changes in the prices at which firms sell their production for exports (see Chart 6b). From 2015 to 2021 price dynamics at sub-sector level was relatively close to that of the euro area, except for the metal and metal products sub-sector. However, from 2022 to 2024, Bulgarian exporters' prices increased noticeably faster in most sub-sectors, indicating a pass-through of cost pressures in sales prices, although the approach used does not allow to distinguish directly the impact of labour costs from that of other factors.

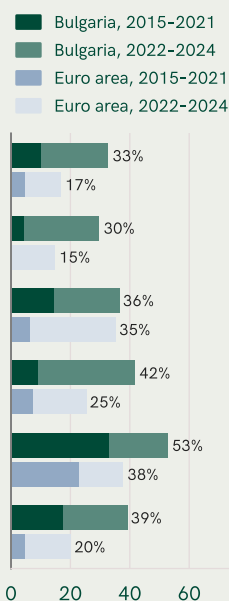
At the same time, the average profit margin measured by the EBITDA/turnover ratio in the period from 2022 to 2024 is lower than between 2015 and 2021 in three of the five sub-sectors under review (see Chart 6c). The enterprises most vulnerable to labour cost growth are those in the textiles, clothing, leather sub-sector, where the share of personnel costs is the highest and profit margins are the lowest.

CHART 6
(a) Personnel Costs and Sales per Employee

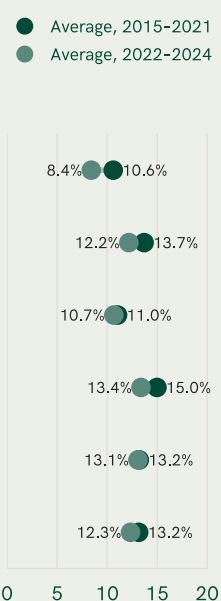
(growth in 2015-2024, per cent)


(b) Producer Prices in the External Market

(growth in 2015-2024, per cent)


(c) Average Profit Margin

(EBITDA/sales, per cent)



Notes: In panels (a) and (b) the contributions of both periods are calculated in relation to the level of 2015. In panel (c) the profit margin is the average of the annual EBITDA/sales ratios for the relevant period. Corporate data for 2024 are preliminary.

Sources: Orbis (Moody's), own calculations.

Cost pressures related to labour costs do not necessarily translate directly into a deterioration in price competitiveness, as firms can absorb part of the cost increase through a lower profit margin without raising their selling prices. However, a prolonged decline in profitability limits investment opportunities that could help improve firms' non-price competitiveness.

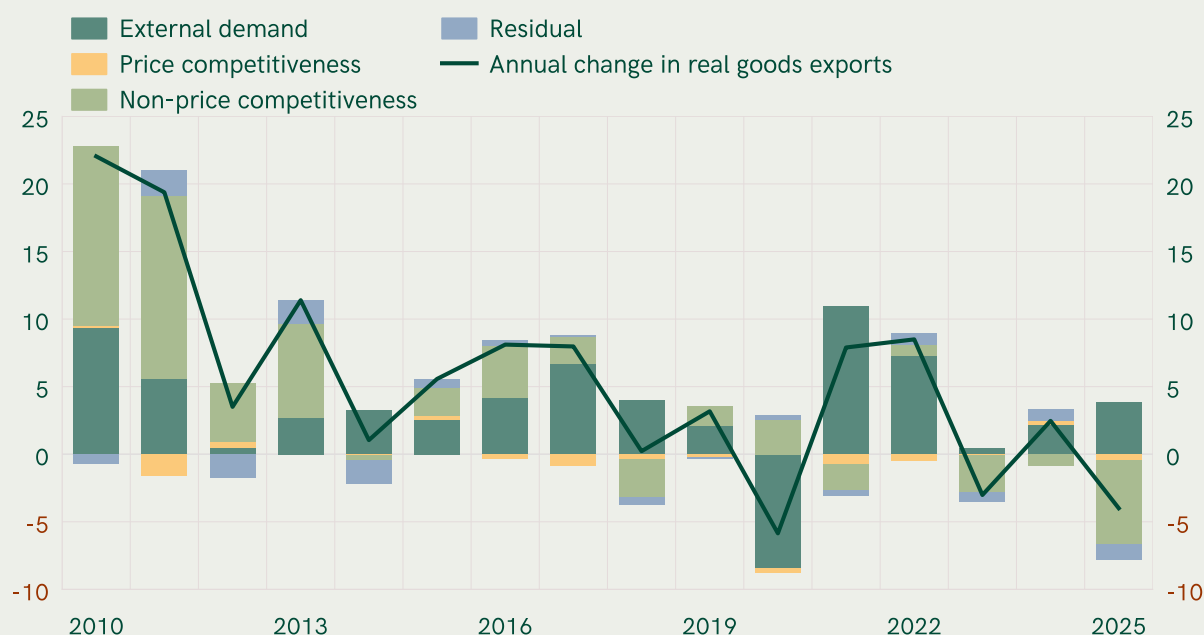
Model estimates based on the Ivanov and Ivanova (2021)⁷ approach show that exports of goods have lagged behind external demand growth since 2023, which is mainly explained by the negative contribution of non-price competitiveness with limited negative impact of price competitiveness (see Chart 7). A possible reason for model estimates to show a greater importance of deterioration in non-price than price competitiveness is the largest effect (in absolute terms) of specific one-off factors related to repairs and other export restrictions on oil products and metals, which have constrained the growth of exports of goods over the past three years. In contrast to these temporary factors, long-term rising labour cost pressures have had a more gradual negative impact on goods export dynamics.

⁷ The estimates follow the state-space model of Ivanov and Ivanova (2021), BNB, DP/118/2021. Non-price competitiveness is an inobservable component assessed by Kalman filter. It may also reflect factors that are not separately reported, such as interruptions of production due to repairs. As the model cannot identify the specific reasons for these changes, the negative contribution of non-price competitiveness is not clear evidence of a persistent loss of competitiveness.

CHART 7

Factors Behind the Change in Real Goods Exports

(per cent, percentage points)

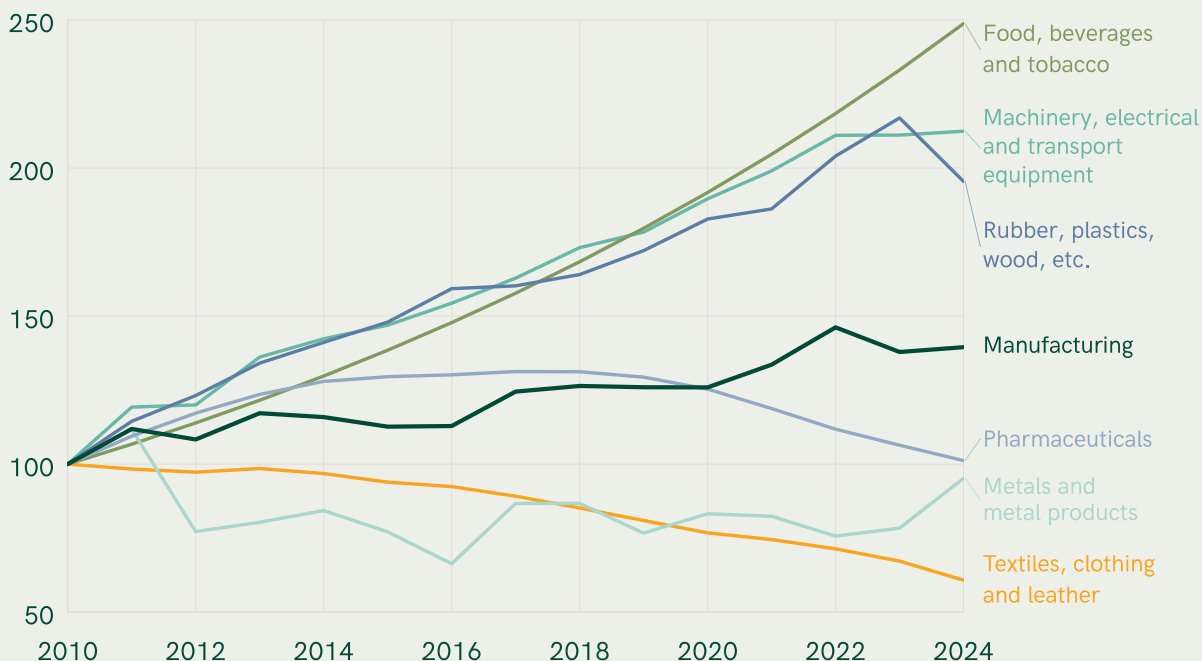


Sources: NSI, BNB, own calculations.

Deterioration in non-price competitiveness is reported in a number of sub-sectors, including those not directly affected by one-off factors (see Chart 8). Model estimates show that the greatest loss of non-price competitiveness is registered in textiles, clothing and leather sub-sectors and in the manufacture of rubber and plastics where a decline in profit margins is also observed. In the absence of information on one-off factors affecting production in these sectors, such a combination of factors could be an indication of structural problems in the relevant sub-sectors and of a risk that exports of these goods will continue to lag behind external demand.

CHART 8**Non-Price Competitiveness by Manufacturing Sub-sector (Model Estimates)**

(indices, 2010 = 100)



Note: Due to the volatility of Bulgarian exports of energy products and its specificities, it was considered that such a model would not reliably assess the impact of price and non-price factors on its competitiveness, and therefore no assessment for this group is presented

Sources: NSI, BNB, own calculations.

Conclusion

One-off factors explain a significant part of the decline in real exports of goods over recent years, but do not fully clarify the reasons for its weak performance. There are signs of a sustained and broad-based weakening of the competitive positions of Bulgarian exporters in terms of both price and non-price competitiveness across commodity groups. Against the background of strongly rising labour costs and falling profit margins in some industrial enterprises, a sustained improvement in Bulgarian goods exports will increasingly depend on effective investment to improve productivity and non-price competitiveness of exporting firms.

