

Foods and Non-foods: Relative Prices and Economic Disruptions in Modern and Contemporary History of Bulgaria

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Abstract: *This study examines the long-term dynamics of food versus non-food relative prices in present-day Bulgaria from 1750 to 2020. Using a fixed consumer basket comprising 11 food and six non-food items, we develop a consistent series of this price ratio. We subsequently establish two types 15 of benchmarks corresponding to a notion of (near-)equilibrium: an interquartile-based benchmark and a long-term trend. We then identify the periods during which the series dynamics diverged from these benchmarks. These deviations are considered in relation to potential linkages with events such as wars, climatic shocks, institutional changes, exchange rate misalignments and administered pricing regimes. Our findings indicate that the food/non-food ratio remained broadly stable over the long term, with significant but temporary deviations coinciding with historical short-term disruptions. Periods of unusually low ratios, when food was inexpensive relative to non-food, correspond with abundant harvests, suppressed food prices, or costly imports of industrial goods, as observed during the late Ottoman agrarian economy, Tanzimat reforms, the Crimean War, and Bulgaria's 1996 financial crisis. Conversely, high-ratio episodes, when food became expensive compared to non-food, arose under conditions of agricultural shortfalls, requisitions, rationing, and price controls, such as wartime blockades, world wars, and the socialist era. The transition of the 1990s exhibited the most volatile dynamics, whereas post-2000 integration coincided with reduced volatility and re-centering near the historical mean. The analysis highlights the political economic dimension of relative prices as a distributional barometer: rising food prices favored rural producers, whereas rising non-food prices advantaged urban producers, reflecting the price-scissors framework. Despite episodic distortions, we do not detect statistically significant level shifts in formal break tests (Bai-Perron). Rather, deep general equilibrium linkages maintained the connection between the two bundles through labor, energy, and trade markets. In periods characterized by competitive markets, the price ratios typically oscillate within defined bands. Conversely, during periods of diminished or absent market competition, price distortions are prevalent. This observation underscores the critical role played by market institutions in the evolution of price ratios. The empirical findings establish a benchmark for comparative analysis across various regions and economies. The*

straightforward yet effective approach we propose for identifying price distortions could serve as a reliable tool for examining price trends, which is robust to typical historical data limitations.

Keywords: *relative prices; food–non-food ratio; price scissors; price distortions; Bulgaria; economic history; administered pricing; economic disruptions*

JEL: *E31, N13, N14, P22, C22*

Introduction

The relative price dynamics of food and non-food items have important implications for household welfare. During economic upswings, food prices often rise faster than non-food prices, eroding the real incomes of poorer households that devote a larger share of their budget to food (Deaton, 1997).¹ By contrast, episodes of faster non-food price increases are usually linked to energy, housing, durables, or services inflation, and are often associated with oil or energy shocks (Hamilton 1983). These shocks affect richer households more immediately, although poorer households also feel the impact in the longer run through postponed or constrained purchases. In economic downturns, the pattern reverses: food prices tend to remain stable, while non-food prices often decline, reflecting differences in price stickiness, which cushions higher-income households but leaves poorer households more exposed to persistent food price pressures (Bils & Klenow, 2004). Moreover, periods of high inflation are typically associated with greater dispersion and volatility in relative prices (Parks, 1978).

There is no unique optimal food/non-food price ratio, reflecting the broader point of Singer (1950) that relative prices evolve differently across time and countries. With economic growth, services tend to become relatively more expensive because of productivity differentials between the tradable and non-tradable sectors (Balassa, 1964; Samuelson, 1964). This trend is reinforced by Engel’s law, which states that households shift their expenditures towards non-food items with rising incomes (Deaton, 1997).

In the literature, historical evidence of long-run price changes is methodologically and thematically fragmented. One line of research reconstructs city- and country-specific CPI series, which allow relative price analysis across detailed consumption groups beyond a simple food/non-food dichotomy (Edvinsson & Söderberg, 2011; Grytten, 2004). The experience with broader historical projects, such as Allen (2001), hints at the risks of base-year drift and the importance of transparent linking when price-collection methodologies change. The second examines the long-run terms of trade between primary commodities and manufactures (Harvey et al., 2010) and the role of globalization and blockade episodes in relative prices (O’Rourke, 1997). A third, more

¹ Recently, however, overlapping supply shocks (e.g. pandemics, war, and climate anomalies) have also produced large swings in global food prices which outpaced headline inflation and amplified real-income losses (IMF 2022).

recent macroeconomic growth strand places relative prices at the core of the reallocation from agriculture to industry to services (Herrendorf, Rogerson & Valentinyi, 2014). Spatial coverage is also uneven: long-run price histories focus heavily on Western Europe, while Southeastern Europe remains understudied. Among the exceptions are studies that focus on the role of trade routes and market institutions (Pamuk, 2000; Quataert, 1994; Atanasov, 2023). Overall, genuinely long-run, economy-wide series on food/non-food relative prices remain rare.

In this study, we contribute to filling this gap by constructing a long-run food/non-food relative price series for modern-day Bulgarian territory covering 1750–2020.² We identify aberrations in these relative prices and associate them with major episodes of disruption, including wars, climatic shocks, exchange rate misalignments, and price controls. Beyond such shocks, we also interpret food/non-food dynamics through the classic town-country lens, treating relative prices as a distributional barometer in the spirit of the price-scissors framework (Sah & Stiglitz, 1984).

Data, definitions, and methods

We use a fixed consumer basket including 11 foods (bread, rice, beans, meat, cooking oil, butter, cheese, fruits, sugar, and salt) and six non-food items (clothing, lighting, heating, soap, transport, and barley as a proxy for domestic animal breeding costs). Although small, this basket is largely representative of the consumption patterns of Bulgarians until the end of World War II. It has also retained a considerable share in household budgets ever since (Ivanov, Simeonova-Ganeva & Ganev, 2022).

We define the food/non-food relative price as a unit-free ratio:

$$R_t = \frac{P_t^{Food}}{P_t^{Non-food}} \cdot 100$$

where P_t^{Food} and $P_t^{Non-food}$ are the annual weighted³ averages of the prices of food and non-food items, respectively. All prices are presented in 1946 Bulgarian leva (Simeonova-Ganeva, Ivanov & Ganev, 2023). A value of R_t below 100 indicates that food is cheaper relative to non-food, and vice versa.

We also compute the chain index of the relative price change as follows:

$$IR_t = \frac{P_t^{Food}/P_t^{Non-food}}{P_{t-1}^{Food}/P_{t-1}^{Non-food}} \cdot 100 = \frac{P_t^{Food}/P_{t-1}^{Food}}{P_t^{Non-food}/P_{t-1}^{Non-food}} \cdot 100$$

² The results concerning the years prior to 1880 are based on 50,000 price observations collected mainly from merchant diaries (Ivanov, Simeonova-Ganeva & Ganev, 2022). For the earlier decades of this period, data density is relatively low, therefore data imputation techniques were applied. The interpretation of the results concerning these years should therefore be more cautious.

³ Weights computed from household budgets.

Values close to 100 indicate that food and non-food prices change proportionally, while values above (below) 100 indicate that food prices increase faster (slower) than non-food prices.

We define *price distortions* as systematic, policy- or institutionally induced wedges between observed R_t and counterfactual levels implied by equilibrium considerations. Canonical sources of such distortions include administered prices under central planning, trade tariffs/quotas, exchange rate misalignment, taxes, and subsidies (Kornai 1980; Bale & Lutz, 1981). As there is insufficient information to construct an economic model to compute the equilibria, we resort to approximations. The first defines (near-)equilibrium behavior in a broader sense, that is, relative prices falling within the interquartile range (IQR). Thus, aberrant values are those falling below the 25th percentile and above the 75th percentile. The second approximation is a narrow-sense one: we compute a long-term trend using the boosted Hodrick-Prescott filter.⁴ Deviations from this trend are identified as distortions. Table 1 provides more details on the economic interpretation of relative prices.

Table 1.

Interpretation of relative price levels

R_t levels	Economic reading	Typical drivers	Distributional signal
Unusually low (below IQR band)	Food is cheap vs. non-food	Strong harvests/ higher agricultural TFP; import openness; exchange-rate appreciation; food subsidies/price controls; or non-food inflation	Favors urban consumers and poorer households with high food shares; can squeeze farm margins and under-incentivize investment in agriculture
Within IQR band	Normal conditions	Rather balanced supply/demand; no large policy wedges; rather smooth structural transition and technological change; short-term fluctuations due to usual market disturbances; opposing structural forces offset	No strong redistribution; relative prices near long-run norms
Unusually high (above IQR band)	Food is dear vs. non-food	Harvest failures/climate shocks; trade blockages and wars; energy/fertilizer spikes; exchange-rate depreciation; protectionism/tariffs; taxation of non-food	Regressive hit to household welfare (Engel's law); rural terms-of-trade improve if prices are market-driven; if prices are administered, high official ratios may still coexist with shortages/rationing

Source: Authors' elaboration

⁴ Phillips and Shi (2021).

We also use price scissors⁵ as a descriptive label for episodes in which the two price aggregates diverge persistently. As food prices are usually lower than those of non-food items, a sustained rise in non-food prices outpacing that of food would lead to “opening” the scissors (if plotted).

Empirical findings

For 1750–2020, the relative price mean was 56.7, the median was 52.3, and the 25th and 75th percentiles were 41.0 and 67.2, respectively (Figure 1). It is easy to see that episodes of unusually low food/non-food ratios aligned with contexts in which food was relatively cheap (e.g., due to abundance or administratively suppressed prices) while non-food became comparatively dear. The list of such episodes includes 1750–68 (the late-Ottoman agrarian economy before the 1768–74 war), 1825–27 (prelude to the 1828–29 war), 1835–39 (institutional change culminating in the 1839 *Tanzimat* reforms decree), 1844–54 (disruptions to Black Sea trade before and during the Crimean War⁶), 1859–94 (including the 1861–65 U.S. Civil War “cotton famine,”⁷ the Long Depression of 1873–95,⁸ and Bulgaria’s 1877–78 Liberation), 1914–17 (food price ceilings and shortages of imported non-foods during WWI), 1952 (price system reform and broader administrative price controls⁹), and 1996 (banking crisis and exchange-rate collapse making imported non-food costly).

Major climate shocks have also left clear marks.¹⁰ During the years following the eruption of the *Laki* volcano (1783–84), the ratio dipped below its central tendency, but no considerable distortions were observed. This was consistent with depressed food prices amid trade insulation, controls, or distress sales (likely to affect more non-food prices). In 1816 (the “year without a summer” after *Tambora*), the contraction of supply was the dominant force, and the ratio spiked above the long-run benchmark.

Unusually high ratios occurred when agricultural supply tightened and distribution frictions arose, whereas non-food prices were capped or non-food demand weakened. These episodes were 1791–1814 (wars¹¹, blockades, epidemics¹², and *Kardzhalii*¹³

⁵ The term originated from the Soviet Union “scissors problem/crisis” (Sah & Stiglitz, 1984). The phenomenon was also observed in the times of the Great Depression in Bulgaria and other agrarian economies (Anderson, 1935).

⁶ Roussev (2024); Georgieva & Todorov (2021).

⁷ Resulting in higher imported textile prices across European–Ottoman markets.

⁸ Ivanov (2021).

⁹ Simeonova-Ganeva, Ivanov & Ganev (2023).

¹⁰ Hristozov (2024).

¹¹ French Revolutionary wars, Napoleonic wars, 1806–1812 Russo–Turkish war, Serbian Revolution.

¹² Predominantly plague, typhus, and smallpox.

¹³ The *Kardzhalii* times was a period of political unrest (c. 1780s–1810s), when organized brigandage and predation raised transaction costs, disrupted routes, and induced distress sales of grain (Mutafchieva 1977).

predation intermittently disrupting grain flows), 1942–51 (wartime requisitions, rationing, and procurement sustaining food scarcity along with administered non-food prices), 1964–1994 (chronic farm shortfalls, periodic de-subsidization, and real income slowdown in the 1980s¹⁴, followed by early transition), and 1997–2000 (post-stabilization price readjustment to market clearing).

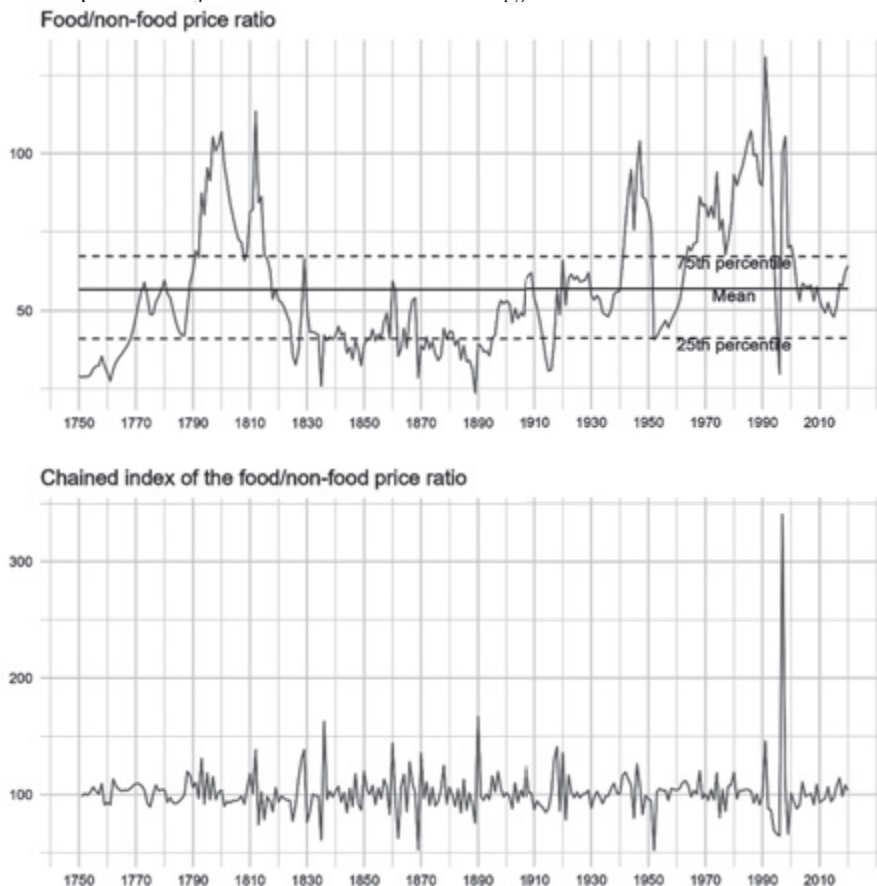


Figure 1. Price ratios and their annual changes, 1750–2020

Source: Own calculations

The chain index values corroborate these mechanisms. Deep one-year drops (values below 100, especially below 95) were clustered in two cases. First, where food prices were controlled or harvests were favorable (or imports were liberalized). Second, where non-food prices surged due to import and input cost shocks. Pronounced spikes (values above 100) coincided with supply squeezes, rationing, and price adjustment

¹⁴ Simeonova-Ganeva, Ganev & Ivanov (2024).

episodes. After 1997–2000, annual changes largely gravitated to near 100. Brief departures aligned with the 2007–08 and 2011–12 global food booms and 2020 supply frictions. The 2013–16 low-inflation spell (aided by the oil-price slump and stronger import competition) temporarily pulled the ratio down before it stabilized.

In Table 2, where we present summary statistics, the period 1750–2020 is partitioned into eight windows:¹⁵ late-Ottoman (1750–1838), *Tanzimat*-to-Liberation (1839–77), post-Liberation to pre-Balkan wars (1878–1911), Balkan wars/WWI and aftermath (1912–28), Great Depression to WWII (1929–44), socialism (1945–89), transition (1990–2002), and EU integration (2003–20). The lowest values of sub-period means are observed in 1839–77 (41.4) and 1878–1911 (44.4). This is consistent with the earlier narrative of depressed food/non-food price ratios under the *Tanzimat*-era reordering and the long agrarian downturn that followed.¹⁶ The years of socialism are featured with persistently high relative prices (mean value 75.8) due to price controls and chronic shortages. In transition, relative prices were the highest and most volatile (mean value 80.8, standard deviation: 28.9).¹⁷ In contrast, the 2003–20 relative prices were confined to a stable corridor (mean 55.0), in line with the aforementioned stabilization. Finally, the overall mean (56.7) exceeded the median (52.3), indicating a right-skewed distribution determined by high-ratio episodes (notably, the 1990s).

Table 2.

Summary statistics of price ratios by subperiods and overall

Period	Mean	25th perc.	Median	75th perc.	St. dev.	Min	Max
1750 - 2020	56.73	41.03	52.33	67.17	20.83	23.58	130.97
1750 - 1838	55.83	40.40	51.00	67.65	21.74	25.87	113.49
1839 - 1877	41.39	37.64	40.67	43.43	6.45	28.58	59.19
1878 - 1911	44.36	38.70	43.30	50.76	8.96	23.58	61.83
1912 - 1928	50.95	41.03	56.47	59.73	11.62	30.53	65.91
1929 - 1944	60.41	52.51	54.96	62.78	14.23	47.83	94.90
1945 - 1989	75.75	65.26	78.91	90.73	19.46	40.47	107.25
1990 - 2002	80.80	66.41	70.74	100.41	28.93	29.49	130.97
2003 - 2020	55.04	51.45	55.38	57.82	4.66	47.74	64.24

Source: Own calculations

Fig. 2 reveals the sub-periods in which the price scissors opened or relative prices were distorted by shocks. In the late-Ottoman and *Tanzimat*-to-Liberation periods, the opening of scissors is consistent with the observed “low-ratio” episodes. After Liberation

¹⁵ Periodization other than the one implied by purely historical considerations is here unjustifiable. From a statistical viewpoint, there are no structural breaks based on the Bai–Perron test results (Bai & Perron, 1998). The implication is that, even amid large historical shocks, the series is characterized with relative dynamic stability and not with discrete regime shifts.

¹⁶ Penchev (2021).

¹⁷ The overall maximum value (above 130) was observed in this period.

(1878–1911), a short-lived spike is visible. In 1912–28, the scissors opened widely before stabilizing and eventually closing in 1929–44.¹⁸ Under socialism, the dynamics of both series were shaped by administrative controls.¹⁹ The 1952 policy shock massively depressed food prices. However, they gradually aligned with non-food prices over time. Such a development indirectly reflected the inflationary pressure that was building up. In the transition, a discontinuous price re-equilibration occurred after the 1996–97 crisis, returning the economy to ‘normal’ food/non-food price ratios. In 2003–20, the two series ran nearly in parallel, evidencing reduced distortions and a return to central tendency.

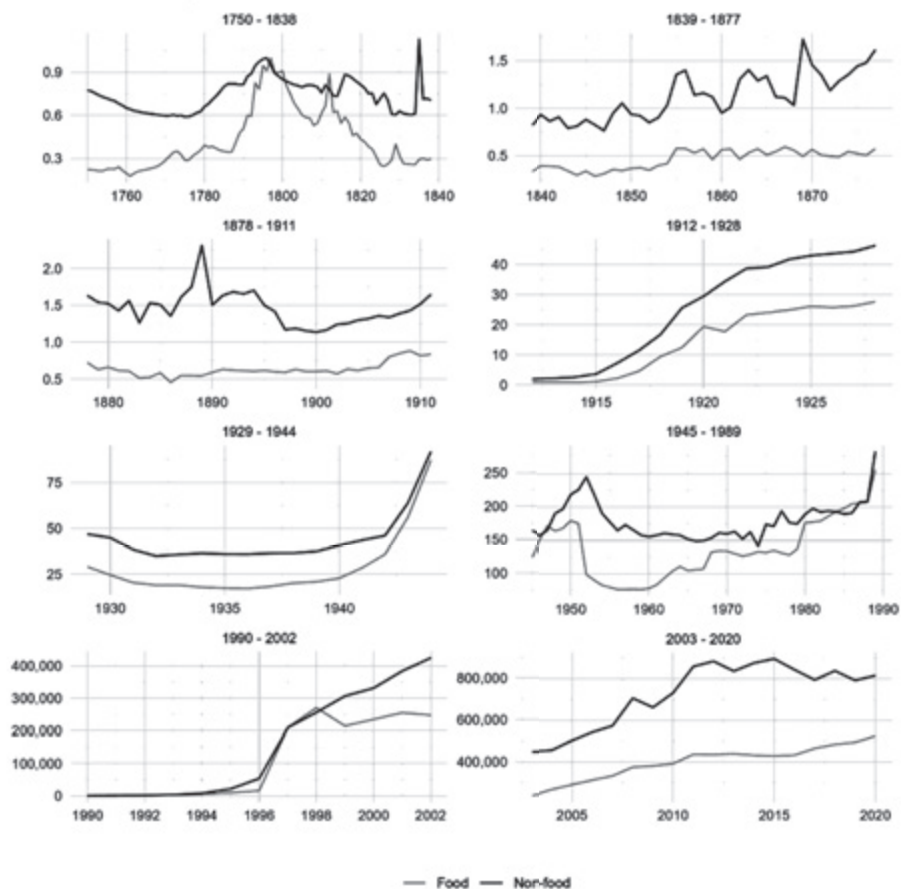


Figure 2. Food and non-food prices by subperiods (in 1946 Bulgarian leva)

Source: Own calculations

Fig. 3 confirms the above observations: no sustained upward or downward tendency was observed in the data. Large positive deviations align with the high-

¹⁸ Cf. Dimitrov (2022) and Paev (2024) for thorough discussions on the 1930s developments that contributed to this outcome.

¹⁹ Ganev, Ivanov & Simeonova-Ganeva (2025).

ratio episodes already discussed, that is, periods when agricultural supply was tight, distribution frictions were high, many non-food prices were capped, or demand for non-food weakened. Large negative deviations are concentrated in the mid-19th-century agrarian depression, in episodes of controlled food prices (e.g., in the 1940s and early-1950s), or when non-food prices surged after import and input cost shocks (early-to-mid-1990s pre-crisis years).



Figure 3. Long-term dynamics of price ratios

Source: Own calculations

Discussion and conclusion

The results indicate that the dynamics of relative prices reflect the main features of historical developments. Over the two-and-a-half centuries considered, the food/non-food ratio displayed stable long-run dynamics, featuring episodic digressions rather than permanent regime shifts. The deviations from (near-)equilibrium behavior coincided with well-known disruptions: war mobilization and blockades, predation and insecurity, climate/harvest shocks, economic and banking crises, and price controls. Supply tightening and distribution frictions pushed the ratio up; episodes of trade integration, good harvests, or administrative suppression of food prices pulled it down. The post-2000 policies mitigated volatility. Bulgaria's recent pattern aligns with the convergence of more open and service-intensive European economies.

The food/non-food relative prices present a good measure of the political economy of town versus country. When food prices increase faster than non-food prices, agriculture is favored. Conversely, when non-food price growth is larger than that of food, the scissors open in favor of towns. There were four impressive but short-lived

spikes in which the country outpaced the town: the *Kardzhalii* times, the Year Without a Summer, WWII, and the period of “domesticating revolution”²⁰). This supports the statement that the country fared relatively better during times of instability. The swings in the ratio help explain migration waves (particularly during the great influx to towns from the 1950s to the 1970s), household budget shifts, and the incidence of pricing policy across regimes.

The lack of structural breaks and subdued post-2000 dynamics imply that wedges were transitory and policy-sensitive, largely consistent with deep general equilibrium linkages and the gradual offset of structural forces. Over the long run, price ratios reveal a continuous interaction between productivity and income-driven consumption, such that technological changes do not lead to abrupt food/non-food price ratio shifts. The slow drift of the series points to long-run linkages between food and non-food prices. There are several explanations for this. First, labor, energy, and traded intermediate goods transmit monetary and trade shocks to both bundles, inducing co-movements. Second, open markets, consumer substitution, and producer reallocation limit the life of large wedges. Third, rising agricultural productivity tends to cheapen food, while services and some non-tradables become relatively dearer with income (Balassa–Samuelson), partly canceling each other. Finally, extreme relative-price configurations are fiscally and politically costly (Pamuk & Karaman, 2023), and exchange-rate realignments and the lifting of controls reverse them.

‘Normal’ ratios, exhibiting oscillations within specified bands, are observed in times with rather competitive markets. Price distortions characterize periods with weak or no market competition. The latter confirms that market institutions play a key role in the evolution of price ratios.

The empirical results provide a benchmark for comparisons with other regions and economies. Extended comparisons would provide additional value if wider consumer baskets were used in the analysis. The simplified but practical approach to identifying price distortions that we suggest could serve as a reliable tool for analyzing price developments, robust to typical historical data limitations.

REFERENCES:

Allen, R., 2001. The great divergence in European wages and prices from the Middle Ages to the First World War. *Explorations in Economic History*. Vol. 38, no. 4, pp. 411–447.

²⁰ The Bulgarian communist government faced a triple shortage: labor in the primary sector, foodstuffs for the growing urban population, and hard currency. Because it needed revenue from food exports, the regime began pursuing policies that favored the countryside, after it had been neglected in the immediate aftermath of the communist takeover. As a result, rural living standards managed to catch up with those of the industrial proletariat during the 1970s and 1980s. The Canadian anthropologist Gerald Creed termed this shift in priorities the “domestication of the revolution” (Creed 1997).

- Anderson, O., 1935. Again on the problem of the scissors of prices in Bulgaria. *Publications of the Statistical Institute for Economic Research, State University of Sofia*. Vol. 2-3, pp. 61–88.
- Atanasov, H., 2023. The attitude towards usurers and interest in nineteenth-century Ottoman Bulgaria: The Orthodox perspective. *Proceedings of the Centre for Economic History Research*. Vol. 8, pp. 45–60. [Атанасов, Х., 2023. Отношението към лихварите и лихвата в османска България през XIX век. Православната перспектива. *Известия на Центъра за стопанско-исторически изследвания*. Т. 8, с. 45–60.]
- Balassa, B., 1964. The purchasing-power parity doctrine: A reappraisal. *Journal of Political Economy*. Vol. 72, no. 6, pp. 584–596.
- Bai, J. & Perron, P., 1998. Estimating and testing linear models with multiple structural changes. *Econometrica*. Vol. 66, no. 1, pp. 47–78.
- Bale, M. & Lutz, E., 1981. Price distortions in agriculture and their effects: An international comparison. *American Journal of Agricultural Economics*. Vol. 63, no. 1, pp. 8–22.
- Bils, M. & Klenow, P., 2004. Some evidence on the importance of sticky prices. *Journal of Political Economy*. Vol. 112, no. 5, pp. 947–985.
- Creed, G., 1997. *Domesticating revolution: From socialist reform to ambivalent transition in a Bulgarian village*. Penn State University Press, Pennsylvania.
- Deaton, A. (1997). *The analysis of household surveys: A microeconomic approach to development policy*. World Bank, Washington, D.C.
- Dimitrov, M., 2022. Bulgarian foreign trade in the 1930s (Guidelines, tools, results). *Proceedings of the Centre for Economic History Research*. Vol. 7, pp. 176–190. [Димитров, М., 2022. Външната търговия на България през 30-те години на XX век (насоки, инструменти, резултати). *Известия на Центъра за стопанско-исторически изследвания*. Т. 7, с. 176–190.]
- Edvinsson, R. & Söderberg, J., 2011. A consumer price index for Sweden, 1290–2008. *Review of Income and Wealth*. Vol. 57, no. 2, pp. 270–292.
- Ganev, K., Ivanov, M. & Simeonova-Ganeva, R., 2025. Consumer price indices: Bridging post-liberation, communism, and post-communism in Bulgaria. *Post-Communist Economies*. Vol. 37, no. 4, 325–343.
- Georgieva, G. & Todorov, N., 2021. Social and professional networks of Beratli merchants. *Proceedings of the Centre for Economic History Research*. Vol. 6, pp. 13–28. [Георгиева, Г. & Тодоров, Н., 2021. Социални и професионални мрежи на търговците бератлии. *Известия на Центъра за стопанско-исторически изследвания*. Т. 6, с. 13–28.]

- Grytten, O., 2004. A Norwegian consumer price index 1819-1913 in a Scandinavian perspective. *European Review of Economic History*. Vol. 8, no. 1, pp. 61–79.
- Hamilton, J., 1983. Oil and the macroeconomy since World War II. *Journal of Political Economy*. Vol. 91, no. 2, pp. 228–248.
- Harvey, D., Kellard, N., Madsen, J. & Wohar, M., 2010. The Prebisch-Singer hypothesis: Four centuries of evidence. *Review of Economics and Statistics*. Vol. 92, no. 2, pp. 367–377.
- Herrendorf, B., Rogerson, R. & Valentinyi, Á., 2014. Growth and structural transformation. In P. Aghion & S. Durlauf (Eds.), *Handbook of Economic Growth*. Vol. 2B, pp. 855–941, Elsevier.
- Hristozov, H., 2024. Connecting ecologies: Egypt and the Balkans during the climate crisis in the mid-1780s. *Proceedings of the Centre for Economic History Research*. Vol. 9, pp. 13–25.
- IMF, 2022. *World economic outlook: Countering the cost-of-living crisis (October)*. International Monetary Fund, Washington, D. C.
- Ivanov, M., Simeonova-Ganeva, R. & Ganev, K., 2022. Long-term consumer price dynamics in Bulgaria, 1750–2020. *Proceedings of the Centre for Economic History Research*. Vol. 7, pp. 23–39.
- Ivanov, M., 2021. *Against the current: Bulgarian textile (proto)industry, 1800-1912*. Sofia: Siela. [Иванов, М., 2021. *Срецу течението: Българската текстилна промишленост 1800-1912 г.* София: Сиела].
- Kornai, J., 1980. *Economics of shortage*. North-Holland, Amsterdam.
- Mutafchieva, V., 1977. *Kardjali Times*, Sofia: Nauka i izkustvo. [Мутафчиева, В., 1977. *Кърджалийско време*. София Наука и изкуство].
- O'Rourke, K., 1997. The European grain invasion, 1870–1913. *Journal of Economic History*. Vol. 57, no. 4, pp. 775–801.
- Paev, K., 2024. Industrial cartels and antimonopoly legislation in Bulgaria in the 1930s. *Proceedings of the Centre for Economic History Research*. Vol. 9, pp. 233–244. [Паев, К., 2024. Индустириални картели и антимонополно законодателство в България през 30-те години на XX век. *Известия на Центъра за стопанско-исторически изследвания*. Т. 9, с. 233–244].
- Pamuk, Ş. & Karaman, K., 2023. The rise of the modern state since 1500: Annual revenues of European and other states. *Proceedings of the Centre for Economic History Research*. Vol. 8, pp. 13–21.
- Parks, R., 1978. Inflation and relative price variability, *Journal of Political Economy*. Vol. 86, no. 1, pp. 79–95.

- Penchev, P., 2021. The role of the market in the Bulgarian Revival. *Proceedings of the Centre for Economic History Research*. Vol. 6, pp. 29–43. [Пенчев, П., 2021. Ролята на пазара в българското Възраждане. *Известия на Центъра за стопанско-исторически изследвания*. Т. 6, с. pp. 29–43].
- Phillips, P. & Shi, Z., 2021. Boosting: Why you can use the HP filter. *International Economic Review*. Vol. 62, no. 2, pp. 521–570.
- Roussev, I., 2024. Good opportunities and barriers to the grain trade in the ports of the Western Black Sea coast in the 1840s, presented in the reports of the European consuls. *Proceedings of the Centre for Economic History Research*. Vol. 9, pp. 103–116. [Русев, И., 2024. Добри възможности и бариери пред зърнената търговия в пристанищата на Западното Черноморие през 40-те години на XIX век, отразени в докладите на европейските консули. *Известия на Центъра за стопанско-исторически изследвания*. Т. 9, с. 103–116].
- Sah, R. & Stiglitz, J., 1984. The Economics of Price Scissors. *American Economic Review*. Vol. 74, no. 1, pp. 125–138.
- Samuelson, P., 1964. Theoretical notes on trade problems. *Review of Economics and Statistics*. Vol. 46, no. 2, pp. 145–154.
- Simeonova-Ganeva, R., Ganev, K. & Ivanov, M., 2024. Real prices, real incomes, and purchasing power during communism, transition and EU integration: Evidence from Bulgaria. *Proceedings of the Centre for Economic History Research*. Vol. 9, pp. 26–45.
- Simeonova-Ganeva, R., Ivanov, M. & Ganev, K., 2023. Currency reforms and inflation in communist and post-communist Bulgaria. *Proceedings of the Centre for Economic History Research*. Vol. 8, pp. 236–250.
- Singer, H., 1950. The distribution of gains between investing and borrowing countries. *American Economic Review*. Vol. 40, no. 2, pp. 473–485.

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