

INFLATION, SCARCITY, AND B2B PURCHASING BEHAVIOUR: A CONCEPTUAL FRAMEWORK FROM THE CEE DRY CONSTRUCTION DISTRIBUTION SECTOR

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Abstract:

This paper is conceptual and exploratory; it does not provide direct empirical measurement of firm-level B2B purchasing behaviour. It develops a sector-specific framework explaining the paradoxical resilience of construction activity in the dry construction distribution channel across selected Central and Eastern European (CEE) countries – Slovakia, the Czech Republic, Poland and Hungary – during the inflationary period 2021-2024. Drawing on dynamic capabilities theory, the resource-based view and the supply chain disruption literature, the framework theorises that when an inflationary shock and supply chain disruption occur simultaneously, the primary B2B supplier-selection criterion in the dry construction distribution channel temporarily shifts from price to product availability, granting distributors with strong inventory positions a temporary bargaining and competitive advantage. The empirical component is restricted to a descriptive analysis of Eurostat macroeconomic indicators (HICP, construction production index, construction PPI) for 16 country-year observations. These aggregated national-level indicators serve only as a macroeconomic backdrop and do not measure dry construction distribution behaviour directly; no inferential statistical model is reported. Four propositions are derived and presented as premises for future empirical research using surveys, case studies and longitudinal designs. The framework offers conceptual guidance for distributors formulating inventory strategies under shortage conditions and for manufacturers designing distribution-partnership mechanisms.

Key words: B2B purchasing behaviour, distribution channel, dry construction sector, inflationary environment, inventory strategy

INTRODUCTION

The dry construction sector – drywall systems, mineral insulation, acoustic ceilings and dry plasters – constitutes an economically relevant segment of the construction industry in CEE countries. Its distribution layer mediates the flow of goods between international manufacturers (Knauf, Saint-Gobain/Rigips, Etex/Siniat) and end customers (construction companies, installers, implementation firms). During 2021-2024 this layer faced a historically exceptional environment marked by four exogenous shocks: (i) post-pandemic disruptions to global supply chains, (ii) the energy crisis intensified by Russia's invasion of Ukraine in February 2022, (iii) record euro-area inflation – HICP reached 12.5% in Slovakia in 2022 [1] – and (iv) significant volatility in the availability of construction materials. The prevailing expert consensus was that these factors would suppress construction activity through higher financing costs and higher input prices.

Empirical development, however, was heterogeneous. Despite substantial inflationary pressures, construction activity did not contract uniformly across the selected CEE countries during 2021-2023. Industry observations suggest that distributors with stronger inventory positions were temporarily better po-

sitioned to capture demand during shortage periods, and that the decisive competitive factor shifted from price to product availability. This phenomenon remains insufficiently covered in the literature on distribution management in the CEE region.

Despite extensive research on inflation, supply chain disruptions and B2B purchasing behaviour, limited attention has been paid to their combined impact in sector-specific distribution channels, particularly in CEE construction materials markets. Existing studies tend to analyse these phenomena in isolation, leaving a gap concerning how their interaction alters competitive dynamics and buyer behaviour under extreme conditions.

The aim of this conceptual paper is threefold: (i) to synthesise available secondary data and academic literature in order to explain the construction-resilience paradox in an inflationary environment, (ii) to identify mechanisms of purchasing-behaviour change in the B2B dry construction distribution channel and (iii) to formulate testable propositions for future empirical verification. Three research questions guide the paper: RQ1. Why did construction activity in the selected CEE countries not contract uniformly despite the simultaneous inflationary and supply-chain shocks of 2021-2023? RQ2. Through which sector-specific mechanisms can such resilience be theoretically explained in the dry construction distribution channel? RQ3. How can these mechanisms be translated into testable propositions about B2B purchasing behaviour under inflation and scarcity?

The paper contributes to the literature on B2B purchasing behaviour during crises [2], on distribution management under turbulence and on the sectoral consequences of disrupted supply chains [3, 4].

LITERATURE REVIEW

Economic theory traditionally assumes that high inflation reduces real incomes, slows investment and depresses aggregate activity [5], implying higher production costs, compressed margins and reduced demand for capital goods, including construction materials. The relationship between inflation and investment behaviour is, however, non-linear. Under rising inflation, firms may rationally prefer real assets over cash as a hedge; where input prices rise faster than overall inflation, the forward-buying effect intensifies as buyers prefer earlier purchases of larger volumes to avoid further price increases [6]. In construction, this is amplified by long project cycles, low short-term demand elasticity and pandemic-related demand shifting into later periods.

Supply chain disruptions during and after COVID-19 became a dominant theme in management. Ivanov [3] introduced the concept of cascading failure propagation (the ripple effect) and emphasised asymmetric vulnerability across sectors. Ivanov [4] developed the notion of supply chain viability and identified four adaptive strategies, including larger safety stocks and increased transparency. Craighead et al. [7] provide a theoretical toolbox for pandemic-related supply chain research. For construction materials distribution, three disruptions were particularly relevant: (i) production outages at manufacturers of raw materials (glass fibres, gypsum, steel profiles), (ii) logistics constraints in global transport and (iii) the energy intensity of certain processes, which became critical after the 2022 energy shock. Under combined demand and supply shocks, availability optimisation dominates over cost optimisation, and the distributor holding physical inventory gains bargaining power [8, 9].

Ritter and Pedersen [2] identify four corporate responses to COVID-19 – adaptation, renewal, residual stability and transformation. For construction materials distributors in CEE, a combination of adaptation (active search for alternative sources) and opportunistic transformation (position shifts in the value chain) was characteristic. Mikalef et al. [10] emphasise sensing capability as a key dynamic capability; distributors with stronger sensing may be better able to anticipate disruptions and build inventory proactively. Under stockout risk, buyers face direct unavailability costs and may therefore increase buffers and extend ordering horizons [11]. Dynamic capabilities theory [12] distinguishes sensing, seizing and transforming. Schilke et al. [13] argue that the value of dynamic capabilities is contextual and becomes salient in turbulent environments. In the resource-based view, sustained competitive advantage stems from valuable, rare, inimitable and non-substitutable resources [14]; under scarcity, physical inventory can become such a resource. From a resource-dependence perspective, bargaining power shifts towards

actors controlling critical resources [9]; during shortages, physical inventory directly affects distributors' pricing power, customer loyalty and strategic position.

METHODOLOGY OF RESEARCH

Research design

The study is conceptual and exploratory. It develops a sector-specific framework grounded in dynamic capabilities theory, the resource-based view and the supply chain disruption literature, and uses an exploratory descriptive analysis of secondary macroeconomic data strictly as contextual background. The paper does not test hypotheses econometrically, does not estimate causal relationships and does not directly measure firm-level dry construction distribution decisions. Accordingly, no inferential statistical model (regression, panel estimation or hypothesis testing) is reported; the macroeconomic data serve solely as a descriptive backdrop for the conceptual framework.

Country and time selection

Four CEE economies – Slovakia, the Czech Republic, Poland and Hungary – were selected on the basis of: (i) geographic proximity and a shared post-1989 transformation pathway, (ii) high integration within the CEE construction materials distribution market (cross-border activity of major manufacturers and distributors), (iii) broadly comparable macroeconomic exposure to the 2021–2023 inflationary and energy shocks and (iv) the public availability of harmonised Eurostat statistics. The analysis covers 2020–2023, during which the most pronounced inflationary and supply-chain shocks materialised; 2024 is referenced narratively only as part of the subsequent market-normalisation context.

Data sources and acquisition

Three indicators were retrieved directly from the Eurostat online database in April 2024 in CSV format: (i) the Harmonised Index of Consumer Prices, annual average rate of change (%), code `prc_hicp_a` and indicator CP00 (all items); (ii) the Construction Production Index (volume), annual rate of change (%), code `sts_cobp_a`, NACE Rev. 2 Section F – Construction; and (iii) the Producer Price Index for construction inputs (PPI), annual rate of change (%), code `sts_inppd_a`, indicator MIG_CAG (intermediate goods and construction-related industrial outputs). Values reported in Tables 1–3 are reproduced from Eurostat [1, 18, 19] without further transformation, deflation or seasonal adjustment; descriptive statistics (mean, range) were computed directly on the published annual percentage changes.

Indicator – segment correspondence and data limitations

The three indicators are aggregated national statistics; none captures the dry construction segment directly. HICP characterises the broader inflationary environment that shapes household renovation demand and end-customer purchasing power. The Construction Production Index aggregates civil engineering, residential building and dry construction works and is therefore used only as a coarse proxy for the activity level of the wider market in which dry construction distribution operates. The construction PPI captures price dynamics for industrial inputs flowing into dry construction products (gypsum, glass and mineral fibres, steel profiles, energy-intensive intermediates) but also for other construction materials. The indicators therefore approximate, rather than measure, the macroeconomic environment of the dry construction distribution channel; this limitation motivates the cautious framing of the analysis and the explicit refusal to draw causal inferences about firm-level purchasing behaviour from the aggregated data.

Analytical procedure

The analysis is purely descriptive. First, descriptive statistics (mean, minimum, maximum) summarise each variable across the 16 country-year observations (4 countries × 4 years). Second, country-level and time trends are compared visually and narratively across Table 1–3 and Fig. 1.

Table 1
Harmonised Index of Consumer Prices (HICP) – annual average rate of change (%)

Slovakia	2.7	1.9	3.2	12.5	11.0
Czech Republic	2.8	3.2	3.8	15.1	10.7
Poland	2.3	3.4	5.1	14.4	10.9
Hungary	3.3	3.3	5.1	14.5	17.0
EU27	1.4	0.7	2.6	9.2	6.4

Source: Eurostat (2024) [1], own elaboration.

Table 2
Construction Production Index (volume) – annual rate of change (%)

Country	2020	2021	2022	2023
Slovakia	-10.7	-2.8	-17.3	0.5
Czech Republic	-7.0	2.4	3.3	-2.4
Poland	-4.3	1.3	8.3	5.2
Hungary	-9.9	11.8	2.1	-5.1
EU	-5.6	3.8	2.5	1.9

Source: Eurostat (2024) [18], own elaboration.

Table 3
Construction Material Prices (PPI) – annual rate of change (%)

Country	2020	2021	2022	2023
Slovakia	3.0	3.9	21.3	11.4
Czech Republic	3.4	5.8	13.1	5.3
Poland	2.9	4.5	13.3	10.0
Hungary	7.1	12.2	24.1	15.2
EU	1.9	5.8	12.2	6.9

Source: Eurostat (2024) [19], own elaboration.

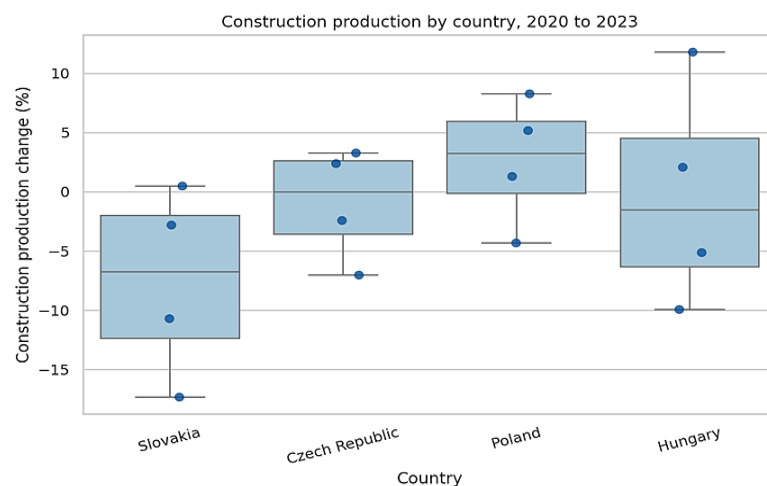


Fig. 1 Distribution of annual changes in construction output by country, 2020-2023

Alt text: Boxplot of annual construction-output changes for Slovakia, Czechia, Poland and Hungary, 2020-2023, showing range, median and data points.

Note: Boxplot of annual changes in construction output by country, 2020-2023. Points are annual observations; the horizontal line within each box is the median.

Across the 16 observations, the Construction Production Index changed by -1.54% on average, ranging from -17.3% (Slovakia, 2022) to $+11.8\%$ (Hungary, 2021); HICP averaged 8.44% (range 1.9% to 17.0%);

PPI averaged 9.78% (range 2.9% to 24.1%). These figures illustrate the scale of the inflationary shock and the heterogeneous construction response across countries.

The descriptive overview confirms that the relationship between inflation and construction activity was not uniformly negative in the selected CEE countries during 2020-2023. The heterogeneous pattern motivates the examination of sector-specific mechanisms in the framework presented in the following section.

RESULTS OF RESEARCH

An integrative conceptual framework (Fig. 2) depicts the relationships between exogenous shocks, five sector-specific mechanisms, four propositions and practical implications.

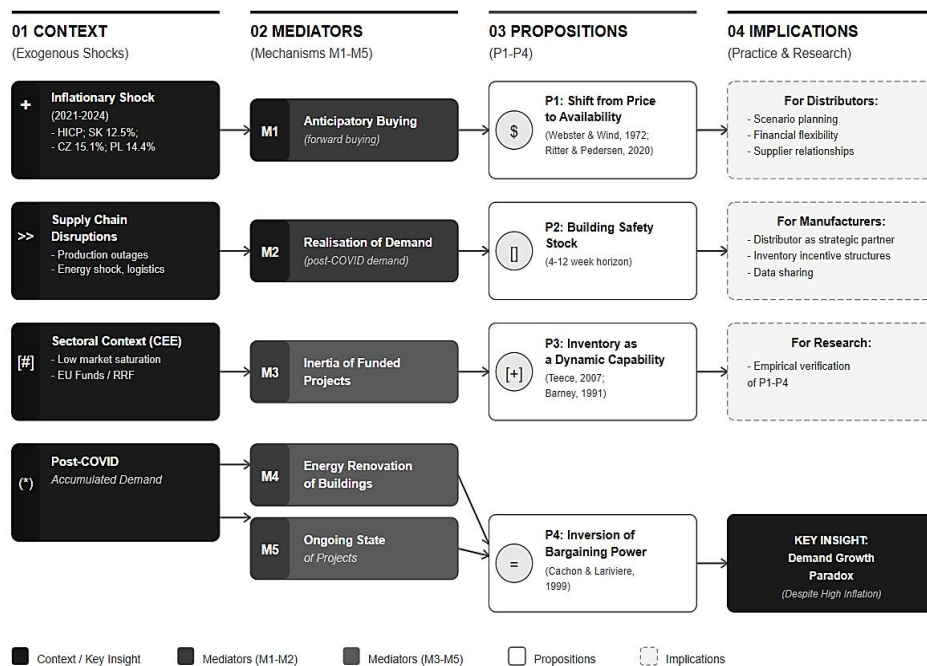


Fig. 2 Inflationary paradox and changes in B2B purchasing behaviour in distribution

Alt text: Diagram: exogenous shocks lead to five mechanisms, four propositions (P1-P4) and practical implications; detailed in the text.

Source: authors' own conceptual elaboration.

The framework builds on dynamic capabilities theory [12], the resource-based view [14] and the supply chain disruption literature [3, 4]; arrows indicate the assumed causal relations among components.

Mechanism 1: Forward buying

In an environment of rapidly rising prices, rational purchasing behaviour shifts towards earlier purchases of larger volumes. Ailawadi et al. [6] show that forward buying can be more pronounced in B2B than in B2C settings because professional buyers quantify cost advantages more precisely.

Mechanism 2: Realisation of accumulated post-COVID demand

COVID-19 caused postponement of construction projects owing to logistics, labour and uncertainty constraints. Delayed execution generated accumulated demand pressure in 2021-2022 that exceeded typical annual market absorption. Euroconstruct [15, 16] describes this as pandemic pent-up demand materialising concurrently rather than gradually.

Mechanism 3: Inertia of EU-funded projects

Projects financed through the European Structural and Investment Funds (ESIF) and the Recovery and Resilience Facility (RRF) were approved with contractual deadlines and drawdown conditions that constrained postponement. Part of the financial shock was absorbed by other stakeholders and physical works continued.

Mechanism 4: Energy renovation as a specific demand impulse

Sharp increases in energy prices intensified household motivation for insulation and renovation. Public subsidy schemes generated specific demand for dry construction products and insulation materials that was relatively inelastic to material prices.

Mechanism 5: Inertia of projects already under construction

Once construction projects enter execution, they are difficult to stop on purely economic grounds: incurred costs are sunk, contracts include penalties and permits have limited validity. Ongoing projects therefore generate material demand irrespective of current price levels, consistent with the residual-stability response of Ritter and Pedersen [2].

Propositional model: changes in B2B purchasing behaviour

P1. Under simultaneous inflationary shock and supply chain disruption in the B2B dry construction distribution channel, the primary supplier-selection criterion shifts from price to product availability, particularly where shortages threaten the completion of approved projects.

P2. Under rapidly increasing construction prices, B2B buyers shift from just-in-time purchasing towards safety-stock and forward-buying strategies.

P3. Distributors with stronger sensing and seizing capabilities are more likely to achieve a temporary competitive advantage under scarcity by securing inventory earlier than reactive competitors.

P4. In the dry construction distribution channel, shortage periods temporarily invert bargaining power: inventory-holding distributors gain pricing power and buyers' price sensitivity decreases; the shift strengthens with the severity and duration of the shortage.

Table 4
Changes in B2B purchasing behaviour: normal vs. inflationary environment

Purchasing behaviour dimension	Normal environment (pre-2021)	Inflationary environment (2021-2023)
Primary selection criterion	Price (TCO optimisation)	Product availability
Ordering horizon	Short-term ordering	Extended ordering horizon
Buyer inventory strategy	Just-in-time, minimal stock	Safety stock/forward buying
Price sensitivity	High	Low to medium
Sales communication focus	Price actions, discounts	Availability confirmation, lead times

Source: authors' conceptual synthesis based on the reviewed literature.

DISCUSSION

The propositions contribute to the literature in several ways. First, they extend the supply chain disruption literature [3, 4, 7] by providing a sector-specific perspective on construction materials distribution, a context under-represented in this stream. Second, they complement research on B2B purchasing behaviour during crises [2] by highlighting inventory strategy as a core response to disruption. Third, they operationalise dynamic capabilities [12, 13] in a sectoral distribution setting in which physical inventory – rather than purely digital capability – becomes a central source of differentiation; recent work on warehouse-level decision support [20] is consistent with this emphasis. From a resource-based perspective [14], physical inventory becomes a rare, hard-to-imitate source of competitive advantage during shortages, because competitors facing the same upstream constraints cannot replicate it quickly. Schilke et al. [13] emphasise the asymmetric value of dynamic capabilities: costly in stable environments yet decisive in turbulent ones.

In the second half of 2023, market conditions began to normalise: material prices eased, capacities recovered and lead times shortened. Euroconstruct [17] reports a moderation of construction activity in CEE during 2023-2024. Distributors that accumulated large inventories at peak prices faced two normalisation risks: (i) inventory write-downs when prices fell and (ii) working-capital lock-in in slow-moving

stock. The capabilities that generated temporary advantage during shortages may therefore expose distributors to financial losses during normalisation, illustrating the asymmetric risk profile of active inventory strategies and the importance of supply chain resilience as a mediating mechanism [21]. Recent research in production engineering also emphasises the need to integrate sustainability, digital transformation and performance-oriented managerial assessment. Ingaldi and Ulewicz [22] propose a Digital Sustainability Maturity Framework that links Industry 4.0 maturity, ESG maturity, organisational capabilities and sustainability performance outcomes. This perspective supports the view that environmental and operational performance should be assessed through integrated and multidimensional approaches rather than through isolated indicators.

Practical implications

For distributors, three implications follow: (i) develop scenario planning and early sensing of macro signals; (ii) maintain financial flexibility sufficient to finance inventory accumulation when warranted; and (iii) build long-term relationships with manufacturers that secure preferential allocation under constrained production. For manufacturers, distributors with high absorption capacity should be treated as strategic partners rather than mere sales channels; incentives for early ordering, buy-back or price-protection mechanisms and shared market intelligence can strengthen these partnerships. For policymakers, the findings underline the importance of stable subsidy schemes for energy renovation, which sustain dry construction demand and contribute to sectoral resilience under macroeconomic stress.

Limitations

Four limitations should be made explicit. First, the article presents a conceptual framework supported by descriptive secondary data; it does not directly measure firm-level purchasing behaviour, distributor inventories or supplier decisions. Second, the macroeconomic indicators used (HICP, construction production index, construction PPI) are aggregated national statistics that approximate, but do not measure, the dry construction segment. Third, the descriptive analysis covers only four countries over four years ($N = 16$), which precludes inferential generalisation; correspondingly, no inferential model is reported. Fourth, the propositions are derived theoretically and require empirical verification through primary data collection.

CONCLUSIONS

This paper develops a conceptual analysis of paradoxical developments in the dry construction distribution channel in the CEE region during the inflationary period 2021-2024. Secondary Eurostat data indicate that, despite record material-price inflation, construction activity in the region did not contract uniformly during 2021-2023. Five theoretically derived mechanisms – forward buying, accumulated post-COVID demand, inertia of EU-funded projects, energy-renovation demand and the inertia of projects already under construction – help explain why the expected negative relationship was not uniformly observed.

Literature synthesis yields four testable propositions: (P1) a shift of the primary supplier-selection criterion from price to availability; (P2) a transition towards safety-stock and forward-buying strategies; (P3) physical inventory as a manifestation of sensing/seizing dynamic capability in the sense of Teece [12]; and (P4) a temporary inversion of bargaining power in the distribution channel during shortage periods. These propositions are grounded in dynamic capabilities theory, supply chain economics and B2B marketing literature.

Future research should test these propositions empirically through cross-sectional surveys among distributors and manufacturers, in-depth case studies of distributor behaviour during 2021-2023 and longitudinal designs assessing whether the changes in purchasing behaviour persist after market normalisation. Such empirical work would also allow disaggregation from national-level macroeconomic indica-

tors to firm-level data on inventory strategy and supplier selection, thereby closing the gap between the macroeconomic backdrop documented here and the proposed sector-specific mechanisms.

ACKNOWLEDGEMENTS

Supported by research and development grant VEGA 1/0109/24.

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