

4th International Conference on Education, Environment, Arts and Social Science (EEAS 2026)

Article

From Confrontation to Negotiation: An Economic Game Model of Residential Holdouts and a People-Centered Mechanism for Conflict Resolution

Yining Wang^{1,*}

¹ Qingdao Weiming School, Qingdao, China

* Correspondence: Yining Wang, Qingdao Weiming School, Qingdao, China

Abstract: Urban redevelopment and housing expropriation can generate prolonged bargaining when affected households reject compensation offers, potentially increasing project delay, litigation, and enforcement costs. Existing research commonly examines compensation fairness, administrative law, or social governance separately, with less attention to how household reservation values, government delay costs, procedural quality, and negotiation mechanisms interact within a unified economic framework. This study develops a sequential bargaining model between the expropriating authority and affected households and combines it with three open-source datasets: 44 city-year housing-price observations for Beijing, Shanghai, Wuhan, and Guangzhou from 2015 to 2025, nine local expropriation policy documents, and 13 Supreme People's Court typical cases. Housing-price changes ranged from negative 9.1 percent to 31.7 percent, indicating substantial variation in the external valuation environment. Among the nine policy documents, six explicitly provided compensation choice and appraisal-review mechanisms, six included signing incentives, and all nine contained hardship-support provisions. Within the purposively selected court cases, procedural objections appeared in all 13 cases, valuation differences in three, compulsory relocation or enforcement in two, and mediation or coordination in five. These findings support a mechanism-based interpretation of residential holdouts. People-centered reconciliation is therefore understood not as unlimited compensation, but as an institutional approach that reduces information asymmetry, transaction and friction costs, accommodates heterogeneous relocation losses, and enlarges the feasible bargaining range.

Keywords: housing expropriation; bargaining game; urban redevelopment; reconciliation; property rights

Received: 28 July 2026

Revised: 12 September 2026

Accepted: 26 September 2026

Published: 02 October 2026



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1. Introduction

1.1. Background

Urban redevelopment has become an important instrument for improving deteriorated housing, reorganizing land use, and upgrading public infrastructure. Yet redevelopment often requires housing expropriation and relocation, which redistribute property interests and impose direct and indirect costs on affected households. In practice, differences in perspectives regarding valuation, compensation, relocation arrangements, and procedural implementation may lead to extended negotiation periods and require resolution through administrative coordination, judicial review, or legally authorized enforcement measures. Recent observations from urban areas in China indicate that cases involving prolonged negotiations are addressed through integrated approaches—including tailored support measures, enhanced service delivery, administrative

facilitation, and application of legal frameworks—rather than relying solely on standardized compensation criteria [1]. Fairness considerations in urban regeneration also vary across resident groups, as tenants, owners, commercial operators, and locally resettled households experience differing impacts and benefit distributions.

A residential holdout should therefore not be interpreted as non-cooperative behavior. A household may assess the compensation offered against multiple dimensions, including relocation-related adjustments, location-specific considerations, time-related opportunity costs, procedural uncertainties, and potential outcomes from continued dialogue [2]. Where the estimated replacement value or intangible losses outweigh the proposed arrangement, a measured pace of agreement can reflect rational, interest-aligned decision-making. Legal analysis of land expropriation further underscores that equitable compensation standards and recognition of situation-specific circumstances remain essential elements in fostering consensus and social harmony.

1.2. Research Problem

The central problem is why households facing broadly similar expropriation institutions follow different trajectories. Some accept the initial or revised package, some remain in prolonged negotiation, others initiate administrative review or litigation, and a smaller group reaches compulsory enforcement [3]. Compensation alone cannot fully account for this variation. Procedural design also matters: evidence on land-expropriation hearings indicates that poorly designed participation mechanisms can reduce perceived procedural fairness and satisfaction, even where formal hearing procedures exist. Expropriation can also generate wider governance costs, including diminished public trust and increased instances of disagreement with local officials; conversely, stronger local governance capacity can help alleviate some of these effects.

1.3. Research Gap

Three gaps follow. First, existing studies often emphasize compensation inadequacy while giving less systematic attention to heterogeneous household losses, including relocation inconvenience, access to services, neighborhood ties, and differences in replacement needs. Second, compensation, procedural fairness, resident participation, and enforcement are commonly examined as separate issues, leaving the strategic interaction between the expropriating authority and households underdeveloped. Third, “people-centered” governance is frequently presented as a normative principle rather than as an economic mechanism that can alter reservation values, information asymmetry, transaction costs, and the feasible bargaining range [4]. Recent experimental evidence on urban regeneration further suggests that participation can be shaped by institutional guidance and decision-making arrangements, providing a basis for treating negotiation quality as an endogenous component of resolution processes.

1.4. Research Questions

This study addresses the following research questions:

RQ1: Under what conditions does a household rationally choose holdout rather than acceptance?

RQ2: How do housing-market conditions, compensation design, and procedural mechanisms affect the bargaining range?

RQ3: Under what conditions can people-centered negotiation reduce the economic cost associated with expropriation-related disputes?

1.5. Contributions

This study makes three contributions. First, it develops a dynamic government-household bargaining model that links compensation, reservation value, waiting cost, and enforcement cost. Second, it integrates the theoretical model with open housing-price data, official expropriation policies, and publicly available representative cases [5]. Third, it frames people-centered resolution mechanisms as institutional arrangements that reduce information asymmetry and transaction costs, accommodate heterogeneous relocation

impacts, and expand the scope for constructive negotiation prior to formal legal or enforcement procedures.

2. Institutional Background and Data

2.1. Urban Housing Expropriation and Residential Holdouts

Urban housing expropriation in China follows a structured administrative process but involves substantial interaction between public authorities and affected households. A typical redevelopment project moves from project proposal and property valuation to compensation design, household negotiation, administrative decision, and, where agreement fails, litigation or enforcement. Outcomes depend on how residents evaluate both compensation and the institutional process. Evidence from urban-renewal projects shows that acceptance is shaped not only by compensation form or amount but also by expectation confirmation and perceived fairness in distribution [6].

The economic effects of residential relocation are also heterogeneous [7]. Research using nationally representative household finance data finds that such relocation can generate substantial household wealth transfers, but the distributional effects vary across cities and socioeconomic groups. Thus, identical nominal compensation may be evaluated differently depending on property value, replacement opportunities, and household circumstances.

Relocation consequences extend beyond the initial transaction. Studies indicate that relocated households may experience improvements in housing quality and commuting conditions while encountering reduced access to certain neighborhood facilities [8]. Pre-relocation research similarly finds that residents may recognize the physical benefits of redevelopment while expressing concern about the potential erosion of social networks and neighborhood ties.

Accordingly, this study uses the term residential holdout rather than informal or potentially misleading labels. A residential holdout refers to a household that does not reach a compensation agreement within the designated negotiation period and subsequently remains engaged in continued bargaining, administrative adjudication, litigation, or enforcement procedures. The term describes an observable bargaining position without implying resistance to urban renewal objectives or questioning the legitimacy of the process [9].

2.2. Economic Sources of Conflict

Four mechanisms are particularly relevant to residential holdouts. The first is property valuation. Authorities and households may adopt different reference points [10]. Official appraisal usually emphasizes current market value and statutory criteria, whereas households may also consider replacement cost, expected price changes, housing quality, and location value. Studies of urban-renewal satisfaction show that residents assess redevelopment through combined physical, economic, and social conditions rather than housing characteristics alone.

The second mechanism is relocation cost. Moving may involve temporary accommodation, longer commuting distances, altered access to schools and medical services, and adaptation to a new neighborhood. These costs are heterogeneous. Research on older residents shows that relocation distance and repeated moves can affect health and well-being. Evidence from Shenzhen likewise identifies divergent post-relocation outcomes in housing security, neighborhood conditions, and accessibility [3].

Third, expropriation can generate non-market losses [11]. Neighborhood attachment, social networks, proximity to relatives, business location, and community identity are difficult to convert into a uniform monetary value. These factors matter because support for urban renewal is associated with whether residents perceive that their needs are recognized, project information is disclosed, and meaningful participation is available.

Finally, strategic expectations may shape bargaining. Households may continue negotiating when they expect delay, administrative review, or stronger bargaining power to produce better compensation or other concessions. Evidence from displacement

situations in Shanghai shows that rights awareness, social capital, and bargaining capacity can influence negotiations among residents, landlords, and public authorities. Holdout behavior can therefore reflect a calculated comparison between expected gains and the costs of waiting, litigation, and uncertainty [11].

These mechanisms also guide the empirical design of this study. Housing-price data capture the external valuation environment; official expropriation documents identify compensation and procedural arrangements; and publicly available cases provide evidence on valuation considerations, negotiation processes, legal proceedings, and implementation outcomes. Together, these sources allow the subsequent game model to link household incentives with institutional design without treating monetary compensation as the sole determinant of resident responses [12].

3. Data and Variable Construction

3.1. Housing Market Data

The first component of the dataset captures the external housing-market environment in Beijing, Shanghai, Guangzhou, and other representative cities [13]. The observation period covers 2015–2025, yielding 44 city-year observations. These cities represent diverse regional housing markets and urban renewal contexts while providing relatively consistent public information on residential expropriation and compensation arrangements.

The main market indicator is the December year-on-year sales price index for newly constructed commercial housing [14]. For each city and year, the corresponding annual percentage change was recorded as PriceGrowth. Positive values indicate year-on-year price increases, whereas negative values indicate declines.

This variable is not used to imply a direct relationship between housing price trends and household negotiation behavior. Instead, it reflects the broader market context influencing household expectations regarding property value, replacement cost, and future housing opportunities. In appreciating markets, households may perceive a wider gap between the current compensation package and the cost of obtaining an equivalent dwelling. In declining markets, this gap may narrow. The housing-price series is therefore treated as contextual evidence related to reservation value rather than as a direct determinant of negotiation outcomes [15].

3.2. Expropriation Policy Data

The second component consists of nine publicly available expropriation-related policy documents and project-level implementation materials from Beijing, Shanghai, Guangzhou, and other major urban centers [16]. Each document was manually coded to identify institutional features that may influence negotiation dynamics and settlement outcomes.

The variables are grouped into four categories [17]. The first captures compensation flexibility, including monetary compensation, property exchange, and alternative relocation options. These variables reflect whether households can select among different forms of compensation rather than being assigned a single standardized arrangement.

The second group captures economic incentives, including signing bonuses, early-signing rewards, relocation rewards, price subsidies, and area-based subsidies [3]. These mechanisms affect the timing and expected value of settlement and may influence household decisions regarding acceptance or continued negotiation.

The third group measures procedural safeguards, including independent valuation, appraisal review, information transparency, and stakeholder consultation. These variables indicate whether households can verify valuation results, access relevant information, and submit feedback prior to formal administrative procedures [7, 12].

The fourth group captures social support provisions, including hardship assistance, targeted support for vulnerable groups, and transitional housing arrangements [13, 16]. These measures are relevant because relocation impacts vary across demographic and socioeconomic groups; older residents, low-income households, and families with specific

accessibility requirements may experience higher adjustment burdens even under uniform formal compensation standards.

All policy variables are coded as binary indicators according to whether the relevant mechanism is explicitly stipulated in the official documents [8].

3.3. Typical Case Data

The third dataset comprises 13 publicly available representative cases related to housing expropriation and compensation, administrative procedures, mediation, or enforcement. These cases are not intended as a nationally representative sample; rather, they serve to identify recurring patterns in procedural progression and to align observed case developments with the analytical framework developed subsequently [4, 5].

Each case is assigned a ProceduralStage value from 0 to 3. Level 0 corresponds to resolution through negotiation or mediation [3, 12]. Level 1 indicates issuance of an administrative compensation decision without judicial review. Level 2 denotes initiation of administrative proceedings, while Level 3 signifies implementation of legally authorized physical relocation or enforcement measures.

Each case is also coded for binary attributes including valuation assessment, procedural compliance, compensation agreement status, mediation participation, third-party valuation engagement, and enforcement action [8]. These variables assist in distinguishing whether procedural escalation correlates more closely with differences in valuation outcomes, adherence to statutory processes, or limitations in intermediate resolution pathways.

3.4. People-Centered Mechanism Index

To summarize institutional features supporting negotiated settlement, this study constructs a People-Centered Mechanism Index (PCI). The index integrates five binary dimensions: resident participation, independent valuation or appraisal review, compensation flexibility, support for vulnerable households, and mediation or review mechanisms [9, 15].

Each dimension is coded as 1 when explicitly present and 0 otherwise [3]. The PCI therefore ranges from 0 to 5, with higher values indicating a broader combination of participatory, flexible, and supportive mechanisms.

The PCI should not be interpreted as an absolute measure of fairness or policy quality. It is an analytical index designed to summarize observable institutional features relevant to negotiation. Its purpose is to support structured comparison across policies and cases and to examine whether broader negotiation-oriented arrangements are associated with reduced escalation of social tensions.

Together, the three data components provide complementary evidence. Housing-market data describe the valuation environment, policy documents capture compensation and negotiation design, and typical cases illustrate how implementation proceeds in practice. This structure links market conditions, bargaining incentives, procedural mechanisms, and social outcomes within a unified framework.

4. Economic Game Model of Residential Holdouts

4.1. Players and Strategies

This study models housing expropriation as a sequential bargaining game between two actors: the Expropriating Authority, denoted by G , and the affected Household, denoted by H . The authority seeks to complete redevelopment while managing compensation, timeline, enforcement, and administrative considerations [7]. The household seeks to preserve the value derived from its property, location, social environment, and future housing opportunities.

The authority chooses a compensation level C and a procedural or negotiation quality q . The variable q represents the quality of valuation disclosure, consultation, appraisal review, relocation alternatives, and mediation arrangements. After observing the proposed package, the household chooses either Accept or Holdout. Acceptance leads

to relocation and project continuation, while holdout initiates further bargaining and may eventually lead to an administrative compensation decision or judicial review.

Figure 1 summarizes this sequential structure. Rather than treating holdout as an isolated behavior, the framework situates it between the initial compensation offer and subsequent institutional responses. The model therefore allows household behavior to depend simultaneously on monetary compensation, expected future gains, relocation costs, and institutional design.

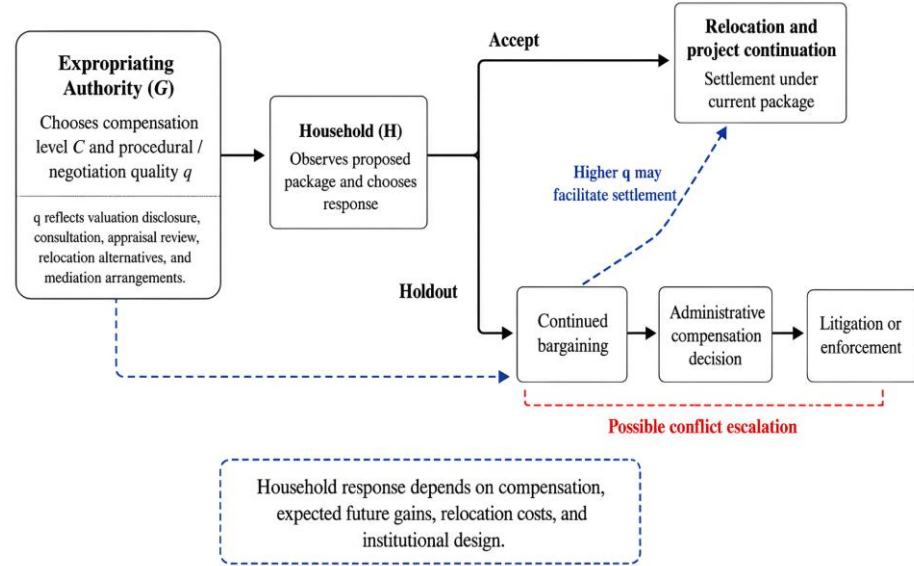


Figure 1. Sequential Bargaining Framework between the Expropriating Authority and the Household.

4.2. Household Reservation Value

The household is assumed to have a minimum acceptable value—termed the reservation value—before agreeing to relocation. It is defined as

$$R_H = V_p + V_M + V_L + V_S + E_G \quad (1)$$

where V_p is the perceived property value, V_M represents moving and resettlement costs, V_L captures location-dependent losses, V_S represents social and other non-market losses, and E_G denotes the expected gain from continued bargaining [10].

This formulation distinguishes the household's reservation value from the market price of the dwelling alone [3]. For instance, two households occupying properties with similar appraised values may exhibit different reservation values due to variations in commuting costs, dependence on nearby medical services, operation of local businesses, or strength of neighborhood ties.

The household accepts when

$$C + B(q) \geq R_H \quad (2)$$

where $B(q)$ represents the non-monetary utility generated by procedural and relocation arrangements. Higher-quality consultation, credible valuation review, multiple resettlement options, or transitional assistance can increase $B(q)$. These mechanisms do not necessarily raise the cash payment but may enhance the overall acceptability of the settlement package.

4.3. Holdout Payoff

If the household rejects the current offer, its expected payoff from continuing negotiations is represented as

$$U_H^H = C + p\Delta C - d_H T - L_H \quad (3)$$

where $p\Delta C$ is the expected additional compensation or concession obtained through continued bargaining, $d_H T$ is the waiting cost accumulated over time T , and L_H represents expected litigation and uncertainty costs.

The household therefore compares the expected gain from delay with the costs of postponement and the institutional benefits already embedded in the proposed settlement [10]. Holdout becomes economically rational when

$$p\Delta C > d_H T + L_H + B(q) \quad (4)$$

This condition is central to the model. It implies that persistent refusal does not require irrational preferences. If households expect continued negotiation to generate sufficiently large gains, while waiting and legal costs remain relatively low, delaying agreement can be a rational strategy.

The opposite also follows [5]. If delay becomes costly, legal uncertainty rises, or the proposed package contains credible procedural and relocation benefits, the incentive to hold out declines. This relationship is reflected in Figure 1, where improved negotiation quality can redirect the household from the escalation branch toward settlement before formal litigation occurs.

4.4. Government Payoff

The authority also faces a strategic choice between continued negotiation and administrative enforcement [17]. Under negotiated settlement, its payoff is

$$U_G^N = B_G - C - K(q) \quad (5)$$

where B_G denotes the economic and administrative value of completing the redevelopment project and $K(q)$ is the cost of participatory negotiation, including consultation, appraisal review, mediation, and differentiated relocation arrangements.

If the authority instead relies on compulsory enforcement, the payoff becomes

$$U_G^E = B_G - C - E - DT - R \quad (6)$$

where E is the direct enforcement cost, D represents the project cost of delay, T is the length of delay, and R captures legal, administrative, and social stability-related risks.

This comparison shows that stronger negotiation mechanisms are not costless. However, they may still be economically preferable when their additional administrative cost is lower than the expected combination of delay, enforcement, and social coordination costs. A people-centered mechanism can therefore be understood as an alternative allocation of governance resources rather than simply as a commitment to higher compensation [13].

4.5. Bargaining Zone

The interaction between the two payoff structures defines a bargaining zone. Let $C_H^{\min}$ denote the minimum monetary compensation the household is willing to accept under a given institutional arrangement, and let $C_G^{\max}$ denote the maximum compensation the authority can provide while maintaining a non-negative expected project payoff [11].

A feasible bargaining zone exists when $C_H^{\min} \leq C_G^{\max}$. Within this interval, both parties may prefer a negotiated settlement over escalation. Bargaining concerns the division of surplus within this interval [2]. If instead $C_H^{\min} > C_G^{\max}$, no immediately feasible monetary agreement exists, increasing the likelihood of prolonged negotiation, administrative adjudication, litigation, or enforcement. This condition may arise from either an elevated household reservation value or constrained government capacity to absorb project and compensation costs.

4.6. Role of People-Centered Mechanisms

The main theoretical implication is that people-centered mechanisms can affect the bargaining zone without relying exclusively on higher cash compensation. In the model, $\frac{\partial C_H^{\min}}{\partial q} < 0$, under the condition that improved procedural and relocation arrangements generate positive utility for the household.

This does not mean that procedural fairness merely induces residents to adjust their expectations downward [15]. Instead, higher q can reduce information uncertainty, enhance the credibility of property valuation, expand relocation options, address household-specific losses, and lower the likelihood of legal proceedings. These

improvements reduce the purely monetary compensation required for a household to attain a comparable utility level.

At the same time, more robust negotiation mechanisms may reduce the authority's expected delays and implementation costs. Consequently, the bargaining zone expands from both sides: household acceptance becomes feasible at a lower monetary threshold, while the authority avoids part of the expected cost associated with escalation. Figure 1 captures this mechanism by incorporating negotiation quality directly into the initial offer rather than positioning mediation as a step taken only after disagreement intensifies.

The model therefore interprets people-centered governance as an economically relevant institutional design. Its purpose is not to eliminate disagreement, but to reshape the payoff structure so that negotiated settlement becomes more attractive than prolonged disagreement for both parties [11].

5. Empirical Evidence and Case Analysis

5.1. Housing-Market Context

Figure 2 presents the December year-on-year change in new commercial residential housing prices in Beijing, Shanghai, Guangzhou, and a major central city in central China from 2015 to 2025. The 44 city-year observations show substantial temporal and cross-city variation [5]. All four locations recorded strong growth in 2016, reaching 28.4% in Beijing, 31.7% in Shanghai, 25.5% in the central city, and 24.3% in Guangzhou. Thereafter, trends became more moderate and divergent. By 2024, changes had fallen to -5.4% in Beijing, -8.0% in the central city, and -9.1% in Guangzhou, while Shanghai remained positive at 5.3%. In 2025, Shanghai still recorded 4.8% growth, compared with -2.4%, -3.4%, and -4.8% in Beijing, the central city, and Guangzhou.

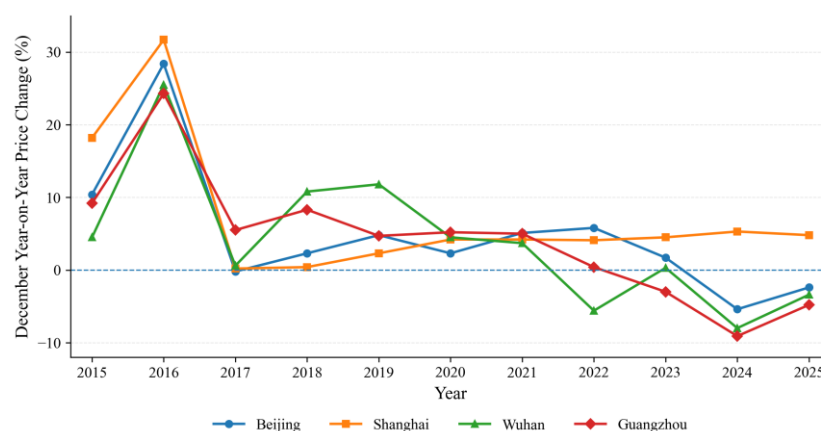


Figure 2. Housing Price Trends in Beijing, Shanghai, Wuhan, and Guangzhou, 2015–2025.

These movements do not imply that housing prices directly cause residential holdouts. Rather, they provide an external economic context within which households form expectations regarding property value and replacement costs [11]. Rapid appreciation may widen the perceived gap between compensation and the cost of obtaining an equivalent dwelling, whereas weaker markets may narrow it. The series therefore supports the treatment of reservation value as partly shaped by market conditions.

5.2. Comparison of Local Expropriation Mechanisms

Table 1 compares nine official policy and project documents. The People-Centered Expropriation Index shown here counts five observable mechanisms: compensation choice, appraisal or review, signing or settlement incentives, hardship support, and consultation or negotiated participation. “Not explicitly stated” means that the mechanism was not clearly identified in the selected document, not that it was absent from the wider local policy system.

Table 1. Comparison of People-Centered Expropriation Mechanisms

City/Policy	Compensation Choice	Appraisal Review	Signing Incentive	Hardship Support	Consultation	PCI
Shanghai Municipal Rules	Yes	Yes	Yes	Yes	Yes	5
Shanghai Chongming Standard (2022)	Not explicitly stated	Not explicitly stated	Not explicitly stated	Yes	Not explicitly stated	1
Shanghai Jiading Standard (2022)	Not explicitly stated	Not explicitly stated	Yes	Yes	Not explicitly stated	2
Shanghai Putuo Standard (2025)	Not explicitly stated	Not explicitly stated	Yes	Yes	Not explicitly stated	2
Wuhan Operational Guidance (2023)	Yes	Yes	Not explicitly stated	Yes	Yes	4
Wuhan Implementation Measures (2024)	Yes	Yes	Not explicitly stated	Yes	Yes	4
Beijing Xicheng Project Plan	Yes	Yes	Yes	Yes	Yes	5
Guangzhou Haizhu Tunnel Plan (2021)	Yes	Yes	Yes	Yes	Yes	5
Guangzhou Haizhu Area Plan (2025)	Yes	Yes	Yes	Yes	Yes	5

The comparison indicates different institutional emphases rather than a ranking of cities. Shanghai district documents emphasize signing thresholds, price and area subsidies, and project-specific support. Several specify an 85% signing threshold, reflecting a coordinated implementation approach. A recent municipal guidance emphasizes procedural rigor, including at least 30 days of consultation, structured appraisal arrangements, compensation choice, and hearing mechanisms.

The Beijing project relies more strongly on timing incentives, with an early-moving reward linked to the signing deadline. Guangzhou documents similarly combine monetary and property-exchange options with deadline-contingent rewards. These mechanisms matter because they alter both the value and timing of settlement rather than simply raising compensation [4, 10].

5.3. Sources of Conflict in Typical Cases

Table 2 summarizes the coded characteristics of 13 Supreme People's Court typical cases. Since these cases were purposively published to illustrate legal or governance principles, the frequencies reflect illustrative patterns rather than population-level estimates [15].

Table 2. Characteristics of Typical Housing-Expropriation Disputes

Characteristic	Cases (n)	Share
Valuation dispute	3	23.1%
Procedural dispute	13	100.0%
Explicit compensation/agreement impasse	6	46.2%
Litigation or judicial/administrative review	13	100.0%
Compulsory demolition or enforcement	2	15.4%

Mediation or coordination	5	38.5%
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Procedural matters appear in all 13 cases, while valuation-related considerations occur in three. Six cases indicate that consensus was not achieved prior to subsequent administrative or judicial steps [6]. Only two involve compulsory enforcement actions, whereas five document mediation or coordination efforts. As all cases entered litigation or review, this distribution primarily reflects case selection criteria rather than the overall incidence of judicial involvement. Only five cases fall within the study’s strict core scope of state-owned-land residential expropriation; the remainder provide supplementary insight into related administrative mechanisms.

5.4. From Confrontation to Negotiation

Four cases illustrate the mechanisms proposed by the bargaining model. The Sun Dexiong case involved challenges in reaching agreement, alongside differences in perspectives on valuation access and compensation methods, demonstrating how information asymmetry can raise the household’s reservation threshold.

The Jiao Jishun case centered on whether the claimant’s property interests were fully integrated into the expropriation process. Here, ambiguities in procedural scope increased uncertainty and reduced confidence in the settlement process [7, 17].

The Wang Jiangchao case escalated to a situation involving removal under time-sensitive administrative grounds, representing the high-intensity branch of the model. Once such administrative measures were implemented, legal and administrative considerations became central alongside the initial compensation discussion.

A contrasting case involved overlapping ownership claims that complicated compensation allocation. Mediation clarified ownership rights, led to an agreed RMB 75,000 payment arrangement, and was followed by withdrawal of the proceeding. Although supplementary to the core sample, it illustrates how mediation can resolve underlying allocation issues and restore a viable path toward settlement.

Overall, the cases align with the bargaining framework [2, 15]. Valuation transparency, procedural clarity, differentiated support, and mediation can shift the relative incentives for settlement versus continued engagement. The evidence should be interpreted as consistent with the proposed mechanisms rather than as definitive causal validation, since stronger causal inference would require a larger and more representative case-level sample.

6. People-Centered Conflict Resolution Mechanism

The theoretical framework and empirical findings indicate that resolution of social coordination challenges should not depend solely on higher monetary compensation or premature administrative measures. A more effective approach involves reducing information asymmetry, acknowledging diverse relocation-related impacts, and maintaining an appropriate scope for collaborative dialogue prior to escalation. Guided by these principles, this study proposes a five-stage people-centered negotiation mechanism.

6.1. Stage 1: Transparent Valuation

The first stage focuses on valuation transparency. Authorities must disclose the applicable valuation standards, relevant market comparables, appraisal procedures, and calculation methods prior to requiring households to finalize decisions. When residents understand how the proposed compensation is determined, uncertainty regarding property value diminishes. Such transparency reduces information asymmetry and renders disagreements more precise and subject to review, rather than permitting them to evolve into broad-based distrust of the expropriation process.

6.2. Stage 2: Household-Specific Loss Assessment

The second stage extends compensation assessment beyond a simple area-by-price calculation. Households may experience varying relocation burdens even when their properties have similar market values. Assessment should therefore consider temporary

accommodation, moving costs, changes in commuting patterns, impacts on livelihoods, access to education and medical services, and the specific needs of vulnerable households. This does not require every non-market impact to be converted mechanically into cash. Instead, the objective is to identify household-specific costs that can be addressed through monetary or non-monetary support measures.

6.3. Stage 3: Menu-Based Compensation

The third stage introduces a menu of settlement options. Rather than offering a single standardized package, authorities may combine cash compensation, property exchange, resettlement housing, transitional support, and targeted assistance. Menu-based compensation is economically relevant because households differ in housing preferences, liquidity needs, family composition, and tolerance for relocation. A broader set of options can therefore reduce the monetary amount required to satisfy heterogeneous reservation values while maintaining fiscal discipline.

6.4. Stage 4: Independent Review and Mediation

The fourth stage applies when valuation or compensation matters remain unresolved. At this point, bilateral communication between the authority and household should be supplemented by independent appraisal review or mediation. Introducing a credible third party can clarify factual uncertainties, identify the underlying basis for differing perspectives, and mitigate the risk of procedural concerns escalating differences in negotiation. Mediation is particularly useful where matters involve compensation allocation, household-specific circumstances, or the adaptation of general compensation principles to individual cases.

6.5. Stage 5: Enforcement as the Last Resort

The final stage preserves administrative and judicial enforcement as institutional options but positions them after lower-cost collaborative mechanisms have been fully utilized. In practice, consultation should occur first, followed where necessary by valuation review and mediation [15]. If these mechanisms fail to produce agreement, an administrative compensation decision may be issued, with judicial enforcement remaining available at the final stage under the applicable legal procedure.

This arrangement does not assume that every matter can be resolved through negotiation. Some households and authorities may remain outside the feasible collaborative range, and lawful enforcement may therefore remain necessary. The key distinction is that coercive measures should not prematurely replace mechanisms capable of resolving valuation, information, or relocation-related matters at lower social and administrative cost.

The people-centered approach is therefore not equivalent to unlimited concessions [7]. Its economic function is to improve information quality, reduce transaction and coordination costs, accommodate heterogeneous relocation impacts, and expand the scope within which negotiated settlement becomes preferable to prolonged non-cooperation.

7. Conclusion

This study examined residential holdouts in urban housing expropriation through a bargaining perspective rather than interpreting delayed agreement as non-strategic behavior. The theoretical model shows that holdout can be a rational strategy when the expected gain from continued negotiation exceeds the combined costs of waiting, legal proceedings, and uncertainty. Household reservation values are shaped by relocation burdens, location-dependent losses, non-market considerations, and market expectations, indicating that compensation amount alone does not account for variation in settlement timing or outcomes.

The open policy framework and case evidence support this broader interpretation. The examined expropriation mechanisms include monetary compensation, property exchange, appraisal review, signing incentives, hardship assistance, consultation, and

mediation. These arrangements affect both the value and procedural dimensions of settlement and therefore influence whether resolution remains achievable within a mutually acceptable range or proceeds toward formal adjudication and enforcement.

The economic significance of people-centered governance lies in its capacity to reduce information asymmetry, transaction costs, and heterogeneous relocation impacts while expanding the scope for mutually beneficial agreement. In this sense, negotiation-oriented resolution is not merely a normative preference but may also lower expected administrative and household-level costs associated with protracted resolution processes.

Several limitations remain. The study draws on 13 purposively selected representative cases, which may reflect selection effects inherent in judicial documentation. Policy documents outline formal institutional arrangements but do not capture implementation consistency across contexts. The 44 housing-market observations reflect aggregate market conditions rather than household-level causal relationships. Future research should broaden the case sample, integrate project-level compensation and signing-time data, and apply survival analysis, ordered logit models, or structural bargaining estimation to test the proposed mechanisms more rigorously.

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