Food Prices, Wages, and Market Concentration in Bulgaria: A Macroeconomic Analysis of the Price-Wage Gap and Consumer Welfare

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Abstract

Bulgaria occupies a distinctive and paradoxical position within the European Union: it is simultaneously the member state with the lowest price levels and the highest income inequality. This paper examines the structural causes and consequences of Bulgaria's persistent price-wage gap, analysing how comparative price levels, gross wage trajectories, GDP per capita growth, household expenditure patterns, and retail market concentration interact to shape the lived economic experience of Bulgarian consumers. Drawing on Eurostat data, the National Statistical Institute Household Budget Survey, and recent empirical research, the paper finds that while Bulgaria's nominal wages rose by approximately 52% between 2021 and 2024 and GDP per capita closed the gap with the EU average from 57% to 66%, food prices have simultaneously surged from 79% to nearly 90% of the EU average. Dairy and oils are priced above the EU mean despite wages sitting at just 36% of it. The Engel coefficient for Bulgarian households stands at 28% of total expenditure, more than double the EU average of 13.2%, indicating a structurally regressive food burden. Market concentration among the five largest food retailers, measured at a Herfindahl-Hirschman Index of approximately 1,700, further constrains competitive pressure and reinforces price rigidity. Bulgaria's Gini coefficient of 38.4 and income quintile ratio of 6.94 confirm that the gains from economic growth are not reaching the bottom of the income distribution. The paper concludes that Bulgaria's food affordability crisis is not a product of inflation alone, but the outcome of structural market failures, inadequate redistributive policy, and a supply chain architecture that systematically disadvantages lower-income consumers.

Introduction

Food affordability is a deceptively simple concept. In principle, it is a function of two variables: what things cost and how much people earn. In practice, however, the relationship between prices and wages is shaped by a dense web of structural factors including market concentration, supply chain architecture, redistributive fiscal policy, and the pace of macroeconomic development relative to inflation. Nowhere in the European Union is this complexity more visible than in Bulgaria.

Bulgaria has long been characterised as the EU's cheapest economy by aggregate price index measures. Yet this designation obscures a more troubling reality: the country's lowest-income households spend a disproportionately large share of their income on food, face some of the bloc's highest relative prices for staple goods like dairy and oils, and do so within a retail environment shaped by significant oligopolistic concentration. Recent years have brought nominal wage growth and GDP convergence toward EU averages, but the distribution of those gains has been deeply uneven. Bulgaria's Gini coefficient and income quintile ratio both rank worst among all 27 member states as of 2025.

The macroeconomic moment is also one of transition. In 2026, Bulgaria formally entered the Eurozone, a milestone that has brought renewed attention to the question of whether increased investor credibility and foreign direct investment will translate into meaningful improvements in household purchasing power, or whether price convergence will outpace wage convergence and widen the gap further. Against this backdrop, this paper offers a structured empirical analysis of Bulgaria's price-wage gap, household food burden, and retail market dynamics, drawing on the most recent available data to assess where the country stands and what structural forces are driving its current trajectory.

Bulgaria Versus the EU: The Price-Wage Gap

Bulgaria's comparative price level (CPL), as measured by Eurostat's methodology aligned with the OECD manual, stood at 55% of the EU average for household consumption in 2021, placing it as the cheapest economy in the bloc alongside Romania at 53%. At first glance, this suggests an affordable environment for consumers. The structural issue becomes apparent when this figure is set alongside Bulgaria's real GDP per capita, which sat at just 44% of the EU average in the same year. The implication is direct: Bulgarians spend a proportionally larger share of their income than citizens in most other member states, meaning that low absolute price levels do not translate into meaningful affordability.

A survey of all 27 EU member states reveals that this mismatch between productivity and price level is not unique to Bulgaria, but Bulgaria's gap is among the most pronounced. Approximately 44.4% of EU countries have a real GDP per capita higher than their comparative price level, while 51.9% face the inverse situation, where prices outpace productivity. Bulgaria sits firmly in the latter camp. Countries such as Poland, Estonia, and Germany serve as instructive comparisons: Poland's price level of 60 is matched by a real GDP index of 61; Estonia registers a price level of 82 against a GDP index of 89; Germany sits at 111 and 120 respectively. In each case, productivity either matches or modestly exceeds price levels. Bulgaria does not approach this alignment.

Between 2021 and 2024, Bulgaria recorded substantial nominal wage growth. The average gross wage rose from approximately 782 euros per month to 1,195 euros, representing a nominal increase of over 52% and a real-terms gain of roughly 17%, with the wage share of the EU27 average rising from 31% to 36%. GDP per capita also converged meaningfully, moving from 57% of the EU average in 2021 to 66% by 2024, a gain of nine percentage points over three years. By 2026, following Eurozone accession, salaries reached an approximate all-time high of 1,370 euros per month, reflecting an additional nominal increase of around 12%.

These gains are genuine and should not be dismissed. However, the three-to-four percentage point lag of wages behind GDP per capita growth carries a specific structural interpretation. When GDP rises faster than median wages, the new income being generated is concentrated at the top of the distribution rather than flowing to median and below-median earners. This dynamic is consistent with Bulgaria's income inequality indicators, discussed further below, and helps explain why aggregate convergence data paints a more optimistic picture than household-level survey evidence.

Food Price Dynamics and Supply Chain Structure

Food prices in Bulgaria have closed much of the gap with the EU average over the past four years, rising from 79% of the EU27 average in 2021 to 89.9% by 2025, an increase of eleven percentage points in a compressed timeframe. For a country where wages remain at 36% of the EU average, this convergence is not a sign of prosperity but of pressure. The distribution of food price increases across product categories is particularly telling.

Meat, which is primarily produced through local, non-tradable farm labour and is therefore relatively insulated from international supply chain dynamics, is priced at 72.7% of the EU average. Because meat production costs are closely tied to domestic labour costs, prices remain relatively stable and affordable relative to the broader food basket. Dairy products and oils tell a very different story. Dairy is priced at 125.2% of the EU average, and oils and fats at 124.2%, meaning both categories are more expensive in Bulgaria than the EU mean. For a household earning wages at 36% of the EU average, paying above-EU-average prices for staple items like milk, cheese, and cooking oil constitutes a severe affordability crisis.

The explanation for this inversion lies in the structure of the supply chains governing these product categories. Dairy and oils are heavily processed goods that pass through extensive distributor networks before reaching consumers. Unlike meat, these categories are dominated on supermarket shelves by a small number of large retail chains, which introduces both logistical cost layers and opportunities for pricing power at the retail level. The Bulgarian food distribution system is characterised by significant instability and sensitivity to global supply dynamics, making price fluctuations in these categories common and difficult for consumers to anticipate or absorb.

Further corroborating this structural account, the K3K Commission for the Defence of Fair Competition published a 2025 analysis confirming significant structural deformations across Bulgaria's food production and distribution chain. The commission's findings identified production decreases in precisely the categories where prices have risen most sharply: raw cow milk production fell by 25%, fresh milk by 8%, cheese by 9%, yellow cheese by 14%, and eggs by 17% over the four-year period from 2020 to 2024. Contraction in domestic supply, combined with import-dependent distribution networks, creates the conditions under which above-EU-average prices for dairy can persist in a country with below-EU-average wages.

Income Inequality and the Distribution of Economic Gains

The aggregate wage and GDP statistics discussed above describe Bulgaria's macroeconomic trajectory at the level of national averages. Understanding who benefits from this growth requires a turn to distributional data, and the picture that emerges is considerably less encouraging.

Bulgaria's income quintile share ratio, known as the S80/S20 ratio, stood at 6.94 as of 2025, meaning that the top 20% of the population earn nearly seven times more than the bottom 20% (Eurostat, 2025). This places Bulgaria first among all 27 EU member states on this measure, a ranking that reflects the most severe income polarisation in the bloc. The top 10% income share for 2021 stood at 30% according to World Bank data, meaning that a single decile of the population captures over a third of all distributed income nationally.

Bulgaria's Gini coefficient of 38.4, also the highest in the EU for 2025, provides a complementary measure of this inequality. For context, a score of zero represents perfect equality and a score of 100 represents perfect inequality; the most equal EU member states, including Slovakia, Slovenia, Czechia, and Belgium, record scores in the range of 22 to 26. Bulgaria's score is not at the global extreme, but it is significantly elevated relative to European norms and is suggestive of a thin middle class concentrated just above the poverty line, with income and wealth skewed heavily toward upper-income households.

Regional inequality reinforces this picture. Sofia, the capital, generates a GDP per capita of approximately 35,412 euros, which is 2.18 times the national average of 16,265 euros. By contrast, poorer regions such as Sliven record a GDP per capita of around 6,700 euros, roughly six times lower than the capital. Bulgaria operates, in effect, as a dual economy: a relatively productive urban core and a substantially poorer periphery, with limited fiscal redistribution to bridge the gap. The country's flat income tax rate of 10% and constrained social transfer programs stand in contrast to the progressive tax systems and stronger transfer mechanisms that help countries like Slovenia, Belgium, and Czechia maintain lower Gini scores at comparable income levels.

Household Burden and the Engel Coefficient

Aggregate macroeconomic statistics describe the national economy, but they do not capture how rising food prices land at the level of individual households. The Engel coefficient, which measures the share of total household expenditure devoted to food, provides a more direct indicator of the pressure that food price inflation places on household budgets and the degree to which it constrains discretionary spending, savings, and financial resilience (Kateva, 2023).

According to Bulgaria's National Statistical Institute Household Budget Survey, food and non-alcoholic beverages accounted for 28% of total household expenditure in 2024. Across the EU as a whole, this figure stands at 13.2%. The gap of nearly fifteen percentage points is striking and carries direct implications for economic vulnerability. Engel's law predicts that as incomes rise, the share of expenditure devoted to food declines, because basic nutritional needs are relatively fixed in quantity while income continues to grow. The persistence of Bulgaria's high food expenditure share despite nominal income gains is what Waglewski and Wyszynski (2024) describe as an Engel-law anomaly: the expected inverse relationship between development and food expenditure share is not materialising at the speed that aggregate growth data would predict.

This anomaly is partly a product of the distributional dynamics discussed above. National averages mask the much higher food expenditure shares of lower-income households, who allocate a substantially larger proportion of their budgets to basic necessities than wealthier households do.

Food inflation is therefore regressive in its incidence: a ten-percentage-point increase in food prices extracts a far larger real cost from a household spending 40% of its income on food than from one spending 12%. In Bulgaria, where the bottom income quintile earns just one-seventh of what the top quintile earns, this regressive dynamic is amplified considerably.

Monopoly Pricing and Retail Market Concentration

The price increases documented in the preceding sections cannot be fully explained by inflation or supply chain disruptions alone. The structure of Bulgaria's retail food market introduces an additional layer of analysis: market concentration and its effects on competitive pricing.

Standard economic theory holds that when a small number of firms dominate a market, competitive pressure diminishes and dominant firms gain the ability to sustain prices above competitive equilibrium. In Bulgaria's food retail sector, recent empirical research found that the five largest food retailers account for 60% of the national market, producing a CR5 concentration ratio of 60% and a Herfindahl-Hirschman Index (HHI) of approximately 1,700 (Hristova, 2025). Under standard competition policy thresholds, markets with an HHI above 2,000 are considered highly concentrated with significant competition concerns; Bulgaria's score places it at the upper boundary of moderate concentration, close enough to raise substantive concerns about pricing behaviour without reaching the formal threshold for regulatory intervention.

The welfare consequences of this degree of concentration are not trivial. Research by Pellegrino (2019) estimates that oligopolistic pricing behaviour in markets with this level of concentration can generate a deadweight loss equivalent to over 13% of total potential economic surplus. This means that both consumers, who pay higher prices than a competitive market would produce, and the economy as a whole, which forgoes transactions that would be mutually beneficial under competitive conditions, bear the cost of market power. As concentration rises, the share of surplus that flows to consumers declines.

The K3K commission's 2025 findings on structural deformations across Bulgaria's food distribution chain align with this theoretical account. The commission identified unequal price distribution across the country and highlighted the dominant role of a small number of large retail chains in determining shelf prices for processed and imported goods, particularly in the dairy and oils categories where domestic production has contracted most sharply. This concentration of retail power in a context of declining domestic supply gives the largest chains significant leverage in setting prices with limited competitive constraint from smaller independent retailers.

Discussion and Limitations

Several methodological limitations apply to this analysis and should be acknowledged before drawing firm conclusions. First, much of the foundational comparative data used in this paper, particularly Eurostat comparative price levels and GDP per capita indices, draws on 2021 and 2024 benchmarks. Given the pace of change in Bulgaria's economy, and especially the structural shift associated with Eurozone accession in 2026, some of these figures may already be outdated by the time of reading. The 2026 salary and GDP projections used in this paper are based on forecasts and preliminary estimates rather than confirmed statistical releases.

Second, the sources used vary in scope and methodology. National-level averages from Eurostat and the NSI Household Budget Survey do not capture the full range of within-country variation, particularly between Sofia and poorer peripheral regions. The income distribution data and Gini coefficient figures are drawn from 2024 and 2025 releases and represent point-in-time snapshots of a rapidly shifting distributional landscape. Third, the HHI and CR5 estimates for Bulgaria's retail food market are sourced from a single study (Hristova, 2025) and would benefit from triangulation against additional independent market analyses before being treated as definitive.

Future research in this area would benefit from longitudinal household-level panel data tracking food expenditure shares and dietary composition across income deciles over time, as well as more granular regional price data that could test whether the price disparities identified at the national level are more or less acute in low-income areas outside Sofia.

Conclusion

Bulgaria's food price situation in 2026 is the product of several overlapping structural forces that nominal wage growth and GDP convergence have not yet resolved. Wages have risen substantially in nominal terms, and GDP per capita has moved meaningfully closer to the EU average. Yet food prices, particularly for dairy and oils, have simultaneously risen to above-EU-average levels, concentrated market power among a small number of large retailers has constrained competitive pricing, domestic production in key food categories has contracted, and the gains from economic growth have flowed disproportionately to upper-income households.

The Engel coefficient of 28% documents the result of these pressures at the household level: Bulgarian families spend more than twice the EU average share of their income on food, leaving them with less capacity to save, invest, or absorb economic shocks. The income quintile ratio of 6.94 and Gini coefficient of 38.4, both the highest in the EU, confirm that the burden of this situation is not evenly shared. The bottom income quintile, living in poorer regions and spending a far larger share of income on food than wealthier counterparts, faces a qualitatively different economic reality than the national averages suggest.

Eurozone accession creates new opportunities for investment and institutional credibility, but it does not automatically resolve the structural issues identified in this paper. What Bulgaria requires alongside macroeconomic development is a strengthening of redistributive fiscal mechanisms, more active enforcement of competition policy in the food retail sector, and investment in domestic food production capacity in the categories where supply contraction has been most severe. Without these structural interventions, the price-wage gap is likely to remain a defining feature of Bulgarian economic life for years to come.

References

Eurostat. (2024). *Comparative price levels for food, beverages and tobacco*. European Commission. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Comparative_price_levels_for_food,_beverages_and_tobacco

Eurostat. (2025). *Income quintile share ratio (S80/S20) by sex and age group*. European Commission.

Eurostat. (2025). *Gini coefficient of equivalised disposable income*. European Commission.

Hristova, M. (2025). Retail market concentration and food pricing in Bulgaria: An HHI analysis. *Bulgarian Economic Review*.

K3K Commission for the Defence of Fair Competition. (2025). *Analysis of retail food prices and structural deformations in Bulgarian food distribution*. Sofia: K3K.

Kateva, D. (2023). Food demand elasticity in Bulgaria. *UNWE Research Papers*. University of National and World Economy, Sofia.

Pellegrino, B. (2019). Product differentiation and oligopoly: A network approach. *Working Paper, University of Maryland*.

Simenova-Ganeva, R., Ganev, P., & Ivanov, M. (2024). Nominal income growth and purchasing power constraints in Bulgaria's transition economy. *Institute for Market Economics, Sofia*.

Trading Economics. (2025). *Bulgaria income distribution (Eurostat)*. https://tradingeconomics.com/bulgaria/inequality-of-income-distribution-eurostat-data.html

Waglewski, P., & Wyszynski, R. (2024). The Engel-law anomaly in Central and Eastern Europe. *Structural Change and Economic Dynamics, 68*, 112–124.

World Bank. (2021). *Income share held by highest 10% — Bulgaria*. World Bank Open Data.