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# WAGE STRATEGIES AND EMPLOYMENT SECURITY BARGAINING IN TURKIYE UNDER ENERGY COST SURGES: A MULTI-METHOD QUALITATIVE STUDY

## *ENERJİ MALİYET ARTIŞLARI KARŞISINDA TÜRKİYE'DE ÜCRET STRATEJİLERİ VE İŞ GÜVENCESİ MÜZAKERELERİ: ÇOK YÖNTEMLİ NİTEL BİR ÇALIŞMA*

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**Abstract:** This study examines how wage and employment bargaining in Türkiye has changed amid recent increases in energy costs and what this means for inflation. Using a mix of methods—document analysis of collective agreements, focus groups with union and employer representatives, and small-scale negotiation simulations—it shows that negotiations centre on a tension between "fair share" for workers and "cost pressure/competitiveness" for firms. Under different types of uncertainty, actors combine tactics such as high opening offers, staged raises, one-off payments, and partial indexation into a small set of recurring agreement packages. In energy-intensive sectors, competitiveness and capped indexation are more common, while in services job security and one-off payments linked to no-layoff pledges are more visible. The results suggest that broad indexation can make inflation more persistent, whereas staggered increases and lump-sum payments help protect purchasing power without locking in permanently higher wage levels.

**Keywords:** Energy Cost Shocks, Collective Bargaining, Wage Indexation, Inflation Persistence

**JEL:** E31, E24, E32, J51, J31, Q41

***Öz:*** *Bu çalışma, Türkiye'de son dönem enerji maliyeti artışları sırasında ücret ve istihdam pazarlıklarının nasıl şekillendiğini ve bunun enflasyon açısından ne anlama geldiğini incelemektedir. Toplu sözleşmelerin belge analizi, sendika ve işveren temsilcileriyle yapılan odak grup görüşmeleri ve küçük ölçekli müzakere canlandırmaları birlikte kullanılmaktadır. Bulgular, pazarlıkların çoğunlukla işçilerin "adil pay" talebi ile işverenlerin "maliyet baskısı/rekabetçilik" kaygısı arasında geçtiğini göstermektedir. Farklı belirsizlik türlerinde, taraflar yüksekten açılış, kademeli zamlar, tek seferlik ödemeler ve kısmi endeksleme gibi taktikleri bir araya getirerek tekrar eden birkaç temel anlaşma paketi oluşturmaktadır. Enerji yoğun sektörlerde rekabetçilik ve tavan–tabanlı endeksleme daha öne çıkarken, hizmetlerde iş güvencesi ve işten çıkarma yasağına bağlı tek seferlik ödemeler daha görünür durumdadır. Sonuçlar, geniş kapsamlı endekslemenin enflasyonun kalıcılığını artırabileceğini, buna karşılık kademeli artışlar ve toplu ödemelerin alım gücünü korurken kalıcılığı sınırlamaya yardımcı olabileceğini düşündürmektedir.*

***Anahtar Kelimeler:*** *Enerji Maliyeti Şokları, Toplu Pazarlık, Ücret Endekslemesi, Enflasyon Kalıcılığı*

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## 1. Introduction

Recent energy price shocks have altered firms' cost structures and renewed attention to the relationship between wage bargaining, price setting, and inflation persistence. The sharp increase in European wholesale gas prices in 2021–2022, followed by substantial volatility in gas and electricity prices, raised production costs across sectors and intensified pressure on wages, employment, and pricing decisions. Existing research shows that the pass-through from energy costs to inflation is shaped by sectoral energy intensity, exchange-rate movements, contract timing, administered prices, and the design of wage indexation mechanisms. It also shows that wages often adjust more slowly than prices because they are mediated by contracts, expectations, and institutional rules, which can make inflation more persistent when indexation is broad or highly inertial (Adolfsen et al., 2024; Bates et al., 2025; López et al., 2025). In this sense, energy shocks are not only cost shocks; they are also bargaining shocks that influence how distributional conflict is negotiated between labour and employers.

Macroeconomic research has provided useful frameworks for understanding these dynamics. The WS–PS model and Phillips-curve approaches explain how wage claims, firms' pricing power, expectations, and labour-market conditions jointly shape inflation and unemployment outcomes (Bonam & Franz, 2021; Carlin & Soskice, 2015; Layard, Nickell, & Jackman, 1991). Recent studies further show that gas-price shocks can affect inflation through both direct and indirect channels, while negotiated responses to inflation often take the form of one-off payments, staggered increases, partial indexation, and selective compensation mechanisms rather than simple across-the-board wage increases (European Central Bank, 2026; Eurofound, 2023). However, this literature remains dominated by macroeconomic modelling, cross-country comparisons, and aggregate wage or agreement data. As a result, we know much more about the macroeconomic effects of wage adjustment than about the bargaining processes through which those adjustments are produced. In particular, existing studies say relatively little about which frames become dominant at the bargaining table, which tactics are used under different forms of uncertainty, and how particular combinations of claims and concessions translate into specific agreement packages.

This gap is especially evident in relation to Türkiye. Although the broader literature has generated important insights into pass-through, inflation persistence, and wage adjustment, these findings are drawn largely from advanced European economies and rarely examine bargaining processes in emerging, high-volatility contexts. To our knowledge, there is still no close qualitative evidence showing how wage and employment negotiations in Türkiye evolve under energy-cost surges, how labor and employer actors frame the problem, and how they combine instruments such as one-off payments, staggered increases, partial indexation, and job-security provisions during bargaining. This absence matters because Türkiye is not a routine extension of the European case. It offers a distinct setting in which imported-energy dependence, exchange-rate volatility, recurrent inflationary pressure, uneven bargaining coverage, and a strong minimum-wage reference point intersect in ways that may reshape both bargaining behavior and inflation dynamics (ILO, n.d.; OECD, 2025a, 2025b; Ministry of Labor and Social Security, 2025). These country-specific economic and institutional features make Türkiye a critical case for examining how energy-cost shocks are translated into bargaining demands, strategic concessions, and settlement forms.

Studying Türkiye is therefore important for both empirical and theoretical reasons. Empirically, it allows the analysis to move beyond highly coordinated, lower-volatility wage-setting systems and examine how negotiations operate in an environment marked by macroeconomic fragility and institutionally uneven collective bargaining. Theoretically, it helps clarify how micro-level bargaining behavior connects with macro-level inflation mechanisms in settings where energy dependence and exchange-rate pass-through are especially pronounced. In such a context, bargaining outcomes may depend not only on distributive conflict over wages, but also on concerns about competitiveness, employment protection, timing, and the permanence of nominal commitments. A Türkiye-focused analysis can therefore reveal dynamics that remain less visible in studies centered on more stable advanced economies.

Against this background, this study investigates how wage strategies and employment-security bargaining in Türkiye are shaped during periods of sharp energy-cost increases and what these dynamics imply for inflation persistence. It does so through a multi-method qualitative design combining document analysis of collective agreements and interim protocols, focus groups with union representatives and employer/HR managers, and scenario-based negotiation simulations across sectors with different energy-intensity profiles. Rather than treating agreements only as final outcomes, the study examines bargaining as a process in which cost pressure, competitiveness, fair share, and job security are framed, contested, and translated into different forms of nominal adjustment. By linking these observed bargaining patterns to WS–PS and Phillips-curve logic, the study contributes to the literature in two ways: first, by providing much-needed process-oriented evidence from Türkiye; and second, by showing how country-specific bargaining practices can help explain broader inflation and employment adjustment under energy-cost shocks.

## 2. Literature and Theoretical Framework

Energy crises affect inflation and employment primarily through cost pass-through mechanisms that alter firms' pricing behavior, profit margins, and labor-cost decisions. Recent evidence from Europe, the United Kingdom, and the United States shows that increases in imported energy prices are transmitted relatively quickly to general price levels, whereas wage adjustment is typically slower and more strongly conditioned by institutional factors such as indexation rules, contract timing, and the broader architecture of wage setting (Hansen et al., 2023; Lu et al., 2024; Usman et al., 2024). In high-inflation environments, pass-through tends to be steeper and more persistent, especially when expectations become less anchored. Fiscal and monetary responses, transfers, and price regulations can cushion the initial shock, but they also shape bargaining expectations and the degree to which temporary shocks become embedded in wage and price dynamics (Auclert et al., 2023; Bobasu et al., 2025). Changes in profit and wage shares further show how shocks are absorbed within the price–wage–profit triangle and underline the importance of institutional design in determining adjustment paths (Hansen et al., 2023). A related literature links energy crises to the green transition, suggesting that higher fossil-fuel prices can simultaneously stimulate renewable investment and increase transition costs through financing volatility and unstable expectations (Esmaeili et al., 2024; Guinea et al., 2024; Murshed & Tanha, 2021; Wang et al., 2025). Another strand highlights the distributional and welfare consequences of energy shocks, especially their effects on labor supply, household consumption, and energy poverty among vulnerable groups (Dokas et al., 2023; Feeny et al., 2021). Within this broader context, agreement

devices such as one-off payments, staggered increases, partial indexation, and wage components linked to energy-efficiency gains can be understood as concrete instruments for balancing inflation persistence, purchasing-power protection, and employment-related concerns.

Yet macroeconomic pass-through alone cannot explain how these adjustments are actually negotiated. The industrial-relations literature shows that wage outcomes are strongly shaped by the institutional architecture of collective bargaining. Bargaining level, bargaining coverage, union density, coordination capacity, representativeness, and extension mechanisms all influence how distributive conflict is translated into wage change, employment protection, and negotiated flexibility. Systems with broader effective coverage and stronger coordination tend to generate more predictable and collectively managed adjustment patterns, whereas fragmented systems with weaker coordination and lower effective coverage are more likely to produce heterogeneous and firm-specific responses (Garnero, 2021; OECD, 2019; OECD, 2025a). In this sense, inflationary cost shocks do not operate on a neutral institutional terrain. They are filtered through bargaining institutions that shape which claims are seen as legitimate, which tactics are feasible, and which forms of settlement become negotiable.

This institutional perspective is especially important in periods of high inflation. In such settings, bargaining does not concern nominal wage growth alone; it increasingly centers on how real-income protection can be balanced against uncertainty, competitiveness pressures, and employment-security concerns. Recent work on inflation bargaining shows that negotiated responses often rely not on uniform and unconditional wage increases, but on mixed arrangements such as one-off payments, staggered adjustments, threshold clauses, conditional review mechanisms, and partial indexation (Eurofound, 2023; ILO, 2024). These arrangements may be interpreted as forms of concession bargaining in which labour-side demands for purchasing-power protection are negotiated together with employer-side concerns about flexibility, timing, and the permanence of wage commitments. They also illustrate the interaction between distributive and integrative bargaining logics. While some claims remain strongly distributive, others depend on issue linkage, package construction, and conditional trade-offs rather than simple positional conflict. For the purposes of the present study, this literature is particularly relevant because it provides a theoretical basis for examining not only wage outcomes, but also the bargaining frames, tactics, and package architectures through which those outcomes are produced.

These institutional considerations are especially relevant in the Turkish context. Available evidence suggests that collective bargaining in Türkiye is predominantly company-based, with relatively low centralisation and limited coordination across bargaining levels (OECD, 2025a). OECD and AIAS data report trade union density at around 9.9% and adjusted collective bargaining coverage at around 8.5%, while ILOSTAT reports a collective bargaining coverage rate of 7.4% for 2019 (ILO, n.d.; OECD, 2025a). At the same time, official statistics published by the Ministry of Labour and Social Security indicate a unionisation rate of 14.97% among registered workers in 2025 (Ministry of Labour and Social Security, 2025). These indicators suggest that formal union membership and effective bargaining coverage should not be treated as equivalent in the Turkish case. As a result, wage bargaining is likely to be uneven across sectors and firms, and negotiated responses to energy-cost shocks may depend more strongly on organizational capacity, sectoral structure, and firm-

level constraints than in highly coordinated systems. This uneven institutional landscape helps explain why bargaining outcomes in Türkiye are likely to take more conditional, hybrid, and context-specific forms.

Another distinctive feature of the Turkish case is the strong role of the minimum wage in overall wage formation. OECD reports that the minimum wage is earned by around half of workers in non-agricultural sectors and that it was increased five times between 2022 and the end of 2024 (OECD, 2025b). This means that wage setting in Türkiye is shaped not only by collective agreements but also by statutory wage adjustments, inflation expectations, and broader macroeconomic policy signals. Under these conditions, energy-cost shocks are more likely to affect bargaining through both direct firm-level cost pressure and economy-wide nominal reference points. The Turkish case also sharpens the relevance of energy dependence itself. OECD evidence indicates that roughly two-thirds of Türkiye's energy consumption is based on imported energy, mostly fossil fuels (OECD, 2025b). When this degree of import dependence interacts with recurrent inflationary pressure, exchange-rate volatility, and uneven bargaining coverage, energy-price shocks are more likely to spill over into bargaining demands, distributive conflict, and debates over employment protection than in more stable low-inflation settings. Türkiye therefore provides a particularly useful context for examining how energy shocks are translated into bargaining frames, tactical repertoires, and agreement forms in an emerging economy marked by both macroeconomic fragility and institutionally uneven wage-setting structures.

The macroeconomic link to these bargaining processes is captured by the WS–PS and Phillips-curve frameworks, which conceptualize inflation and unemployment as the outcome of the interaction between workers' target real wages and firms' ability to pass higher costs into prices (Carlin & Soskice, 2015; Layard et al., 1991). A substantial empirical literature shows that the slope and persistence of the Phillips curve are not fixed but vary across institutional settings and expectation regimes (Bonam & Franz, 2021). Recent research for the euro area shows that spikes in natural-gas prices feed more quickly into inflation where indexation rules are broader and inflation expectations are less firmly anchored (Adolfsen et al., 2024; López et al., 2025). From this perspective, the qualitative elements examined in this study align naturally with macroeconomic behavior. Language pointing to broad indexation signals faster transmission from cost shocks to wages and prices, implying a steeper short-run Phillips curve, while references to lumpsum or one-off payments indicate temporary compensation that does not permanently ratchet the wage base, thereby reducing persistence.

Narrative-based evidence further suggests that what negotiators say and the tactics they adopt matter beyond the bargaining room. Shock narratives, hardened bargaining positions, and strategic interaction can alter the wage-setting process in ways that leave lasting effects on wages, unemployment, and prices (Budrys et al., 2022). Recent euro-area studies also show that Phillips-curve relationships differ across sectors and regions and evolve over time (Beschin et al., 2025). In this study, "fair share" rhetoric is interpreted as consistent with higher target real wages and an upward shift of the WS schedule; explicit indexation language strengthens wage–price pass-through and steepens the short-run slope; one-off payments function as temporary wage shocks that moderate persistence; and packages that exchange wage restraint for verifiable productivity or energy-efficiency gains reduce unit costs on the PS side, potentially improving the inflation–unemployment trade-off (Adolfsen et al., 2024; Bonam & Franz, 2021; Budrys et al., 2021; Carlin & Soskice, 2015; Beschin et al.,

2025). Taken together, these strands of macroeconomic, industrial-relations, and bargaining-process literature provide the basis for the qualitative–macro bridge developed in this study. Frames such as cost pressure, fair share, competitiveness, and job security, together with tactics such as anchoring, bundling, and mediation, are therefore treated not only as descriptive features of negotiation, but as observable micro-level signals of pass-through, coordination, and persistence configurations that matter for macroeconomic adjustment.

## 3. Method

### 3.1. Research Design

This study adopts a multi-method qualitative design to examine which combinations of frames and tactics are most likely to produce agreement in wage–employment negotiations during periods of sharp energy-cost increases. The design brings together three interrelated sources of evidence. First, a systematic document analysis is conducted on collective agreements, interim protocols, dispute-related texts, and institutional announcements to identify both negotiation frames, such as cost pressure, competitiveness, fair share, and job security, and institutional markers, including bargaining level, coordination, coverage, and indexation practices. Second, sector-specific focus groups in energy-intensive manufacturing, logistics, and services are used to explore how bargaining actors describe their strategic repertoires in context, including opening offers, anchoring and counter-anchoring, bundling, and concession zones. Third, round-based negotiation simulations are employed to trace bargaining moves in real time and to observe how offers, sequencing, tone, and settlement patterns evolve under different shock and institutional conditions.

All empirical materials were managed and coded in NVivo. The document analysis combined predefined analytical categories with inductive coding to capture both theoretically expected and context-specific patterns, and the findings were organized into frame–institution–instrument matrices. Focus-group transcripts were analyzed thematically, while simulation materials were coded for bargaining moves, sequencing, and settlement forms. As the study was conducted by a single researcher, consistency and credibility were supported through a pilot coding stage, repeated coding after a time interval, systematic memo writing, and the maintenance of an audit trail documenting coding decisions and category refinement. In the integration stage, the frame lexicon identified in the documents was refined through focus-group evidence and then linked to the settlement patterns observed in the simulations. These patterns were subsequently interpreted in relation to WS–PS and Phillips-curve parameters: settlements centered on indexation and base-wage incorporation were treated as more closely associated with steeper short-run inflation dynamics and greater persistence, whereas one-off payments and productivity- or energy-efficiency-linked packages were interpreted as arrangements more likely to limit persistence and support more favorable cost adjustment.

### 3.2. Data Collection

Data were generated through three interrelated stages: (i) a structured document analysis, (ii) focus-group discussions prepared on the basis of the documentary corpus, and (iii) scenario-based negotiation simulations developed from the patterns identified in the first two stages. This sequencing was designed to ensure that the empirical materials were treated not as isolated sources, but as connected layers of evidence. The document analysis established the initial analytical frame, the focus

groups deepened understanding of bargaining strategies and conditional responses, and the simulation stage was used to observe how these frames and strategies interacted under different shock conditions.

The documentary corpus was constructed through purposive, criterion-based sampling rather than random selection. The aim was not to build a statistically representative archive of all wage-setting documents in Türkiye, but to assemble an analytically relevant set of texts capable of illuminating how energy-cost pressures were framed and negotiated during the post-2021 period of elevated inflation and rising energy prices. In this sense, the documentary sample was designed for analytical comparison and mechanism tracing rather than for statistical generalization. Documents were included if they met at least one of three criteria: first, they contained explicit collective bargaining outcomes or interim protocol content related to wage adjustment; second, they included union- or employer-side framing language concerning inflation, cost pressure, purchasing power, competitiveness, or job security; and third, they provided sectoral or institutional information on labour-market conditions, pricing pressure, work organization, or cost management relevant to wage negotiations. On this basis, seven core documents were included in the documentary corpus.

The final corpus covered materials from metal and manufacturing, logistics-related labor-market and employer contexts, retail and service-oriented work organization discussions, and broader labor-market reporting. These sectors were selected because they differ in energy intensity, organizational structure, and likely bargaining responses to cost shocks. Metal and manufacturing were included because they represent a highly visible bargaining arena in which energy costs, industrial wage negotiations, and organized employer-union interaction are especially pronounced. Logistics and warehousing were included because energy costs affect transportation, storage, and operational continuity in ways that are likely to shape both wage bargaining and employment-security concerns. Retail and service-oriented contexts were incorporated to capture settings in which cost pass-through, labor flexibility, and purchasing-power pressures may produce different bargaining frames and agreement forms. Accordingly, the documentary set was intended to support structured comparison across sectoral contexts rather than to claim coverage of all wage-setting activity in Türkiye.

Table 1 presents the documentary sources used in the analysis. The corpus includes collective bargaining outcome statements, union press releases, employer-side reports, labor-market reports, and selected corporate reporting. These materials were used to identify wage-adjustment practices such as base-pay incorporation, one-off payments, social-benefit components, indexation clauses, phased increases, and employment-related safeguards, as well as the dominant narrative frames used by the parties, particularly cost pressure, fair share, competitiveness, and job security.

**Table 1. Sources compiled for the document analysis**

| Document Type | Document / Title | Institution / Source | Sector | Year | Full Reference |
|---|---|---|---|---|---|
| Press release / CBA outcome | 2021–2023 MESS Group CBA agreement | Türk Metal Sendikası | Metal / Manufacturing | 2022 | Türk Metal Sendikası. (2022, January 12). *2021–2023 MESS Grup* |

| | | | | | |
|---|---|---|---|---|---|
| | (emphasis on 65.67% annual increase) | | | | *Toplu İş Sözleşmesi bağıtlandı.* |
| Press release / CBA outcome | Signing of the MESS Group CBA and wage increases | Birleşik Metal-İş Sendikası | Metal / Manufacturing | 2022 | Birleşik Metal-İş Sendikası. (2022). *MESS grup toplu iş sözleşmesi sonuç açıklaması.* |
| Employer report / indicator set | MESS views on inflation and raise periods | Türkiye Metal Sanayicileri Sendikası (MESS) | Metal / Manufacturing | 2023 | Türkiye Metal Sanayicileri Sendikası (MESS). (2023). *Enflasyon, ücret artışları ve sanayi görünümü üzerine değerlendirme notu.* |
| Research report | Outlook for unemployment and employment — February 2022 | DİSK-AR | General labour market / All sectors | 2022 | DİSK-AR. (2022, February). *İşsizlik ve istihdamın görünümü raporu.* |
| Research report | Outlook for unemployment and employment — August 2024 | DİSK-AR | General labour market / All sectors | 2024 | DİSK-AR. (2024, August). *İşsizlik ve istihdamın görünümü raporu.* |
| Employers' confederation report | New-generation work models | Türkiye İşveren Sendikaları Konfederasyonu (TİSK) | Multi-sector | n.d. | Türkiye İşveren Sendikaları Konfederasyonu (TİSK). (n.d.). *Yeni nesil çalışma modelleri.* |
| Corporate sustainability report | Energy-cost management and customer solutions (selected sections) | Enerjisa Enerji A.Ş. | Energy / Services | 2023 | Enerjisa Enerji A.Ş. (2023). *2022 Sustainability Report.* |

**Source:** Compiled by the author from the public documentary sources listed in the Full Reference column.

The documentary corpus served two methodological purposes. First, it provided the initial coding basis for identifying recurring bargaining frames, strategic signals, and settlement architectures. Second, it informed the design of the subsequent empirical stages. The institutions-actors map and the focus-group guide were refined on the basis of recurrent themes and linguistic markers identified in the documents. Likewise, the negotiation-simulation scenarios were constructed from patterns observed in the corpus, including sudden energy-cost shocks, gradual cost escalation combined with exchange-rate volatility, and package structures involving

productivity- or efficiency-linked concessions. In this respect, the documentary material did not function merely as background context; it provided the empirical foundation for both the focus-group design and the simulation setup.

The design also strengthened triangulation across data sources. DİSK-AR reports provided contextual evidence on labor-market conditions, while MESS and union statements supplied direct evidence on bargaining language and wage-adjustment outcomes in metal and manufacturing negotiations. TİSK materials and selected corporate reporting contributed complementary insight into employer-side responses, including flexibility arrangements, organizational adaptation, and cost-management practices. Taken together, these sources enabled the study to compare frame-strategy-settlement patterns across sectoral settings and to interpret focus-group and simulation findings against a documented textual record rather than in isolation.

### 3.3. Focus-Group Design and Procedure

The focus-group stage was designed to complement the documentary analysis by exploring how bargaining actors interpreted energy-cost shocks, evaluated negotiation options, and assessed the viability of different settlement packages under sector-specific conditions. Consistent with the overall multi-method design, the focus-group component was organized around three sectoral settings—energy-intensive manufacturing, logistics, and services—to compare how bargaining frames and strategic repertoires varied across contexts with different levels of energy-cost exposure, organizational structures, and employment-security concerns. In this way, the focus groups were used not only to deepen the themes identified in the documentary corpus but also to refine the strategic and discursive patterns that later informed the negotiation-simulation stage.

A total of three focus-group sessions were conducted, one for each sectoral setting. Across these sessions, eight participants took part in the study. The groups included both labor-side and employer-side perspectives and comprised four union representatives and four employer or HR representatives. Participants were selected purposively because they had direct or closely related knowledge of wage bargaining, employment-security concerns, and sectoral labor-management dynamics under conditions of rising energy costs and inflation. To protect confidentiality, participant identities were anonymized and coded in the dataset using identifiers such as U1–U8. This participant profile enabled the capture of informed perspectives on distributive bargaining, employer-side constraints, and sector-specific negotiation practices.

The focus-group discussions were semi-structured and analytically guided rather than fully open-ended. The interview guide was developed from the thematic architecture emerging from the document analysis and focused on four interrelated issues: how participants framed energy-cost shocks, which negotiation tactics they considered workable under different uncertainty conditions, which settlement packages they regarded as viable, and how institutional and sectoral conditions shaped bargaining choices. This structure allowed comparability across the three sectoral settings while still capturing differences in bargaining language, strategy selection, and perceptions of feasibility. The resulting material was later analyzed through the same frame–strategy–outcome logic applied in the document and simulation stages.

The sessions were conducted online and lasted approximately 75 to 90 minutes each. Before participation, all individuals were informed both verbally and in writing about the purpose of the study, the research procedures, the voluntary nature of participation,

and their right to withdraw at any stage. Written informed consent was obtained prior to the sessions. Because the subject matter involved potentially sensitive issues related to wage bargaining, employer–union relations, and employment-security commitments, clear ground rules were established at the beginning of each session, and participants were reminded that they could decline to answer any question or leave the discussion at any time. The study received ethics approval from İstinye University (Decision/Approval No: 25-121).

Data handling followed a documented confidentiality and traceability protocol. With participant consent, sessions were audio- and video-recorded and transcribed within 48 hours using speaker labels, timestamps, and relevant paralinguistic notes where necessary. Personal and institutional identifiers were pseudonymized, and only de-identified transcripts were imported into NVivo for analysis. Raw audio and video files were stored in encrypted, access-controlled environments for up to five years, after which they were scheduled for secure deletion. De-identified transcripts, code files, and related analytical materials were retained for a longer period in line with the study's KVKK/GDPR-oriented data-management procedures. These steps were adopted to strengthen confidentiality, traceability, and methodological transparency throughout the focus-group stage.

### 3.4. Negotiation-Simulation Design and Procedure

To complement the document analysis and focus-group findings, the study incorporated a negotiation-simulation stage designed to observe how bargaining frames, tactics, and settlement forms developed under different types of energy-cost pressure. The simulations were structured as round-based role-play exercises and organized around three conditions: sudden shock under high uncertainty, gradual shock combined with exchange-rate volatility, and fragmented authority under high tension. Scenario design was informed by the documentary corpus, the focus-group discussions, and the literature on energy-price pass-through, wage adjustment, and inflation-related bargaining. The simulation materials were analyzed using the same frame–strategy–outcome coding architecture applied in the other empirical stages of the study.

A total of nine simulation sessions were conducted, with each of the three scenarios run three times in order to observe whether similar bargaining patterns recurred under repeated conditions. The simulation stage involved eight sector-informed participants drawn from labor-side and employer-side backgrounds, including union representatives, employer or HR representatives, and participants with closely related knowledge of labor-management dynamics. These individuals were not treated as formal negotiators in an ongoing bargaining process; rather, they participated as informed actors capable of performing structured bargaining roles relevant to the scenarios. Across sessions, participants were assigned labor-side roles, employer-side roles, and, where required by the scenario, a mediating or coordinating role. This design allowed the study to observe not only settlement outcomes but also the interactional sequence through which bargaining positions were advanced, resisted, revised, or stabilized.

Each simulation session was conducted online and lasted approximately 60 to 75 minutes. All sessions followed a four-round structure (T0–T3). In the first round, participants presented initial positions and framed the shock conditions. In the second and third rounds, they introduced counteroffers, package adjustments, time-based

conditions, or mediating interventions. In the final round, the interaction either moved toward settlement, conditional agreement, or deadlock. The unit of analysis in the simulation stage was the negotiation turn, which allowed the researcher to trace bargaining sequences step by step and compare how the same scenario logic produced different tactical pathways or outcomes across repeated runs.

The simulations were documented through structured session notes and, where consent was granted, audio- and video-recorded interaction material. Recorded sessions were transcribed with speaker labels, timestamps, and relevant interaction notes, and all personal or institutional identifiers were pseudonymized before analysis. Only de-identified materials were imported into NVivo. These procedures were adopted to preserve confidentiality while also ensuring traceability and analytical consistency. To improve procedural transparency, the main features of the simulation design are summarized in Table 2.

**Table 2. Summary of the negotiation-simulation design**

| Dimension | Description |
|---|---|
| Purpose | To observe how bargaining frames, strategies, and settlement packages unfold dynamically under different energy-cost shock conditions |
| Design type | Scenario-based, round-structured negotiation simulation / role-play |
| Analytical role in study | To extend document-analysis and focus-group findings into an interactive setting and trace bargaining sequences turn by turn |
| Total number of sessions | Nine sessions in total |
| Repetition structure | Each of the three scenarios was run three times |
| Scenario 1 | Sudden shock / high uncertainty (S1) |
| Scenario 2 | Gradual shock + exchange-rate volatility (S2) |
| Scenario 3 | Fragmented authority / high tension (S3) |
| Basis for scenario construction | Documentary evidence from collective bargaining texts and sectoral reports; focus-group findings; literature on energy-price shocks, wage bargaining, and inflation persistence |
| Participant profile | Eight sector-informed participants from labor-side and employer-side backgrounds, including union representatives, employer/HR representatives, and participants with closely related knowledge of labor-management relations |
| Nature of participation | Participants acted as informed role players rather than official negotiators in an active bargaining process |

| | |
|---|---|
| Role allocation | Participants were assigned labour-side roles, employer-side roles, and, where needed, a mediating/coordinating role |
| Session format | Online |
| Session duration | Approximately 60–75 minutes per session |
| Session structure | Round-based negotiation exercise |
| Number of rounds | Four rounds (T0–T3) |
| Unit of analysis | Negotiation turn |
| Main analytical dimensions | Frame, strategy, and outcome |
| Examples of coded frames | Cost pressure, fair share, competitiveness, job security |
| Examples of coded strategies | Anchoring, bundling, counteroffers, concession bands, time leverage, mediation |
| Examples of coded outcomes | Staggered increases, one-off payments, partial/threshold indexation, productivity-linked add-ons, mixed packages |
| Coding procedure | Directed content analysis using open, axial, and selective coding |
| Software | NVivo |
| Documentation | Structured session notes and, where consent was available, recorded and transcribed interaction material |
| Transcript handling | Speaker labels, timestamps, and relevant interaction notes were retained for coding |
| Confidentiality | Personal and institutional identifiers were pseudonymized; only de-identified materials were coded |
| Comparative value | Allowed comparison of bargaining pathways, rounds to settlement, and stall patterns across repeated scenario conditions |

**Source:** Author's design and coding framework based on the study's documentary corpus, focus-group findings, and negotiation-simulation procedure.
**Note:** The table summarizes the procedural structure of the simulation stage. Scenario outcomes are reported separately in the findings section.

# 4. Data and Coding Scheme

## 4.1. Data

This section presents the codebook developed for the directed content analysis applied to the document corpus, focus-group transcripts, and negotiation-simulation materials. The documentary corpus included collective bargaining agreement texts, interim protocols, press releases, and sector reports. The additional empirical materials consisted of focus-group transcripts and structured records from the negotiation simulations. Depending on the material, the coding unit was defined at the sentence, paragraph, or turn level, with simulation moves coded across rounds T0–T3. The analytical structure was organized around three main code families: frames, strategies, and outcomes. These categories were treated hierarchically but also allowed to co-occur within the same passage when the content supported more than one analytical dimension. For example, a single statement could simultaneously reflect cost pressure, bundling, and a staggered increase. Coding also took account of both affirmative and contrastive expressions so that the absence, rejection, or qualification of a frame or tactic could be interpreted alongside its explicit presence. Table 3 presents the frame codebook used in the analysis.

**Table 3. Frame codebook used in the directed content analysis**

| Code | Operational Definition | Inclusion Cues | Exclusion Note | Typical Indicators | Example Statement | Empirical Source Type(s) |
|---|---|---|---|---|---|---|
| Cost Pressure | The constraining effect of increases in energy, exchange rates, or imported inputs on wage policy and pricing | "cost burden," "energy bill," "input increases," "margin squeeze," "makes commitments difficult" | Exclude if it is a general inflation comment with no energy- or exchange-rate link | Shock emphasis, short-term fiscal pressure, budget ceiling | "Due to energy costs, it is not possible for us to exceed the current offer." | CBA clause, employer statement, simulation T0 |
| Competitiveness | The impact of wage adjustments on productivity, price competition, order books, or market share | "stay competitive," "loss of orders," "cost leadership," "meeting price points" | Exclude if it is purely internal efficiency talk with no market or competition reference | External market emphasis, demand/order effects | "An excessive increase will distort export pricing." | Employer statement, sector report |
| Fair Share | Preserving or improving labour's share within | "fair share," "share of prosperity," "sharing a profitable period," | Exclude if only the minimum wage is mentioned with no | Compensation or balance language, | "We demand a fair sharing of the rise in | Union statement, focus group |

| | | | | | | |
|---|---|---|---|---|---|---|
| | inflation and profit dynamics | "catch-up raise" | distributional language | past losses | profitability." | |
| Employment Security | Job security, no-layoff pledges, short-time work, and employment protection | "protect employment," "no separations," "manage via short-time work" | Exclude if it is wage bargaining only with no employment guarantee | Layoff moratorium, route or shift arrangements | "In return for the raise, we want a 12-month job-security clause." | CBA clause, simulation T2 |
| Productivity | Linking wages or benefits to productivity gains, training, or process improvement | "in exchange for productivity," "if the target is met," "performance bonus," "energy-efficiency commitment" | Exclude if it is a bonus promise without a target or commitment link | Target-contingent pay, training or investment condition | "If we achieve a 5% productivity increase, we add +2 points." | Protocol, simulation package |
| Social Dialogue | Conduct of bargaining through institutional or participatory processes, including mediation, consultation, and data sharing | "joint committee," "tripartite mechanism," "with a mediator," "regular data sharing" | Exclude unilateral statements with no shared process | Joint monitoring, regular meetings, transparency | "Let's establish a quarterly monitoring committee." | Protocol, press release |

**Source:** Author's compilation based on the coding framework applied to documentary sources, focus-group transcripts, and negotiation-simulation materials.

**Note:** The table presents the frame categories used in the directed content analysis. Example statements are illustrative coding anchors derived from recurring patterns in the study materials, and the final column identifies the type(s) of empirical material in which each frame was applied.

These frame categories were designed to capture how bargaining actors defined the situation, justified claims, and interpreted constraints in wage–employment negotiations under energy-cost pressure. The frame codes included cost pressure, competitiveness, fair share, employment security, productivity, and social dialogue. For each code, the table provides an operational definition, typical inclusion cues, exclusion boundaries, indicative expressions, an illustrative example statement, and the type of empirical material in which the code was applied. The example statements are not reproduced as direct quotations from a single source but serve as coding anchors based on recurring expressions observed across the study materials.

Table 4 reports the strategy codebook. These codes were used to identify the tactical moves through which bargaining positions were advanced, modified, or defended. The strategy dimension includes opening or anchoring moves, bundling, counteroffers, concession zones, timing leverage, and the use of a mediator. The purpose of this coding layer was to move beyond the identification of bargaining language alone and to capture how actors attempted to influence the bargaining process in practical terms. As with the frame codebook, each strategy code was defined through operational criteria, inclusion and exclusion rules, typical indicators, and illustrative examples in order to maintain coding consistency across materials.

**Table 4. Strategy codebook used in the directed content analysis**

| Code | Operational Definition | Inclusion Cues | Exclusion Note | Typical Indicators | Example Statement | Empirical Source Type(s) |
|---|---|---|---|---|---|---|
| Opening / Anchor | Positioning the first offer high or low to create a reference point | "our initial offer…," "we come to the table with this range" | Exclude if it is mere information sharing with no explicit figure | Round or striking numbers, ranges, anchoring | "We're opening at 60%." | Simulation T0, focus group |
| Bundling | Presenting multiple elements together, such as raise, bonus, training, or job security | "package," "composite proposal," "conditional combination" | Exclude if it is a single element only | Dependent components, balancing items | "30% raise + one-month bonus + training fund." | CBA addendum, simulation T2 |
| Counteroffer | An alternative to the previous offer, including partial acceptance or rejection | "our counterproposal is…," "we accept under this condition" | Exclude if it is only an objection with no alternative | Shifting the anchor, narrowing the margin | "Not 60%; we propose 40% plus a bonus." | Simulation T1 |
| Concession Zone | Setting limits for items or points that can be given up | "our red line is…," "we won't go below this band" | Exclude general dissatisfaction with no stated limit | Thresholds, bands, minimum conditions | "We cannot go below 25%." | Focus group, simulation |

| | | | | | | |
|---|---|---|---|---|---|---|
| Timing Leverage | Using time as a bargaining tool, such as delay, postponement, or calendar pressure | "timeline," "postponement," "mid-year adjustment" | Exclude operational or delivery schedules unrelated to bargaining | Mid-period increases, milestones | "A mid-year correction in July is essential." | Protocol, CBA, simulation |
| Use of Mediator | Engaging a third-party facilitator between the sides | "mediator," "conciliator," "mediation" | Exclude generic "we sought advice" statements | Neutral facilitation role | "A new round with a mediator present." | Protocol, press release |

**Source:** Author's compilation based on the strategy-coding framework applied to documentary materials, focus-group transcripts, and negotiation-simulation records.

**Note:** The table presents the strategy categories used in the directed content analysis. Example statements are illustrative coding anchors derived from recurring patterns in the study materials, and the final column identifies the type(s) of empirical material in which each strategy was applied.

**Table 5. Outcome codebook used in the directed content analysis**

| Code | Operational Definition | Inclusion Cues | Exclusion Note | Typical Indicators | Example Statement | Empirical Source Type(s) |
|---|---|---|---|---|---|---|
| Wage Increase Structure – Staggered | Increases spread across periods | "staggered," "two stages," "mid-period" | Exclude if it is a one-off payment or no increase | T1/T2 increases, mid-year adjustments | "20% in January + 10% in July." | CBA, protocol |
| Wage Increase Structure – One-Off | Single lump-sum bonus or payment | "one-off," "paid once," "lump-sum" | Exclude regular or recurring performance bonuses | Single gross or net payment | "An extra one-month bonus." | Protocol, press |
| Wage Increase Structure – Indexed | Partial or full indexation to inflation or exchange rate | "indexation," "linked to CPI/PPI" | Exclude general comments on inflation | Thresholds, bands, formula | "If CPI ≥ 30%, add +5%." | CBA clause |
| Job Security Commitments | Moratorium on layoffs or employment protection commitments | "job security," "no separations," "headcount | Exclude temporary hiring without guarantees | Time-bound pledge, seniority protection | "No terminations for 12 months." | CBA, simulation |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | maintained" | | | | |
| Flexibility Arrangements | Shifts, rota, short-time work, remote/hybrid work, or training–productivity trade-offs | "flexible," "rota," "short-time work," "in exchange for productivity" | Exclude generic goodwill statements | Flexible hours or rota, target-contingent setups | "Shift rota plus training in exchange." | Protocol, focus group |

**Source:** Author's compilation based on the outcome-coding framework applied to documentary sources, focus-group transcripts, and negotiation simulations.

**Note:** The table presents the outcome categories used to identify settlement structures and negotiated arrangements. Example statements are illustrative coding anchors derived from recurring patterns in the study materials, and the final column indicates the type(s) of empirical material in which each outcome was applied.

Cross-coding was permitted throughout the analysis so that, where appropriate, a frame, a strategy, and an outcome could be coded jointly within the same passage, for example cost pressure, bundling, and staggered increase. In the document analysis, outcome codes were prioritized when the text contained clear indicators such as formulas, rates, dates, or explicit settlement clauses; where such indicators were absent, discourse-oriented frame codes were given greater analytical weight. In the simulation materials, each code was additionally linked to the relevant negotiation round (T0–T3) in order to preserve the temporal sequence of bargaining moves. The codebook was refined through pilot coding, repeated review, and clarification of operational definitions and inclusion–exclusion rules during the analysis process. This procedure made it possible to trace the movement from negotiation language to strategy repertoire and settlement form in a systematic and transparent manner, providing the basis for the subsequent conceptual interpretation of bargaining patterns in relation to WS–PS and Phillips-curve dynamics.

### 4.2 Coding Process

Coding was carried out in NVivo through an open axial selective sequence. In the open-coding stage, documents and focus-group materials were segmented at the sentence or paragraph level, while simulation materials were segmented at the turn level (T0–T3). Meaning units were initially coded within a directed content-analysis framework built around frames, strategies, and outcomes, while still allowing new subthemes to emerge from the data. In the axial-coding stage, relationships among the initial codes were examined through co-occurrence patterns and contextual comparison to identify how specific frames, tactics, and settlement forms clustered together. For example, recurrent links such as cost pressure, bundling, and staggered increases were traced across the three empirical components. In the selective-coding stage, the analysis was narrowed to the most explanatory and recurring categories, such as indexation-led settlements or one-off payment packages linked to job security, and these were used to construct the final thematic structure of the findings.

Because the study was conducted by a single researcher, consistency was strengthened through several solo-rigor procedures rather than inter-coder reliability testing. A pilot subset covering all three data sources was coded first to refine the code structure and clarify category boundaries. After an interval, the same subset was re-coded to check

coding consistency, and any discrepancies were documented and resolved by revisiting the operational definitions and inclusion–exclusion rules in the codebook. Throughout the process, analytic memos were used to record coding decisions, conceptual links, and boundary issues, while revisions to category labels, definitions, and example excerpts were documented in an audit trail. Negative-case analysis was also used to identify statements or patterns that did not fit the dominant coding structure. In the simulation data, each coded move was additionally marked by round and move type to support sequential interpretation of bargaining patterns across scenarios.

Data management procedures were integrated into the coding process to support transparency and confidentiality. Where consent was provided, focus-group and simulation sessions were transcribed with speaker labels, timestamps, and relevant interaction notes. Personal and institutional identifiers were removed or generalized before the materials were imported into NVivo, and only de-identified texts were used for analysis. Raw and cleaned materials were stored separately, and coding files, memos, codebook revisions, and decision records were archived systematically to preserve a clear audit trail. These procedures were intended to enhance traceability, interpretive consistency, and methodological transparency across the full analysis process.

# 5. Findings

## 5.1. Document Analysis

Drawing on the post-2021 corpus (Türk Metal press releases on MESS group CBAs; Birleşik Metal-İş settlement notes; MESS inflation brief; DİSK-AR labor-market outlooks for 2022/2024; TİSK "new-generation work models"; Enerjisa 2022 Sustainability Report), a directed content analysis was conducted to identify the frames embedded in texts, the strategy signals present in clauses and announcements, and the settlement architectures either stated or implied. The coding unit was the sentence/paragraph, and co-occurrence among frames–strategies–outcomes was permitted to capture how textual framing travels with concrete contract devices.

**Table 6. Per-document coding summary of the documentary corpus**

| Document / source | Sector | Dominant frames | Strategy signals in text | Settlement architecture (stated/implied) |
|---|---|---|---|---|
| Türk Metal (2022) – MESS Group CBA outcome | Metal / Manufacturing | Cost pressure; Fair share | Anchoring ranges; bundling of wage increase and bonus; time leverage through mid-year correction | Staggered increases (e.g., January + July); one-off bonus |
| Birleşik Metal-İş (2022) – Group CBA settlement | Metal / Manufacturing | Fair share; Job security | Bundling; concession bands; monitoring committee | Staggered increases; job-security pledge (e.g., no layoffs for a defined period) |

| | | | | |
|---|---|---|---|---|
| MESS (2023) – Inflation brief | Metal / Manufacturing | Cost pressure; Competitiveness | Threshold formulae; indexation references | Partial / threshold indexation (CPI-linked) |
| DİSK-AR (2022) – Labour outlook | All sectors | Fair share; Job security | Social-dialogue cues (consultation / mediation language) | Context for staggered increases and short-time work (indicative) |
| DİSK-AR (2024) – Labour outlook | All sectors | Fair share; Social dialogue | Transparency and monitoring references | Context for thresholded indexation under persistent inflation |
| TİSK (n.d.) – New-generation work models | Multi-sector | Competitiveness; Flexibility | Flexible work arrangements (rota / hybrid); productivity links | Flexibility arrangements; training–productivity trade-offs |

**Source:** Author's analysis of the documentary corpus listed in Table 1.

**Note**: The table presents a coded analytical summary of each document included in the corpus. The entries in the columns "Dominant frames," "Strategy signals in text," and "Settlement architecture (stated/implied)" are interpretive outputs of the directed content analysis rather than verbatim extracts from the original documents.

Across metal/manufacturing texts, cost pressure and fair share consistently co-appear, with concrete bundling and time-binding signals (e.g., mid-year corrections) in union communications and threshold/indexation language in employer materials. Where unions emphasize distributional justice ("fair share"), documents also exhibit job-security clauses or monitoring committees anchoring implementation; where employer briefs stress competitiveness and cost pressure, settlement devices more often reference partial/threshold indexation rather than unconditional base-pay incorporation. Multi-sector and corporate sustainability documents extend the palette by pairing flexibility and productivity frames with conditional add-ons (training/efficiency commitments), foreshadowing productivity-linked components in packages. To synthesize prevalence, the document corpus was also summarized by frame frequency. The aggregate table and the accompanying diagram (Figure 1) show fair share and cost pressure as the two most frequently coded frames, followed by job security and competitiveness, with social dialogue, flexibility, and productivity appearing as supporting but non-negligible motifs. In other words, distributional and cost-containment narratives dominate the written record, while implementation and efficiency frames structure the feasible space for compromise.

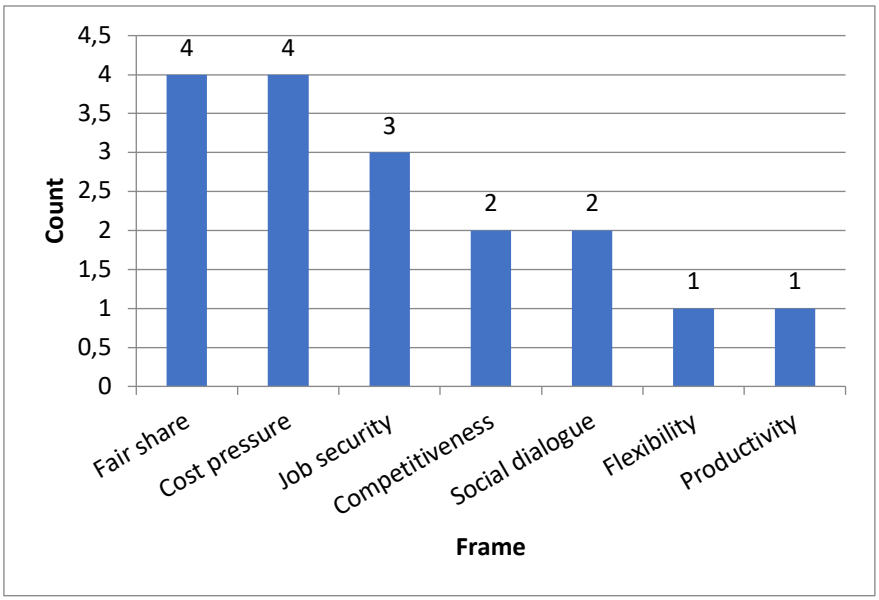


**Figure 1. Frame Frequency in Documents**

The pattern indicates that, during the energy-cost period, textual discourse is anchored in a distributional tension (fair-share claims) that is immediately counterbalanced by cost-containment constraints (cost-pressure framing). This dual anchor helps explain why the settlement architectures visible in Table 5. gravitate toward (i) staggered increases with calendar triggers or monitoring provisions, (ii) one-off bonuses coupled to no-layoff moratoria, and (iii) partial/threshold indexation rather than unbounded base-pay indexation. Documents that foreground productivity/efficiency add a fourth path—productivity-linked components—which appears particularly in corporate/sectoral reports and provides an institutional rationale for "efficiency-for-pay" trades later observed in simulations.

These patterns suggest that settlement design is shaped not only by distributive conflict but also by the institutional need to avoid unconditional wage ratcheting under inflationary cost pressure. In energy-sensitive settings, employer-side competitiveness framing appears to make thresholded or partial indexation more acceptable than full base-wage incorporation, while union-side fair-share claims gain greater traction when they are paired with monitoring devices or job-security clauses. This indicates that package design functions as a mechanism for reconciling purchasing-power protection with employer efforts to contain persistence.

### 5.2. Focus-Group Analysis

Guided by the directed codebook, the focus-group corpus was analyzed to trace how actors frame the problem, which tactics they regard as workable under distinct conditions, and which settlement packages they consider viable. Table 7. reports frame salience by sector; Figure 2. aggregates those counts across sectors to visualize overall prominence. The distribution shows that fair share and cost pressure co-anchor discussion in all groups, with cost pressure peaking in energy-intensive manufacturing (input-cost exposure) and job security most invoked in services (headcount stability and scheduling). Competitiveness is stronger in manufacturing

and logistics given export pricing and order-book sensitivity, while social dialogue and productivity appear as supporting motifs that structure verification routines and "efficiency-for-pay" add-ons.

**Table 7. Sectoral distribution of coded frames in the focus-group corpus**

| Frame | Energy-intensive manufacturing | Logistics | Services |
|---|---|---|---|
| Fair share | 22 | 17 | 14 |
| Cost pressure | 26 | 19 | 12 |
| Job security | 9 | 12 | 16 |
| Competitiveness | 18 | 14 | 9 |
| Productivity | 11 | 10 | 8 |
| Social dialogue | 7 | 8 | 10 |

**Source:** Author's coding analysis of the focus-group corpus.

**Note:** The frequencies reported in the table indicate coded occurrences of bargaining frames in focus-group discussions by sector. The counts reflect analytical coding frequency rather than the number of participants or the number of separate bargaining episodes. Figure 2 presents the aggregated distribution of these frame counts across sectors.

Read horizontally, the table shows a clear tension between distributional concerns ("fair share") and cost concerns ("cost pressure"), and how this tension shifts across sectors depending on their energy-input intensity and perceived employment risk. In line with this, Figure 2 (Total frame salience across sectors) shows that fair share and cost pressure are the two main reference points in the discourse, followed by competitiveness and job security. Social dialogue and productivity appear as secondary but consistent themes that support workable arrangements, such as committees, monitoring, and training.

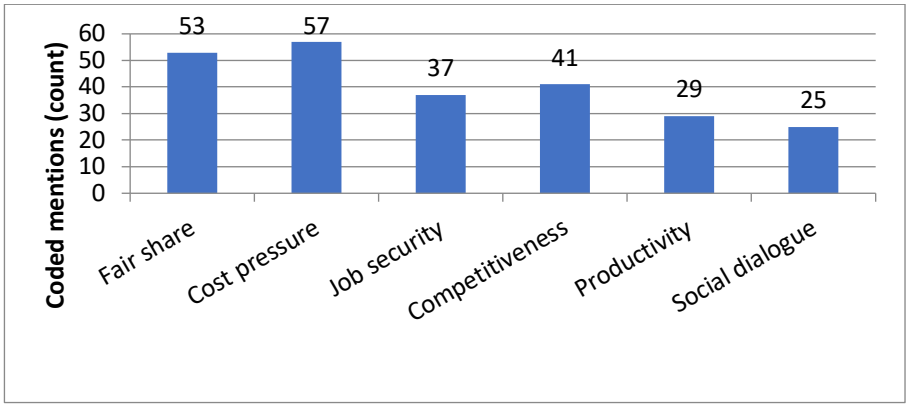


**Figure 2. Total frame salience across sectors**

Turning to tactics, Table 8 cross-tabulates coded bargaining tactics with four recurring negotiation conditions discussed in the focus-group sessions: sudden shocks, gradual shocks combined with exchange-rate volatility, high information asymmetry, and fragmented authority. The table shows that anchoring was used most often under sudden shocks and high information asymmetry, where participants described a stronger need to reset the reference point in an uncertain bargaining environment. Bundling appeared most prominently under gradual shock conditions with exchange-rate volatility, suggesting that participants viewed package-based offers as a practical way to hedge against uncertainty by combining moderate base-wage adjustments with bonuses, training-related provisions, or calendar-based triggers. Concession bands were most visible in settings characterized by fragmented authority, where clearly defined bargaining limits appeared to help coordinate across multiple decision points. Time leverage, including staging and mid-year corrections, was used most often under acute shock conditions, while mediator use became more prominent when governance frictions and internal veto points were more likely to slow convergence.

The pattern reported in Table 8 indicates that bargaining tactics were not treated as fixed repertoires, but as condition-specific responses to different forms of uncertainty and institutional friction. Time leverage and anchoring became more attractive when actors sought to avoid irreversible commitments under acute cost pressure, whereas mediation and concession bands gained salience when fragmented authority weakened coordination and increased the risk of deadlock. In this sense, the tactical structure of bargaining appears to reflect not only distributive preferences, but also the institutional constraints within which negotiation unfolds.

**Table 8. Frequency of coded bargaining tactics by negotiation condition in the focus-group corpus**

| Tactic | Sudden shock | Gradual shock + FX volatility | High information asymmetry | Fragmented authority |
|---|---|---|---|---|
| Anchoring | 21 | 11 | 18 | 9 |
| Bundling | 10 | 23 | 12 | 14 |
| Counteroffer | 13 | 17 | 15 | 10 |
| Concession band | 8 | 9 | 12 | 16 |
| Time leverage | 19 | 14 | 11 | 7 |
| Mediator use | 6 | 8 | 10 | 19 |

**Source:** Author's coding analysis of the focus-group corpus.
**Note:** The table reports coded occurrences of bargaining tactics discussed under different negotiation conditions in the focus-group sessions. The values indicate analytical coding frequencies rather than the number of participants, discrete bargaining rounds, or actual negotiated agreements.

The tactical variation across conditions indicates that bargaining strategies are chosen as responses to specific uncertainty structures rather than as fixed repertoires. Time leverage and anchoring become more attractive when actors seek to postpone

irreversible commitments under acute cost uncertainty, whereas mediation and concession bands gain prominence when fragmented authority weakens coordination and increases the risk of deadlock. In this sense, bargaining tactics reflect institutional frictions as much as distributive preferences.

Finally, Table 9 summarizes the settlement archetypes participants judged viable by sector. Four packages recur: (i) staggered increases with mid-year correction; (ii) one-off payment with a no-layoff pledge; (iii) partial/threshold indexation; and (iv) productivity-linked add-ons. Energy-intensive manufacturing leans toward staggered increases and thresholded indexation (predictability under cost spikes); logistics gives relatively more weight to one-off + no-layoff and mixed bundles; services place a premium on variants containing job-security provisions.

**Table 9. Sectoral distribution of viable settlement package archetypes in the focus-group corpus**

| Package archetype | Energy-intensive manufacturing | Logistics | Services |
|---|---|---|---|
| Staggered increase + mid-year correction | 18 | 14 | 11 |
| One-off payment + no-layoff pledge | 9 | 12 | 13 |
| Partial indexation (thresholds / caps) | 15 | 11 | 9 |
| Productivity-linked add-ons | 12 | 10 | 8 |
| Mixed package (low base increase + one-off payment + partial indexation + calendar trigger) | 10 | 9 | 7 |

**Source:** Author's coding analysis of the focus-group corpus.

**Note:** The table reports coded frequencies of settlement package archetypes that participants identified as viable in focus-group discussions across sectors. The values indicate analytical coding occurrences and perceived package viability, not the number of actual signed agreements or bargaining episodes.

The variation in viable package archetypes suggests that settlement form is closely linked to sector-specific combinations of energy exposure, labour organization, and institutional risk. In energy-intensive manufacturing, staggered increases and threshold-based indexation appear more viable because they distribute adjustment over time and reduce the risk of locking volatile energy costs permanently into the wage base. In logistics, the relative weight of one-off payments and mixed bundles is consistent with a setting in which operational continuity matters but margins remain exposed to fuel and transport-cost fluctuations. In services, the stronger appeal of packages containing job-security provisions indicates that bargaining is shaped less

by direct input-cost transmission and more by the importance of workforce stability, scheduling continuity, and relational employment protection.

These sectoral differences are not merely descriptive. In energy-intensive manufacturing, stronger cost-pressure and competitiveness framing appears rational because firms face direct exposure to input-price volatility and stronger pressure to protect margins and order-book stability. In services, by contrast, the stronger salience of job security suggests that bargaining is shaped less by direct energy intensity and more by staffing continuity, scheduling constraints, and the social cost of headcount adjustment. This implies that sectoral bargaining frames are mediated by both energy exposure and the employment organization of the sector.

Across the tables and figures, a clear pattern emerges. Frames trigger tactics that match the underlying conditions, and these tactics then combine into a small set of packages that participants see as workable. When cost pressure is the dominant concern, actors tend to prefer time-based tools and threshold formulas, leading to staggered or partially indexed packages. When fair share or job security is the main priority, agreements include no-layoff commitments and extra elements for monitoring and verification. In cases of fragmented authority, concession bands and mediation help compensate for weak coordination and make it possible to agree on mixed packages.

### 5.3. Negotiation–Simulation Analysis

Role-play simulations were conducted under three scenario conditions designed to reflect the main bargaining frictions identified in the documentary and focus-group stages: S1 (sudden shock under high uncertainty), S2 (gradual shock combined with exchange-rate volatility), and S3 (fragmented authority under high tension). The simulation materials were coded turn by turn across four rounds (T0–T3) using the same frame–strategy–outcome structure applied in the previous empirical sections. This made it possible to examine not only which settlement forms emerged under each condition, but also how particular bargaining pathways developed from initial framing to final agreement or deadlock.

Given that each scenario was run three times, the simulation findings are reported as repeated qualitative patterns rather than as fine-grained percentage distributions. This reporting choice is intended to preserve consistency with the scale of the simulation design and to avoid overstating numerical precision in a small qualitative dataset. Table 10 therefore summarizes the dominant coded pathway, the most recurrent settlement tendency, the observed variation across runs, and the general timing pattern within each scenario.

**Table 10. Scenario-level patterns observed in the negotiation simulations**

| Scenario | Dominant sequence (coded path) | Most recurrent settlement tendency across three runs | Observed variation across runs | General timing pattern |
|---|---|---|---|---|
| **S1: Sudden shock / high uncertainty** | Cost pressure → High anchor → Time leverage → Staggered deal | Staggered wage increases emerged as the most recurrent outcome | Some variation was observed between staggered settlements and more limited indexation-based adjustments | Settlements generally emerged relatively early, with staged arrangements helping the parties move toward agreement |
| **S2: Gradual shock + FX volatility** | Bundling → Partial-index counter → Mixed package | Partial/threshold indexation and mixed packages appeared most frequently | Outcomes varied across runs, with staggered settlements still appearing but with greater use of package-based hedging mechanisms | Bargaining required somewhat more adjustment across rounds, reflecting persistent uncertainty linked to exchange-rate movements |
| **S3: Fragmented authority / high tension** | Mediator → Concession bands → One-off + job-security | One-off payments combined with job-security commitments were the most recurrent tendency | This scenario showed the greatest variation, including more fragile pathways to agreement and a higher risk of deadlock | Settlement generally required more procedural effort, and convergence was slower than in the other scenarios |

**Source:** Author's coding analysis of the negotiation-simulation corpus.
**Note:** The table reports the dominant qualitative patterns observed across the repeated simulation runs conducted under the three scenario conditions described in Section 5.3. Each scenario was run three times, for a total of nine simulation sessions. "Dominant sequence" refers to the most frequently observed coded pathway across rounds. Because the number of runs per scenario was limited, the findings are presented as repeated qualitative tendencies rather than as detailed percentage distributions.

The dominant pathways indicate that bargaining tactics were adapted to specific scenario conditions rather than used as generic moves. Under acute uncertainty in S1, participants most often combined strong anchoring with time-based staging, and this pattern was associated primarily with staggered settlements. These outcomes suggest a preference for arrangements that reduce immediate distributive pressure while avoiding rigid commitments to full formula-based wage adjustment. Indexation-related elements appeared in some runs, but the most recurrent tendency remained staged and time-bound settlement.

In S2, where exchange-rate volatility intensified uncertainty about future cost conditions, bargaining more often moved through bundling and partial-index counteroffers. In this setting, package-based arrangements and thresholded indexation became more visible than in S1. Although staggered outcomes still appeared, the

overall tendency shifted toward settlement forms that hedged against repeated renegotiation and attempted to balance income protection with flexibility under continuing volatility.

In S3, where fragmented authority and internal coordination problems were more pronounced, mediation and concession bands became more central to the bargaining process. These pathways most often supported one-off payment packages combined with job-security clauses, indicating that temporary cash compensation tied to employment protection became more feasible than durable changes to the wage base. Compared with the other two scenarios, this condition also produced slower convergence and greater fragility in the bargaining process, suggesting that governance frictions increased both procedural difficulty and the likelihood of deadlock.

Taken together, the simulation findings suggest that macroeconomic uncertainty and institutional coordination capacity jointly shape not only whether bargaining ends in agreement, but also what type of agreement becomes negotiable. When uncertainty is high but authority remains relatively intact, actors appear to prefer staged and reversible arrangements. When volatility is persistent, threshold-based indexation and mixed packages become more attractive as hedging devices. When authority is fragmented, temporary compensation linked to job-security assurances appears more viable than permanent wage-base commitments.

## 6. Discussion

The findings indicate that wage–employment bargaining in Türkiye during periods of rising energy costs is not simply a sequence of observable tactics, but a structured response to the combined pressures of sectoral cost exposure, institutional fragmentation, and inflation uncertainty. Across the documentary corpus, focus groups, and simulations, bargaining repeatedly followed a recognizable progression in which actors first framed the shock, then selected tactics appropriate to that framing, and finally converged on a limited set of settlement architectures. What is analytically important, however, is not only that these patterns appeared, but why particular patterns were more likely under particular sectoral and institutional conditions. The recurrent tension between “fair share” and “cost pressure/competitiveness” suggests that bargaining outcomes were shaped by the interaction between distributive claims and firms’ perceived need to preserve margins under volatile input prices. The stronger visibility of job-security framing in services, and of competitiveness framing in energy-intensive manufacturing and logistics, further indicates that bargaining discourse was filtered through sector-specific production structures and employment risks rather than emerging uniformly across the economy.

These sectoral differences are not merely descriptive. In energy-intensive manufacturing, where energy-cost exposure is more direct and profit margins are more vulnerable to abrupt input-price increases, cost-pressure and competitiveness framing become more rational bargaining devices because they legitimize caution toward permanent wage-base increases. In such contexts, staggered increases, threshold-based formulas, and phased corrections help distribute adjustment over time and reduce the risk that temporary cost spikes become permanently embedded in the wage structure. Time-leverage strategies are also more understandable in these settings, since delaying irreversible commitments allows employers to monitor

whether the shock proves transitory or persistent. In this sense, the findings suggest that energy intensity does not simply raise the level of distributive conflict; it changes the type of settlement architecture that becomes institutionally and financially feasible.

A similar logic helps explain the patterns observed in logistics. Although logistics shares with manufacturing a strong sensitivity to fuel and transport-cost volatility, its bargaining environment is also shaped by the need to maintain operational continuity across interconnected networks. This makes mixed packages and one-off arrangements especially attractive, as they can provide immediate compensation while preserving room for organizational flexibility. Where cost conditions are unstable but service disruption is also expensive, parties appear more willing to adopt hybrid and temporary devices than to rely solely on permanent wage-base adjustments. The relative weight of packaging and partial adjustment in logistics therefore seems to reflect a dual pressure: the need to contain cost volatility and the need to protect continuity in labour-dependent operations.

The findings from services point to a different institutional logic. In service-oriented settings, direct energy intensity may be lower than in manufacturing, but staffing continuity, scheduling stability, and the relational costs of workforce disruption become more salient. This helps explain why job-security language, social dialogue, and flexibility-containing packages are more visible in that sector. Bargaining in these environments appears less centred on the direct transmission of input-cost shocks and more on preserving workforce stability under inflationary pressure. As a result, packages that combine softer compensation devices with employment-protection commitments become more acceptable. This suggests that the salience of job security in bargaining is not only a normative issue but also an organizational response to sectors in which labour continuity and service delivery are tightly linked.

The findings also show that bargaining tactics are not fixed repertoires but adaptive responses to specific uncertainty structures. Under high uncertainty, high opening offers and staged calendars or mid-year corrections appear to function as risk-distribution devices: they protect workers against immediate real-wage erosion while allowing employers to avoid fully irreversible commitments. Where exchange-rate drift becomes central, threshold- and cap-based formulas work as hedging mechanisms, enabling adjustment without automatic and unlimited pass-through. In settings marked by fragmented authority, mediation and concession bands become more prominent because agreement is more difficult when veto points are dispersed and organizational coherence is weaker. In this respect, tactical variation reflects not only distributive conflict, but also institutional frictions and differences in coordination capacity. Bargaining strategies therefore need to be interpreted as responses to governance problems as much as to wage demands.

Institutional fragmentation is especially important for understanding the movement toward mediation, concession bands, and mixed settlements. Where bargaining authority is dispersed, actors may not be able to commit credibly to a single rigid settlement line, and internal coordination problems can make direct agreement more difficult even when distributive preferences are not irreconcilable. Under such conditions, mediation becomes more valuable because it reduces escalation risk, concession bands become more practical because they preserve room for internal adjustment, and mixed packages become more feasible because they allow parties to combine limited wage relief with conditional or temporary safeguards. Institutional

fragmentation therefore does not merely slow bargaining; it changes the architecture of feasible agreements by shifting attention away from rigid wage commitments and toward hybrid and conditional package design. This is one of the key theoretical implications of the study, since it shows that bargaining form is shaped not only by the shock itself but also by the coherence of the institutions through which the shock is negotiated.

The variation in package design reinforces this interpretation. The emergence of staggered increases, one-off payments tied to no-layoff commitments, partial or threshold-based indexation, and productivity-linked add-ons suggests that settlement architecture functions as a mechanism for reconciling purchasing-power protection with employer concerns about persistence and cost control. These packages are not interchangeable. Staggered increases are more attractive where actors need to buy time and keep the wage bill adjustable; one-off payments are more feasible where uncertainty is high and parties wish to avoid permanent ratcheting of the wage base; thresholder indexation becomes more relevant where repeated inflation and exchange-rate shocks make complete discretion costly but full indexation too risky; and productivity-linked components appear where parties are able to frame wage adjustment as conditional on performance or efficiency gains. The findings therefore imply that agreement design is not simply the endpoint of bargaining, but part of the institutional logic through which actors manage uncertainty, credibility, and inflation risk.

Read against the comparative literature, these patterns are broadly consistent with what is known about indexation, expectations, and social dialogue, but the Turkish case adds an important institutional nuance. Prior work shows that broad, uncapped indexation is associated with faster and more persistent pass-through from energy costs to inflation, whereas partial or thresholder schemes and one-off payments provide relief without fully ratcheting up the wage base (Adolfsen et al., 2024). Comparative industrial-relations research also indicates that systems with higher coverage and stronger coordination are better able to use staged raises, short-time instruments, and negotiated adjustment to stabilize employment (Garnero, 2021; Vandekerckhove & Lenaerts, 2023). In Türkiye, however, these adjustment mechanisms operate within a more uneven bargaining environment marked by limited effective coverage, weaker coordination, and stronger macroeconomic volatility. This helps explain why temporary and conditional devices recur so strongly across the findings: they are not only economically prudent responses to uncertainty, but also institutionally feasible responses in a setting where broad, highly coordinated wage adjustment is less readily available.

Interpreted through the WS–PS and Phillips-curve perspective, the findings suggest that bargaining language and package design can be read as micro-level signals of macroeconomic adjustment mechanisms. “Fair share” rhetoric is consistent with upward pressure on workers’ target real wages and, therefore, with an upward shift in the WS schedule. “Cost pressure” and “competitiveness” framing, by contrast, reflect tighter margins and greater resistance on the PS side. Broad and automatic indexation implies faster transmission from cost shocks to wages and prices, steepening the short-run Phillips relationship and increasing persistence. Staging, thresholding, and lump-sum compensation, on the other hand, appear to function as devices that slow carry-over from temporary shocks into permanent nominal commitments. The simulations reinforce this interpretation by showing that uncertainty and fragmented authority

influence not only whether agreements are reached, but also what kinds of commitments become negotiable. When authority remains relatively coherent, actors can still bargain over staged and reversible commitments; when authority becomes fragmented, temporary cash-based compensation linked to job-security assurances becomes more feasible than durable wage-base changes.

These findings have clear policy and practice implications. First, contract design should be aligned with the nature of the shock rather than treated as a one-size-fits-all exercise. Under acute uncertainty, staged calendars and scheduled corrections appear more suitable than immediate and unconditional base-wage revisions. Under persistent exchange-rate volatility, thresholded or capped formulas may provide a more credible balance between income protection and inflation control. In settings where coordination is weak, one-off payments linked to no-layoff pledges may be more politically and institutionally feasible than permanent wage adjustments. Second, the results suggest that institutional supports matter greatly. Coverage, coordination, monitoring committees, transparent sharing of cost and trigger data, and credible verification rules increase the feasibility of time-bound and enforceable packages. These mechanisms help convert distributive conflict into verifiable agreement design, reducing the probability that temporary energy-cost shocks harden into self-sustaining wage–price dynamics.

At the same time, several limitations require caution in interpretation. The qualitative sample is purposive rather than probabilistic, and the number of participants remains limited. Public documents cannot fully capture closed-door bargaining dynamics, and simulation outputs, while analytically valuable, do not replicate all features of real collective bargaining. Interpretive coding protocols, audit trails, and triangulation reduce but do not eliminate subjectivity. In addition, the findings are shaped by institutional features specific to Türkiye, including uneven bargaining coverage, the strong role of inflation and exchange-rate dynamics, and the broader wage-setting environment, which may limit direct generalization to more coordinated systems. The results are therefore best understood as context-sensitive mechanisms rather than universal settlement rules.

Future research can build on these findings in several directions. Larger text corpora of collective agreements could be analyzed using text-as-data methods in order to test whether the frame–strategy–outcome patterns identified here appear systematically across sectors and periods. Clause-level studies could examine whether specific devices such as thresholder indexation, monitoring committees, or no-layoff commitments have measurable effects on wage persistence, labor turnover, or bargaining duration. Quantitative and quasi-experimental designs could also investigate how different package forms affect inflation pass-through under different institutional conditions. Finally, integrating the observed package architectures into structural macro-labor models would make it possible to assess more directly how bargaining design influences Phillips-curve slope, inflation persistence, and the inflation–employment trade-off in high-volatility settings.

## 7. Conclusion

This study set out to understand how wage–employment bargaining under energy-driven cost pressures works in practice and how it connects to inflation dynamics. It did so by asking four questions about the frames used at the table (RQ1), the strategies actors rely on and the conditions under which they deploy them (RQ2), the types of

agreements that emerge (RQ3), and how these patterns vary with energy intensity and institutional context (RQ4). The multi-method design, combining document analysis, focus groups, and simulations, allows clear answers to each of these questions.

Regarding RQ1, the analysis shows that bargaining discourse during energy-cost increases is organized around a small set of frames. Across agreements, protocols, and interviews, distributional debates are primarily expressed as a tension between fair share and cost pressures and competitiveness. Sector accents matter: in services, job security often comes to the fore, while in energy-intensive manufacturing and logistics, competitiveness and survival on thin margins are more prominent. Frames such as social dialogue and productivity also appear, but mainly as supporting themes rather than primary lenses.

For RQ2, the study finds that actors' strategy repertoires are not used randomly but are closely conditioned by the shock environment and governance frictions. Under acute uncertainty, high opening offers are used to reset reference points, followed by time-based tools such as staged increases and mid-year corrections to spread risk without permanently raising the base wage. When exchange-rate volatility drives cost drift, negotiators construct bundles that combine modest base increases with explicit thresholds or caps to hedge uncertainty. Where decision-making authority is fragmented across levels or units, mediation and concession bands are used to align dispersed veto players and reduce the likelihood of stalled talks. In short, specific frames tend to cue specific tactics under identifiable conditions.

Turning to RQ3, these frame–strategy combinations repeatedly crystallize into a limited set of agreement patterns. Four settlement types dominate the material: staggered wage increases over the contract period; one-off payments that are explicitly traded for no-layoff or headcount-stability pledges; partial or threshold-based indexation clauses that limit full automatic pass-through; and productivity-linked add-ons, including training and energy-efficiency commitments. These patterns offer different ways of balancing protection for workers with flexibility for firms, and their incidence can be traced across documents, focus groups, and simulations.

With respect to RQ4, the results show clear variation by energy intensity and institutional context. In highly energy-exposed sectors, competitiveness frames and FX-related concerns are more prominent, and partial indexation and capped formulas are used more often to manage pass-through. In service sectors, job-security frames are stronger, and one-off payments linked to employment guarantees are more common. Institutional features—such as the coverage and coordination of collective bargaining, the presence of monitoring committees, and the degree of data transparency—also influence which packages are feasible. Where coverage and coordination are high, staged increases and verifiable, time-bounded formulas can be implemented more predictably; where institutions are weaker or more fragmented, reliance on mediation and concession bands increases.

Taken together, these findings provide a clear micro-level mechanism that runs from negotiation language, through tactic choice, to settlement architecture, and then to macro-relevant parameters such as the slope and persistence of the Phillips curve. Staged calendars and one-off payments tend to support purchasing power while limiting automatic carry-over into the wage base, which is consistent with lower inflation persistence. Broad and weakly constrained indexation, by contrast, increases pass-through from energy costs to prices and makes persistent inflation more likely.

The study therefore offers both a conceptual and a practical bridge between qualitative evidence on bargaining and quantitative debates on inflation dynamics.

Finally, the results should be read with an awareness of their limits. The qualitative sample is not representative of all sectors and institutions, closed-door dynamics cannot be fully captured in public documents, and some features are specific to Türkiye's wage-setting and exchange-rate environment. For these reasons, the conclusions are best seen as mechanisms that can guide adaptation rather than as ready-made prescriptions. Future work can test and refine these mechanisms by scaling text-as-data analyses to larger agreement corpora, evaluating specific clauses in field or natural-experiment settings, and embedding observed package mixes in macro models. Even with these caveats, the study shows that careful design of frames, tactics, and clauses can provide protection and stability in the face of volatile energy costs without locking in higher inflation.

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