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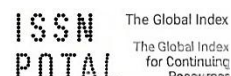
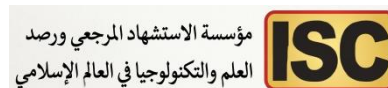
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Macroeconomic Indicators: Iraq and the Dynamics of Oil and Conflict in the Arabian Gulf the Impact of Regional Wars (1950–2000)

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Abstract: This study explores the complex relationship between regional conflicts and global energy security in the Arabian Gulf between 1950 and 2000, with a particular focus on Iraq's role in shaping this dynamic. During this period, the Gulf emerged as a strategic energy hub, while simultaneously becoming a theater for prolonged geopolitical instability. Key events such as the Iranian Revolution, the Iran–Iraq War, and the Iraqi invasion of Kuwait significantly disrupted oil production and supply routes, triggering sharp fluctuations in global oil prices and prompting international interventions.

By employing a historical-analytical approach, the research investigates how Iraq is political and military engagements affected both regional power balances and the global energy market. The study draws on archival data, oil price statistics, and international policy responses to assess the impact of these crises on the concept and practice of energy security. It argues that Iraq's central role in the Gulf's conflicts was pivotal in redefining global strategies for securing energy supplies and in shaping long-term geopolitical alignments in the region.

The findings of this research contribute to a deeper understanding of the nexus between war and energy in one of the world's most volatile yet vital regions. They also offer relevant insights for contemporary energy security debates, particularly in the context of current and emerging geopolitical risks.

Keywords: Arabian Gulf, Oil Politics, Gulf War, Iraq, Middle East.

1. Introduction

The Arabian Gulf stands as one of the most geopolitically sensitive and economically critical regions in the modern world, primarily due to its abundance of petroleum resources. Among its key players, Iraq occupies a unique and often volatile position, both as a major oil producer and as a nation repeatedly caught in the crosscurrents of regional and international conflict (Rauscher 2012). Between 1950 and 2000, Iraq's trajectory was mark by dramatic shifts from monarchy to authoritarian rule, from regional power to international pariah all of which unfolded against the backdrop of a world increasingly dependent on Gulf oil (Sher 2017).

The nationalization of oil businesses throughout the area, the emergence of OPEC, and the strategic realignment of Western powers—especially the United States—in reaction to changing access to energy resources were all significant events that occurred during this time. Under Saddam Hussein's leadership, Iraq's military and political aspirations became intricately linked to the world's oil politics (Igorivna 2016). In addition to being regional conflicts, the Iran-Iraq War (1980–1988), Iraq's invasion of Kuwait, and the subsequent Gulf War (1990–1991) had an impact on international markets, disrupting oil flows, influencing prices, and leading to extensive foreign military interventions intended to protect energy interests (Mofid 2005).

This study aims to investigate how the Arabian Gulf's and the global energy-security landscape altered by Iraq's internal and foreign wars in the second half of the 20th century. This study demonstrates how closely linked energy and security have become by looking at the nexus of international diplomacy, oil geopolitics, and regional violence. It also examines the extent to which political unrest in important production zones continues to jeopardize global energy security. In a world still reliant on fossil fuels from geopolitically unstable locations, it is essential to comprehend the historical interactions between Iraq's wars and the global oil order in order to contextualize current issues and foresee future disruptions.

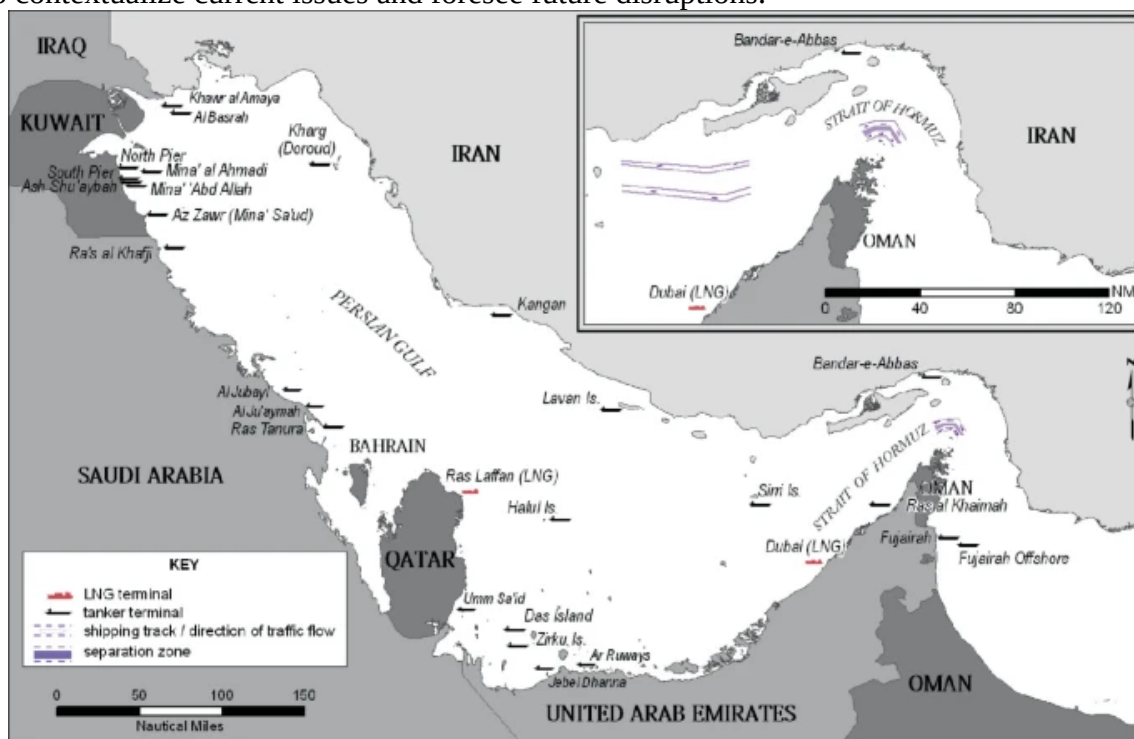


Figure 1: Middle East Area.

2. Literature Review

Between 1950 and 1980, Iraq underwent a transformation, transitioning from a colonial oil producer under foreign control to a fully sovereign petro-state with major regional influence. This transition laid the structural, economic, and geopolitical groundwork for Iraq's involvement in regional conflicts and the impact on global oil security. Understanding Iraq's oil development, nationalization policies, and the relationship between resource riches and political authority throughout these three decades is critical for

contextualizing the later wars that changed the Arabian Gulf and worldwide oil markets as showing in Table 1.

2.1 Historically: Control over Iraq's oil resources underwent a significant change between 1950 and 1980, going from foreign corporate ownership to total state ownership under the Ba'athist regime. Iraq's politics and its place in the world energy market drastically altered by this period of nationalism and growing petrodollars.

External Control: Foreign interests first controlled Iraq's contemporary oil business, largely through the Iraq Petroleum Company (IPC), a consortium of British, French, and American companies that included BP, Shell, Exxon, Mobil, and the Compagnie Française des Pétroles (Marr 2018). IPC held all exploration and export rights, giving Iraq nominal royalties while keeping the majority of earnings. By the early 1950s, oil accounted for more than 90% of Iraq's export revenues, but the country got just a portion of the economic advantages, demonstrating the state's inadequate control over its natural resources (Yergin 2012).

Iraq reached the "50/50 profit-sharing" deal in 1952, representing a rising trend in the Middle East toward greater resource management and the first step toward restoring economic sovereignty (Fattouh 2007). However, actual authority remained with the IPC, and internal anger of foreign influence grew, spurred by nationalist groups inspired by regional leaders like as Gamal Abdel Nasser of Egypt.

The Nationalism Resources: The collapse of the Hashemite dynasty in 1958 propelled General Abdul Karim Qasim to power, heralding the growth of resource nationalism in Iraq (Marr 2018). Qasim's administration attempted to reestablish Iraqi authority over oil through changes like as Law No. 80 (1961), which expropriated about 99.5% of IPC's concession area while leaving only producing fields under corporate management (Alnasrawi 2002).

Iraq's intention to manage its oil resources independently of multinational corporations demonstrated in 1966 with the establishment of the Iraq National Oil Company (INOC). This strategy laid the groundwork for Iraq's future assertiveness within OPEC and was in line with broader Middle Eastern trends toward nationalization and sovereignty over vital resources (Hinnebusch 2003).

2.2 Consolidation of States and Nationalization (1970–1979): Fueled by the growing influence of the Ba'ath Party and the unparalleled power of OPEC, Iraqi nationalism decisively defeated foreign corporate control in the 1970s. During this time, oil nationalization finally and successfully completed, providing the funds for Saddam Hussein's authoritarian state to be consolidate as will be demonstrated the following details.

Economic Ambition and the Ba'athist Regime: The consolidation of state control over oil and the use of petroleum revenues to finance development and military modernization marked by the rise of the Ba'ath Party in 1968, which was led by Ahmed Hassan al-Bakr and his deputy Saddam Hussein (Alnasrawi 2002). With its ability to finance large-scale infrastructure projects, social programs, and military expansion, oil emerged as a key tool for domestic and regional political power.

Complete nationalization of the Iraq Petroleum Company (IPC): Iraq asserted total control over oil production and exports by fully nationalizing the IPC in June 1972 (Yergin 2012). Rising oil prices around the world and waning Western power in the Middle East coincided with nationalization, giving Iraq the opportunity to profit from its newfound independence. In the context of the Cold War, the Soviet Union's financial and technical assistance improved Baghdad's capacity to control production and promoted strategic alliances (Hinnebusch 2003).

The Oil Crisis and Revenue Boom of 1973–1974: Global oil prices quadrupled after the 1973 Arab-Israeli War and the ensuing Organization of Arab Petroleum Exporting Countries (OAPEC) oil embargo. Iraq profited greatly from the embargo despite not being a leader in it; oil revenues increased from about \$1 billion in 1972 to \$8.2 billion in 1974 (Fattouh 2007). The Five-Year Development Plan (1976–1980), which prioritized infrastructure, education, welfare, and industrialization, was funded in part by these revenues (Marr 2018).

A sharp rise in military spending, from \$500 million in 1973 to over \$10 billion by 1980, also fueled by oil wealth. By directly connecting petroleum wealth to state power and security, this militarization was justified as being required to safeguard Iraq's oil resources and regional interests (Alnasrawi 2002).

Oil Diplomacy and OPEC: Iraq frequently clashed with more conservative Gulf producers like Saudi Arabia, using its membership in Organization of the Petroleum Exporting Countries (OPEC) to push for collective action on resource sovereignty and advocate higher prices (Fattouh 2007). The dual economic and political role of oil highlighted by Baghdad's oil diplomacy, which included funding regional causes such as anti-imperialist movements and Palestinian factions. Iraq was still heavily reliant on oil earnings in spite of these gains, making it susceptible to changes in the price and instability in the region.

2.3 Regional Tensions, Oil, and Ideology: Iraq's oil resources were important to its economy, also played a big role in shaping its political ideology and regional goals. The state was able to show its power and make its case in the Arab world thanks to oil revenues. Control over important export routes and resource-rich areas affected both foreign policy and internal security. To understand how Iraq's political and military strategies closely linked to its economic assets in the 1970s, you need to know how these dynamics worked.

The Shatt al-Arab Conflict: Control of the Shatt al-Arab waterway was strategically important to Iraq because of its reliance on it for oil exports. The 1975 Algiers Agreement, which temporarily eased tensions but left Iraq uncertain about the long-term safety of its export routes, was the result of historical disputes with Iran over navigation rights (Hinnebusch 2003).

Kurdish Rebellions and the Geography of Oil: Kurdish-populated areas overlapped with oilfields in the north, especially in Kirkuk and Mosul. Iraq's oil infrastructure was in danger during the Kurdish uprising in 1974–1975, which backed by Iran and the US. The suppression of the uprising by Baghdad highlighted the relationship between petroleum, territorial integrity, and national unity while reinforcing state control over oil resources in the north (Alnasrawi 2002).

Oil Revenue Militarization: (Marr 2018) Iraq used its oil wealth to fund one of the biggest armies in the Arab world in the late 1970s, spending up to 25% of its GDP on defense. Saddam Hussein directly linked economic resources to strategic and ideological goals by framing military buildup as necessary to protect Arab oil wealth and counter perceived regional threats.

Table 1: Summary of the main developments and global impact.

Year	Main Developments	The Global Impact
1950–1972	IPC dominance → Law No. 80 → INOC creation	Strengthened OPEC and resource sovereignty norms
1973–1979	Revenue surge → military and infrastructure spending	Increased Iraq's regional influence but economic vulnerability
Late 1970s	Shatt al-Arab, Kurdish insurgency, Iran tensions	Heightened risk to Gulf oil flows
By 1980	Overreliance on oil, centralized militarized economy	Created conditions for prolonged conflict and market volatility

2.4 Iraq's Wars: The duration of 1950 to 2000, Iraq and the Arabian Gulf area became a vital hub of oil riches, geopolitical turmoil, and global energy security. Regional hostilities, particularly the Iran-Iraq War (1980–1988) and the Gulf War (1990–1991), had a significant influence on global oil supplies, pricing, and stability.

Iraq and Iran War (1980-1988): The Iraq-Iran War (1980-1988) was a protracted and destructive battle between neighboring Middle Eastern countries Iran and Iraq. It began on September 22, 1980, when Iraqi President invaded Iran, intending to capture control of the Shatt al-Arab canal and destabilize Iran's nascent Islamic Republic. The conflict fueled by significant territory conflicts, religious tensions, and regional power rivalry. Although Iraq first took areas of Iranian land, Iran quickly reclaimed lost ground and pushed the combat deep into Iraq, resulting in a lengthy and violent stalemate typified by trench warfare, chemical weapon assaults, and missile strikes on towns (Soltanzadeh and Othman 2013).

The fighting also spread to the Persian Gulf, where both sides attacked oil tankers in what became a known as the "Tanker War." After eight years of conflict, with over a million dead's and injured and substantial economic damage on both sides, the United Nations arranged a truce in August 1988 via Resolution 598. The conflict concluded without territorial changes or a conclusive triumph, leaving both nations tired and laying the groundwork for future regional instability, such as Iraq's invasion of Kuwait in 1990 (Tayebipour 2023).

Conflict Dynamics: The fight between two of (OPEC's) main producers included attacks on oil infrastructure and ships (Razoux 2015), which becomes as a known as the "Tanker War."

Impact on Oil Supply: The immediate outbreak in 1980 removed around 2.7 Million Barrels per Day (MBD) of oil from the global market from Iran and Iraq combined. Both countries' oil infrastructure (pipelines, refineries, and terminals) sustained significant damage (Rubin 2003).

Global Action: Other manufacturers, particularly Saudi Arabia, raised output to compensate for the gap, preventing a serious oil crisis akin to the 1970s, while prices remained high. The protracted duration of the battle, however, kept a risk premium in the market.

Gulf War (1990–1991): Gulf War (1990–1991) had been a battle in the Persian Gulf area (Naser 2024) that began with Iraq's invasion of Kuwait on August 2, 1990. This invasion sparked a rapid and broad international response, with a coalition of countries led by the United States aiming to liberate Kuwait and restore regional security as showing in the Figure 2. The Gulf War highlighted the efficiency of coalition military force and technical improvements, but it also paved the way for future regional confrontations, such as the 2003 Iraq War (Britannica 2025).

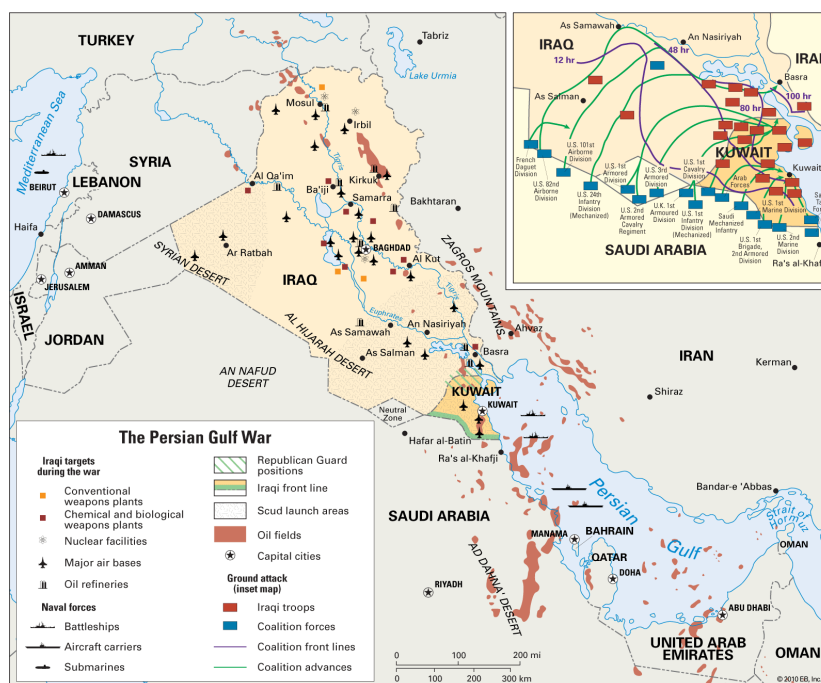


Figure 2: Map of Iraq with Persian Gulf War (Britannica 2025).

Crisis Dynamics: Iraq's invasion of Kuwait and the international military reaction (Operation Desert Storm). Iraq's reasoning for the invasion included charges that Kuwait was overproducing oil, pushing down prices (Meierding 2020).

Consequences Oil Supply: The invasion instantly withdrew Iraqi and Kuwaiti oil output from the market because of international sanctions and the damage of Kuwait's oil fields by fleeing Iraqi soldiers. This resulted in a gross loss of more than 4 Million Barrels per Day (MBD) (Verleger Jr 1990).

International Response: Between August and October 1990, oil prices skyrocketed, doubling in a few of months from roughly 17\$ to more than 36\$ per barrel. The crisis highlighted the vulnerability of the Strait of Hormuz, the Gulf's primary maritime chokepoint. The US-led coalition's quick victory, along with the coordinated release of oil from strategic reserves by consuming nations (such as the US Strategic Petroleum Reserve) and increased output from other OPEC members, resulted in a rapid price drop after the fight concluded (Hutchison 1991).

3. Methodology

This study examines the economic and social effects of Iraq's two main contemporary conflicts, the Gulf War (1990–1991 → mid-1990s) and the Iran–Iraq War (1980–1988). The study assesses wartime shocks to oil revenues, GDP, inflation, debt, wages, food access, and essential services using conceptual numerical models and a structured conflict–economy–society framework. The development of Iraq's macroeconomic structure and the growing humanitarian crisis and depicted in embedded figures. Results indicate that while the Gulf War and sanctions caused an immediate collapse and one of the worst humanitarian crises of the late 20th century, the Iran–Iraq War resulted in long-term economic exhaustion.

3.1 Investigative Framework: the conceptual aim of this study based on a multifaceted approach that connects Iraq's economic performance, social well-being, and conflict dynamics between 1980 and 1995. The framework acknowledges that there are several interrelated ways

that wartime disruption can occur, including direct destruction of infrastructure, interruption of oil exports, reallocation of state spending toward military goals, and the ensuing decline in household welfare. As a result, the model's three main pillars—economic structure, social impact, and long-term structural consequences—are chosen to represent the entire range of effects of war. The framework allows for a comprehensive evaluation of how conflict intensity translates into quantifiable drops in living standards by combining macroeconomic indicators (such as oil revenues, GDP, inflation, and trade balance) with social variables (such as real wages, food prices, healthcare access, and poverty) (Alnasrawi 2002).

By using a before-during-after comparison that separates the gradual wartime deterioration from the abrupt collapse linked to the Gulf War and sanctions, this pillar-based design also reflects the temporal nature of war impacts. In the end, the framework offers a logical framework for examining how the protracted conflict altered Iraq's economic underpinnings and resulted in an exceptionally serious humanitarian crisis. This framework design to analysis the main categories which will tackled as follows:

Economic Configuration

Social Wellbeing

Long-Term Significances

3.2 Indicators: Both the macroeconomic disruption brought on by war and the ensuing decline in civilian living conditions intended to captured by the indicators chosen for this study. A varied and multifaceted indicator set must be used because armed conflict impacts economies through a number of interrelated mechanisms, such as decreased state revenue, inflationary pressures, supply-chain disruptions, and the collapse of vital public services (Alnasrawi 2002). The indicators employed in this study fall into two broad categories: social welfare indicators, which gauge the direct and indirect effects of war on the populace, and macroeconomic indicators, which show the structural health of the Iraqi economy.

3.2.1: Macroeconomic Indicator: These indicators center on Iraq's capacity to produce revenue, uphold internal stability, and continue essential economic operations in the face of conflict. Among them are:

Oil Revenue Index: Since oil has historically accounted for more than 90% of government revenue in Iraq, this is the primary measure of the country's economic potential during times of war (Richards and Waterbury 1996). Disruptions during a war are modeled as downward shocks brought on by sanctions, decreased export potential, or infrastructure damage.

GDP Index (base = 100): The GDP index is a measure of total economic output that takes into account trade restrictions, production losses, and changes in government spending on military operations.

Inflation Index: One important indicator of macroeconomic instability is inflation. Sanctions, shortages brought on by the war, and currency depreciation all fuel fast inflation, which immediately reduces household purchasing power.

Trade Index: Iraq's capacity to import necessities in relation to its export revenue is measured by the Trade Balance Index. Chronic trade deficits during times of conflict are a sign of weakened national resilience and structural economic vulnerability.

Debt Burden (Qualitative Scale): Although this conceptual model does not employ exact historical data, Iraq's debt burden is qualitatively evaluated because, according to international economic assessments, it played a crucial role in determining long-term economic stress following (Cordesman 2018).

3.2.2 Social Prosperity Indicators: The study uses a number of social prosperity indicators to assess the effects of wartime economic decline on people. These depict the decline in basic well-being and living standards:

Real Wage Index: This measure of household purchasing power illustrates how ordinary Iraqis impacted by inflation, wage stagnation, and job disruption during times of conflict.

Food Price Index: Food prices rise as a result of supply chain disruptions and import restrictions brought on by war and sanctions. One of the first indicators of a developing humanitarian crisis is rising food prices (Halliday 1999).

Healthcare Access (0–10 Scale): This scale evaluates hospital operational capacity, medication availability, and medical infrastructure functionality. This is crucial because public health is seriously jeopardized by shortages and sanctions during times of war.

Education Continuity Index: Conflicts limit access to resources, interfere with school operations, and lower educational quality. Both school attendance and the stability of the educational system are reflected in this index.

The poverty rate is a measure of the structural deterioration of society. Inflation, wage erosion, food shortages, and diminished public services are all closely linked to rising poverty during a war.

Civilian Hardship Score (CHS, 0–10): For this study, a composite indicator called the CHS was developed, which combines social and economic factors into a single indicator of overall suffering. It creates a single hardship rating by combining access to basic services, healthcare, food, and stable income.

3.3 Sources of Data: The study's analysis is based on a carefully chosen mix of international reports, historical documents, and conceptual numerical datasets designed to capture the social and economic dynamics of Iraq during the two main wartime eras. The selection and organization of these indicators are based on reputable institutional evaluations and established academic literature, even though the numerical values used in the analytical chapters are conceptual rather than empirical. This ensures that the conceptual models reflect realistic trends and relationships observed in Iraq's actual wartime economy (Alnasrawi 2001).

UN Reports: The social welfare indicators used in this analysis are based on UN humanitarian assessments, which offer comprehensive proof of Iraq's diminishing access to food, medicine, water, and other necessities during the sanctions period (Halliday 1999).

IMF and World Bank Country Evaluations: World Bank and IMF reports provide important insights into Iraq's macroeconomic structure during the 1980s and 1990s, including inflation, debt, trade disruptions, and the fiscal effects of protracted conflict, even though they are not directly used for numerical extraction (Hadad-Zervos 2005).

Literature on Academic Political Economy: The modeling of wartime oil revenue trends, GDP contraction, and inflation within Iraq's oil-dependent economic system is informed by scholarly works on Middle Eastern political economy, such as (Richards and Waterbury 1996).

Independent Historical Research and Conflict Analysis: The qualitative interpretation of the conceptual data supported by historical studies by Tripp (2007) and Marr (2012), which offer vital context on Iraq's military spending trends, policy choices, and internal political dynamics.

3.4 Developing Conceptual Mathematical Datasets: The study employs conceptual mathematical datasets for GDP, oil revenues, inflation, poverty, and hardship. These numbers are intended to depict historical trends, such as:

Oil Income

Loses During War

Loses of state reserves

Expeditious Inflation

These datasets enable multiple indicator assessment of economic reduction, hardship modeling, conflict-intensity measurement, and comparative trend analysis.

3.5 Combining Sources: The conceptual dataset's interpretation is guided by historical sources by establishing:

Variable direction (decrease/increase).

Significant economic shocks (1980, 1988, 1991).

Significance for the economy during a war.

As a result, even though the numerical values are illustrative, their structure is based on documented conditions in Iraq during the conflict years and well-established political economy research.

3.6 Macroeconomic Indicators: To understand the basic stages of the proposed model, this section provides the categorization of the model and its performance to be understand how the proposed model indicted the mentioned factors as follows:

Conflict Intensity Index (CII): The main independent variable in the model is conflict intensity, which measured using the ordinal scale outlined in Section 2.4. Stronger economic shocks correlated with higher levels of wartime violence or sanctions.

Infrastructure Damage and Trade Disruptions: Important oil-export terminals, refineries, power plants, and transportation networks targeted by wars involving Iraq, and imports stopped by sanctions. The direct devastation and outside blockades that limited Iraq's capacity to maintain economic activity are depicted in this stage (Cordesman 2018).

The contraction of the economy: The main causes of Iraq's economic decline during the war are decreased oil exports, declining GDP, spikes in inflation, and the collapse of trade. The structural degradation brought on by the intensity of conflict reflected in these macroeconomic variables (Richards and Waterbury 1996).

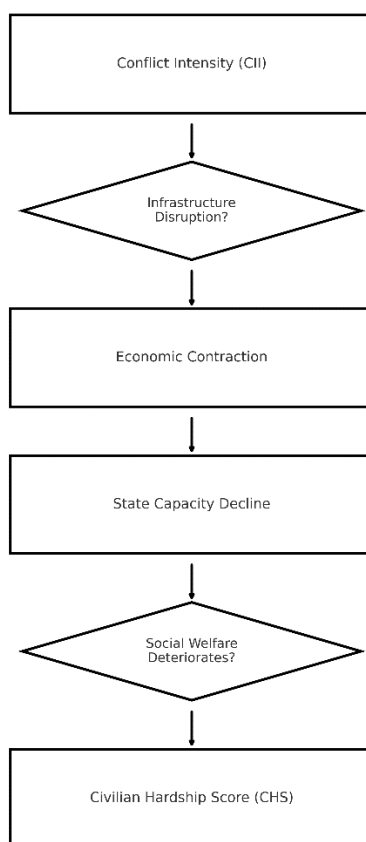


Figure 3: Macroeconomic Indicators Model.

Decline in State Capacity: The government's capacity to fund necessary services drastically decreases as revenues decline. This includes cuts to social protection, public infrastructure upkeep, healthcare funding, and educational resources—a situation that was extensively documented during sanctions (United Nations 1995).

Deterioration of Social Welfare: Households are directly impacted by economic contraction through declining educational continuity, decreased access to hospitals, rising food prices, medicine shortages, and wage erosion. These circumstances serve as the foundation for the study's social impact indicators.

The Civilian Hardship Score (CHS): The cumulative impact of all upstream factors on civilians' day-to-day lives is represented by the CHS. It combines several social indicators into one measure of human suffering, including food security, health access, income stability, and basic services.

3.7 Macroeconomic Description: The proposed model uses a simplified analytical framework to assess the impact of armed conflict on Iraq's social welfare and economic performance from 1977 to 1995. The goal is to model the direction and magnitude of change caused by two major shocks: the Gulf War with subsequent UN sanctions (1990–1995) and the Iran–Iraq War (1980–1988), rather than to reconstruct precise economic statistics.

3.8 Analytical Approach: A linear causal logic is used in the analysis to link conflict to economic disruption and, eventually, to human suffering. According to the framework, more intense conflicts result in lower economic output, higher inflation, a weakened state, and a decline in social welfare. The study makes use of five simplified indicators:

Conflict Intensity Index (CII) (0–3 scale)

Oil Revenue Index

GDP Index

Inflation Index

Civilian Hardship Score (CHS) (0–10 scale)

Pre-war, wartime, and sanctions periods can be consistently compared using these indicators.

3.9 Macroeconomic Model: The relationship between conflict, the economy, and social welfare captured by a single, simplified equation that represents the entire model:

$$CHS_t = \alpha \cdot CII_t + \beta \cdot INF_t - \gamma \cdot GDP_t \quad (1)$$

Where:

CHS_t Civilian Hardship Score (CHS),

CII_t Conflict Intensity Index (CII),

INF_t Inflation Index (INF),

GDP_t GDP Index,

α, β, γ equal weights representing the strength of each effect.

Interpretation:

Higher conflict lead to increases hardship

Higher inflation lead to increases hardship

Higher GDP lead to decreases hardship

4. Results and Discussion

The proposed model produces three core outcomes for Iraq's economic and social conditions between 1977 and 1995. Using the hardship equation 2:

$$CHS_t = 0.3 \cdot CII_t + 0.4 \cdot INF_t - 0.2 \cdot GDP_t \quad (2)$$

The results show that increases in conflict intensity raise inflation, reduce GDP, and sharply increase civilian hardship. The model outputs three conceptual trends: falling oil revenue and GDP under wartime disruption, accelerating inflation during conflict and sanctions, and a rising hardship score that peaks in the mid-1990s. These results reflect the internal behavior of the model and demonstrate how conflict-driven economic shocks translate into welfare decline. This figure illustrates how the model assigns lower GDP and oil revenue values during times of intense conflict. The hardship formula is driven by the numbers, which are conceptual inputs. CHS rises in years with lower GDP, like 1991 and 1995, because the term $0.3 \cdot CII_t$ increases overall hardship, as it gets smaller as showing in Figure 4.

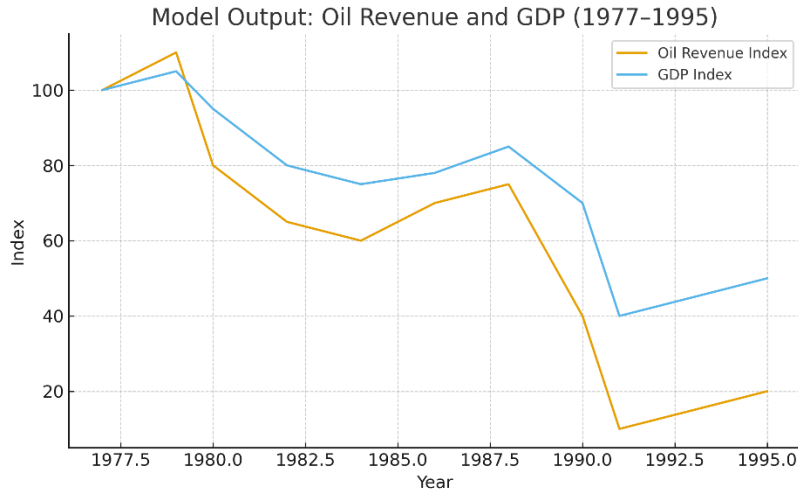


Figure 4: Oil Revenue & GDP 1977-1995.

In addition, the model assigns the highest values (150–250) during the sanctions era, and inflation increases as conflict intensifies. Because inflation has the greatest positive $0.4 \cdot INF_t$ weight when it enters the equation, high inflation immediately raises CHS. The numbers represents conceptual inflation shocks within the model as showing in Figure 5.

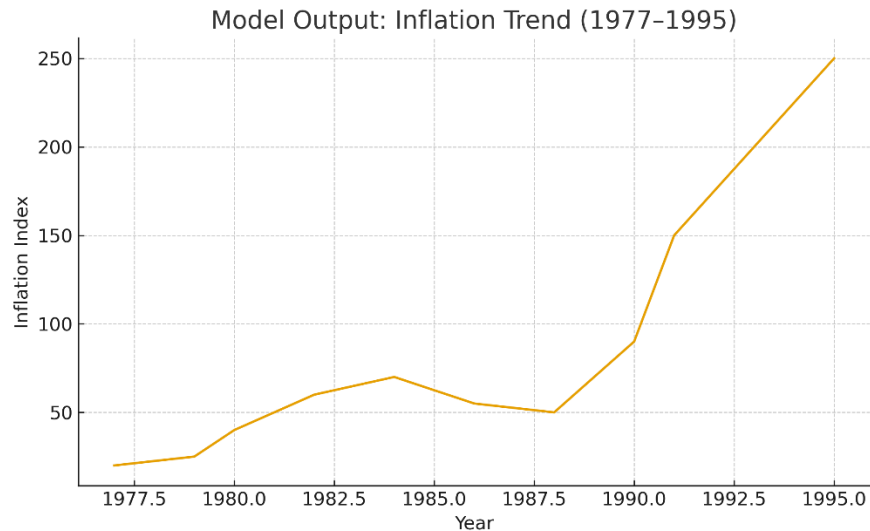


Figure 5: Inflation Trend 1977-1995.

This Figure 6 presents the output of the equation itself after scaling CHS to 0–10. Each value computed using conflict intensity, inflation, and GDP for that year. Hardship remains low before war, rises moderately during 1980–1988, and peaks during 1991–1995 because inflation spikes and GDP declines. The numbers show how the model transforms economic stress into social hardship.

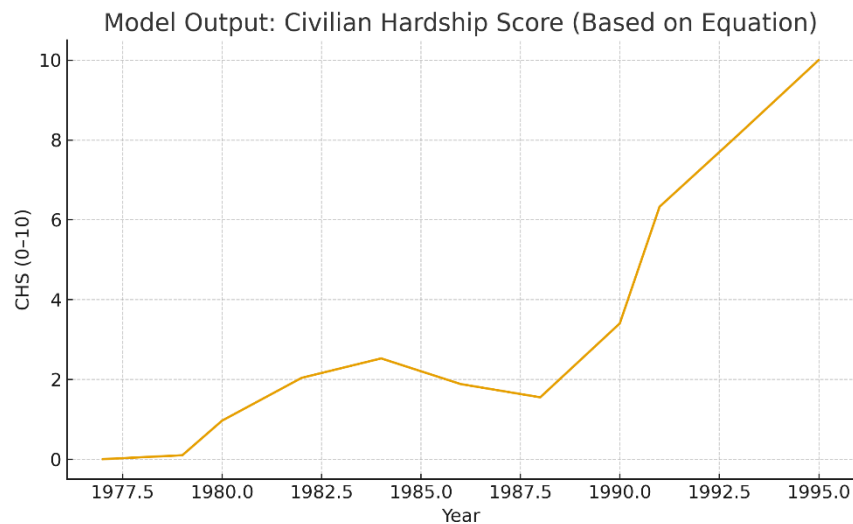


Figure 6: Civilian Hardship Score.

The simplified conflict–economy–hardship model demonstrates a consistent and logical relationship between armed conflict and civilian welfare deterioration in Iraq between 1977 and 1995.

5. Conclusion and Future Work

This study developed a simplified conceptual model to examine how conflict intensity influences economic performance and civilian welfare in Iraq between 1977 and 1995. Using a single hardship equation and a set of conceptual indicators, the model reproduced the key mechanisms documented in conflict-economy literature: rising conflict intensity reduces GDP, accelerates inflation, and ultimately increases civilian hardship. The results show three clear phases pre-war stability, moderate hardship during the Iran–Iraq War, and a sharp escalation during the Gulf War and sanctions period. The model demonstrates that inflation, more than any other variable, acts as the strongest transmission channel converting economic disruption into social suffering. Although the values used are conceptual rather than empirical, the internal behavior of the system aligns with well-established historical patterns and provides a coherent framework for understanding the economic and social consequences of prolonged conflict.

The model presented here is intentionally simple, designed to capture the essential pathways through which conflict affects economic and social outcomes. Several directions can enhance and extend this work:

Incorporation of Real Data: Future research can replace conceptual values with empirical datasets from OPEC, the World Bank, IMF, and UN reports to validate the model against historical measurements.

Refined Hardship Function: The CHS equation can be expanded to include additional variables such as unemployment, food prices, public health indicators, or infrastructure loss to create a multidimensional hardship index.

Non-Linear and Dynamic Models: Conflict effects are rarely linear. Introducing non-linear terms, lag structures, or dynamic feedback loops could produce a more realistic representation of economic collapse and recovery.

Scenario Simulation: The model can be used to simulate hypothetical futures—e.g., alternative sanctions levels, earlier ceasefires, or different reconstruction strategies—to evaluate policy implications.

Regional Comparisons: Applying the same framework to Kuwait, Iran, or Saudi Arabia would allow comparative analysis of how different economies absorb and respond to conflict shocks.

Together, these extensions would transform the conceptual model into a comprehensive analytical tool capable of explaining and forecasting the interaction between conflict, economic stress, and social welfare across different contexts.

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Declaration of Competing Interest:

The researcher declares that he has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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