



# Navigating the Iran-Azerbaijan Tension: A Game Theory Perspective

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**Abstract:** In this article, we aim to analyze the tensions between Iran and Azerbaijan using game theory. Following Azerbaijan's decisive victory in the Second Karabakh War, Iran's position in the South Caucasus region came under significant threat. The growing influence of Azerbaijan, along with its main ally Turkey, has further limited Iran's scope of action in the region. In response to Azerbaijan's actions and attempts to alter the regional landscape, Iran has responded strongly. Through various military maneuvers, Iran has demonstrated its firm determination to prevent any alteration of the region's geography and borders. This article will examine the current situation and explore potential future scenarios using game theory to understand the dynamics of the Iran-Azerbaijan tension. Using a non-cooperative 3x3 game in an extensive form, the article examines the policy options available to both Iran and Azerbaijan and assess their relative merits. By constructing a matrix and assigning numerical values based on preference order, the article quantifies the significance of each policy option for both players. The Nash equilibrium is determined to be within the segment of tactical longevity and do nothing, implying that Azerbaijan is likely to strategically adopt initiatives while carefully timing its actions for most impact, while Iran aims to maintain stability and avoid escalating tensions. The article concludes by emphasizing the need for continuous monitoring and assessment as the situation evolves, allowing both countries to adapt their strategies accordingly.

**Keywords:** Iran, Azerbaijan, Karabakh war, Game Theory, Nash Equilibrium

## I. Introduction

The Nagorno-Karabakh conflict, situated in the Caucasus region between Armenia and the Republic of Azerbaijan, emerged as a significant and persistent issue that has plagued the South Caucasus region since the 1990s. This conflict arose following the independence of both countries after the dissolution of the Soviet Union in 1991. Despite numerous resolutions put forth by the United Nations and the active participation of major global powers such as the United States, France, and Russia through the Minsk Group, the problem continues to persist and poses a significant challenge.

In light of the conclusion of the second Karabakh war in November 2020, which resulted in Azerbaijan emerging as the victor, the examination of the relationship between Iran and Azerbaijan has gained significant importance. The conflict between Azerbaijan and Armenia has not only altered the geopolitical dynamics within the South Caucasus region but has also exerted a notable influence on regional powers, particularly Iran.

While most studies in this field focus on the approaches of Azerbaijan, Russia, Turkey, and Armenia, it is crucial not to overlook the role and approach of Iran towards the developments in the Caucasus region. Despite Iran's diminished role in the relations of the South Caucasus region due to years of sanctions and an isolationist

foreign policy, it should still be regarded as one of the important actors that will play a significant role in the region's developments.

In conclusion, this article aims to provide a comprehensive analysis of the relations between Iran and Azerbaijan using the game theory approach. By examining policy options and interactions of the two actors, we can gain valuable insights into their interests and the possible future trajectory of their relations. This analysis will also consider the broader regional implications and shed light on the complex dynamics within the South Caucasus region. Through this study, we hope to contribute to a deeper understanding of the evolving relationship between Iran and Azerbaijan and its significance in the wider geopolitical context.

## II. Methodology

This study aims to explore Iran-Azerbaijan tension in south Caucasus using a game-theoretical approach. Game theory is the study of the ways in which interacting choices of economic agents produce outcomes with respect to the preferences (or utilities) of those agents, where the outcomes in question might have been intended by none of the agents. (Ross, 2023). Games are defined mathematical objects, consisting of a set of players, a set of strategies (options or moves) available to them, and specification of players' payoffs for each combination of such strategies (possible outcomes of the game). (Madani, 2010).

Game theory is a theoretical framework for conceiving social situations among competing players. In some respects, game theory is the science of strategy, or at least the optimal decision-making of independent and competing actors in a strategic setting. Game theory has a wide range of applications, including psychology, evolutionary biology, war, politics, economics, and business. (Hayes, 2023).

Governments continuously interact with each other regarding a wide range of political, economic, security and military issues. Sometimes these interactions are cooperative and sometimes they show themselves in the form of competitive relations, and in all these cases, the decision and behavior of one government directly affects the decision and behavior of another government. It is reciprocally affected by it. Situations like this are defined as "strategic conditions" and each actor should pay attention to the policy of the opposite actor in order to decide what policy to pursue in order to maximize their interests.

Game theory can be utilized to predict how players behave in conflicts while pursuing their own interests. In a typical game, decision-makers (players) with their own objectives attempt to outmaneuver one another by anticipating each other's decisions. The outcome of the game is determined by the players' decisions. Game theory analyzes the strategies employed by players to maximize their payoffs. A solution to a game prescribes the decisions that decision-makers may make and describes the outcome of the game.

## III. Background

Following the dissolution of the Ottoman Empire and the consequential events of the First World War, the Karabakh region fell under the authority of Russia and subsequently the Soviet Union. Autonomy was conferred upon this region by the Soviet Union in 1923, and it was integrated into the Socialist Republic of Azerbaijan as part of the administrative framework of the USSR.

In February 1988, the Nagorno-Karabakh Autonomous Region expressed its desire to secede from Soviet Azerbaijan and integrate with Soviet Armenia. Despite this, the Supreme Council of the Soviet Union rejected the request. Subsequently, the Armenian inhabitants of the Nagorno-Karabakh region independently opted to unify with Armenia, a move that found favor with Soviet Armenia. This series of events ignited ethnic tensions in the area, ultimately culminating in the unilateral declaration of independence by the Armenians of Nagorno-Karabakh in 1991, proclaiming themselves as the Republic of Nagorno-Karabakh. This proclamation of independence prompted a conflict between Armenia and Azerbaijan.

Following the conflict, Armenian forces secured complete control over the Karabakh region and roughly 20% of the territory belonging to the Republic of Azerbaijan. This war resulted in the loss of roughly 30 thousand lives. Subsequently, a ceasefire agreement was reached between the two parties on May 12, 1994

Despite the signing of a cease-fire agreement between Azerbaijan and Armenia, the prevailing tension persisted, and the conflict between the two sides endured.

Until September 2020, there was limited progress achieved in the dialogue between the two parties. Despite the efforts made by the Minsk Group and other regional and global actors, the impasse persisted.

The conflict known as the Second Karabakh War commenced on September 27, 2020, marked by military engagements initiated by the Republic of Azerbaijan and concluded on November 10, 2020. In the aftermath of this conflict, significant geopolitical shifts occurred, capturing the attention of both regional and global stakeholders. Subsequent to this war, the Republic of Armenia ceded control of all seven previously acquired regions following the initial Karabakh conflict in the early 1990s, with the sole exception being the Lachin Corridor, serving as the link between the Karabakh region and the Republic of Armenia.

Russia facilitated a ceasefire agreement to conclude the conflict and simultaneously initiated measures to maintain stability. This involved the deployment of peacekeepers to contain renewed hostilities within and around the enclave, along with the introduction of border guards on the Armenian side to prevent confrontations along the border. What nearly 30 years of negotiations in the multilateral OSCE Minsk Group could not achieve, Azerbaijan seemed attained in a 44-day war. The ceasefire agreement between Armenia and Azerbaijan, mediated by Russia Outside the agreed OSCE format on November 9 and 10, 2020, has utterly changed the situation of the karabakh conflict and the countries of the South Caucasus. (Meister, 2021).

Even as Baku and yerevan pushed for negotiations, the two sides clashed in the spring, summer and fall of 2022. By pursuing military gains even as its negotiators were discussing a political settlement, Azerbaijan appeared to be trying to put itself in the best possible position to win concessions from Armenia. (Shiriyev, 2022).

the first major fighting came in March, when Azerbaijani forces seized territory around Farukh, an ethnic Armenian-populated village patrolled by Russian peacekeepers as part of the 2020 ceasefire. As a result, they were able to establish new positions in the nearby mountains. From their new vantage points, the Azerbaijani troops enjoy views deep into Armenian-populated areas – something that would work to their benefit in any future military campaign (Nagorno-Karabakh: Seeking a Path to Peace in the Ukraine War's Shadow, 2022).

The second outbreak came in August. On 3 August, Baku launched a military operation in Nagorno-Karabakh, saying an Azerbaijani soldier had been killed in the Lachin region in an exchange of fire with forces of the de factor authorities in Stepanakert. (Vartanyan, Shiriyev, & Mihaeljana, 2022). Though bloodier than the March episode, the result was analogous. When the fighting had died down, Azerbaijani forces had gained strategically advantageous positions, and diplomacy soon resumed, culminating late in August in an EU-mediated summit between Armenian and Azerbaijani leaders in Brussels. Although no major announcement emerged, the discussions produced a commitment to start substantive talks on a peace treaty within a month. (Averting a New War between Armenia and Azerbaijan, 2023).

Mediation efforts continued in 2022, in parallel with regular and increasingly violent clashes, with both sides attempting to improve their negotiating positions at the table. After smaller clashes in late July and early August, September 2022 saw the worst hostilities since 2020, with nearly 300 soldiers (an estimated 200 Armenians and 80 Azerbaijanis) killed in an Azerbaijani incursion into Armenian territory – allowing Azerbaijani troops to take control of new positions deep inside Armenia – and at least 7600 civilians displaced from the Armenian provinces. (Caprile & Przetacznik, 2023).

The blockade since 12 December 2022 of the Lachin corridor – the only road connecting Nagorno-Karabakh to Armenia – by a group of Azerbaijani pro-government activists is having severe humanitarian consequences for the 120 000 Armenians living in the enclave. With the inaction of Russian peace-keeping troops and the blessing of the Azerbaijan authorities, the blockade has put additional pressure on Yerevan (and Stepanakert) to agree on a peace deal on Baku's terms. On 23 April 2023 Azerbaijan authorities doubled down and established a checkpoint on the Lachin corridor, justifying the move by claiming that Armenians had been shipping military equipment on the road, and that the road passed through their territory and so they had a right to establish checkpoints on it. Armenia has called Azerbaijan's action 'a flagrant violation' of the Russian-backed ceasefire agreement of November 2020 and appealed to Russia, whose peacekeepers are supposed to be maintaining security on the road, to reverse the situation. Moscow's response, 24 hours later, was a non-

committal general condemnation of violations of the November 2020 agreement, while the EU and the US promptly expressed concerns that the move could jeopardize the peace negotiations. (Caprile & Przetacznik, 2023).

### **3-1-Iran's stance toward recent developments in south Caucasus region**

This war presents serious challenges to Iran, which styles itself as a "major power" in the south Caucasus, especially because Turkey, its Muslim rival, and Azerbaijan, which it has long regarded with suspicion, are now on Iran's border with armed forces and as allies. These developments seriously challenge Iran's pretensions to major power status, as well as its more material and tangible state interests in the south Caucasus, (Blank, 2021). The ramifications resulting from the Second Karabakh War have undeniably posed significant threats to Iran's interests within the South Caucasus region. Armenia is vital for Iran, allowing for access to alternative markets, balancing power against Azerbaijan and for facilitating Tehran's assertion of regional dominance. In response to this matter, Iran promptly embarked on diplomatic and, at times, military initiatives aimed at confronting this crisis. Iran's discontentment with the unfolding events and the subsequent challenges arising from these events can be explicated through several key factors.

The recent conflict has not only resulted in the defeat of Iran's prominent regional partner, Armenia, but has also brought forth an escalation in Turkish influence within the Caucasus region, thereby having significant implications for Iran. Furthermore, the Republic of Azerbaijan, in strategic alliance with Turkey, is currently solidifying its presence in the region. Of particular concern to Iran is Turkey's participation in military exercises conducted jointly with the Republic of Azerbaijan in close proximity to the Iranian border, which has raised apprehension within Iranian circles.

Moreover, the unwavering commitment exhibited by Turkey and Azerbaijan towards the establishment of fresh transportation routes, notably the Zangzor corridor that will serve as a direct link between the Republic of Azerbaijan and the Nakhchivan region which Iran claims that the border region through which the Zangezur corridor would pass would de facto fall under Azerbaijan's control and eventually will lead to the closure of the Iran-Armenia border therefore weaken Iran's position in the region, alongside the direct connectivity planned between Turkey and the Republic of Azerbaijan, undoubtedly portend a multitude of adverse implications for Iran. Consequently, Iran will be compelled to withhold its consent regarding this development.

The demographic composition of northwestern regions in Iran predominantly encompasses the Turkish population, who have historically been deemed by the central government as a potential locus for ethnic unrest. In light of the Republic of Azerbaijan's successful reclamation of territories previously occupied by Armenia, concerns regarding the potential diffusion of ethnocentric sentiments and separatist movements within Iran's own territory have notably intensified. The significance of this matter extends to shaping the relationship between Iran and Azerbaijan. Given the unique circumstances surrounding the Second Karabakh War and its consequential geopolitical impact, Iran has adopted a cautious and measured approach in addressing the situation.

The aforementioned matter has given rise to Iran adopting a somewhat paradoxical stance with regard to the conflict between Azerbaijan and Armenia. It could be argued that a discernible disparity exists between Iran's officially stated policy and its actual execution in this regard.

Another significant factor that has contributed to Iran's pessimistic outlook on the Republic of Azerbaijan and its post-Second Karabakh War motivations pertains to the enduring source of discontent and disagreement between the two countries, namely the relationship between the Republic of Azerbaijan and the State of Israel. This issue has consistently roused Iran's dissatisfaction and has emerged as a cause for concern.

During the past 15 years, Baku has purchased millions of dollars' worth of Israeli armaments. Tehran views Israel as a major threat to its national security. Therefore, the availability of Israeli weaponry in the region, especially unmanned aerial vehicles (UAVs), has made Iran uncomfortable and prejudiced against Azerbaijan. (Gafarli, 2020).

In light of the developments that posed potential risks to Iran's interests within the region, Iran promptly initiated diplomatic and military maneuvers to address these evolving circumstances. However, concerning the diplomatic dimension, it appears that Iran encountered considerable challenges in safeguarding its interests.

Iran's attempts to mediate a peaceful resolution between Azerbaijan and Armenia were largely ineffective, rendering Iran unable to establish itself as a consequential and dependable actor in the regional context. Consequently, Iran's official endeavors to address the crisis and its aftermath faced notable disregard. Compounded by conflicts in other regions and its resultant international isolation, Iran has witnessed a decline in its credibility as an influential actor and has experienced a form of strategic passivity within the South Caucasus region.

In terms of military implications, the outcome of the conflict between Azerbaijan and Armenia appeared heavily tilted in favor of the Republic of Azerbaijan right from its commencement. Iran faced the potential threat posed by the significant military presence of the Republic of Azerbaijan, backed by Turkey, along its borders. Iran never would like to see the advancement of Turkey in the Caucasus, because Turkey is one of the central members of the NATO and the second army in the alliance after United States. It means that military deployment of the Turkish army in Azeri-controlled territories of Karabakh after the war in 2020 with the mission of so-called monitoring group is considered by Iran as direct challenge for its national interests. (Voskanyan, 2022).

Furthermore, considering Armenia's defeat in the war, Iran confronted the possibility of the conflict spilling over across its borders, thereby risking the marginalization of its interests within the equations of the South Caucasus region. In response to this predicament, Iran's military commanders took a resolute position vis-à-vis the developments transpiring in the South Caucasus region. Their explicit opposition to any alterations or changes to the borders was unequivocally expressed, as evidenced by statements made by the commander-in-chief of the army and the commander of the ground forces of the Iranian army. Their steadfast opposition highlighted Iran's unwavering commitment to maintaining the region's existing geopolitical landscape and underscored Iran's firm stance against any modifications to the region's geographical boundaries.

Iranian officials have repeatedly declared that they will not allow the closure of Iran's borders with Armenia, that opening the Zangezur Corridor will result in Iran being bypassed from the regional equation, and that they will not allow foreign powers, especially Israel, to settle on their borders. In this context, they held consecutive exercises on the borders of Azerbaijan. (Uygur, 2023).

After the war, one of the important changes in the 30-year-old Iran-Azerbaijan relations has been that the Azerbaijani authorities, especially Ilham Aliyev, adopted a harsher discourse against Iran, and they used a sort of rhetoric targeting the Azerbaijani Turks in Iran by leaving the defense position behind. Azerbaijani media has also returned to the long-forgotten "South Azerbaijan" discourse, and the emphasis on 30 million Azerbaijanis living in Iran has started to be expressed on every platform. (Uygur, 2023).

Overall, Iran's stance towards the South Caucasus and the aftermath of the Second Karabakh War was characterized by challenges to its major power status, concerns over its tangible interests, the need to address internal ethnic dynamics, opposition to changes in borders, and unease regarding Azerbaijan's relationship with Israel.

Amidst this complex situation, Iran has directed its efforts towards mitigating the conflict's scope and thwarting its potential escalation. Simultaneously, Iran has staunchly striven to uphold the existing status quo in the South Caucasus region.

### **3-2-Azerbaijan's stance in the aftermath of the second karabakh war**

Over the past 25 years, Baku has adopted a strategic approach of waiting for the opportune moment to advance its interests, effectively bolstering Azerbaijan's military and economic strength. This approach has enabled Azerbaijan to cultivate positive relationships with key geopolitical players involved in the conflict with Armenia. In line with this patient strategy, Baku has proactively engaged in diplomatic endeavors, including signing a strategic alliance agreement with Moscow in February 2022, to enhance its negotiating position vis-à-vis Armenia. Additionally, Azerbaijan has sought to garner Turkish support, with the hope that Ankara would advocate for Azerbaijani interests.

At the same time as it was working through diplomatic channels to achieve its objectives, Baku worked to improve its battlefield position. In rough parallel to the positive diplomatic engagement in March-April 2022, fighting increased in and around Nagorno-Karabakh's Russian-patrolled area. Baku appeared to want to force Armenia into on a peace agreement on Azerbaijan's terms, through a mix of threat and diplomacy, at a time

when Russia and other powers were distracted by the war in Ukraine. When ceasefires broke down in March and August, Azerbaijani troops were able to take control of strategic sites inside the Nagorno-Karabakh area patrolled by Russian peacekeepers (Ambrosetti, 2022).

The Republic of Azerbaijan is actively pursuing the establishment of new commercial and economic corridors as one of its main objectives. Undoubtedly, the changes in this area, along with the re-establishment of lines and junctions in the transport infrastructure of the South Caucasus, will have a significant impact on intra-country and intercountry, as well as intra-regional and interregional trade and economic relations. This will create opportunities for Azerbaijan to diversify its cargo transportation to the West via Turkey and to the South via Iran. Also, Azerbaijan's short-term and medium-term expenditures and long-term revenues as a transit country in the region will be increase.

According to Article 9 of the ceasefire agreement signed between Azerbaijan and Armenia after the 44-day war, the Zangezur corridor is a corridor that will establish a connection between Azerbaijan and the Nakhichevan Autonomous Republic, which is part of the exclave. The corridor is essential for ensuring transit between Azerbaijan and Nakhichevan Autonomous Province. Azerbaijan wants to strengthen its role in transferring its own energy resources and the region's energy resources in Central Asia and the Caspian Sea to the West. Turkey defends the Zangezur corridor project demanded by Azerbaijan and considers it very important for them. The project is considered an opportunity to open Turkey directly to Azerbaijan and the Turkic states in Central Asia. (Mammadov, 2022).

In conclusion it can be said that After the conclusion of the Second Karabakh War, the Republic of Azerbaijan is actively pursuing several key objectives. Firstly, Azerbaijan aims to solidify its victory over the Republic of Armenia and establish full control over the recently liberated territories. Secondly, there is a focus on ensuring security and initiating the reconstruction process in these areas to facilitate the safe return of citizens. This will allow Azerbaijan to implement its economic and development plans for the previously conflict-ridden regions. Lastly, the creation of new corridors and roads is a priority, as it serves to reduce Azerbaijan's dependency on regional players such as Iran and Russia, while simultaneously expanding its geopolitical and economic influence in the region.

#### IV. Model

In this article we are going to analyze Iran and Azerbaijan's tensions regarding the aftermath of the second karabakh war and the opening of zangezur corridor by using a non-cooperative 3x3 game in and extensive form game. But before representing the situation, some assumptions are necessary.

- Iran and Azerbaijan are both rational actors and they intent to maximize their payoffs by implementing the best policy option available to them.
- We have two players in this game: Iran and Azerbaijan
- Each player has 3 strategies, as shown by tables 1 and 2

To gain a comprehensive understanding of the conflict between Iran and Azerbaijan, this analysis adopts a formal framework using a 3x3 game configuration. Initially, we will scrutinize the policy options available to each actor. Subsequently, we will assess the relative merits of these options by constructing a matrix and assigning numerical values based on Preference Order (ranging from 9 to 1, representing the highest to lowest preference for each player). The aim is to quantify the relative significance of each policy option for both players. Finally, this study will utilize Gambit software to examine the game model in a more detailed manner.

Tables 1 and 2 provides us with Azerbaijan and Iran's policy options:



Dominant Aggression (DA)	unilateral imposition of a particular agenda in the South Caucasus region, irrespective of the positions or strategies employed by other actors involved.
Tactical Longevity (TL)	the adoption of strategic patience, whereby Azerbaijan carefully plans and executes its policies and objectives within the South Caucasus region. By exercising patience, this approach ensures that plans are implemented at an opportune time and with minimal associated costs.
Diplomatic Initiative (DI)	diplomatic and comprehensive approach involving the collaboration and engagement of multiple actors, including Iran, within the realm of regional developments. By fostering dialogue, establishing diplomatic channels, and considering the priorities and perspectives of all relevant stakeholders, this approach seeks to facilitate inclusive decision-making processes and achieve mutually beneficial outcomes.

*Table 1 Azerbaijan's policy options*

Military Action (MA)	military response in the event that Azerbaijan imposes its demands and brings about significant geopolitical changes in the South Caucasus region. This approach signifies a readiness to employ force or defensive measures to safeguard national interests or regional stability against perceived threats or unfavorable shifts in the geopolitical landscape.
Do Nothing (DN)	adopting a passive and restrained stance in response to future developments within the region. Under this approach, a country refrains from taking proactive actions and adopts a limited response strategy, which may involve closely monitoring events without initiating significant shifts in policy or engagement.
Diplomatic Participation (DP)	actively participating in diplomatic initiatives to shape the trajectory of regional development. This approach emphasizes engagement and proactive involvement in diplomatic efforts, both bilateral and multilateral, to influence decision-making processes and contribute to the long-term stability, prosperity, and cooperation within the South Caucasus region.

*Table 2 Iran's policy options*

As previously indicated, a quantitative evaluation of the relative merits of each policy option will be conducted to provide a numerical value. This assessment will be achieved by constructing a matrix, wherein numerical values will be assigned based on the Preference Order. Table 3 portrays the matrix encompassing the policy options for each player:

		Iran		
	Policy Options	MA	DN	DP
Azerbaijan	DA	DA-MA	DA-DN	DA-DP
	TL	TL-MA	TL-DN	TL-DP
	DI	DI-MA	DI-DN	DI-DP

*Table 3 Azerbaijan and Iran Policy Options Matrix*

In this section, I will rank the payoffs based on each player's point of view separately. As it has been mentioned before, the payoffs are going to be ordinal. Unlike cardinal payoffs, ordinal payoffs don't have any meaning on their own and show only the ranking of preferences. Table 3 shows the matrix of the game. Based on each player's actions there are 9 possible states in this game.

For Azerbaijan preference ranking are as follows:

DA-DN > DA-DP > TL-DN > TL-DP > DI-DN > DI-DP > DA-MA > TL-MA > DI-MA

For Iran preference ranking are as follows:

DI-DN > TL-DN > DI-DP > TL-DP > DI-MA > TL-MA > DA-MA > DA-DP > DA-DN

#### V. Assessing the situation by applying game theory in extensive form:

In this section, we will summarize the material presented so far and examine the situation in south Caucasus between Iran and Azerbaijan using a game theoretical approach. Figure 1 presents the policy options of two actors in a Extensive form game. By analyzing these options, we can gain insight into the potential outcomes and strategies of each actor.

Within this scenario, Azerbaijan assumes the role of the initiating player in the game. As the second Karabakh war commenced, Azerbaijan took the initial action. In response, Iran conducted a series of military maneuvers and expressed a steadfast stance against any alterations to the borders of South Caucasus nations. Consequently, the next move in the game will be undertaken by Azerbaijan, as it evaluates the circumstances and prepares to commence its subsequent action.

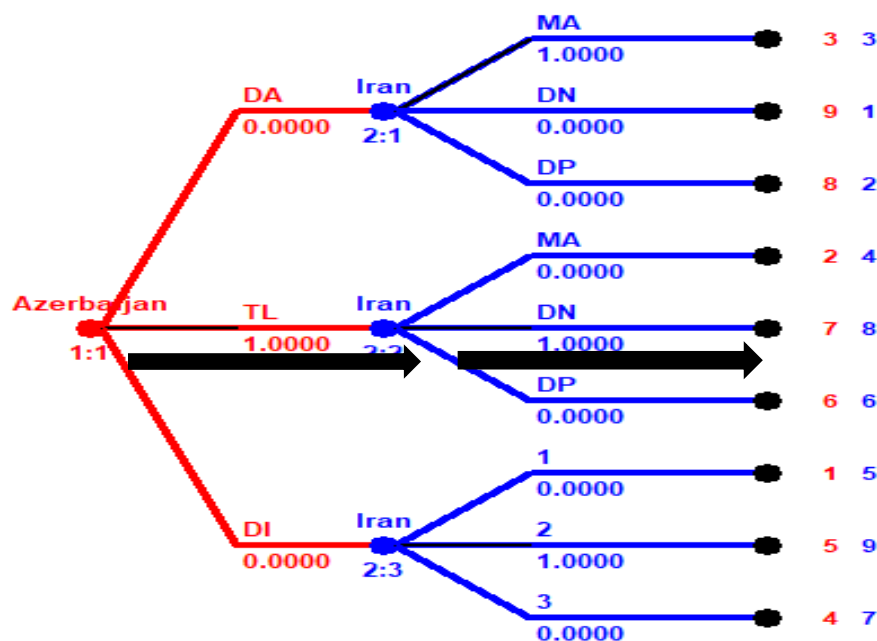


Figure 1 Extensive Form Game

Figure 1 presented above illustrates the application of game theory principles using the Gambit software. Upon analyzing the data and utilizing the Gambit software, the accompanying diagram illustrates the determination of the Nash equilibrium's sustainability. As indicated, the equilibrium point was identified within the (TL, DN) segment. This finding suggests that in the absence of significant changes to the prevailing conditions, Azerbaijan is likely to strategically adopt initiatives in the region while carefully timing its actions for maximum impact. In response to these circumstances, it is probable that Iran will refrain from engaging in immediate military action or displaying any noteworthy initiatives. By exhibiting restraint, Iran aims to maintain stability in the region and avoids escalating tensions or entering into conflict, understanding the potential risks associated with impulsive actions.



it is important to note that the dynamics of the situation can evolve over time, and actions and reactions are subject to change. Hence, continuous monitoring and assessment of the prevailing conditions are essential for both Iran and Azerbaijan to adapt their strategies and policies accordingly.

## VI. Conclusion

In conclusion, the aftermath of the Second Karabakh War has significantly impacted the dynamics in the South Caucasus region, particularly the relationship between Iran and Azerbaijan. The conflict has challenged Iran's position as a major power in the region, with Turkey and Azerbaijan now exerting influence on its border. The opening of the Zangezur corridor has further complicated the situation, as it has put pressure on Iran to agree to a peace deal on Azerbaijan's terms.

To analyze the tensions between Iran and Azerbaijan, a non-cooperative 3x3 game in an extensive form was employed and we assumed that Both countries are rational actors seeking to maximize their payoffs. The game evaluated the policy options available to each country, Azerbaijan's available policy options include dominant aggression, tactical longevity, and diplomatic initiatives. On the other hand, Iran's policy choices consist of military action, doing nothing, and diplomatic participation.

Based on the preference order and assigning numerical values to each policy option, a matrix was constructed to quantify the relative significance of each option for both players. The Nash equilibrium point was determined to be in the segment of tactical longevity for Azerbaijan and doing nothing for Iran. This suggests that Azerbaijan is likely to adopt strategic initiatives in the region while carefully timing its actions, while Iran aims to maintain stability and avoid escalating tensions.

However, it is important to note that the situation is subject to change, and continuous monitoring and assessment are necessary for both countries to adapt their strategies accordingly. The dynamics in the region can evolve, and actions and reactions may alter the equilibrium point. Therefore, it is crucial for Iran and Azerbaijan to remain vigilant and flexible in their approaches to navigate the complexities of the South Caucasus region.

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