

Prediction of Relation of I. R. Iran and Saudi Arabia in Region by Game Theory

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ABSTRACT: This article examines the relations between Iran and Saudi Arabia after the reign of king Salman and we study major changes in the cabinet, including the Saudi Foreign Ministry and defense. And, using the game theory, we show that likely to be in war between Saudi Arabia and Iran on basis Saudi-Arab air and naval forces. And a ground attack can also take place from ISIL forces around the borders of Iran.

Most of them are Sunnis. Initially, we start with statement of the game Combat Death Hunting, We explore relations and goals between Iran and Saudi Arabia in the region. Then, the situation in Saudi Arabia in Syria, the war in Saudi Arabia and the situation in Saudi Arabia in Yemen. Finally, we look at the relationship between the two countries in the Middle East. Because of the war Iran's Saudi Arabia The whole Islamic world is weakened. Israel can easily reach its destination in the region, using this opportunity to attack Islamic countries like Lebanon, Syria and even Saudi Arabia. Iran uses Hezbollah to fight Israel, Saudi Arabia with Iran and, ultimately, Israel with Iran.

During this period, Iran is constantly seeking to negotiate and find common interests with Saudi Arabia, while Saudi Arabia constantly looking for non-cooperation with Iran. It is not interested in having common interests with Iran. Saudi Arabia seeks to persuade Iran to attack the military. Saudi Arabia continues the game before the completely lifting of Iran's sanctions by European and American nations and eventually a military strike against Iran will begin. There are reasons why the Iranians may be inhibition in the region from Saudi Arabia, which could provide some attractions for attacking Iran in Saudi Arabia. In this article, we will also examine this charm and, using the game theory, we anticipate the probable time of Saudi invasion of Iran on 2018.

Keywords: game theory, Iran, KSA, conflict, prediction

I. INTRODUCTION

A war policy that includes both regulation and implementation as well as the product and outcome of leaders' decisions it is a guide for actions taken by a government beyond its borders to advance its goals other government actors and non-governmental actors. The policy of war focuses mainly on the views of governments and their way of dealing with issues such as security, order, conflict and cooperation, and is constantly evolving.

Based on this, we will examine the Saudi and future politics of the relationship. By game theory we examine the Saudi warlike and bullying regime against Iran throughout the Middle East and the events of Mena from another point of view, and Let's point out that game theory plays an essential role in politics, international relations and wars, and it's best to use game theory before any political dialogue and the beginning of any relationship and war, and we always have a strategy complete for any action from your opponent.

II. SAUDI ARABIA AND IRAN WAR

Saudi Arabia, with the fears that Iran is gaining power, especially after the nuclear deal and its subsequent agreement, has tried to play Iran with a zero-sum game in the Middle East, which, in its imagination, is the winner and the losing Iran. . But after reaching agreement 5+1 and increasing Iran's power, it became clear that Iran's nuclear strategy and the process of the game would be nothing but Saudi defeat and Iran's increasing power in the region and the Middle East.

By changing its strategy toward Iran, Saudi Arabia has been trying to make progressive game with result 0.

Again, Saudi Arabia's inexperienced foreign minister, has taken strategies that are clear that it will be a loss to Saudi Arabia, because Iran has always been and is seeking peace and assistance to its Muslim friends and brothers, and is interested in taking with Saudi in the Middle East crisis to save the region from crisis and turmoil.

III. SAUDI ARABIA AND IRAN WAR IN SYRIA

Given that Iran has never been a warlord and has not greedy eyes to other countries, it has never been a war veteran, but if a country overcame its land, it will defend its security and soil with all its might.

Considering that in the present and after the nuclear accord, Iran has been considered by many countries in the world and has found great popularity among neighboring countries, especially the Middle East, Iran prefers to remove trouble with Saudi Arabia through Negotiated settlement There is no interest in waging war with Saudi Arabia. But Saudi Arabia has become horrified for gaining power over Iran, which has not made the right decision right, Especially after Iran's nuclear talks, the United States did not pay much attention to Saudi demands, Saudi Arabia has become more fearsome. On the other hand, many Arab countries after the Arab Spring and the emergence of popular revolutions, supported by Iran, and Saudi Arabia, on the other hand, in the war with Yemen, which thought it could easily be dominated. It is now becoming a swamp that Saudi Arabia is falling on every day, and on the other hand, the enormous costs that the war has left Saudi Arabia has, to a lesser extent, already weakened Saudi Arabia and the state of affairs The reason is that Saudi Arabia has decided to compete in Syria with Iran and seek change in Syria to prove itself in the region. In this case, Huck and Dove has been playing with Iran in Syria. Assume v is the value of the Syrian state and c the cost of reaching Syria.

Saudi Arabia has taken strategy to solve Syria problem, it plans to isolate Iran and not allow Iran to enter. We are reviewing the Saudi game with Iran in Syria.

Show of this game in form (Huck-Dove)

players: $\begin{cases} 1\text{-Saudi arabia} \\ 2\text{-Iran} \end{cases}$

Action of Players :1-Cooerate Action of Player2:Non cooperative

| | | Player2 | |
|---------|---|-------------|--------------------|
| | | C | D |
| Player1 | C | $V/2, Vv/2$ | $0, V$ |
| | D | $V, 0$ | $(V-C)/2, (V-C)/2$ |

According to the game, which Saudi Arabia is taking and Iran is forced to continue, the pure strategy for the two countries is to cooperate, and the other does not cooperate to dominate only one country in Syria, which is Saudi Arabia's wish. But since Iran intends to calm the situation in Syria, this balance does not require Iran. Suppose the possibility p of a war on the part of Saudi Arabia and what steps should be taken so that Saudi Arabia do not start this war and in the end to start the talks with Iran.

| | | Player2 | |
|---------|-----|--------------------|------------|
| | | q | 1-q |
| Player1 | p | $(v-c)/2, (v-c)/2$ | $0, v$ |
| | 1-p | $V, 0$ | $v/2, v/2$ |

Since mixed equilibrium at the point

$$(v/c, v/c) = (p, q)$$

happened the probability to start war on the part of Saudi Arabia depends on variables V and C ($C > V$). Assuming $v_2 = C$, the cost of war is twice the value of the source then probability of war will be $p=1/2$. If C is greater than v , the less likely it will be war one of the ways to prevent this possible war. Iran is interested in solving the problems of the region with the help of Saudi Arabia to reach a peaceful Middle East, but with regard to the strategies that Saudi Arabia has taken, Iran does not have enough confidence in Saudi Arabia. For this purpose, Iran prefers to play the game of the two prisoners with Saudi Arabia. To help Saudi Arabia solve the Syrian problem and reduce Western interference in the region in this game $c < v$.

Showing the Game in Strategic Form (Riddle of Two Prisoners)

players: $\begin{cases} 1\text{-Saudi arabia} \\ 2\text{-Iran} \end{cases}$

Action of Players :1- Cooperate Action of Player2: Non cooperative

| | | Player2 | |
|---------|---|-------------|--------------------|
| | | C | D |
| Player1 | C | $V/2, Vv/2$ | $0, V$ |
| | D | $V, 0$ | $(V-C)/2, (V-C)/2$ |

The pure Nash equilibrium of the game is (D D), meaning both countries can solve the Syrian crisis with Saudi Arabia, while if Saudi Arabia takes the right strategy, it can solve the Syrian crisis without harming Iran. Regarding the situation of the Saudi war with Yemen and the costs incurred Saudi Arabia, the domestic situation in Saudi Arabia and the events that took place against Saudi Arabia Adel al-Jabir's speeches against Iran can be considered as threats it's incredible, but you cannot be indifferent to these words because the new Saudi regime, and especially the work of the crown prince and minister of affairs Saudi Arabia has seen that behind the behaviors and decisions nothing but there is no rush and nobody should be prepared for any behavior on their part therefore, Iran should take steps to secure the country providing power and more in every way. Assuming that Adel al-Jabir's speeches against Iran and Iran's threat we should consider war as a believable threat Iran prepare for a possible war with Saudi Arabia. This preparation can be used to strengthen the military and weapons forces Iran's Popularity and Allied Neighborhood to Strengthen Security Border, and ... and Saudi Arabia can also advance such a process.

Take up the game table is based on the application of the puzzle game of two prisoners in relationships International is as follows:

A = Preparedness for war and increased military and weaponry B = Maintain existing forces and neglect to start a possible war

| | | Player2 | |
|---------|---|---------|-----|
| | | A | B |
| Player1 | A | 3,3 | 1,4 |
| | B | 4,1 | 2,2 |

In the hope that there will not be a war, the two countries cannot make any effort to increase their readiness, in which case there will be no special cost to the two sides. This is the Nash equilibrium, which is the game of the two prisoners, which should not be taken by Iran in light of recent Saudi behaviors. If the two countries are struggling to increase the power of confrontation in the war, they will incur a lot of costs, which, of course, will be less for Iran. But Saudi Arabia will pay a huge amount of money, except for payments to date to fight Yemen and keep its allies. Due to the fact that it has self-reliant itself in the years of sanctions and has produced most of its military and

weaponry equipment, Iran could use blocked funds during the boycott if it does not have to buy weapons. Now, if a country is to increase its strength and the other country does not pay the cost for any reason, it will surely be a loser in this war. So, it's better for Iran, given the Saudi knowledge, it's better for itself it will prepare a possible battle that will cost less in any case for Iran. As a result, it can increase its military capability in the region and the world, with the exception of its own internal security with this cardium, so that never a country even thinks of invading Iran, and considering Saudi Arabia's not so good situation, Set aside the absolute power of the region.

In the region of the Middle East, Saudi Arabia is seeking a lack of cooperation with Iran, and has set a deadlock game. But Iran is always looking for Saudi Arabia's cooperation and common interests in the Middle East, preferring to end the region's crisis with the help of Saudi Arabia, in order to shorten the West and the United States from the region as soon as possible. Iran is interested in playing deer hunting with Saudi Arabia.

Present of game in mixed strategic form (deer hunting deadlock)

Players: 1-saudi Arabia

2- Iran

Players Actions: C; cooperate

D: non cooperate

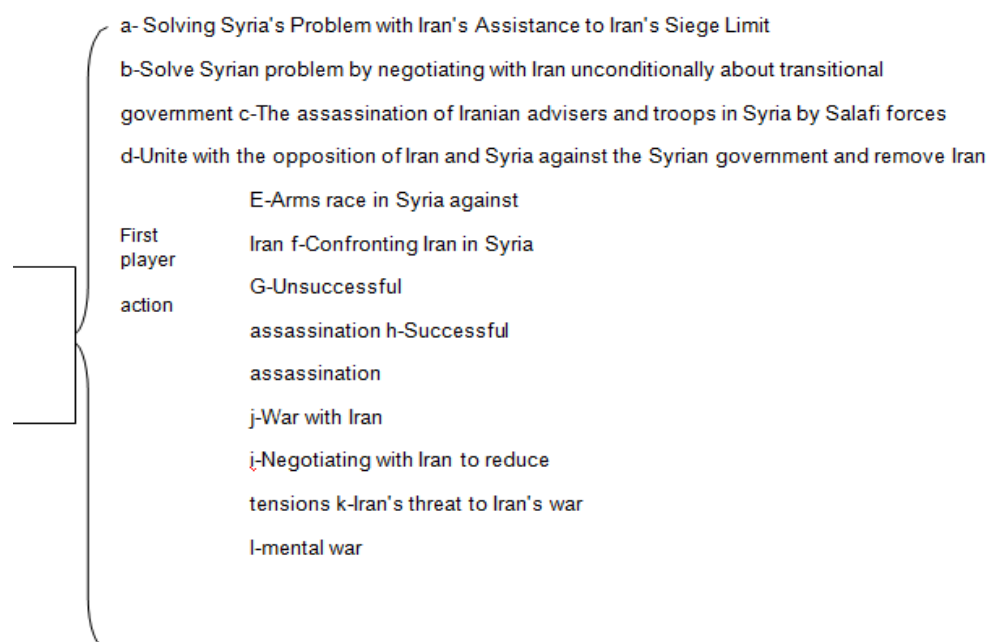
| | | Player2 | |
|---------|---|---------|-----|
| | | C | D |
| Player1 | C | 3,1 | 0,3 |
| | D | 2,0 | 1,2 |

The pure Nash equilibrium of the game is a point (1, 2), that is, if Saudi Arabia does not change its game in the region and Iran is still seeking to cooperate with Saudi Arabia, eventually both countries will have to not cooperate, which will benefit Saudi Arabia more than.

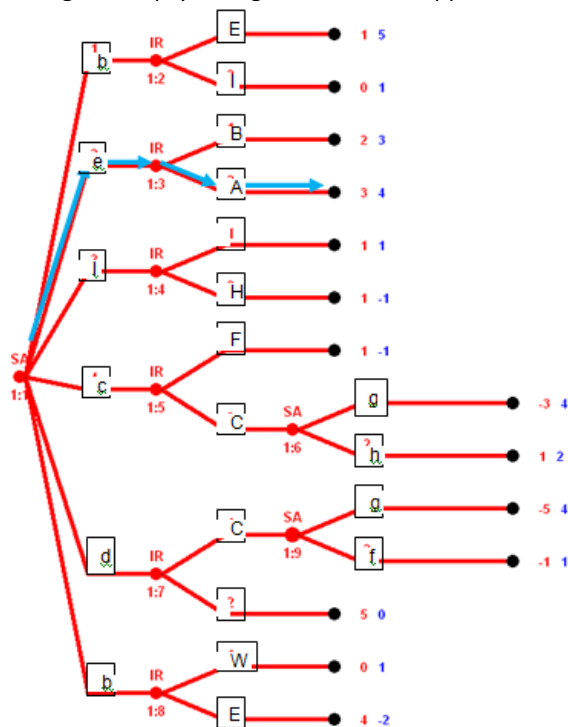
Present of game in extension form (in Syria):

Players: 1-Saudi Arabia

2-Iran



- A- Increase military weapons to deal with Suadia Arabi
- B- Negotiating with Saudi Arabia to end tensions
- Deploying more troops to Syria to confront Saudi Arabia and support the Syrian people
- D- Retreat
- E- Adopt Saudi conditions
- F- Failure to send advocates and intelligence forces
- G- Neutralize the psychological warfare
- H- Disregard for psychological warfare
- I- Opposition to Saudi conditions



Nash equilibrium is $SPE = \{ (e, A) \}$

Present of game in extension form of Yamane war

Players: 1-Saudi Arabia 2-

Iran

a-Deal with the Iranian military presence in Yemen

b-Avoiding military adviser to Houthi

c-Negotiating with Iran to get out of the swamp of Yemen

d- Coping with the financial of the cultural policies of the food-drug aid of -Iran in

e- Accept a Shiite government in Yemen

f-Prevent the release of the resistance and revolution in behavior among people of

g-Psychological warfare

A-Deal with the Saudi military presence in Yemen

B-retreat

C-The lack of dealing

D-Conflict with Saudi Arabia and add the military adviser

E- Acceptance of the demands of Saudi Arabia

F-Reject the demands of Saudi Arabia

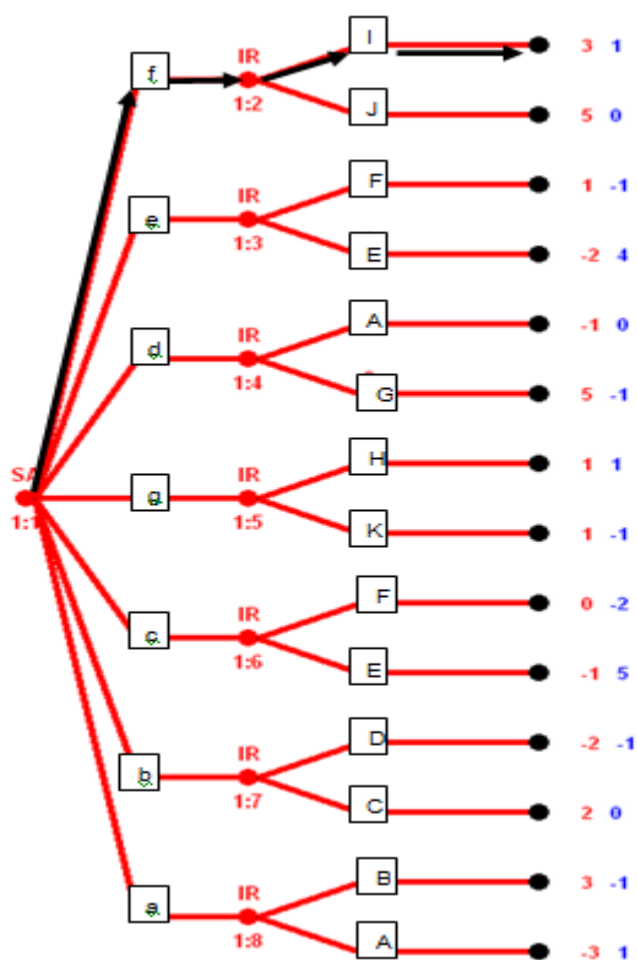
G-A complaint to the United Nations to support the oppressed people of Yaman

H-Neutralize the psychological warfare

K-To neglect the psychological warfare

I-The support of the people oppressed, Yemen

J-Silence facing Saudi Arabia



Nash equilibrium will SPE(f,I)

Present of game in extension form (Iran and Saudi Arabia In region)

Players: 1- Saudi Arabia**2-Iran****Actions of Plyaer 1:**

a-Negotiations to resolve the issues between Iran and Saudi Arabia

and calm down the relationships.

b-Division between the factions and religions of Iran

c-War with Iran in Syria and increasing armament in Syria

d- Direct war

e- Oil war

f-Attempts to isolate Iran with foreign partners

g- Psychological war

i-War in Yemen

j- War in Iran

k-Compromise

Action of player 2 : A-Acceptance of the terms of the Saudi

B-Reject the conditions of Arabia

C-Disregard

D- The increase of weapons

E-Devise and neutralize

F-Reaction to the start of the war on behalf of Saudi Arabia

G-War

H-Neutralize the psychological warfare

I-retreat

J- Compromise

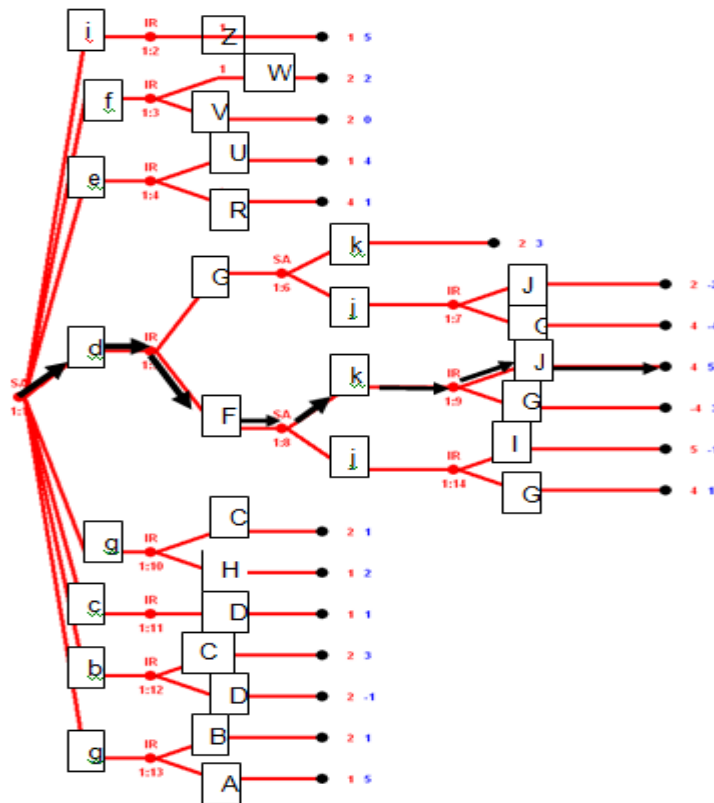
R-The economic submission

U- The lack of economic surrender

V-isolating Iran

W -confrontational with Saudi

Z-The support of the people of Saudi Arabia



Nash equilibrium is $SPE\{dk,FJ\}$

IV. THE IMPACT OF PERSONALITY ON FOREIGN POLICY

What makes the foreign policy of a country work is paying attention to the geopolitical position, economic status and internal affairs in terms of efficient and developed manpower and awareness of environmental contexts, especially in the international system.

Professor James Jr. is a distinguished theorist of international relations the most important determinants of US foreign policy, especially during Ronald's Reagan believes five variables affecting foreign policy of countries we have these variables some in the developed world of power and influence deeper, and some as a variable called the personality in the Third World developing countries have more influence on foreign policy formation.

With the coming of the kingdom of Salman as a king and a relatively deep transformation in power, including abandoning the brother and choosing the nephew as crown prince who did not have history in Saudi politics and empowered his young son Mohammed bin Salman, a fan of the war against Yemen, and despite the study of politics in the West, it has enough experience and sophistication Saudi Arabia's foreign policy is not conservative with rationality, to remove the interests of this government and radicalism with the goal showing military power in the area and gaining more popularity among some internal currents and exponential power against some other governments in Middle East.

Adel al-Jabir, from 2002 to 2015, the Saudi ambassador to the states United was a graduate of economics and political science from George Town University, somewhat of a significant personality difference from the predecessor it has its ownless attention to conservatism, poor ratio with the influential Saudi princes and influencers and the presence of a large part of the era his life in America has made him different. With an individual presence a relatively moderate, year-old average, is interested in communicating with the United States and the powerful Saudi government liaison with Israel's powerful lobby (AIPAC) there is a rather insignificant relative difference in Saudi foreign policy.

Finally, understanding the personality variable as the effect of individual and personality skills the mental and intellectual opinion (again confirms Professor Rosen's speech which is in the less developed or developing countries of foreign policy it is strongly influenced by individuals and personality variables, unlike developed nations which has a role and system variable from a higher position [25] and [00].

It is now investigating the possible profits and losses of Iran and Saudi Arabia in this war Probably:

Saudi profits:

- 1- Signs of Saudi Arabian Nasalism
- 2- Ending pseudo-conflicts in the region
- 3- Increasing oil prices in favor of allies
- 4- Creating Sunni Arab Coalition Against Shiite Crescent
- 5- Eliminating the spirit of resistance in the Middle East and suppressing turmoil in region
- 6- Superpower in the region
- 7- Becoming from a financial economic power to a military political power
- 8- Domination of the Persian Gulf
- 9- Dominance of oil resources in the region
- 10- Attracting maximum support from the United States and its Western allies 11-The Return of the Lost Arabic Spirit in Arabic History
- 12- Showing the Arab-American power in the neighborhood of the Russians and undermining their interests in Syria
- 13- China and Russia become more isolated in Central Asia and Western Asia
- 14- Attaining the maximum and maximum support of the Arab princes from the Saudi Minister of Defense (son of Ben Salman)
- 15- Leading the Islamic World
- 16- International consensus on Iran and its performance in the region
- 17- Attract support and support from its Western and American supporters

Saudi's losses:

- 1- Signs of Saudi Arabian Nasalism
- 2- Ending pseudo-conflicts in the region
- 3- Increasing oil prices in favor of allies
- 4- Creating Sunni Arab Coalition Against Shiite Crescent
- 5- Eliminating the spirit of resistance in the Middle East and suppressing turmoil in region
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- 17- Attract support and support from its Western and American supporters

Saudi's losses:

- Damage to Saudi Arabia's oil and strategic centers 2-Gulf insecurity and oil transit in the Gulf
- 3- Insecurity for Arab Gulf States
- 4- The powerful opposition princes Saudi in sovereignty
- 5- Formation of popular uprisings inside Saudi Arabia and Arab and allied allies Saudi Shiite, including Qatif
- 6- The loss of focus in Yemen and Syria and the weakening of the Sunni-Takfiri front 7-The cost of weapons and the hiring of a large number for war
- 7- Reducing religious tourists

Iran Profit:

- 1- Showing the main face of the al-Saud family to the Islamic world
- 2- Possibility to strengthen the Shiite Crescent and the power of the Resistance 3-The possibility of Hezbollah's strength and pressure on Israel
- 4- Possibility of strengthening the anti-American front with Iran, Russia and so on China

Iran's losses:

Gulf insecurity

Destruction of the island of stability and tranquility in the region

Increased weapons costs rather than development costs

- 4- Lacking the country's scientific growth
- 5- Depending on countries like Russia and China and giving them more privilege 6-Loss of resistance axis
- 7- Abuse of transnational countries such as France and the United States to hit Iran 8-Impact or destruction of Iran's strategic areas and facilities
- 9- Remaining sanctions on Iran
- 10- Public discontent for preventing or planning a war

11- The possibility of weakening Shiites in the region

Common disadvantage:

- 1- Insecurity in the Gulf and neighboring countries
- 2- Insecurity in oil shipment and transit in the Gulf
- 3- The destruction of the assets of these two countries and spending a great deal
- 4- The effects of war on people in the country in terms of cultural, financial and scientific and Livelihood
- 5- The weakening of military, political and financial power in each country
- 6- The US and Western countries abused oil prices
- 7- Israeli strength in the region
- 8- Increasing the presence of foreign and western forces in the Persian Gulf

Conclusion

By the above data from Gambit conclusion is that Saudi Arabia will start war with Iran

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