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# Research

## Kurdish Electoral Politics: A Game Theoretic-Analysis of the Enduring Duopoly between PUK and KDP (2005-2025)

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## Abstract

This article provides a distinctive, explanatory framework for understanding the enduring political stasis and the dynamics of power consolidation by employing a game-theoretic framework to analyze the political system and electoral dynamics within the Kurdistan Region of Iraq (KRI) from 2005 to 2025. It argues that the political interactions between the Kurdistan Democratic Party (KDP) and the Patriotic Union of Kurdistan (PUK) are characterized by remarkable stability and enduring duopoly, rather than unpredictable flux. The study delineates the strategic cooperation and controlled competition between these dominant parties, highlighting how their repeated-game interactions lead to a self-sustaining equilibrium. It further examines the challenges faced by opposition parties, often trapped in a Prisoner's Dilemma that hinders their collective effectiveness. A key finding is the robust advantage of incumbency, bolstered significantly by the KDP and PUK's strategic balancing of external patronage from regional powers like Iran and Turkey, which collectively reinforces their control. The paper's implications underscore the deep-seated structural and geopolitical factors maintaining the KRI's political status quo.

## Keywords

Kurdish politics, Game Theory, KDP, PUK, electoral systems, incumbency

## Introduction

The political system within the Kurdistan Region of Iraq (KRI) and its representation within the Iraqi national parliament for close to two decades (2005-2025), offers a compelling game-theoretic case study. Empirical observations clearly indicate that the political "game" played between the Kurdistan Democratic Party (KDP) and the Patriotic Union of Kurdistan (PUK) is characterized by relative stasis and stability, rather than dynamic flux and unpredictability. This enduring duopoly warrants deeper examination to understand the underlying mechanisms that maintain such a consistent power structure.

While much literature addresses Kurdish politics, few studies rigorously apply game theory to analyze the strategic interactions that create and sustain this particular equilibrium. This article aims to fill this knowledge gap by providing a comprehensive game-theoretical analysis of the KRI's electoral landscape. The purpose of this study is to delineate the strategic interaction between the leading political and administrative players, applying classic game-theoretic notions of cooperation and competition, and examining the specific benefits derived from political incumbency, including the often-overlooked role of external geopolitical patronage. This paper seeks to discuss how the KDP and PUK maintain their dominance despite internal competition and the rise of opposition parties, and what role external regional powers play in this dynamic. By doing so, this article will expand the existing body of knowledge by offering previously underexplored, theoretically driven perspective on the resilience of power structures in autonomous regions amidst complex regional geopolitics.

## Literature Review

Historically, the study of Kurdish politics in Iraq has been a rich and complex field, largely bifurcated into analyses of national identity and conflict, and the internal dynamics of the Kurdistan Region of Iraq (KRI). Early scholarship often focused on the struggle for self-determination, the impacts of regional conflicts, and the historical marginalization of Kurds within the Iraqi state(Castillo Quiñones J.C., 2024). These works provide essential context regarding the foundational grievances and aspirations that shaped the emergence of dominant political parties.

Following the establishment of the KRI's autonomy post-2003, a significant body of literature shifted its focus to the nascent Kurdish state-building project, its institutional development, and the challenges of governance(Kaplan, 2019; Macmillan-Scott et al., 2024; Salih, n.d.). Within this domain, scholars have extensively documented the rise and persistent dominance of the two primary political actors: the Kurdistan Democratic Party (KDP) and the Patriotic Union of

Kurdistan (PUK). These studies typically detail the historical origins of these parties, their ideological differences, their respective geographical strongholds, and their roles in the KRI's political and economic development. A common thread in this literature is the acknowledgement of the KDP and PUK's shared control, often characterized as a power-sharing arrangement or a fragile coalition, but rarely delving into the strategic underpinnings of its enduring stability from a rigorous game-theoretic standpoint(Ordeshook, 1986; Salih, n.d.; Schäfers, 2021).

Discussions on the KRI's internal politics frequently highlight the challenges posed by corruption, institutional weaknesses, and the limited space for effective opposition(hassan abdullah & Hama, 2020). These analyses often describe the frustration of nascent opposition movements and their struggle to break the established duopoly, but they generally rely on socio-political or historical explanations rather than explicit strategic models. The role of external actors, particularly neighboring states like Iran and Turkey, in influencing KRI politics is also well-documented (Ameen, 2023), often focusing on economic ties, security concerns, and the regional balance of power. However, the literature has yet to fully integrate how the KDP and PUK strategically leverage or are constrained by these external relationships in a game-theoretic framework to maintain their internal electoral equilibrium.

The application of Game Theory in political science has a strong tradition, particularly in understanding electoral competition, coalition formation, and strategic interactions among political parties. These theoretical contributions provide analytical tools to dissect political behaviors in terms of players, strategies, payoffs, and equilibria(Abbas, 2025; Ordeshook, 1986). Studies applying game theory to fragile states or post-conflict societies have explored power-sharing agreements and institutional design (McCarty & Meirowitz, 2007), but specific, detailed game-theoretic models focusing on the electoral endurance of a duopoly like the KDP-PUK, especially within an autonomous region like the KRI and considering external geopolitical influences, remain relatively underexplored.

Therefore, the knowledge gaps this article addresses is multi-faceted. While the dominance of the KDP and PUK is widely acknowledged, existing literature largely describes this phenomenon without deeply explaining its strategic resilience through a formal game-theoretic lens. Specifically, there is a lacuna in rigorous analyses that: (1) model the KDP-PUK relationship as a repeated game of strategic cooperation and competition; (2) apply the Prisoner's Dilemma to explain the persistent fragmentation and limited impact of opposition parties; and (3) systematically integrate the KDP and PUK's strategic engagement with regional powers (Iran and Turkey) as a factor reinforcing their internal electoral equilibrium. Utilizing a longitudinal dataset of KRI electoral outcomes 2005-2025, sourced from the Independent High Electoral Commission (IHEC) and cross-referenced with International Foundation for Electoral Systems (IFES) reports, this paper applies specific game-theoretic concepts. In doing so, it provides a distinctive framework for understanding political stasis and power consolidation, contributing to both Kurdish studies and the field of political game theory.

## Theoretical Framework

This article employs Game Theory as its primary theoretical framework to analyze Kurdish electoral politics. Game theory is particularly suitable for this topic as it provides a robust analytical lens for understanding strategic decision-making among rational actors in situations of interdependence(McCarty & Meirowitz, 2007). In this context, the political parties (KDP, PUK, and opposition groups) are modeled as "players," each pursuing strategy (alliance formation, campaigning, policy platforms) to maximize their "payoffs" (electoral seats, political power, control over government)(Ordeshook, 1986).

Key game-theoretic concepts utilized include (Ordeshook, 1986):

- **Repeated Games:** Elections are cyclical, allowing parties to learn from past interactions and adjust future strategies, influencing long-term cooperation or competition.

- **Cooperation and Competition:** Analyzing how parties choose between collaborative and rivalrous actions to achieve their objectives.

- **Nash Equilibrium:** Identifying stable outcomes where no player can improve their payoff by unilaterally changing their strategy, given the strategies of others.

- **Prisoner's Dilemma:** Explaining situations where individual rationality leads to a collectively suboptimal outcome, particularly for fragmented opposition groups.

- **First-Mover Advantage/Incumbency:** Examining the inherent benefits enjoyed by established players that control resources and influence, making it difficult for challengers.

By applying this particular framework, this article moves beyond descriptive accounts to explain why certain political behaviors persist, how stable power structures are maintained, and what strategic choices lead to the observed electoral equilibrium in the KRI.

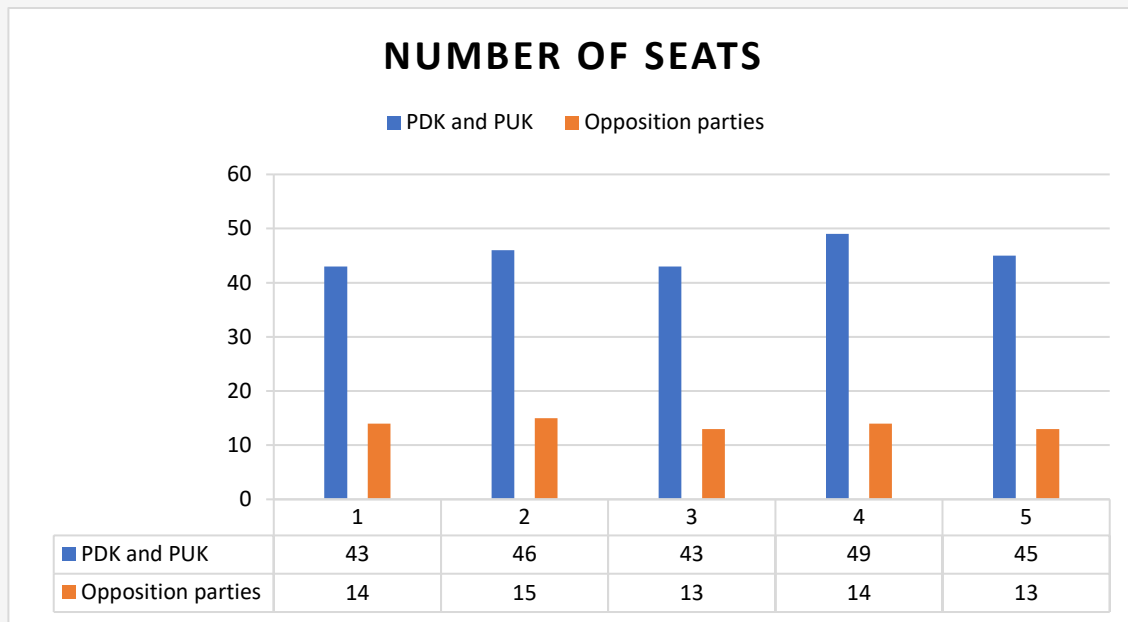## Analysis

### The Players and the Game

The political parties within the Kurdistan Region of Iraq, including the Kurdistan Democratic Party (KDP), Patriotic Union of Kurdistan (PUK), Gorran (Change Movement), New Generation, Kurdistan Islamic Union (KIU), and Halwest, comprise the central participants in this political field. The methodologies, or strategies, utilized by these political entities encompass various activities: organizing election campaigns, developing political programs, establishing political alliances, and negotiating post-election deals. The number of seats gained in an election represents the ultimate payoff for each political entity, as these determine political power and influence within governmental structures.

The KDP-PUK Dynamic: Cooperation and Controlled Competition

The most notable aspect of this political game is the steady and frequent cooperative relationship between the KDP and PUK. Their interactions often resemble a cartel or collusive duopoly, in which two powerful organizations cooperate to protect their combined market share from possible competitors.

From 2005 to 2025, evidence consistently points to an expressed intention for the establishment of joint lists. This is exemplified by "DPAK" and "Kurdistan List," formed with the intention of participating in elections. Such joint lists serve as a means for maximizing their combined seat count, presenting a united front, and thereby hindering the growth and potential of smaller political parties. For example, during the national elections held in 2005, the DPAK (KDP + PUK coalition) won a total of 53 seats, inclusive of the dominant representation for Kurds within Iraq's political arena. Additionally, during the national election held within Iraq in 2010, the "Kurdistan List" (KDP + PUK joint list) won a total of 43 seats. As illustrated within Figure 1 below, the number of seats for the coalition between the KDP + PUK is between 43 and 49. Additionally, the number for opposition political groups for Kurds within the Iraqi parliament is between 13 and 15 seats.

**NUMBER OF SEATS**

■ PDK and PUK   ■ Opposition parties

|  | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| ■ PDK and PUK | 43 | 46 | 43 | 49 | 45 |
| ■ Opposition parties | 14 | 15 | 13 | 14 | 13 |

*Figure 1*: *Number of the seats for all Kurdish parties in the parliament of Iraq from 2010 till 2025. Data adapted from (IHEC) and (IFES)*

The rationale for this collaboration stems from a repeated-game scenario, where the KDP and PUK mutually benefit from regional stability and shared dominance. While one party could theoretically attempt to completely marginalize the other, such a move is fraught with significant risks. It could trigger internal strife, embolden opposition forces, or even lead to hostilities, ultimately resulting in a worse long-term payoff for both. Thus, a cooperative balance emerges as a self-sustaining system that helps both parties maintain their dominance.

However, this cooperation is not devoid of tension. Even within their alignment, an underlying competitive dynamic persists. When parties participate separately in national elections (as observed in 2014, 2018, and 2021), they compete to maximize their individual seat count. For instance, in the 2021 national election, the KDP received 31 seats, while PUK linked lists acquired 17 seats. This competition for more seats is a function of strategic behavior: the party that secures the most seats gain

greater leverage in post-election coalition building negotiations, particularly concerning ministerial assignments and the formulation of the new government's program. Thus, this situation represents a game within a game, where individual parties optimize their positions within the broader negotiated framework of collaborative power preservation.
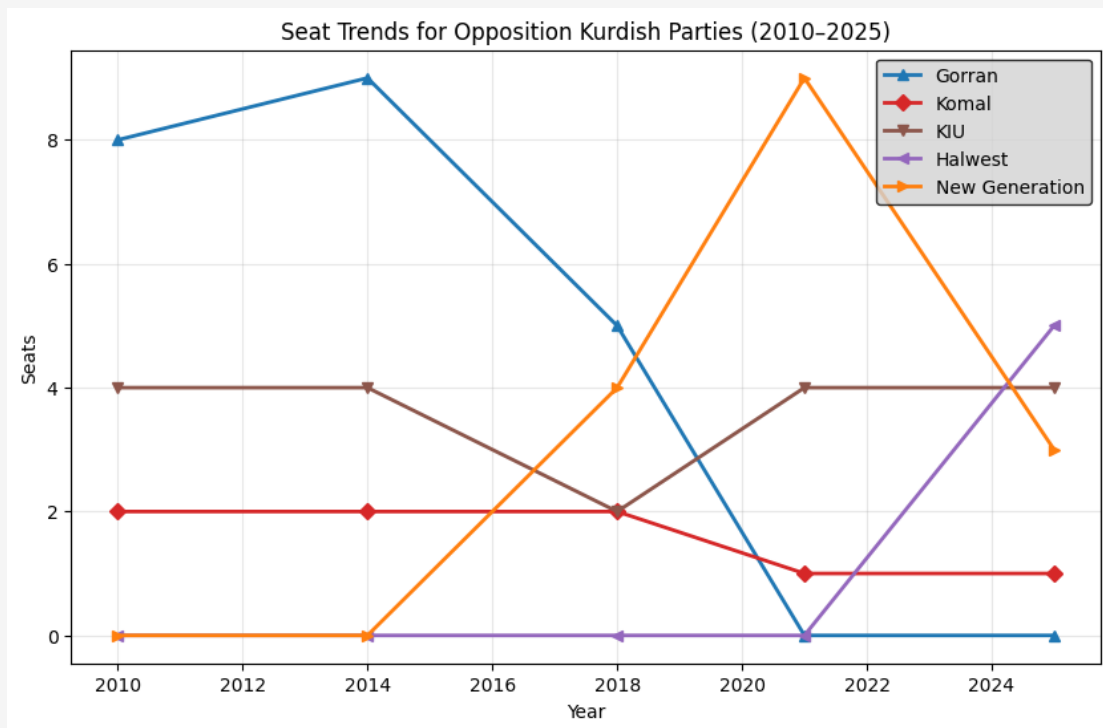
## The Opposition's Dilemma: The Struggle for a Foothold

The emergence of opposition parties, such as Gorran, the New Generation, and the Kurdistan Islamic Union (KIU), introduces a new dynamic into the KRI's political arena. From a Game Theory perspective, these parties are challengers to the KDP-PUK duopoly and attempt to appeal to disaffected voters by providing alternative platforms, often focused on anti-corruption, governance reform, or alternative ideas. For example, Gorran obtained 8 seats in the 2010 national elections, and the New Generation is projected to have 15 seats as the largest opposition party in the 2024 KRI elections, indicating that there is still a strong demand for alternatives to KDP-PUK.

Crucially, many opposition factions often find themselves constrained by a political Prisoner's Dilemma. Consider the potential if a coalition among all major opposition factions were to form a highly organized, unified electoral list. By forming such a coalition or unified list, the opposition could eliminate dispersed voting, provide a clearer contrast to the ruling parties, and potentially secure significantly more elected representatives. This could pose a legitimate threat to the KDP-PUK's dominance or at least form a sufficiently strong veto group to necessitate negotiation with the opposition.

However, this ideal cooperative strategy for the opposition parties is very unlikely to materialize. Each opposition party, acting rationally, strives for maximum individual seat gains and leverage. Within the KRI, opposition political entities often believe that differentiation from rival opposition groups, for example, by appealing to a particular niche voter subgroup or emphasizing distinctive strengths, will

maximize their individual votes. This leads them to run separately, often at the expense of lessening the cumulative number of opposition seats. Furthermore, smaller opposition political groups often fear that coalition formation with a larger opposition might dilute their own political identity and compromise their core goals and values. Additionally, they face rivalry and competition for limited resources, such as funding, media coverage, and public attention, which further hinders sustained unity and collaboration. Figure 2, demonstrates this issue and vividly explains this tendency among opposition political groups within Kurdistan and how much inter-entity rivalry represents this particular issue.
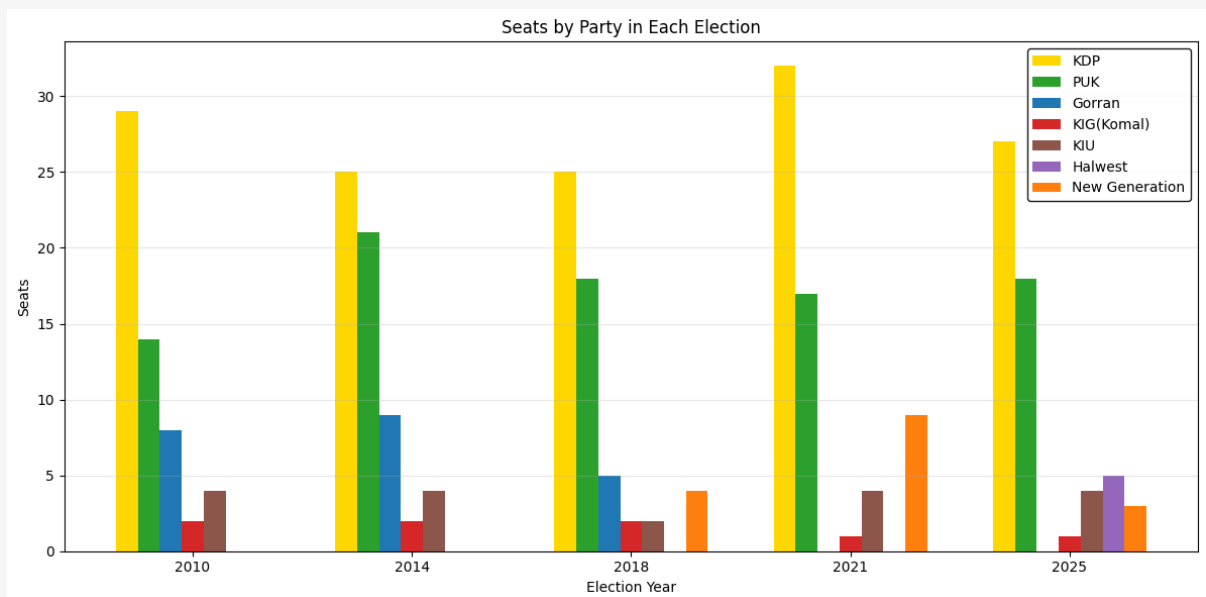


*Figure 2: Number of the seats for opposition parties of Kurdistan in the parliament of Iraq from 2010 till 2025. Data adapted from (IHEC) and (IFES)*

The result of this individualistic reasoning is a fragmented opposition. The data indicates that several opposition parties operate independently (e.g., Gorran, New Generation, KIU, Kurdistan Justice Group), splitting the vote against the incumbents.

This fragmentation represents a suboptimal outcome for the opposition as a whole. The KDP and PUK, as the dominant parties, are the primary beneficiaries of this division. A small opposition party gaining a few percentage points may primarily do so at the cost of another opposition party, rather than solely drawing from the KDP-PUK base, thus enabling the ruling parties to maintain their plurality or majority.

The opposition faces the formidable challenge of signaling a credible alternative. The electorate, especially in regions with a history of political turmoil, might perceive a fractured opposition as less capable of delivering stable governance compared to the long-standing KDP-PUK coalition, despite its imperfections. This perception further reduces their collective payoff. The repeated inability of opposition parties to establish stable and cohesive coalitions suggests that immediate, individualistic incentives often override the collective benefits of joint action, thereby impairing their prospects for winning. Figure 3 illustrates seat distribution for all parties with a Kurdish background and identifies the hegemony exerted by the KDP and PUK within the opposition camps.



*Figure 3: Number of the seats for all Kurdish parties*
*in the parliament of Iraq from 2010 till 2025. Data adapted from (IHEC) and (IFES)*

## Incumbency and the Equilibrium of Power: The Role of External Influence

The ongoing electoral supremacy of the KDP and PUK highlights the significant advantages of incumbency in a political system, extending beyond mere popular endorsement. From a game theory perspective, incumbents possess a significant first-mover advantage that profoundly shapes power dynamics and makes it exceedingly challenging for competitors to disrupt the established order.

This advantage arises from multiple interconnected factors, including the crucial external dimension:

1.  **Control of State Resources and Patronage Networks:** The KDP and PUK, as the ruling parties, maintain direct or indirect control over state institutions, budgets, and public sector employment. This enables the allocation of resources, undertaking of public projects, and provision of jobs or contracts, all of which can be utilized, directly or indirectly, to reward supporters and sway voters. This creates a strong patronage network that connects a considerable segment of the population to the ruling parties, fostering a compelling motivation for individuals to back the incumbents in order to preserve their economic or social status.

2.  **Information Asymmetry and Media Control:** Incumbents gain advantages from increased visibility and positive media coverage due to having more control over the channels they use to distribute information. This increased visibility ensures voters are often inundated with information regarding their accomplishments and the stability of the ruling parties, while opposition narratives may receive less exposure and face greater criticism. The regulation of how information is disseminated is essential to developing how the public views the candidates running for office and reinforcing the perception that only those currently in power can effectively lead.

3.  **Established Infrastructure and Campaign Finance:** Years of governance have allowed the KDP and PUK to establish elaborate organizational

networks across the KRI, including party offices, youth branches, women's organizations, and an extensive network of party activists. They have more significant financial resources for campaigning, advertising, and mobilization compared to most opposition parties. Their logistical and financial capacity is considerably greater, enabling them to reach more voters more effectively.

4. **Credibility and Perceived Stability (Internal & External):** In such a complex and dynamic geopolitical environment within this region, the traditional continued leadership role played by the KDP and PUK represents a degree of familiarity and reliability that can be attractive to electors forced to make a number of political decisions at the time of voting. A natural default position for many electors is therefore one that values this reliability and perceived stability. This contributes to a Nash equilibrium where the strategic superiority of the KDP and PUK combination is accepted as the known and stable solution to the political game. Any deviation, such as voting for the opposition, may be viewed as resulting in a less favorable or more unpredictable outcome.

5. **Shaping the Rules of the Game:** Incumbents play a significant role in shaping electoral laws and policies, including eligibility criteria and the voting process. This is exemplified by activities such as the postponement of elections for specific regions, including the KRI, thereby strengthening their considerable influence over electoral outcomes and power. While not always overtly manipulative, these activities invariably create an imbalanced playing field.

6. **External Patronage and Geopolitical Balancing Act:** This is especially significant. Both the KDP and the PUK have always maintained strategic alliances with important regional allies such as Iran and Turkey. While the KDP has always maintained greater closeness with Turkey, the PUK has mostly maintained its closeness with Iran. Far from weakening them, this

system of external patronage can paradoxically serve as a strong stabilizing force for the joint governance of Kurdish society by the two parties.

- o **Deterrence of External Meddling (against each other):** Both parties benefit from having an external patron state that can act as a deterrent against a complete takeover or marginalization by the other. A complete takeover by one party could invite interference from the marginalized party's regional ally, potentially leading to a worse outcome for all.

- o **Maintaining Regional Endorsement:** Despite their complex and at times mutually contradictory interests regarding Kurdish aspirations, both Iran and Turkey generally support a stable and predictable, albeit divided, Kurdish administration within Iraq over any drastic reshuffles. A balanced role for the KDP and PUK, with each managing its distinct foreign policy relationships, provides a stable, if at times tense, interlocutor for these regional states. Regional support for the administration serves to further legitimate powerholders and hinder opposition with limited international support from gaining much purchase.

- o **Resources and Influence:** These external relationships provide both KDP and PUK with additional resources, political leverage, and diplomatic weight. In effect, these external ties significantly raise the payoff for maintaining their cooperative duopoly.

The combined effect of these incumbency advantages, critically including the strategic balancing of external relationships with regional powers, creates a powerful stable equilibrium in KRI politics. While the KDP and PUK might jostle for internal dominance within their alliance, their collective position at the apex of power remains largely unchallenged. Any meaningful shift would require a seismic realignment of voter preferences, a monumental and sustained collaborative effort

by the opposition, or a significant internal fracture within the KDP-PUK alliance itself, scenarios that while not impossible, are exceptionally difficult to achieve given the existing internal and external game theory dynamics.

## Conclusion

Examining Kurdish electoral politics from 2005 to 2025 through a game theory perspective reveals a remarkably durable system. The dynamic between the two leading parties, the KDP and PUK, is marked by an intricate combination of collaboration and controlled competition, as they frequently unite to protect their shared influence despite their inherent rivalries. Opposition forces, though present and sometimes influential, encounter considerable strategic obstacles, particularly the difficulty of overcoming their own collective action problems and the entrenched benefits enjoyed by incumbents. The outcome is a stable political equilibrium, with the KDP and PUK remaining the main architects and beneficiaries of the system, shaping the parameters and results of KRI electoral politics. The implications of this analysis suggest that fundamental shifts in KRI's political landscape would require either a significant internal re-evaluation of strategies by the dominant parties, a unified and sustained effort from the opposition to overcome its collective action dilemma, or a substantial alteration in the geopolitical calculations of key regional actors.

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