

The hunger games: procurement strategies under unmitigable supplier dominance

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Abstract

Purpose – Most procurement research assumes that buyers possess negotiation power and viable alternatives. However, such assumptions do not hold in practice, as buyers in many industries operate under unmitigable supplier dominance. Against this backdrop, we examine how weaker buyers configure procurement strategies to secure supplies under unmitigable supplier dominance.

Design/methodology/approach – We conduct a multiple case study of 11 small and medium-sized enterprises (SMEs) in the Spanish agri-food sector, a setting characterized by high supply concentration and limited buyer leverage. These SMEs occupy the middle of the supply chains, positioned between powerful upstream and downstream agents.

Findings – We find that established procurement strategies can become infeasible, heavily constrained, or even counterproductive under supplier dominance. Their feasibility is bounded by two contingencies: the urgency and substitutability of supplies.

Practical implications – The findings provide managers with a feasibility-based decision logic for selecting procurement strategies under supplier dominance.

Social implications – This study highlights how concentration in supply markets creates systemic vulnerability in supply security, underscoring the need for regulatory frameworks that facilitate adaptive sourcing during crises.

Originality/value – This study develops a constraint-based view of procurement, demonstrating that under unmitigable supplier dominance, strategy feasibility precedes strategy selection.

Keywords Agri-food supply chain, Buyer-supplier relationship, Supplier dominance, Supply chain resilience, Procurement strategies

Paper type Research article

1. Introduction

Buyers often face severe procurement challenges, which are especially acute in concentrated and resource-scarce supply markets, such as agri-food and natural-resource markets (e.g. Kalaitzi *et al.*, 2018), where external shocks can rapidly destabilize global supply chains. For instance, the Russo-Ukrainian war triggered an energy crisis across Europe, disrupting critical agri-food markets for commodities such as sunflower oil and wheat (e.g. Terazono and Pooler,



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2022). Related spillovers spread to other import-reliant settings: fertilizer supply disruptions during the same period severely affected agricultural production in Sub-Saharan Africa, which largely depends on imports from several dominant suppliers in Russia (World Bank, 2024). Emerging clean-energy supply chains exhibit similar concentration dynamics. Critical battery minerals such as cobalt and lithium are geographically concentrated, with a substantial share of global cobalt production originating from the Democratic Republic of Congo, amplifying supplier power and downstream vulnerability in electric-vehicle value chains (World Bank, 2021). In such settings, buyers lack bargaining power and viable alternatives, rendering them vulnerable to supply disruptions and limiting their capacity to actively configure procurement strategies (e.g. Morrissey and Pittaway, 2006).

This supply concentration, which leads to asymmetry in inter-organizational power relations, is commonly referred to as *supplier dominance* (Cox, 2001). Although buyer–supplier power asymmetry has been extensively studied, the literature has focused on *buyer dominance*, exploring how large firms exert power over smaller suppliers (e.g. Schleper *et al.*, 2017; Zhang *et al.*, 2021). Furthermore, existing studies on supplier dominance primarily suggest mechanisms for reducing the power imbalance and relational mitigation strategies (Habib *et al.*, 2015; Nyaga *et al.*, 2013), offering limited insights into implementing procurement strategies when such dominance cannot be mitigated. Consequently, how weaker buyers navigate relationships with dominant suppliers and with structurally constrained strategic choices is scarcely understood (Bastl *et al.*, 2013; Pulles *et al.*, 2016b; Wagner, 2021).

Classic procurement strategies, such as dual sourcing, multi-sourcing, and competitive tendering (e.g. Stanczyk *et al.*, 2017) implicitly assume that buyers have negotiation power and alternatives. Related research on strategic purchasing reinforces this assumption of buyer agency, whereby buyers can evaluate, develop, and influence their suppliers (Carr and Pearson, 1999). These assumptions do not hold in concentrated markets where switching is infeasible for small buyers with limited power. Frameworks widely used in procurement, such as the Kraljic matrix, assume that buyers can allocate sourcing strategies across a portfolio of alternatives. Similarly, power-conscious extensions such as the Purchasing Chessboard (Cox, 2015; Schuh *et al.*, 2008) incorporate power asymmetry but presume that buyers can select and implement strategic levers. Recent procurement research further distinguishes category strategies from the sourcing levers through which they are implemented and broadens the range of strategic options considered during strategy formulation (Fontes *et al.*, 2025). Yet this literature leaves a prior question unresolved: whether these options are feasible when buyer agency is structurally constrained. Under unmitigable supplier dominance, buyers must therefore determine which strategies remain feasible before selecting among them. Therefore, this study addresses the following questions:

What procurement strategies are feasible for buyers sourcing critical supplies under unmitigable supplier dominance, and what contingencies determine the boundaries of these feasible strategies?

To this end, we conduct a multiple-case study of 11 Small and Medium-sized Enterprises (SMEs) in the Spanish agri-food supply chain (AFSC), contextualized by unmitigable supplier dominance. The findings show that classical procurement strategies often become infeasible under such conditions owing to buyers' inability to switch suppliers or exercise leverage. Building on these insights, we develop a constraint-based theory of procurement under supplier dominance. Specifically, we demonstrate that under unmitigable supplier dominance, strategy feasibility precedes strategy selection: buyers must first determine which strategies remain implementable before selecting among them. Moreover, we show that these feasible strategies are bounded by two contingencies, *urgency* and *substitutability*, which determine when established procurement strategies become infeasible, ineffective, or counterproductive. We extend procurement theory by showing how supplier dominance constrains the feasible

strategy set within which strategic choices are made, with implications for both managerial practice and policy design.

2. Theoretical background

2.1 Buyer–supplier power asymmetry

Power asymmetry refers to the degree to which one actor can influence another's decisions, pricing, product design, or delivery terms (El-Ansary and Stern, 1972; Gaski, 1984). Resource Dependence Theory (RDT) posits that such asymmetry restricts the weaker actor's autonomy, making them susceptible to exploitation (e.g. Jiang *et al.*, 2023). Drawing on RDT, Bag *et al.* (2024) show that overdependence on powerful supply chain partners increases exposure to exploitation, limits strategic autonomy, and weakens firms' ability to pursue long-term objectives such as sustainability. However, the literature emphasizes that power asymmetry is not inherently detrimental under effective mitigation strategies. Prajogo *et al.* (2020) demonstrate that the effects of dependence are contingent on a buyer's absorptive capacity and relational governance: when both are high, dependence can enhance performance.

The buyer dominance research stream documents both detrimental outcomes, such as supplier exploitation (Schleper *et al.*, 2017) and opportunistic abuse (Kim *et al.*, 2022), and beneficial ones, such as the enforcement of sustainability standards (Pagell *et al.*, 2010). Contrastingly, the less understood *supplier dominance* is increasingly prevalent across sectors characterized by high supply concentration (e.g. rare earth elements, agricultural products) and resource dependence. For instance, supplier dominance is salient in many African and Asian agri-food systems, in which multinational suppliers exert disproportionate control over seeds, fertilizers, and commodities, constraining buyers' strategic options and reinforcing structural dependence (e.g. Glavee-Geo *et al.*, 2022).

Moreover, existing work on *supplier dominance* treats it as a relational problem that must be mitigated (see Supplementary Material 1). For instance, Gelderman *et al.* (2008) examine coercive tactics; Pulles *et al.* (2016b) emphasize inter-buyer rivalry in supplier resource competition; Ulstrup Hoejmose *et al.* (2013) consider asymmetries in socially responsible sourcing from a supplier-power perspective; and Wagner (2021) details the disadvantages startups encounter as weaker buyers and the benefits of relational and signaling practices in reducing power asymmetries. Even when considering purchasing strategies, such as Caniëls and Gelderman's (2005, 2007) integration of power and dependence into the Kraljic (1983) matrix, the emphasis remains on partnership forms and reducing dependence, rather than on procurement strategies for persistent supplier dominance. The present study diverges from this logic by holding supplier dominance constant and examining procurement strategies that enable buyers to operate under, rather than eliminate, such conditions.

2.2 Procurement strategies against supplier dominance

Although asymmetric power dynamics are inherent in procurement strategies, popular frameworks such as the Kraljic (1983) matrix implicitly assume that buyers hold *leverage*, an invalid assumption when they lack power. In supplier-dominant complex markets with resource-dependent characteristics, transactional levers become ineffective (Svahn and Westerlund, 2009). Dependence-driven exploitation can further erode buyers' organizational slack and strategic flexibility, lessening the feasibility of classical procurement strategies (Bag *et al.*, 2024). For instance, Terpend *et al.* (2011) show that actual purchasing strategies often diverge from prescriptive models, revealing additional less-dominant approaches, such as *adversarial purchase*.

The growing resource scarcity and supply concentration warrant procurement strategies tailored specifically to supplier dominance. The limited studies addressing supplier dominance frequently mention two strategies: preferred customer status and coalition building. *Preferred customer status* seeks to enhance customer attractiveness and supplier

satisfaction for preferential treatment (Pulles *et al.*, 2016a), particularly under resource scarcity (Pulles *et al.*, 2016b; Schiele *et al.*, 2012). *Coalition-building*, ranging from strategic alliances to purchasing consortia (Tella and Virolainen, 2005), involves weaker buyers or suppliers forming alliances to counterbalance dominant actors (Bastl *et al.*, 2013). However, coalitions struggle to accumulate sufficient power in concentrated markets, and buyer participation is low owing to competition concerns, limited trust, and coordination costs (Ramjaun *et al.*, 2024). Overall, existing strategies are fragmented and context dependent. A more systematic investigation is required to understand how procurement strategies can be designed and implemented under unmitigable supplier dominance, increasingly common in contemporary supply markets.

2.3 Conceptual framework: the purchasing chessboard

Schuh *et al.* (2008) developed a *Purchasing Chessboard* to address the conceptual limitations of the Kraljic matrix, particularly its assumption of buyer power. This framework integrates procurement portfolio thinking with power dynamics by overlaying Kraljic's item categories with Cox's (2001, 2015) four power positions: supplier dominance, buyer dominance, interdependence, and independence. This layout yields a 64-cell matrix with 16 strategic approaches for each power configuration. For supplier dominance (low buyer and high supplier power), the chessboard identifies four overarching levers: risk management, innovation breakthrough, technical data mining, and re-specification. Excluding out-of-scope strategies, this study focuses on five relevant ones: (1) intelligent deal structure, (2) political framework management, (3) bottleneck management, (4) vertical integration, and (5) specification assessment (see [Supplementary Material 2](#) for inclusion and exclusion justifications). These strategies provide an initial conceptual lens for examining how weaker buyers procure under sustained power asymmetry, while allowing for additional strategies and boundary conditions to emerge from the empirical analysis.

3. Methods

3.1 Research context

We selected the agri-food sector as the research context owing to its relevance to the supply chain literature on power asymmetry. Upstream supplier dominance stems from commodity concentration created by the region-specific geological and climatic conditions in a small set of countries (AFDJ, 2022). For instance, cocoa production is heavily concentrated in West Africa, with Ghana and the Ivory Coast collectively accounting for more than 60% of global output (Reuters, 2022), whereas palm oil has 70% of the production in Asia (Lee *et al.*, 2019). Downstream, grocery retailers are highly consolidated in most markets and exert high costs and delivery pressure on their suppliers (Pullman and Wu, 2021).

Positioned between these dominant upstream and downstream actors are middle-tier firms, typically SMEs, including animal feed producers, slaughterhouses, breweries, mills, bakeries, and other processors, which handle food processing and manufacturing. Although a few large manufacturers dominate the global food sector, controlling up to 50% of their respective regional markets (Pullman and Wu, 2021, p. 115), many SMEs remain highly exposed to supplier power, particularly when sourcing from large agricultural producers or multinational ingredient suppliers. Despite their strategic positioning in the supply chain, these SME buyers have received limited attention in the procurement literature, particularly in the agri-food context. Moreover, downstream pressure from retailers entails transferring supply-side risks along the chain. Consequently, they must absorb disproportionate risk while navigating procurement relationships with dominant suppliers. This dual exposure makes agri-food SMEs an ideal context for investigating procurement strategies under supplier dominance.

3.2 Research design

We employed a multi-case study approach, which is well-suited for examining underexplored and context-dependent phenomena (Gioia *et al.*, 2012; Yin, 2015), within a specific empirical setting: the Spanish AFSC. We collected qualitative data through in-depth, semi-structured interviews, complemented by company documents. Secondary sources were used to corroborate the interview data, contextualize market conditions, and validate claims regarding supply concentration, substitutability constraints, and policy responses during the disruption periods. This approach enabled us to capture the lived experiences and strategic choices of weaker buyers in their real-world context, making it particularly well-suited for theoretical elaboration and extension (Meredith, 1998).

3.3 Empirical context and case selection

We selected Spain's agri-food sector as the empirical context for several reasons. First, Spain is one of the EU's largest agricultural producers, with key strengths in the meat, bakery, and pasta production industries heavily composed of SMEs (OFTEX, 2023). These firms are highly exposed to input cost volatility owing to Spain's dependence on imported agricultural commodities and fertilizers from large global suppliers (CaixaBank, 2023). Second, climate change has exacerbated production vulnerabilities by reducing domestic agricultural output, increasing reliance on imports (CaixaBank, 2023). Third, the product focus of many Spanish food companies, such as grain-based items (39.7%), animal feed (19.6%), fats and oils (5.7%), and produce processing (4.8%), often requires procurement from oligopolistic and geographically concentrated supplier markets (Statista, 2023). These conditions compound supplier dominance and constrain buyer leverage. Finally, Spain's agri-food sector is highly fragmented, with a large number of SME buyers (Government of Spain, 2022), making it suitable for studying procurement under power asymmetry.

The case selection followed two criteria: (1) supplier dominance and (2) diverse purchased materials. First, we targeted SMEs in midstream AFSC positions, where they are structurally exposed to powerful actors both upstream and downstream (Supplementary Material 3). We subsequently confirmed supplier dominance for critical supplies through interviews (Supplementary Material 8) and secondary evidence of concentrated supply markets, dependence on critical suppliers or origins, and limited switching or substitution (AFDJ, 2022; CaixaBank, 2023). Second, as we intended to capture both commonalities and nuanced variations in procurement strategies across different categories of purchased inputs, we adopted a diverse case-selection strategy (Seawright and Gerring, 2008) in which we targeted firms producing different types of commodities. Our approach is consistent with recent methodological discussions (e.g. Eisenhardt, 2021; Gioia *et al.*, 2012), which emphasize that case-based research allows for flexibility in the number and type of cases to suit specific empirical contexts. The initial cases were identified through the second author's professional network in the agri-food sector. Snowball sampling was used to expand participation and supplement public company data to ensure diversity and relevance.

Of the 25 firms contacted, 12 agreed to participate. Eleven were SME agri-food producers and constituted the focal cases. The remaining organization, an agri-food procurement consultancy (Assess-B), served as a contextual expert organization and was used to provide broader industry-level insights. Given the firm sizes, procurement responsibilities involve only one or two individuals. Thus, the procurement function of each focal SME is the unit of analysis (see Supplementary Material 3 for the positions of the case companies in the AFSC). The 11 focal SMEs included in our study are well-established agents in the agri-food sector, averaging 58.4 years of operations (see Supplementary Material 4 for information on the case companies and interview data), supporting the relevance and credibility of their procurement practices. The 11 focal cases include firms procuring raw materials for both animal and human consumption, as well as two fertilizer producers. This range allowed us to explore variations in procurement strategies across different supply contexts while maintaining a shared condition

of supplier dominance. Procurement responsibilities were largely distributed across multiple roles, reflecting the structure of SME operations. The interviewees included general managers, plant managers, engineering managers, procurement specialists, and raw material cost analysts.

3.4 Data collection

Data were collected between March 2022 and February 2023, a period marked by the ongoing Russo-Ukrainian war that intensified supply chain disruptions and increased vulnerability among agri-food SMEs with limited purchasing power. This temporal context provides a unique and timely empirical setting for examining how structurally weaker buyers respond to high-stakes procurement challenges under external shocks. Our primary data source comprised 14 semi-structured interviews across 11 focal SMEs and one contextual expert organization. Two organizations included an additional respondent due to their shared strategic procurement responsibilities. The participants had 22 years of procurement experience in their current posts on average, ensuring expert-level insights. The interview protocol ([Supplementary Material 5](#)) was informed by existing literature and the second author's industry expertise. It includes questions referencing recent disruptions, namely, the COVID-19 pandemic and the Russo-Ukrainian war, to elicit rich, context-sensitive reflections on supplier dominance and procurement responses. The interview data were corroborated with secondary sources such as company reports, press releases, and government publications. For instance, market reports confirmed that key inputs were sourced from a few geographically concentrated suppliers, supporting the interviewees' claims regarding the infeasibility of diversification ([AFDJ, 2022](#)). These sources were particularly useful for corroborating claims about market volatility and public policy interventions during the data collection window.

3.5 Data analysis

All interviews were conducted in Spanish, recorded, and transcribed. The transcripts were translated into English by a professional translator and verified for accuracy by a bilingual author. This process yielded approximately 250 pages of transcripts and notes for analysis. To ensure rigor and mitigate researcher bias, all three authors independently coded the transcripts and developed individual case summaries. Coding discrepancies were systematically reviewed and reconciled through iterative discussions, following best practices in qualitative research ([Eisenhardt, 1989](#); [Gioia et al., 2012](#)).

Our analytical approach combined deductive and inductive strategies ([Eisenhardt, 2021](#)) and allowed for inductively emerging themes. Five fundamentally different procurement strategies emerged: (1) collaboration, (2) visibility, (3) financial hedging, (4) bargaining power, and (5) back-up sourcing. Combined with the five deductive strategies derived from the Purchasing Chessboard framework, ten strategies were considered. In the second round of coding, the research team developed a shared coding dictionary and continuously refined themes and subthemes through collaborative discussions and memos ([Gibbert et al., 2008](#)). These strategies were further categorized by three levels: organization, network, and environment. A detailed step-by-step account of our data coding and analysis process, including the intermediary coding matrices, is available in [Supplementary Material 6](#). To ensure transparency and traceability, representative quotes and thematic summaries are provided in [Supplementary Material 7](#).

4. Findings

4.1 Within-group analysis

A within-case analysis systematically assessed each company's core materials, procurement strategies, vulnerabilities, and mitigation efforts and confirmed supplier dominance across the 11 focal cases (see [Supplementary Material 8](#) for summaries of individual cases). To enhance

clarity and coherence, we grouped the cases into three operation-based clusters: fertilizer, animal food, and human food. These clusters also mirror the typical flow in AFSCs from agricultural inputs (fertilizer) to animal feed and from animal feed to food products for human consumption.

4.1.1 Fertilizer. Two firms (Fert-F and Fert-G) produce fertilizers by sourcing minerals and organic compounds such as phosphate, potash, potassium nitrate, and urea. Assess-B provides pricing and material assessments for fertilizer producers. These companies sell directly to farmers or distributors, relying heavily on Research and Development (R&D) to support product innovation and post-sale farmer training. Farmers' willingness to purchase fertilizer is highly price-sensitive. If fertilizer prices rise excessively, farmers will not buy, but instead will choose crops with minimal fertilizer requirements or accept lower crop yields. Formulations are relatively flexible owing to lenient labeling requirements, allowing for some degree of substitution. The presence of large multinational buyers further destabilizes the pricing for smaller firms. A common procurement strategy is dual sourcing—combining a low-cost supplier with a reliable supplier—while maintaining agility in volatile markets. Fert-G described this agility as essential:

First of all, to get information as soon as possible . . . that's essential, but not only about what goes on in other parts of the world but also in the plants next door. You need to control your level of stock, your production, your purchasing process. You need the information. And secondly, to act quickly. If you say "there's a super cheap supplier in Egypt," but you take a month to buy it (because that used to be the process), three offers, and such. But not anymore, now you need to do something like an electronic auction, with a digital signature . . . to go faster. That's information and flexibility at the same time.

4.1.2 Animal food. Four companies procure 10–20% of their inputs comprising essential minerals and vitamins derived from cereals, legumes, and vegetal proteins for animal feed: Anim-A (pork and beef), Anim-C (chicken, as an agricultural cooperative), Anim-L (pet food), and Anim-M (feed imports). Feed costs account for the majority of their total production costs, and producers have to balance input prices and market- or retailer-imposed output prices. Inventory is tightly managed, with only three to four days of feed stored on site. Firms navigate tradeoffs between costs and quality. Substitutions are possible, but nutrient-sensitive ingredients, such as soy and amino acids, are difficult to replace. As Anim-A noted:

We brought amino acids to a store we have near us . . . so that if there's a problem, we have amino acids for a month . . . When you start seeing uncertainties, you try to do what you can, which is not a lot. With the most critical things, like amino acids, we're disrupting the diet a lot. I bring amino acids, and I'm covered for at least one more month in that store plus what I have in my factory store.

4.1.3 Human food. Five companies procure raw materials for human food products: Human-E, Human-J, Human-K, and HumAnim-N primarily purchase grain and flour for milling and baking, whereas Human-D sources vegetables and legumes for processed food production. Global commodity markets and currency fluctuations (e.g. USD–EUR) generate cost uncertainty, which firms mitigate by maintaining at least two suppliers per product. Unlike grains, vegetables and legumes are sourced locally, but exhibit significant price volatility depending on farmers' seasonal crop choices. EU labeling regulations for human food products impose strict ingredient constraints, limiting substitutions. Downstream, firms face intense pressure from dominant grocery retailers who negotiate annual contracts based on prevailing prices, forcing them to commit to sales prices before the input prices are finalized. As Human-D explained:

We sell to clients, but we sell at real prices, not futures . . . we negotiate with a chain, and we give them prices now, at the moment of negotiating, for a whole year. We estimate we can purchase at this price, but we may have closed the deal or not and had a euro-dollar value from the company we sell to. It's a drawback where prices can go up one month later.

4.2 Cross-case and cross-group analysis

The cross-case and cross-group analyses aimed to identify shared patterns and meaningful contrasts across individual firms and industry groups. An iterative analytic process grounded in simultaneous comparisons and replication logic (Eisenhardt, 2021) was followed, distinguishing idiosyncratic responses from more generalizable strategies. By grouping firms into fertilizer, animal food, and human food categories, we examined the degree to which procurement strategies vary by industry. Table 1 presents an overview of the 11 focal firms and their sourcing and resilience-building strategies. The degree of strategy implementation was coded using High/Medium/Low ratings. Across the cases, 10 distinct strategies emerged as responses to supply uncertainty under conditions of supplier dominance. Although these strategies are well established in the procurement literature, our findings show that under supplier dominance, their meanings, objectives, and configurations shift fundamentally. These strategies are often repurposed to preserve access to critical supplies rather than used for optimization or leverage. This interpretation is consistent with industry reports documenting high supplier concentration and limited availability of alternative sources during the study period (AFDJ, 2022; CaixaBank, 2023), which reinforced the infeasibility of the diversification strategies reported by the interviewees. Thus, supplier dominance does not merely affect the choice of strategies but reshapes their underlying logic and implementation. These strategies were categorized into three levels: organizational, network, and environmental. Adoption patterns differed considerably across sectors, reflecting industry-specific constraints and capabilities.

4.2.1 Organization-level strategies. At the organizational level, firms employ up to three strategies to enhance their procurement resilience: specification assessment, bottleneck management, and supply chain visibility. Some firms implemented a single strategy (e.g. HumAnim-N, Human-D, and Fert-G), while others (e.g. Anim-M, Anim-L, and Fert-F) applied all three. Animal feed and fertilizer firms had greater leeway to implement organizational-level responses, whereas human food firms faced more regulatory rigidity.

Specification assessment entails critically examining the internal requirements to identify opportunities for relaxing, modifying, or eliminating rigid material specifications (Schuh et al., 2008) and recipe reformulation to manage shortages or price fluctuations. However, this flexibility is highly contingent on the industry. For instance, firms producing human food operate under strict EU food labeling laws, which limit their ability to alter formulations. As Human-D explained, “We can’t easily change the labels and recipes of our products. We would have to engage the legal department, create new packaging, etc. I mean, being granted the permission to sell our product using a different raw material.” Only Human-J exhibited partial flexibility. Contrastingly, animal feed and fertilizer firms reported significantly higher latitudes for altering their compositions. For example, Anim-A.2 described a recent adaptation prompted by supply disruptions: “We are also beginning to introduce substitutes; we have started this month introducing rapeseed meal in one factory.” In loosely regulated product categories, this capacity for recipe adaptation provides a critical buffer against input volatility. This aligns with the regulation documentation, indicating stricter formulation constraints for human food products (EU Regulation 1169/2011) relative to animal feed (EU Regulation 767/2009) and fertilizers (EU Regulation 2019/1009), which limits substitutability in these segments.

Bottleneck management combines measures for the early detection of supply constraints and the implementation of timely countermeasures, such as inventory buffering and extending planning horizons, to ensure uninterrupted delivery of finished products to customers, even under adverse conditions (Schuh et al., 2008). Across the cases, most firms, particularly the smaller ones, did not maintain significant inventory buffers owing to space constraints, cost considerations, and risk aversion. As Assess-B noted, “The inventory space in the factory is extremely limited and everything has to be effectively geared.” The vulnerabilities of this approach became more evident in the wake of the Russo-Ukrainian war. Reflecting on the

Table 1. Cross-case comparison of strategies

	Industry Main purchases	Animal feed Cereals	Animal feed Corn, soy	Animal feed Cereals and vitamins		Animal feed Corn, soy, vitamins	Human and animal Wheat and cereals	Human Wheat, rye, spelt	Human Flour, sugar, oils	Human Cereals and oils	Human Vegetables and legumes	Fertilizer Phosphate, urea, DAP Mixed (material dependent)	Fertilizer Phosphate, urea, DAP Mixed (material dependent)
	Characteristics Company code Size	High urgency/high C Small	substitutability M Small	A.1 Medium	A.2 Medium	L Medium	Mixed N Small	Low urgency/low J Small	substitutability K Medium	E Medium	D Medium	F Medium	G Medium
Organization level													
Specification assessment (D)	Flexibility level	H	H	M	H	H	L	M	×	L	×	L	L
Bottleneck management (D)	Inventory buffer	L	×	L	L	M	L	L	L	H	L	M	×
	Planning horizon	L	M	L	×	L	M	L	H	×	H	H	M
Visibility (I)	Uncertainty assessment	M	M	L	M	H	L	H	M	M	L	M	L
Network level													
Intelligent deal structure (D)	Contract development	L	M	M	M	×	M	L	M	M	M	M	H
Bargaining power (I)	Ability to gain power	×	L	L	M	L	M	L	M	L	L	H	M
Back-up sourcing (I)	Use of other suppliers	L	L	M	M	M	L	L	M	H	L	L	M
Vertical integration (D)	Upwards	H	L	H	H	×	L	×	H	×	×	×	×
	Downwards	M	L	×	L	M	L	M	×	L	L	L	L
Collaboration (I)	Suppliers	M	M	L	M	M	M	M	H	H	L	H	M
	Competitors	H	M	H	H	L	M	H	L	×	×	H	H
(continued)													

(continued)

Table 1. Continued

	Industry Main purchases	Animal feed Cereals	Animal feed Corn, soy	Animal feed Cereals and vitamins		Animal feed Corn, soy, vitamins	Human and animal Wheat and cereals	Human Wheat, rye, spelt	Human Flour, sugar, oils	Human Cereals and oils	Human Vegetables and legumes	Fertilizer Phosphate, urea, DAP Mixed (material dependent)	Fertilizer Phosphate, urea, DAP Mixed (material dependent)
	Characteristics Company code Size	High C	urgency/high M	substitutability A.1 A.2		L	Mixed N	Low J	urgency/low K	substitutability E D		F	G
		Small	Small	Medium	Medium	Medium	Small	Small	Medium	Medium	Medium	Medium	Medium
Environment level													
Political framework management (D)	Government influencing	L	L	×	×	L	L	L	L	×	×	×	×
Financial hedging (I)	Forward contract Options	H	H	H	M	H	M	H	H	H	H	H	H
		×	L	×	L	L	M	M	×	×	×	×	×

Note(s): D = Deductive Strategy; I = Inductive Strategy

× = not implemented; L = low implementation (seldom); M = medium implementation (implemented with limitations); H = high (full) implementation

Source(s): Authors' own creation

consequences, Anim-M remarked, *“Our clients had a zero-stock policy for many years, and you cannot imagine the damage that this entailed.”*

While raw material shortages were previously considered improbable, heightened volatility in recent years had prompted a reevaluation of this assumption. Several firms such as Anim-A and Human-E had begun to selectively build inventory for the most critical or frequently disrupted materials. Notably, these adjustments tended to occur reactively, often after prolonged disruptions. More commonly, firms relied on suppliers to hold inventory, combining this with forward contracts to buffer geopolitical uncertainty.

Furthermore, bottleneck management was operationalized through time buffering by lengthening planning horizons. For instance, Human-E secured contracts for its most critical inputs several months in advance, whereas Anim-C emphasized the centrality of forward planning in procurement decisions. This strategy is common with limited flexibility in adjusting product specifications. Firms with rigid recipes or labeling requirements, such as Human-D, were more likely to adopt long-term sourcing strategies:

What we have to do is to sufficiently anticipate our purchases to avoid shortages and evaluate the risks of where the suppliers are and who we are working with. [. . .] We are currently sourcing products for which the contracts were made a year ago.

Conversely, firms with more adaptable product formulas are less reliant on extended planning. This contrast illustrates the dynamic interplay between bottleneck management and specification assessment strategies, whereby the degree of product flexibility shapes how firms preemptively mitigate supply risks.

Following the 2022 disruptions, some firms began adopting more dynamic planning approaches. Human-E implemented multiple annual planning scenarios and shortened planning horizons for volatile inputs: *“If you are not covered (for the upcoming months), the general strategy is to cover your short-term needs [. . .] and see little by little how the market evolves.”* Overall, consistent application of longer planning horizons was observed only among fertilizer producers (Fert-F and Fert-G) and firms in the fresh food segment (Human-D).

Visibility refers to a firm’s ability to perceive supply chain structures, processes, and risk indicators across the network, while employing information systems and frameworks that ensure timely information flow (Stone and Rahimifard, 2018). All case firms, except HumAnim-N, Fert-G, and Human-D, sought to implement visibility strategies to some degree. Despite the broad recognition of its importance, visibility was poorly operationalized. As Anim-A reflected, *“We assess these types of risks [geopolitical] very poorly, but it is not only us; the whole sector doesn’t know how to correctly assess these types of uncertainties.”*

The Ukraine crisis served as a turning point, catalyzing more proactive risk awareness and information-seeking behavior. Human-J described this shift, *“The truth is that there is a lot of transparency in the market. [. . .] We have a lot of information.”* During this period, some firms sought specialized publications and closer collaborations with traders or suppliers. Multinational corporations escalated their response by launching weekly cross-regional meetings, conducting more frequent environmental scans, and involving senior leaders in strategic discussions.

Nevertheless, advanced data-driven visibility tools were absent. Fert-F acknowledged this gap, *“There are available resources and software that allow companies to have a radar on their suppliers and assess anything you need. [. . .] We haven’t incorporated these kinds of tools yet.”* Furthermore, many of these tools rely on historical data and struggle to predict black swan events. As Human-E noted:

We could have been informed better . . . the moment that everyone is aware of the situation, it doesn’t matter if you got the information, you already were in an exceptional situation. The only alternative is obtaining the information earlier than everyone else.

Overall, visibility remains a foundational but underutilized capability for managing supplier dominance and geopolitical uncertainty. Rather than functioning primarily as a tool for efficiency and coordination, visibility under supplier dominance serves as an early-warning mechanism. This enables buyers to anticipate disruptions and react before dominant suppliers reallocate their scarce resources. Despite the widespread recognition of its importance, most of these firms lacked the tools, systems, and foresight needed to translate visibility into supply resilience.

4.2.2 Network-level strategies. At the network level, several strategies for dealing with the power imbalance between buyers and suppliers emerged: bargaining power, intelligent deal structures, back-up sourcing, vertical integration, and collaboration. The case firms employed three or four strategies at the network level, with notable exceptions: the largest animal feed producer (Anim-L) used only supplier collaboration and backup suppliers; Human-D used only an intelligent deal structure for buying fresh produce; and Human-J used only buyer and supplier collaboration.

Bargaining power refers to the factors that influence an entity's capacity to negotiate effectively under power asymmetry (Stone and Rahimifard, 2018). In some cases, organizations were able to assert their influence despite their weaker structural positions. Under supplier dominance, bargaining power is no longer rooted in resource control but in relational and reputational influence, resembling a form of *soft power* (Lashley and Pollock, 2020). Fert-F noted its strong industry reputation as a bargaining asset:

On paper, if we only have one supplier, they would be in a position of power when negotiating with us. However, the experience also tells us that if we interest them as clients, they won't try to impose anything. [...] For them, saying they are selling products to us, means they have a high-quality product, and thus we provide them prestige.

Bargaining power often develops over time through repeated exchanges; however, many buyers noted a deterioration in their negotiation capacity in the prevailing market. Human-E explained, "*There are certain suppliers, especially lately in this supplier's market, which are more powerful than us. This means we completely depend on them and their guidelines. We have no bargaining power against them right now.*"

Intelligent deal structure refers to the careful design of contracts—including supplier relationships, key suppliers, contract duration, and trustworthiness—to ensure capacity and resources in scarce supply situations (Schuh *et al.*, 2008). Adequately designed contracts incorporate clauses addressing disruptive events. Fert-G had the most extensive deal structure, purchasing minerals rather than commodity crops. The interviewee emphasized, "*A reliable contract [is] one that becomes a good tool for your company.*" Close long-term relationships with suppliers are necessary for better agreements and strategic alliances. However, the oligopolistic power of many suppliers often prevents purchasers from achieving these goals.

For publicly traded raw materials (e.g. wheat and corn), negotiations focus on payment conditions or delivery times because prices are determined externally. For non-traded materials (e.g. vegetables), companies must negotiate satisfactory prices without clear market benchmarks. Anim-A explained:

The supplier condition for settling capacity strongly depends on the market being transparent or not. For instance, soy's price is already settled in Chicago, so companies can't determine it. However, they can settle other non-negotiable economic conditions of the transaction, like payment terms.

Most companies used intelligent deal structures, particularly forward contracts. However, Fert-F relied on indexed contracts, "*What we are doing, and I know other companies as well, is to index prices [with suppliers] as much as possible. [...] This allows us to avoid continuous negotiations regarding prices.*" These findings suggest that *intelligent deal structures* and *bargaining power* are closely intertwined, with well-crafted contracts offsetting limited negotiation leverage.

Back-up sourcing involves securing alternative sources for critical materials. Although all firms maintained at least two suppliers for key inputs, widespread implementation was constrained by two key factors. First, alternatives did not always exist for certain raw materials. Second, companies greatly struggled to find additional suppliers who met the required quality standards. Assess-B.1 stated, “*It doesn’t make any difference to have multiple suppliers if all of them either purchase from the same factory, come from the same place, or arrive in the same boat.*” When all suppliers source from a single company or region, a large supply base offers no resilience. In such cases, building long-term, trust-based relationships with fewer suppliers proved more effective, contrasting with classical portfolio-based prescriptions of diversification. Anim-A.1 shared:

With soy, we only work with one supplier. That’s theoretically against any diversification principle, but we are granted “exclusive client” status, and we are a priority if there are supply failures. As a consequence, we have never had, even in harsh times, sourcing problems.

Vertical integration involves collating processes from other supply chain tiers under the same management or ownership (Majumdar and Ramaswamy, 1994). Backward integration, which extends operations to raw materials (Lin et al., 2014), enables greater visibility and direct control over resources during disruptions. Animal-feed companies benefited significantly from vertical integration. Farmer-owned cooperatives and feed-processing ownership stabilized procurement and supported production. Anim-C reported, “*As part of a cooperative, we barely have sourcing problems with cereals, as our farmers grant us preferential treatment.*” However, constraints such as geography, capital, and market structure prevent others from pursuing this strategy.

Collaboration encompasses both supply chain and industry-level efforts, with practices including joint forecasting, shared logistics, and risk-sharing. Collaboration also occurs through industry associations and informal competitor networks. Two distinct patterns emerged: companies handling publicly traded commodities were more open to collaboration, whereas those dependent on non-traded resources were more guarded owing to trust and competition concerns. Human-D described this dynamic: “*With competitors, [we contact them] very little. At some point, we have contacted them, but it is very rare. I would say each of us is dealing with our issues on our own. We don’t tell anything to competitors, if we do, oftentimes it’s false.*” By contrast, Fert-F reported frequent communication with competitors owing to overlapping supplier bases and industry meetings, “*We do communicate often with them [competitors], because some of our suppliers are also our competitors. We also participate in international industry meetings where we share information.*” During heightened geopolitical uncertainty, daily collaboration with suppliers became critical for accessing accurate and timely market intelligence. However, firms remained cautious about over-reliance, recognizing that suppliers maintain their own strategic interests. Ultimately, companies calibrated their collaborative intensity based on past reliability and perceived alignment of interests. Firms collaborated primarily as a defensive strategy: weaker buyers collaborated not to generate joint value, but to avoid exclusion from scarce supplier resources.

4.2.3 Environment-level strategies. At the environmental level, two key strategies emerged across the cases: political framework management and financial hedging. While all companies engaged in some form of financial hedging, many expressed frustrations with political framework management, citing limited impact and feasibility across industries and firm sizes.

Political framework management refers to a firm’s efforts to shape or adapt to the regulatory environment, including lobbying activities aimed at offsetting supplier power by influencing national or international policy (Schuh et al., 2008). Across the firms, interviewees acknowledged the role of government policy but expressed skepticism regarding its efficacy. Anim-C noted, “*In times of crisis, through the industry union we talk with Spanish politicians, but many measures have to come from Europe, so the impact is very limited.*”

National initiatives were insufficient, and the real influence lay with the European Union, creating an environment where small atomized firms lacked the collective power to effect change. Several firms (Assess-B, Fert-F, and Anim-L) acknowledged that their industry associations provided modest lobbying capacity, but emphasized the limited scope and success of such efforts. As Anim-L summarized:

I think that we are the great forgotten in Spain. [...] We always participate in the actions of the sectoral associations [...] From there, we unite and defend ourselves as a sector or when there are threats from the implementation of new policies at the European level.

Moreover, firms described how regulations often hindered operations without compensatory mechanisms. According to Anim-A.2: “We do see that (resource nationalist policies) cause only problems [...] and we don’t see that from here (the government) is able to apply any facilitating measures (for granting access to raw materials).” The EU temporarily relaxed some import restrictions (e.g. on pesticide residues) to maintain supply continuity (European Commission, 2022a). As Anim-A.2 explained, “What the European government did was to reduce its requirements regarding [...] plant protection products to provide access to the market to goods that are usually banned in Europe.” These adjustments illustrate how regulatory conditions can temporarily expand substitutability and alter a feasible set of procurement strategies.

Financial hedging was widely practiced, especially through *forward contracts*, enabling companies to secure raw materials in volatile markets. Although forward contracts were commonly used for short- and medium-term planning, they rarely extend beyond the harvest season. Several contextual contingencies, such as supplier power, market structure, and raw material characteristics, constrained this strategy. Some smaller firms (e.g. HumAnim-N and Human-J) expressed growing interest in *options and other risk arbitrage instruments*. Human-J noted: “This year (2023), for example, we are going to start using risk arbitrage platforms.”

However, these tools are rarely used in practice. Their adoption is constrained by complexity, cost, and a lack of financial expertise. Human-E captured this resistance: “We don’t feel comfortable doing these types of actions [working with options derivatives]. That entails some tradition, and it is very complicated to switch the customs of a certain market.” In summary, while financial hedging proved to be more actionable than political engagement, both strategies were shaped by structural constraints—regulatory regimes, market dynamics, and organizational capabilities—that complicated their consistent use. This highlights the limited agency of SME buyers who face systemic power asymmetries and geopolitical uncertainty. Consequently, supplier dominance does not simply constrain the effectiveness of procurement strategies, but often transforms their strategic meaning. Strategies traditionally associated with efficiency, leverage, or risk mitigation have been reconfigured into mechanisms for access preservation. This reinterpretation provides a foundation for the contingency framework developed in the following section.

5. Discussion

Under unmitigable supplier dominance, buying firms operate within a bounded set of feasible actions from which strategic choices are made. First, we discuss how established procurement strategies change their meaning and effectiveness under supplier dominance. We then develop a contingency framework based on urgency and substitutability and discuss its managerial and policy implications.

5.1 Extending procurement theory for weak buyers facing supplier dominance

Classical procurement strategies assume that buyers can access alternatives and exercise leverage. This assumption breaks down under unmitigable supplier dominance. Several established strategies, including backup sourcing (e.g. Hong et al., 2018), are not reliably

implemented in concentrated supply markets with limited input sources. In such settings, attempts to diversify supply may not improve resilience and can reduce access to scarce resources. By contrast, when supply is difficult to substitute, sole sourcing can improve supply security under disruptions. Firms that concentrate on purchases with a single supplier may obtain *preferred customer status* and secure priority access when faced with supply scarcity. This aligns with and extends the literature on supplier resource competition (Pulles *et al.*, 2016a, b), suggesting that sole sourcing may be a rational strategy under certain power asymmetries. This reverses the conventional risk logic of procurement: strategies viewed as risk-increasing under buyer leverage can enhance supply security when access, rather than flexibility, is the top priority.

- P1. Under supplier dominance, when substitutability is low, procurement strategies considered risk-increasing under buyer leverage (e.g. sole sourcing or deep relational commitment) can enhance supply security by improving preferred-customer status and access prioritization.

These findings suggest that supplier dominance is not only structural but also enacted through relational and market interactions that shape access to scarce resources. Similarly, while *collaboration* is widely promoted in the literature as a foundational risk management strategy (Stone and Rahimifard, 2018), our findings reveal that collaboration is heavily bound by power asymmetries and contextual factors. Buyers reported opportunistic behavior during disruptions, limiting their collaborative efforts to trusted and historically reliable suppliers. Moreover, collaboration with competitors—in the form of consortia or alliances—is questionable, particularly in industries with high rivalry or limited transparency. These boundary conditions (e.g. trust, competition, and sector norms) are consistent with recent findings (Ramjaun *et al.*, 2024), underscoring the need to reconceptualize collaboration strategies through a power-sensitive lens. The limited ability of weaker buyers to influence contract terms under supplier dominance aligns with earlier findings (Yan *et al.*, 2015) that buyers' governance capabilities diminish in supplier-dominant markets. This underscores the importance of *relational governance* (Cao and Lumineau, 2015), particularly in building credibility and customer attractiveness (Schiele *et al.*, 2012). Buyers who enhanced their value proposition—by offering reputation, reliability, or prestige—tended to gain favorable treatment even in asymmetrical relationships.

Moreover, our findings indicate a disconnect between scholarly recommendations for financial risk mitigation and practical adoption in weaker buyer contexts. While financial tools such as options and forward contracts have been proposed as buffers against price volatility (Luo and Chen, 2015; Taušer and Čajka, 2014), weaker buyers, often smaller and with limited capabilities, are reluctant to adopt these instruments owing to perceived complexity, cost, and lack of market tradition, echoing Madre and Devuyt's (2016) observations. This raises questions about the practicality of some risk-management tools in sectors with low financial sophistication. Finally, we highlight *changing the nature of demand* (Schuh *et al.*, 2008) as a promising yet underexplored strategy. For instance, bio-based feed innovations (e.g. GRASSA; Smit, 2021) and regenerative agricultural practices could enhance resilience by reducing demand for critical inputs (e.g. minerals for fertilizers) from dominant suppliers. Consistent with recent calls for a shift from efficiency to resilience (Dong, 2021), our findings support a broader agenda for rethinking procurement and production strategies under rising systemic risk.

5.2 Toward a procurement strategy framework for weaker buyers facing supplier dominance

A cross-case analysis identified a constraint-based logic of procurement under unmitigable supplier dominance. Existing procurement frameworks primarily address strategy selection and formulation. Portfolio models (e.g. Caniëls and Gelderman, 2005, 2007; Kraljic, 1983;

Schuh *et al.*, 2008) link purchasing conditions to strategic prescriptions, while recent research (Fontes *et al.*, 2025) distinguishes category strategies from the sourcing levers through which they are operationalized. We extend this literature by theorizing a sequentially prior problem: strategy feasibility. Under unmitigable supplier dominance, buyers cannot necessarily implement otherwise appropriate strategies. Supplier dominance therefore constrains the feasible strategy set within which selection occurs. Consistent with resource dependence theory, this constraint reflects the loss of strategic discretion that follows from dependence on actors who control critical resources. Our findings identify *urgency* and *substitutability* as the contingencies defining the boundaries of this set. Thus, our framework complements rather than replaces existing strategy-formulation approaches: it explains which strategies remain

Table 2. Comparison of procurement frameworks: Kraljic, purchasing chessboard, and the urgency-substitutability framework

Dimension	Kraljic (1983) matrix	Purchasing chessboard (Schuh <i>et al.</i> , 2008)	This study: urgency × substitutability under unmitigable supplier dominance
Primary purpose	Portfolio classification to allocate purchasing attention and manage supply risk	Portfolio logic + power positioning to select strategic levers by power configuration	Explain the conditions under which procurement strategies remain <i>feasible</i> under unmitigable supplier dominance
Core assumption about buyer agency	Buyers can shape outcomes via sourcing choices and leverage	Strategy depends on power position	• Buyer agency is structurally constrained under supplier dominance • Buyers cannot freely choose among theoretically available procurement strategies
Key dimensions	Profit impact × supply risk	Kraljic categories × power positions (dominance/interdependence/independence)	Consequence severity (urgency) × replaceability under operational + institutional constraints (substitutability)
Typical strategic logic	<i>Optimize</i> cost/risk trade-offs via segmentation and supply strategies	<i>Select</i> levers suited to each power position	Determine <i>strategy feasibility</i> based on urgency-substitutability contingencies
Theoretical contribution	• Foundational purchasing portfolio theory • General prioritization and risk segmentation in purchasing	• Integrates power into portfolio thinking • How power positions alter which levers are theoretically available	<i>Theory elaboration:</i> Under unmitigable supplier dominance, strategy feasibility precedes strategy selection, with urgency and substitutability defining the boundaries of the feasible strategy set. • Which established procurement strategies remain feasible for weaker buyers • Why some strategies become infeasible or counterproductive • Why the effectiveness of the same strategy varies across urgency-substitutability conditions
Limitations	Persistent supplier dominance: situations where switching/leverage are infeasible	The implementation feasibility and boundary conditions of levers for structurally weak buyers	Identifies the feasible strategy set but does not prescribe selection among feasible alternatives
Source(s): Authors' own creation			

feasible under persistent supplier dominance, after which existing approaches can inform selection among them. Table 2 summarizes this distinction. The comparison highlights that our contribution is not a new portfolio tool *per se*, but a contingency framework that explains when established procurement strategies remain feasible and when they become infeasible or counterproductive under unmitigable supplier dominance.

Urgency captures the severity of consequences associated with supply interruptions, such as production discontinuity, shutdown risk, loss of sales, regulatory non-compliance, and, in extreme cases, humanitarian stakes (e.g. malnutrition and starvation). It increases with disruption intensity and time pressure, as buyers face progressively narrower windows to secure access to critical inputs. *Substitutability* captures the degree to which buyers can replace a supply without altering product characteristics or violating regulations, labeling, or quality requirements. Thus, substitutability is not only operational, but also institutionally shaped (e.g. animal vs human consumption regulatory differences) and market-facing (e.g. downstream acceptance).

- P2. Institutional, regulatory, and market constraints reduce substitutability by restricting the set of viable supply alternatives. Even when operationally feasible substitutes exist, regulatory, labeling, and market acceptance requirements can render supplies non-substitutable, thus limiting strategic choices.

To enable a systematic classification and future empirical testing, we propose observable indicators for each dimension. Urgency can be proxied by (1) lead-time tolerance, (2) stockout cost magnitude (including shutdown and lost sales exposure), and (3) perishability rate. Substitutability can be proxied by (1) the number or capacity of viable alternatives, (2) switch requirements (reformulation, redesign, and revalidation), and (3) the share of output subject to regulatory or labeling constraints that preclude substitution. Cross-tabulating urgency and substitutability yields a four-category typology (see Figure 1) that predicts when procurement strategies remain feasible and become ineffective or counterproductive (e.g. plural sourcing could damage preferred-customer status under dominance). Urgency and substitutability define the boundaries of the feasible strategy set under unmitigable supplier dominance. They determine which strategies can be implemented under supplier dominance and when classical strategies become infeasible.

- P3. Under unmitigable supplier dominance, increasing urgency and decreasing substitutability reduce the feasible strategy set, forcing buyers to prioritize access-preserving mechanisms over efficiency-oriented strategies.

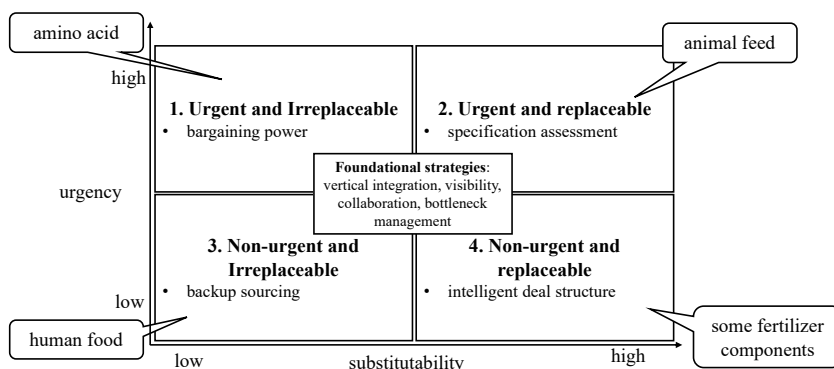


Figure 1. Procurement framework in the context of supplier dominance. **Source(s):** Authors' own creation

Foundational resilience-building strategies, namely vertical integration, supply chain visibility, network-level collaboration, and bottleneck management, are applicable across all supply categories. These strategies serve as baseline capabilities that firms should establish before implementing category-specific approaches, irrespective of the raw material type. For supplies with high urgency and low substitutability, procurement resilience depends on *bargaining power*. For supplies with high urgency but high substitutability, specification assessment—the ability to adapt or alter raw material requirements—becomes critical for supply continuity. Conversely, non-urgent supplies allow for long-term strategic positioning. For non-substitutable and non-urgent supplies, *backup sourcing*, when feasible, safeguards against disruptions. For substitutable and non-urgent supplies, *intelligent deal structures*, such as indexed or forward contracts, offer greater flexibility and cost stability. These four categories map onto the four recovery mechanisms of supply chain resilience described by Chowdhury and Quaddus (2016): preferential treatment (Quadrant 1), substitute materials (Quadrant 2), substitute suppliers (Quadrant 3), and intelligent contracting (Quadrant 4). This typology offers a theoretically grounded and practically relevant framework for designing resilient procurement strategies under supplier dominance.

5.3 Practical implications

Our findings demonstrate that under persistent supplier dominance, managers should evaluate procurement strategies in terms of feasibility rather than optimality. Managers should be more proactive in assessing the current recipe formulations for substitutability, lead-time tolerance, and perishability. Firms with animal feeding operations tend to benefit from more substitutability options but higher urgency (low lead-time tolerance as the animals must be fed). Therefore, it is imperative to understand the availability of different feed options and develop rapid analyses of new dietary formulations for animal health and weight maintenance. Additionally, firms should consider investing in local farming partnerships and inventory positioning, as seen in more stable animal feeding operations. As a long-term strategy, buyers can develop the circular economy of feed from food waste, an undervalued local source. When substitutability is low (e.g. human food products and animal supplements), managers should prioritize access to these ingredients by building bargaining power and preferred customer status with the critical ingredient suppliers. Thus, buyers may be required to order large volumes, subject to the ingredient's perishability window.

When urgency is low, managers have more strategic leeway. With low substitutability, diversification and backup sourcing become optimal. However, managers should avoid overreliance on diversification strategies, as this can weaken supplier relationships without improving supply security. Managers can improve the substitutability of some products by adjusting labels for more flexibility, including grouping oils under vegetable oils rather than calling out a specific oil, which is permitted by many regulators. With high substitutability, intelligent deal structures and financial hedging offer greater predictability. However, as many SMEs lack expertise in these options, consultants or hiring in-house experts would provide the required skills. Overall, our framework shifts the managerial focus from cost optimization to feasibility and access preservation under supplier dominance. Table 3 summarizes the managerial decision recommendations under supplier dominance.

5.4 Policy implications

Strategic responses, such as *specification assessment*, are largely constrained by rigid regulatory requirements. While strict regulations are essential under normal conditions to uphold standards, such as food safety, they may inadvertently reduce substitutability during severe food supply disruptions, limiting firms' ability to respond. It behooves the food industry associations to suggest flexibility options to the food label regulators, as mentioned above with the generic vegetable oil labeling. Following the Russo-Ukrainian war, EU Member States introduced flexibility in food-labeling requirements to facilitate the substitution of disrupted

Table 3. Managerial decision recommendations under supplier dominance

Supply condition	Dominant risk	Objective	Managerial decisions	Strategies to prioritize	Strategies to avoid
Quadrant 1: High urgency × Low substitutability	Immediate supply disruption with no viable alternatives	Secure access and preferential treatment	Accept dependence on a key supplier to ensure priority access rather than pursuing unrealistic diversification	<i>Access-preserving strategies:</i> Sole sourcing, preferred customer positioning, bargaining power, long-term relational contracts, vertical integration	<i>Diversification-oriented strategies:</i> back-up sourcing
Quadrant 2: High urgency × High substitutability	Immediate disruption but alternatives exist	Enable rapid switching	Relax specifications and activate alternative suppliers to maintain operational continuity	<i>Substitution-oriented strategies:</i> Specification assessment, recipe reformulation	<i>Relational lock-in strategies:</i> sole sourcing, deep relational commitment, long planning horizons
Quadrant 3: Low urgency × Low substitutability	Long-term vulnerability to dominant suppliers	Build structural resilience	Invest in developing alternative suppliers over time while maintaining the dominant relationship	<i>Diversification-oriented strategies:</i> Back-up sourcing, gradual supplier development, coalition-building	<i>Short-term adaptation strategies:</i> specification assessment
Quadrant 4: Low urgency × High substitutability	Cost volatility rather than existential risk	Optimize cost and flexibility	Leverage market mechanisms and contracts rather than relational dependence	<i>Contractual strategies:</i> Intelligent deal structures, financial hedging, forward contracts	<i>Access-preserving strategies:</i> bargaining power development, preferred-customer positioning

Source(s): Authors' own creation

ingredients, including vegetable oil (European Commission, 2022b), illustrating both the necessity and practical feasibility of such regulatory flexibility. This approach highlights the importance of scenario-based regulatory approaches that allow conditional relaxation during disruptions. When a critical supply is cut off, and viable alternatives that meet acceptable safety and quality thresholds exist, procurement policies should enable substitution.

Several government agencies (e.g. in China, India, and Switzerland) have implemented policies including stockpiling of essential commodities, which reduce the urgency for food companies and buffer the cost of inventorying large quantities of commodities for individual companies (e.g. FAO, 2015; FONES, 2026; OECD, 2023). Therefore, our research suggests that, given the volatile geopolitical environment, policymakers should prioritize food security issues and the needs of food producers. Overall, our findings are particularly relevant for

regulators, industry bodies, and supranational institutions, including the European Union, which shape food security policy and procurement constraints through trade, safety, and labeling regulations.

6. Conclusion and future research

This study addresses the urgent need to examine procurement strategies under supplier dominance. It contributes to the limited literature on power asymmetries in procurement (Cox, 2001) by offering a systematic overview of procurement strategies and insights into the factors that influence their implementation. Our findings show that classical procurement strategies under supplier dominance are insufficient, thereby requiring additional resilience strategies. Furthermore, the *urgency* and *substitutability* of supplies should also be considered. Theoretically, this study advances procurement strategy research by distinguishing strategy feasibility from strategy selection. Under unmitigable supplier dominance, *urgency* and *substitutability* constrain the feasible strategy set within which selection occurs. Managerially, the study calls for a shift from cost-driven to resilience-oriented procurement. Policy implications underline the necessity to restrain anti-competitive dynamics in concentrated markets and develop flexible regulations for emergency sourcing of critical supplies.

Idiosyncrasies in the Spanish agri-food sector limit the generalizability of the findings. Future research could extend the analysis to other countries to provide broader insights. While this study focused on prominent procurement strategies, it would be valuable to explore what agri-food firms could learn from sectors that deal with urgency, such as humanitarian, medical, and other perishable supply chains. Although we triangulated the interview data with secondary sources where possible, our analysis relied primarily on buyer interviews and may have been subject to disclosure bias. Future research could mitigate this limitation by incorporating alternative data sources such as observational data to further triangulate firm-level claims regarding procurement behavior. Moreover, while notable differences emerged before and after the Ukrainian invasion, these were primarily observed across firms. A longitudinal study that examines how the same firms learn and adapt to crises would be instructive. Finally, although this study focused on geopolitical uncertainty, supplier dominance can also stem from factors such as resource scarcity (e.g. rare elements in electric vehicle production) and climate change. These drivers may pose more insidious threats to supply security, as their effects largely unfold gradually rather than abruptly, as in the case of armed conflicts or trade bans. Future research could explore these alternative sources of disruption to deepen the understanding of how weaker buyers manage upstream supply vulnerability.

Supplementary material

The supplementary material for this article can be found online.

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