OMAR A.M. EL-JOUMAYLE
University of Pavia

Economic growth, abrupt institutional changes and institutional policies: The case of an oil-exporting country

ABSTRACT

This article deals with economic growth in Iraq when formal institutions are subject to abrupt institutional change. The article follows a quantitative mode of enquiry to determine the impacts of institutional changes on economic performance. I built an expanded and updated version of Rowat's model for the Iraq war of 2003. Thus, I estimate the effects of oil price, oil production, and abrupt institutional change in terms of war on Iraq's gross domestic product (GDP) for 1971–2012. Likewise, I estimate the effects of the new institutional arrangements on the country's economic performance for the sub-period 1998–2012. The results demonstrate that the 2003 war and institutional arrangements have had a negative and significant effect on GDP growth, while the effects of both oil production and oil prices are positive but the latter is not statistically significant. In line with these findings, a static comparative analysis was also carried out for before and after the 2003 war. On one hand, the results show the destructive realities of the wars at the macro level and on the standard of living for common citizens and, on the other, the findings illustrate the

difficulties and challenges related to creating institutional arrangements in the post-2003 war period that can enhance or promote sustained economic growth.

I. INTRODUCTION

Scholars in the 1950s held the widespread belief that the Iraqi economy had better prospects for achieving development than any other Middle Eastern economy. They argued that the country's natural resources favoured agriculture production (i.e., a relative plenty of cultivatable land and enough water for irrigation) and that the country was particularly blessed with increasing amounts of revenues from the oil industry (Iversen 1954; Warriner 1962), although the planning and management of development under the Board of Development have been criticized by some scholars (see e.g., Habermann 1955; Salter 1955; Alnasrawi 1994).

However, since 1958 economic growth in contemporary Iraq has been subject to dramatic disruptions like military coups and wars. These abrupt changes have brought about fundamental and rapid alterations in political and economic institutions. These institutions are characterized by political instability in terms of a series of military coups d'état followed by the establishment of nominally republican regimes in which the power in most cases was in the hands of military officers (see Farouk-Sluglett and Sluglett 2003; Tripp 2007). This has been reflected in repeated and sudden reorganizations of political and economic institutions to reinforce the different agendas and conflicting ideas of these governments; these continuous changes resulted in a lack of systematic and stable direction for economic development in 1958–1970 in particular (Alnasrawi 1994: 41, 130; Yousif 2012a: 48).

In contrast, the 1970s witnessed a high rate of economic growth with the help of a steady increase in oil revenues, while political suppression increased (Yousif and Davis 2011: 228; Davis 2010: 345–46). However, the trend of a high growth rate reversed dramatically after the 1980s when the country began to engage in a series of wars and conflicts combined with intensification of political repression. In sum, during Saddam Hussein's time in office as president of Iraq (1979–2003), Iraq engaged in armed conflicts, bilateral border skirmishes, and shows of force, including the First Gulf War (1980–1988), Second Gulf War (1990–1991), United Nations (UN) sanctions (1990–2003), and the Iraq war of 2003.

The Iraq war of 2003 was an exogenous shock, pushing for abrupt institutional change. Thus it offers a case study of the impact of institutional change on the country's political institutions, with economic consequences in addition to the obvious human losses and social consequences. By definition, *institutional change* is understood as appropriate change in governance structure that successfully promotes economic growth (Libecap 1989: 4, footnote), while unsuccessful change in governance structure essentially creates the opposite result, such as stagnation or it might lead to economic decline.

Thus, the following research question seems to be highly pertinent for the case of the Iraq war of 2003: How is the performance of the Iraqi economy affected when its formal institutions are subject to abrupt (discontinuous) changes?

My intention is to capture the economic effects of the changes in formal institutions on the aggregate output (i.e., the growth in gross domestic product [GDP]). Thus, in seeking to answer the essay's question, I guided by the

analytical approach of new institutional economics (NIE) in dealing with institutional change[1] Thus I essentially employ a considerably different approach by attempting to express in quantitative terms the impacts of institutional changes on economic performance.

This led us to the following hypothesis:

The institutional change brought about by the Iraq war of 2003 was unsuccessful in establishing its promised institutional arrangements. Nominally designed to promote economic growth, the new institutional framework failed to address an existing set of constraints and thereby did not improve the living standards for common citizens.

Given the case study in hand, after more than a decade of institutional change, I am arguably in a better position to test the aforementioned hypothesis empirically.

My contribution is twofold: First to my knowledge, no empirical study to date has looked at the relationship between abrupt institutional changes and growth over time for the case of Iraq. In this context, the essay seeks to fill the gap in the quantitative mode of enquiry for the wars, in particular Iraq war of 2003, by measuring and comparing the economic outcomes for pre- and post-institutional change. Second, given that cross-country growth regressions offer evidence of almost a certain relationship between institutions and economic development, the time-series evidence based on country's case study likewise is necessary (Chang 2011: 483). Thus, there is much to be gained from the time-series analysis of abrupt institutional changes in the Iraqi economy.

The article is structured as follows. Section II introduces the background for the case in hand. Section III presents theoretical considerations based on NIE and discusses some of the most relevant literature on the Iraq war. In Section IV, the methodology and model specifications are presented, while Section V applies econometric models in the Iraq setting by testing the relationship between the growth in GDP as a dependent variable and various independent variables, including the growth in the aggregate annual governance index based on the Worldwide Governance Indicator (WGI) of World Bank. Section VI provides a static comparative analysis between pre-war and post-war circumstances and also discusses the results. Section VII concludes and provides possible extensions.

II. INSTITUTIONAL CHANGE, OIL, AND THE PERFORMANCE OF IRAQ'S ECONOMY: A BRIEF BACKGROUND

The Iraqi economy witnessed relatively steady growth after the 1950s when the export of oil became a vital component in Iraq's GDP (Alnasrawi 1996: 3). However, in the 1970s, the trend in growth increased rapidly. According to calculations performed by Yousif (2012: 46) the real GDP per capita (in 1990 prices) increased 106% between 1970 and 1979, while it declined during the 1980s; in which the decline was about 31% in 1989 in comparison with the 1979 level. The United Nations Conference on Trade and Development (United Nations Conference on Trade and Development [UNCTAD] 2015) also estimated a high annual average growth rate in GDP (in 2005 prices); it was 11.73% and the income per capita increased by 8.21% in 1970–1980, which was the highest growth rate in Western Asia.

This high rate of growth was driven mainly by oil price increases in 1973/1974, and the result was that oil revenues in nominal terms rose to reach US $26.3 billion in 1980 versus US $20 million in 1950 (Alnasrawi 1996: 3).

1. The article focuses on the war(s) as a source of abrupt institutional changes and how the institutional arrangement (i.e., rules, norms and enforcement) including the institutional policies would affect the performance of the economy. Hence, for most of the article I deal with the formal rules and their enforcement within the existing norms (i.e. traditions, taboos and customs) in the society because norms actually are subject to change in the long run.

Also, oil production increased to reach a historical peak of 3.47 million barrels per day in 1979 compared with 139,000 barrels per day in 1950 (Organization of Petroleum Exporting Countries [OPEC] 2013: 54).

This was reflected in the absolute dominance of the oil sector, in which the oil rent ratio to GDP reached about 65% in 1980 (World Bank 2015a) According to World Bank (2015a), *oil rents* are 'the difference between the value of crude oil production at world prices and total costs of production'. Therefore, Iraq became over time, a classic example of a rentier state (Sassoon 2011: 129). By *rentier state* I mean a country that receives substantial revenues of external rent regularly, and this external rent (such as oil revenues) is paid by foreign entities (Mahdavy 1970: 248).

However, the high rate of economic growth did not last long and the path of economic development has been hampered since September 1980. There are two correlated factors. First, the oil price increase in 1979–1980 was eroded in 1981–1985 and it collapsed in the first half of 1986, falling by more than 50% (Gately et al. 1986: 238). Second, the more important factor is the engagement of Iraq in war with Iran (First Gulf War). As a consequence of the war, the actual Iraq oil production decreased to less than two million barrels per day in 1981–1986 (OPEC 2013). The country entered another devastating armed conflict after the invasion of Kuwait in 1990 (Second Gulf War), which was followed by more than a decade of severe UN sanctions and finally the outbreak of the Iraq War in 2003.

Figure 1-A plots the rate of growth/decline in GDP and oil production for 1971–2012, while Figure 1-B plots the rate of growth/decline in GDP and oil price for the same period. Figure 1-A shows that the GDP and oil production moved closely together in the same direction for the period under study. The fluctuation includes a sharp drop in 1981, 1991, and 2003, respectively, because of wars. Figure 1-B shows the spike in oil prices, especially in the mid of 1970s and sharp drop in 1981–1986. In addition, it also suggests that the GDP responded to oil price changes with a slight lag.
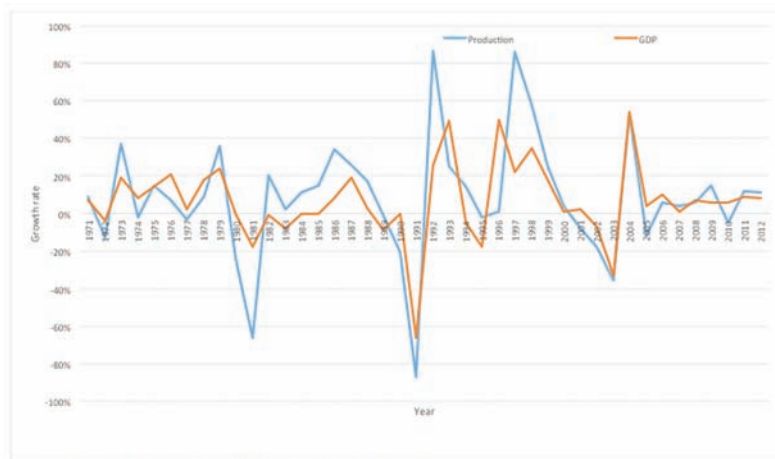
Sources: UNCTAD (2015); OPEC (2013), author calculation.

Figure 1-A: The rate of fluctuation in GDP and oil production for 1971–2012.
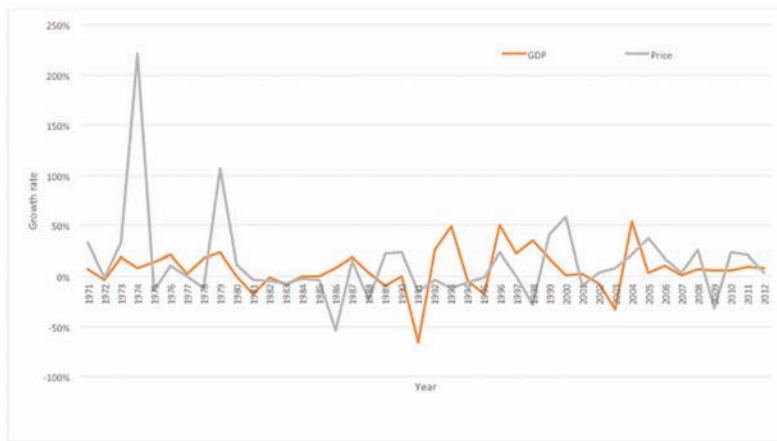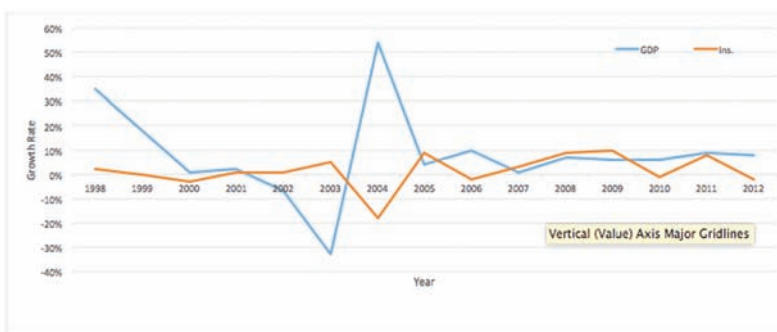
Sources: UNCTAD (2015); World Bank (2014a), author calculation.

Figure 1-B: The rate of fluctuation in GDP and oil prices for 1971–2012.

Furthermore, we plot Figure 2 which display the rate of growth/decline in both the GDP and aggregate annual governance index for 1998–2012 of WGI[2] Figure 2 shows the drastic drop of GDP in 2003 followed by a high growth rate in GDP accompanied by a sharp drop in the governance index in 2004. In sum, visual inspection suggests that the change in oil production, oil prices and governance index may help to explain Iraqi GDP growth.

Many Scholars have noted that the wars are linked together in a sort of continuous chain of events; the negative economic consequences of the First Gulf War coupled with the decline in oil prices in the 1980s created the causes for the Second Gulf War (Al-bazaz 1992; Yousif 2012: 35), while the Iraq war of 2003 is considered by some to be the final phase of the unfinished Second Gulf War.

Sources: UNCTAD (2015); World Bank (2015b), author calculation.

Figure 2: The rate of fluctuation in GDP and aggregate annual governance index for1998–2012.

Year	Event*	Increase/ Decrease in Real GDP (2005)	Increase/ Decrease in Oil Production	Increase/ Decrease in Real Crude Oil Price (2005)**	GPD per Capita in USD (2005)***
1981	First Gulf War (Outbreak of Iran-Iraq War September 1980)	−18%	−66%****	−4%	1581
1991	Second Gulf War (Invasion of Kuwait August 1990)	−66%	−87%	−15%	460
1998	Oil for Food Program (OFFP)	58%	35%	−28%	1324*****
2003	Iraq War (March 2003)	−35%******	−33%	8%	868

*) According to Barsky and Kilian (2004: 116, Table 1), the 1st, 2nd, and 4th events are associated with subsequent major oil price increases in the international market. According to Gately (1995: 4), the price doubling in 1979/1980 took six years to un-do, while the price doubling in 1990 took just three months to return to the previous level.

**) The percentage change in crude oil price in which the average spot price of Brent, Dubai, and West Texas intermediate is equally weighted (World Bank 2014a).

***) In 1979, the Iraqi GDP per capita (at 2005 prices) reached its peak of US $2,034 (UNCTAD, 2015).

****) Oil production declined from 3.4 million barrels per day (mbd) in August to 140 thousand mbd in October 1980, and the negative impact of the war hit oil revenues, which declined from US $25.1 billion in 1980 to US $10.4 billion one year later (Alnasrawi 1994: 80).

*****) While GDP per capita rose in 1998, the increase might overstate the level of economic recovery in the late 1990s due to unequal income distribution from one side and the restrictions imposed by OFFP on the imports from the other (see Yousif & Davis, 2011: 231–232).

******) According to Merza (2008: 6, 32), the overall decline in GDP (at 1988 prices) was 33%; the share of oil was 37% while the share of non-oil activities was 28%. Merza also provided the decline on the sectoral level; the most affected was construction and electricity with a 76% decline, while water had a 60% decline. Transport and trade followed with 43% and 46%, respectively. Agriculture and manufacturing were hit equally hard at 29%. In contrast, social services maintained its level.

Source: Barsky and Kilian (2004), Gately (1995), UNCTAD (2015), World Bank. (2014a), Merza (2008), Alnasrawi (1994), Yousif and Davis (2011), OPEC (2013).

Table 1: Exogenous disruptions in Iraqi GDP, GDP per capita, and oil production.

Table 1 demonstrates the actual disruption in Iraqi GDP, GDP per capita, and oil production when these armed conflicts broke out.

It is easy to note in Table 1 that these institutional changes (i.e., the wars and the UN Oil for Food Program) played an undeniable role in affecting the performance of Iraq's economy (i.e., GDP and GDP per capita have experienced wide swings).

Essentially, these impacts varied depending on the initial conditions prevalent at the outset of the institutional change. Thus, the negative effects of the wars on GDP and GDP per capita may differ greatly from one episode to the next, in accordance with variations in oil production level, oil market conditions, and the associated political events. However, the table shows that the largest impact came from the Second Gulf War, which Iraq fought after

invading Kuwait in a wide-scale military conflict with coalition forces under the leadership of the United States.

The first phase of economic decline was the First Gulf War; according to Alnasrawi (1994: 100), the annual cost is estimated to be 104% of Iraq's GDP during 1980–1989. Furthermore, a rough calculation done by Nordhaus (2002: 4) based on the decrease in levels of oil production estimated that the UN sanctions in 1991–2002 reduced Iraq's oil revenues by approximately six years' GDP. Thus, as a consequence of the Second Gulf War and the UN sanctions, the GDP per capita (at constant 2005 prices) had fallen to US $1397 in 1989 and collapsed drastically to US $460 in 1990, compared with its increase from US $998 in 1970 to US $2,034 in 1979 (UNCTAD 2015).

Apparently, the two wars followed by UN sanctions cost the Iraqi economy two decades of GDP loss in financial resources, output, and infrastructure (Nordhaus 2002: 4). Thus, Nordhaus concluded that '[there are] no parallels in modern history to economic devastation on that scale'.

On 19 March 2003, the United States and other coalition forces launched a full-scale military intervention called 'Operation Iraqi Freedom' in which Iraqi forces fell apart due to the coalition forces' domination of the air and their massive firepower (Tripp 2007: 274). By 9 April, American forces had taken Baghdad and Saddam Hussein's regime had collapsed.

Thus, the 2003 war marked the beginning of a new chapter in Iraq's history; this war fundamentally differed from previous wars because this external intervention opened the window of opportunity to create new political and economic institutions (al-Oraibi 2013: 77). This took place in the form of wholesale change; new formal rules came into force and a new constitution was drafted and approved in 2005 (see Allawi 2007).

III. LITERATURE REVIEW

In this section, I review the theoretical framework of NIE, which draws on work by North (1990), North et al. (2009) and Barzel (2002), among others, and I link that research to some of the most relevant literature on the Iraq war.

A relevant starting point might be the clarification of terms. *Institutions* can be defined as 'legal, administrative and customary arrangements for repeated human interactions' (Pejovich 1990: 4). In other words, they can be defined as 'the rules of the game in a society' (North 1990: 3), in which the rules are laws, regulations and norms (Eggertsson 2013: 1).

According to North (1990), institutional arrangements comprise both informal and formal constraints that include traditions, taboos and customs at one end and laws and constitutions governing economics and politics at the other. In this vein, the incentives of individuals and organizations and their opportunities for wealth-enhancement are defined by the structure of both formal and informal rules and their enforcement mechanism (Aron 2000: 104). Even though the neo-classical vision has provided valuable insights for the process of economic growth, it is unable to explain growth adequately because it disregards the role of institutions and the subsequent changes in institutional arrangements (see Acemoglu et al. 2005; Chakravarti 2008).

According to NIE, the rate of economic growth is determined by different assets, such as economic resources, natural and human resources, the stock of institutions and knowledge, and physical capital, while other factors shape economic performance; these factors range from the adopted policies to extraordinary circumstances and internal or external political events

(Eggertsson 1996: 13). Thus, the path to a prosperous society lies in the availability of neither capital nor natural resources, but in creating institutional arrangements that support growth (Nye 2008: 69). Along the same line, North (1990: 110) pointed out, 'Third World countries are poor because the institutional constraints define a set of payoffs to political/economic activity that do not [*sic*] encourage productive activity'.

In this context, NIE places institutional change as central in the development process, where development is defined as the sum of economic growth and appropriate institutional change, in which the latter smooths the way for further economic growth (Toye 1995: 61).

One of the main features of social institutions is that they are relatively stable and durable so they assist in creating order (Kingston and Caballero 2009: 172). However, institutions are also subject to change over time as certain social, political and economic circumstances emerge. This leads to institutional change. In Eggertsson's view (1996: 12), the effects of institutional change on the economy can be summarized as follows: 'The sequence of institutional change may move the economy either away from an efficient (wealth-enhancing) institutional structure or in [the] direction of such structure'.

Typically, institutional change occurs gradually, with institutional arrangements (i.e., rules, norms and enforcement) undergoing marginal adjustments over time (North 1990: 83). On the other hand, institutions can also change in a discontinuous or abrupt manner. However, abrupt change is an exception; it is the result of revolution or conquest in which formal rules change radically overnight (North 1990: 6, 89).

In the same context, Pejovich (1990: 6) argued that changes are in response to forces which are either exogenous or endogenous. According to Pejovich, the former are imposed upon society, with changes in the rules of the game coming from without by a white knight, while the latter are outcomes of negotiations among individuals in response to the availability of new economic and social circumstances. It is worth noting here that externally imposed change is relatively much faster than inside-driven change, which is gradual (Toye 1995: 63). In this respect, North (1990: 89) classified the sources of discontinuous institutional change into natural disasters like hurricanes, earthquakes, and floods and man-made changes such as revolutions, conquests and wars.

Barzel (2002: 250–51) considered these events to be shocks, defined as 'anything that causes a change in the balance of power and the uncertainty associated with it'. In this vein, Barzel suggested that shocks such as natural disasters are the source of great damage. Likewise, shocks can result from errors, accidents, or even the spread of a new religion. According to Barzel, most severe shocks are man-made. Wars (i.e., civil and external wars) are the primary cause of shocks but can also be the effects of shocks. Though civil war is considered an endogenous event, its outcome is similar to that of an external war; the outcome is unpredictable. Such shocks are not predictable and thus constitute random shocks. Eggertsson (2008: 48) noted that the external shock has the most destructive consequences for developing countries because their ability to deal with the consequences of shocks is heavily constrained by the primitive technology in use. It is worth noting here that in these countries the negative consequences might be more severe, especially when the formal institutions are weak. In this context, North et al. (2009: 252) highlighted the following: 'Over the last two centuries, sustained economic growth results from the reduction of negative shocks to social

output rather than a marked increase in the rate of growth in years when output is growing'.

In connection with Iraq, North et al. (2009: 42) classified the Iraqi state at present (among a number of states in Africa and Asia) as a fragile natural state, which can hardly tolerate the external and internal violence. In this context, the authors highlighted that the fragile state is ruled by a dominant coalition. However, the coalition is unstable, shifts rapidly, and can melt down when encountering any kind of shock. Thus, shocks can lead to reorganization within the coalition or alternatively to violence and the foundation of new coalitions. Furthermore, the membership in coalitions depends on the members' personality and individual identity, while the patron–client networks play a vital role.

In his attempt to build up a theory of discontinuous change, Chakravarti (2008: 17) argued that the contemporary history of political and economic institutions in developing countries is brought out mostly by the intervention of human agency in terms of discontinuous change, namely, a small group within the country or a direct intervention by an external force. On the other hand, Tang (2012: 22) affirmed that, in human history, war among nations is a cause to spread efficient institutional arrangements; the winner pushes to reduce or eliminate welfare-reducing institutions and impose welfare-improving institutions on the society. Tang also believed that there is a learning process in which the parties engaged in conflict can learn from each other's institutions and in the end this process results in the evolution of better institutions.

However, this presumes a happy ending which is not necessarily the final outcome, as the possibility of other scenarios may lead to failure. Acemoglu (2003) referred to some cases in which an external force (e.g. colonial power) has imposed inefficient institutions and policies. In addition, the involved parties do not act in isolation as they are subject to internal and external constrains including the availability of the financial resources and degree of long-term commitments for external force in pursuing political and economic objectives (see e.g., Dodge 2003).

One should note here that, the NIE approach makes intuitive sense and it is supported by an expanding research, while existing discussions are not yet grounded in a coherent theory of abrupt institutional change that can generate clear predictions.

Eggertsson (2009: 149), referred to *institutional policy* as 'attempts made by rule makers (the authority) to adjust social systems by modifying various rules and methods of enforcements'. Thus, the objective is to transform and manipulate the economic relationships towards a specific direction (Boudreaux and Aligica 2007: 28). This constitutes the core of any implemented institutional policy. However, for the case of transitions led by the state, Opper (2008: 400–01) suggested that two elements are necessary for a successful transition: political and bureaucratic capabilities exist to implement and enforce the reform on a national scale and the reform agenda is appropriate. Thus, the crucial element in implementing market reform policy in particular is the need to select a suitable method to transition into a friendly institutional environment (Nye 2008: 75).

Although the institutional change took place via military intervention for the case in hand, mounting American expenditures, in terms of both money and lives, have been subject to open public debate (Anon. 2006: 48–49). Thus, numerous economists have joined the public policy debate in connection with

the calculation and documentation of these costs (see, e.g., Wallsten 2008; Stiglitz 2008). In fact, attempts to project the cost of the war can be traced back to before the outbreak of the war (see Nordhaus 2002; McKibbin and Stoeckel 2003; Davis et al. 2003, 2006).

The body of literature expanded considerably after the outbreak of the war; many related studies have focused on estimating the cost for the United States (Stiglitz and Bilmes 2006, 2008; Wallsten and Kosec 2005; Congressional Budget Office 2008), while Hartley (2003) built a theoretical framework for cost-benefit analysis for the United Kingdom. Later, he expanded his analysis to include an initial estimation for the United States, the United Kingdom, other Allies and Iraq (see Hartley 2004). In this vein, Webster (2007) provided a comprehensive literature review on the cost of the Iraq war of 2003. Thus, she carried out a comparative examination to the works of Nordhaus (2002), Wallsten and Kosec (2005), and Stiglitz and Bilmes (2006), while Edwards (2010) provided a descriptive and comparative review of the different approaches that have been used in calculating the costs.

Most of these studies (but not all) applied the cost accounting method by adding up the monetary value of direct and indirect costs; in this method, calculations are carried out for multiple scenarios in which there is a need for careful investigation of all types of costs to avoid double counting some costs and leaving out others (Gardeazabal 2010: 3).

In contrast, much less focus has been placed on the costs facing the other side of the conflict: Iraq, that borne by the Iraqi state and Iraqi citizenry. The evidence, clearly shows that the costs to the Iraqi economy and society were massive with respect to the loss of life and destruction of property (Stiglitz and Bilmes 2010: 35). The projection of the full cost is difficult due to the ongoing conflicts and violence. Thus, very few quantitative analyses surround the subject, a major reason for which might be the unavailability of data on the Iraqi economy. Nevertheless, in their calculations for the economic costs and benefits of the war, Wallsten and Kosec (2005) applied cost-benefit analysis to Iraq with the calculation on three levels: United States, coalition countries and Iraq.

Bernasek (2006) reported a single attempt that concentrated on investigating the cost of the war for Iraq: Rowat's 2007 study. According to Rowat (2007), Iraq's GDP in 2005 might have reached $61 billion rather than the estimated $37 billion, if we assume Iraq had not engaged in the 2003 war. However, the cost for the economy is actually more than the difference of $24 billion; it is closer to $30 billion after subtracting foreign aid (Hong 2010: 3). In other words, the estimation indicates the war was associated with not less than a 50% loss in GDP Rowat (2007: 241). Rowat emphasized that the obtained results should be considered speculative given the short time span. Furthermore, Rowat's econometric model includes a counterfactual estimation, which assumes maintenance of the status quo (i.e., no outbreak of war).

In this vein, the predication markets provide some useful insights for the risk of war in Iraq including the movements in oil price (Wolfers and Zitzewitz 2004). However , such estimation faces the challenge that it is almost impossible to know what would have happened to Iraq and the Middle East region if Saddam Hussein had stayed in office (Stiglitz and Bilmes 2010: 35).

On the other hand, the assessment and evaluation of the implemented institutional policies in post-war Iraq and their impacts on Iraq's political economy and its performance have been the subject of extensive analysis by

Dodge (2003, 2013a, 2013b, 2013c), Davis (2007), Owen (2007), Mahdi (2007), Abboud (2009) and Yousif and Davis (2011).

Although these scholars studied the Iraq case from different perspectives, they shared a similar point of view; while the economic shocks of wars and sanctions reflected negatively on the economic performance, after the regime change, there is a strong association between the poor performance of the Iraqi economy and the implemented institutional policies. In this regard, Looney (2004), Yousif (2006: 495) and Davis (2007) highlight the negative impact of the economic policies that were based on the quick liberalization of markets and prices, called shock therapy. In this regard, Stiglitz (2004) went even further by criticizing this policy as a bigger shock for a developing country like Iraq, which was severely damaged by the Gulf wars and sanctions. In the meantime, he advocated management of the transition based on a gradual approach of privatization combined with the rebuilding of institutional arrangements.

In this context, Yousif (2006, 2007, 2010, 2013) was among the first to analyse from an economic perspective the different aspects of the implemented institutional policies, reconstruction process, and institutional arrangements and how these affected the economic development in the post-war era. Yousif made the essential point that the institutional policies for post-war Iraq resulted in increasing fragmentation of Iraqi society and failed to establish coherent new institutional arrangements.

As pointed out earlier, in this article I am concerned primarily with a somewhat different question that puts at the centre the war as an abrupt institutional change, focusing on its transformative impact on Iraqi economic, societal and state institutions.

IV. METHODOLOGY AND MODEL SPECIFICATIONS

In this section, first I review the methodology and second I describe the econometric model by specifying the variables chosen to investigate the relationship between the growth in real GDP and institutional change.

Although the main purpose is to gain a proper understanding of the present performance of the Iraqi economy as an oil-exporting country, I recognize a substantial degree of path dependence (i.e., continuity between the past and present) in the country's growth experience. Therefore, two regression models are developed for 1971–2012 and 1998–2012, respectively. The econometric technique of time series data attempts to deal with the cumulative impact of repeated conflicts (i.e. multiple institutional changes of the First Gulf War, Second Gulf War and Iraq war of 2003).

A. Methodology

The article follows in principle the theoretical plan outlined by Alston (1996: 26–27) in analysing the institutional change. At the first level of analysis, there is a need to distinguish between the causes and consequences of institutional change found in Iraq, while at the second level, the concern is the consequences or effects of institutional change. Alston suggested carrying out a static comparison between the two situations that is, comparing the situation between ante and post institutions or sets of rules in which institutional change is treated as exogenous. Therefore, section VI includes a static comparison between the two situations in Iraq, after the war and under Saddam Hussein's rule, where the focus is on the number of institutional and

economic indicators. This might serve in part to create a sort of balance sheet as suggested by Owen (2007: 99); this would include the failure and success of the post-2003 war period within the broad economic situation.

As according to many observers the war constitutes an unavoidable event, the discussion implicitly follows the Eggertsson's (2008: 48) call to deal with the degree of governance effectiveness and institutional policies by questioning whether the inadequate or appropriate policies are the source of aggravation for the external shock or not. I admit the comparison is too difficult to achieve because it is almost impossible to know what the situation would look like if Saddam had stayed in power (al-Oraibi 2013: 86). However, I believe it provides useful indicators of the performance of the Iraqi economy.

In connection with the causes of the Iraq war of 2003, it is worth noting here that weapons of mass destruction (WMD) programs never existed or were destroyed years ago and there were no established links to al-Qaeda (Stiglitz and Bilmes 2006:1, 2008: x). Furthermore, some scholars have affirmed that the alleged motivation for the war, which was based on the claims to control oil, seems simplistic and incomplete. In this regard, Mabro (2003) argued that the Iraq war of 2003 unlike the Second Gulf War was not an oil war. It is better understood within the strategic/geopolitical context; the war would provide the United States with political and security advantages over other nations and oil would not be involved in this in a major way. Nevertheless, the causes of the Iraq war and its related debate are beyond the scope of this article and have been analysed elsewhere (see, e.g., Ismael and Ismael 2015; Bassil 2012; Schmidt and Williams 2008; Zunes 2007).

I follow Streeck and Thelen's (2005: 8) call to distinguish between the process of change (i.e., the war[s]) and the results of change (i.e., the breakdown of the old political order and its replacement with a new one). While one of the unique features of institutional change is that it cannot be easily or adequately quantified and this creates obstacles for statistical analysis (Alston 1996: 29), I overcome this problem by using dummy variables; a dummy variable is a 0-1 variable that can best be viewed as an on-off switch. Furthermore, I admit the quality of institutions is very difficult to quantify, while the measurement by some indexes might be subject to qualitative judgements and have a certain bias towards free-market policies (see Chang 2011: 484–86). Nevertheless, I believe that use of the aggregate annual governance index as a proxy for the degree of governance effectiveness serves the core of my intention. Thus, I proceed in my examination by introducing the econometric models.

B. Model specification and data

In dealing with institutional changes, the article utilizes econometric techniques by applying the transfer function approach (see Gardeazabal 2010: 9–10). Thus, I employ a time series regression with and without such dynamics. So as to expand upon transformative linear regression to model growth in the Iraqi economy, in which the attempt is to capture the impacts at the macro level.

The starting point is three important facts to be considered with respect to the Iraqi economy, Iraqi dependence on oil revenues, the constrains of oil revenues operate under and Iraq's current inability to unilaterally impact global pricing.

First, the economy heavily depends on oil revenues; for instance, oil exports account for (96–99)% of total exports for 2000–2011 and the share

of oil and gas revenues to total government revenues increased from 68% in 2005 to 97% in 2011 (Revenue Watch Institute 2013). Furthermore, according to calculations performed by Jiyad (2011: 14), the ratio of oil export revenues to GDP is around 63% for 2007–2012. Second, oil revenues in turn are determined by three major factors: the quantities of exported oil, the trading price of oil in the international market, and the purchasing power of the US dollar vis-à-vis other currencies (Alnasrawi 1994: 156). Third, while Iraq is an oil-exporting country with one of the highest reserves in the world, it nonetheless acts as a price taker, dependent on the price established by global market beyond its direct control. This means that while any upward movements in global commodity pricing benefits the economy that the Iraqi economy is also open to the volatility of unforeseen price declines.

As the initial issue of interest here is the relationship between economic growth and institutional changes (i.e., the wars), I build on the pioneering work of Rowat (2007), which estimated the cost of the war for the Iraqi economy for 1997–2004. His attempt was to estimate the economic cost by using a single-equation growth model. More specifically, he regressed growth in real oil prices to the annual growth rate in the real GDP. In addition, he added two dummy variables; first was a pre-war impulse dummy variable set to 1 in 2002, and second was a war impulse dummy variable set to 1 in 2003 as follows:

$$\Delta y_t = \beta 0 + \beta 1\ \Delta p_t + d1pre + d2inv + \varepsilon t.$$

The model was subject to two major constraints: the scarce or unavailable Iraqi economic data and the very short time span (1997–2004).

Thus in my attempt, I tried to broaden the time horizon and scope of the analysis by adding some important new elements (i.e. independent variables). The oil sector is represented in the two models by including the growth in both oil production and real oil price, as follows[3]:

$$\Delta GDP_t = \beta 0 + \beta 1^* \Delta Poil_t + \beta 2^* \Delta Pro_t + \beta 3^* Dum81 +$$
$$\beta 4^* Dum91 + \beta 5^* Dum03 + \varepsilon t. \qquad \text{(I)}$$

where, Δ is the difference operator, ΔGDP is the change in real GDP from UNCTAD, and $\Delta Poil_t$ is the change in crude oil price per barrel, the average spot price of Brent, Dubai and West Texas intermediate equally weighted from the World Bank. Both are measured in 2005 US dollars. ΔPro_t is the change in oil production from OPEC annual reports. Dum81 is a dummy variable for the First Gulf War equal to 1 in 1981 and 0 otherwise, dum91 is a dummy variable for the Second Gulf War of 1990, equal to 1 in 1991 and 0 otherwise, and dum03 is a dummy variable for the Iraq war of 2003, equal to 1 in 2003 and 0 otherwise. $\beta 0$ = Intercept, $\beta 1, \beta 2, \beta 3, \beta 4$ and $\beta 5$ are co-efficients and εt is the error term.

Moreover, to capture the effects of institutional arrangements on the performance of Iraq's economy, the model is modified by adding a new independent variable for the sub-period 1998–2012: ΔInx is the change in the aggregate annual government index for Iraq from WGI. It is the change in the average of the aggregated six indicators of governance for 1998–2012. The index was constructed based on the work by Kaufmann et al. (2010). Thus, it is used as a proxy to express institutional quality over time. Therefore, the modified model is as follows:

$$\Delta GDP_t = \beta 0 + \beta 1^* \Delta Poil_t + \beta 2^* \Delta Pro_t + \beta 3^* Dum03 + \beta 4^* \Delta Inx + \varepsilon t. \quad \text{(II)}$$

3. The models omit the investment variable but it replaced by two variables (production of oil and oil price) that determine to a large extent the public revenues and thus the investments.

There are two determinants in choosing the sample and sub-sample period. First is economic considerations and data availability. The beginning of the sample period is considered by many economists as a sort of golden decade for the Iraqi economy (see e.g. Yousif 2012). For the modified model (II), I considered 1998 as the beginning of the sub-period because the OFFP of 1996 under UN supervision was expanded; this allowed for selling oil for US $5.25 billion over six months.[4] The closing date of both samples is 2012 given the available data.

Though, much like in other developing countries Iraqi data are imperfect much, such data became scarcer during the 1980s and subject to certain manipulation during the 1990s (Yousif 2008: 217). In addition, the actual figures of the Iraqi GDP and unemployment in post-2003 differ from one national and international organization to another and, as a consequence, so do the reported rates of GDP growth and unemployment (see Hong 2010; Rowat 2007). Therefore, the inadequacy of the data did not help in using the complete structural system for a growth model to capture the dynamics of the Iraqi economy and its performance. To the contrary, this led to use a single-equation reduced-form growth regression. According to Aron (2000: 101), the major weakness of the latter is that it cannot show the different channels that influence economic growth. Furthermore, the variables that determine the investment are usually incomplete or include other independent variables.

V. EMPIRICAL RESULTS

A. Results of unit roots tests

I begin by testing the stationarity of the time series by applying the unit roots for each variable in the model because non-stationary variables would result a spurious regression in which the estimated coefficients are biased (see Wooldridge 2013: 639–46). In this context, the augmented Dicky-Fuller (ADF) test has been employed using the software package Eviews 8.

Table 2-A and 2-B show the estimated statistics of the ADF test for each variable. The results indicate that all the variables are stationary at level I (0) for the sample 1971–2012 and sub-sample 1998–2012 respectively.

B. Regression results

Model (I) is estimated using ordinary least squares (OLS) from the data for 1971–2012 to validate conclusions about the GDP response to oil production, price and abrupt institutional change in terms of wars. In this regard, first I

Variable	ADF Statistic			Results	Variable	ADF Statistic			Results
	None	Trend & Intercept	Intercept			None	Trend & Intercept	Intercept	
ΔGDP	5.97	6.43	6.50	I(0)	ΔGDPt-1	5.91	6.34	6.42	I(0)
ΔProt	5.92	6.17	6.23	I(0)	ΔProt-1	5.86	6.08	6.15	I(0)
ΔPoilt	6.03	6.49	6.44	I(0)	ΔPoilt-1	5.94	6.39	6.35	I(0)

Table 2-A: Results of the ADF unit root tests.

Variable	ADF Statistic			Results
	None	Trend & Intercept	Intercept	
ΔGDP	4.33	4.51**	4.00	I(0)
ΔProt	4.56	4.19**	4.52	I(0)
ΔPoilt	4.74	4.89	3.26	I(0)
ΔIns	4.75	5.39	4.87	I(0)

*) The probabilities and critical value are calculated for N:20 and may not be accurate for N:14

**) t -value less than critical value at the 1% level but greater than the 5% level.

Table 2-B: Results of the ADF unit root test*.

regressed each independent variable to ΔGDPt (equations [1]–[4]). Second, I regressed all independent variables to ΔGDPt (equation [5]) and finally, after I drooped the insignificant variables, I regressed the significant variables (equation [6]). The results for equations (1)–(6) are displayed in Table 3.

Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)****
Intercept	2.47 (1.96)	0.06*** (0.03)	0.01 (0.02)	0.10* (0.02)	0.04 (0.02)	0.05** (0.02)
ΔProt	0.72* (0.07)	—	0.48* (0.07)	—	0.37* (0.08)	0.36* (0.07)
ΔPoilt	—	0.05 (0.07)	0.06 (0.05)	—	0.04 (0.05)	—
Dum81	—	—	—	−0.28*** (0.16)	0.02 (0.15)	—
Dum91	—	—	—	−0.76* (0.16)	−0.36** (0.16)	−0.39** (0.15)
Dum03	—	—	—	−0.43* (0.16)	−0.24*** (0.13)	−0.25*** (0.13)
R^2	0.53	0.012	0.55	0.44	0.63	0.62
Adj. R^2	0.52	−0.012	0.53	0.40	0.58	0.59
F-statistic (Prob.)	46.83 (0.00)	0.49 (0.48)	24.50 (0.00)	10.24 (0.00)	12.51 (0.00)	21.16 (0.00)
D.W.	2.59	2.10	2.67	1.84	2.57	2.57

*) p-value of 1% (0.01) or lower,**) p-value greater than 1% (0.01) but less than 5% (0.05), and***) p-value greater than 5% (0.05) but less than 10% (0.10). No. of observation: 42. Standard errors appear in parentheses.**** In equation (6), we dropped the insignificant variables in equation (5) (i.e., ΔPoilt and Dum81).

Table 3: Estimated coefficients for model I.

Broadly speaking, the signs of regression coefficients are the same across the estimations and consistent with the economic logic and expectations. More specifically, the signs of the coefficients associated with the real oil price and production are positive. The positive signs are consistent with the economic logic that an increase in the oil production and/or price tends to increase Iraqi GDP. Moreover, the coefficients associated with the wars (dummy 81, dummy 91, and dummy 03) are unsurprisingly negative and statistically significant because the wars constitute a negative shock to the economy and diminish the GDP. However, an exception is (equation [5]), in which dummy 81 is positive and statistically insignificant. This might be attributed to omitted independent variables (e.g., foreign debt and external grants).

The results show that the aforementioned effects diminish when adding oil production as an explanatory variable. This is understandable as the production of oil has a positive effect on the GDP because oil provides the biggest percentage of public revenue that is channelled to consumption and investment, including reconstruction necessitated by war damages. This would cause a decrease in the negative impact of the wars. However, in equation (6) the negative effects of dum91 alone exceed the positive effects of oil production. This might indicate that the Iraqi economy is witnessing an economic regression because of the devastating consequences of these wars.

At the same time, the oil price does not reveal a statistically significant effect on GDP in any of the equations, including the benchmark model (equation [5]) These results can be attributed to both the GDP and oil price which might have depended on a third factor (the shock caused by the wars) as the cause for the increase in oil prices in the international market on one hand and the decline in GDP on the other (Hamilton 2008: 1) because these wars are one cause for the oil spike in international markets in anticipation of supply disruptions. In contrast, the Iraqi economy did not benefit because Iraq's production was eliminated totally or partially while other oil producers increased their production to offset the lost Iraqi supplies. Nevertheless, this possibility has not been explored.

Also, the Iraqi economy was subjected to multi-structural breaks in the period under study (i.e., three wars and UN sanctions), which is characterized as economically unusual by all standards. This is reflected in Iraq's role as a producer in OPEC being uncertain after the end of Second Gulf War (Kaufmann et al. 2004: 75). Furthermore, Iraq's economy was dependent during the war with Iran on using the accumulated foreign reserves of US $35 billion, foreign debt, and external grants from Gulf states, in particular Saudi Arabia and Kuwait (Alnasrawi 1994: 81, 157). Kuwait's share, for example, was US $16 billion (Sassoon 2011: 138).

Moreover, even after the country returned to the oil market in 1998 as a result of implementing the OFFP, oil exports were halted at various times during 2000–2001 by the Iraqi government in reaction to the UN Security Council's attempts to control smuggling activities (Rowat 2007: 237). Actually, the political dynamic of the UN sanctions was the major driver of production levels and market considerations came in second place (see Marbo 1999). In sum, all these factors likely make it difficult to observe the oil price-GDP relationship.

Finally, to account for the dynamic relationship, I estimate the dynamic form of equation (6) in Table 3 by adding a lag of GDP and oil production, as follows:

$$\Delta GDPt = \beta 0 + \beta 1^* \ GDPt\text{-}1 + \beta 2^* \ \Delta Prot + \beta \ 3^* \ Prot\text{-}1 + \beta 4^* \ Dum91 + \beta 5^* \ Dum03 + \varepsilon t. \qquad (7)$$

I obtained the following results:

$$\Delta GDPt = 0.05^{**} \ -0.29^{**} \ GDPt\text{-}1 + 0.36^*Prot + 0.23^{**} \ Prot\text{-}1 - 0.34^{**} \ Dum91 - 0.23^{**} \ Dum03$$

(0.02) (0.14) (0.07) (0.09) (0.15) (0. 13)

N:44 R^2:0.68   Adj. R^2: 0.63   F:15.03   Prob:0.00   Durbin-Watson: 2.00

*) p-value of 1% (0.01) or lower and **) p-value greater than 1% (0.01) but less than 5% (0.05). Standard errors appear in parentheses.

It is clear from the values of R^2 and adjusted R^2 that there is explanatory power (in equations [4], [5], [6] and [7] of model [I]) which remains in the residuals. This would include, for example, how these shocks indirectly affected the growth in GDP through the monetary policy (issuance of new notes), which responded to the enormous deficit in public finance during the First Gulf War and UN sanctions in particular.

For the modified model (II) which covers the sub-period 1998–2012, the results are displayed in Table 4 in equations (1)–(8).

The results show that the Iraqi economy experienced a negative impact of the 2003 war. Actually, it still operates under the shock of the war and it consequences, which has had a large negative impact on both real and potential GDP growth. Also, the institutional variable has a negative effect on GDP

Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	2.47	8.46	0.98	11.00**	10.36**	12.65*	5.05***	5.65*
	(1.96)	(5.78)	(2.22)	(4.19)	(4.24)	(3.47)	(2.30)	(1.77)
$\Delta Prot$	0.72*	—	0.74*	—	—	—	0.57*	0.56*
	(0.00)		(0.07)				(0.08)	(0.07)
$\Delta Poilt$	—	-0.03	0.10	—	—	—	0.02	—
		(0.21)	(0.07)				(0.06)	
Dum03	—	—	—	−44.00*	—	−38.82*	−15.19***	−15.83**
				(16.26)		(13.40)	(6.97)	(6.56)
ΔInx	—	—	—	—	−1.56**	−1.36*	−0.57**	−0.61**
					(0.61)	(0.49)	(0.26)	(0.23)
R^2	0.86	0.015	0.88	0.36	0.33	0.60	0.93	0.93
Adj. R^2	0.85	-0.07	0.86	0.31	0.28	0.54	0.90	0.91
F-statistic	82.72	0.019	44.55	7.32	6.45	6.26	35.70	51.32
(Prob.)	(0.00)	(0.88)	(0.00)	(0.01)	(0.02)	(0.00)	(0.00)	(0.00)
Durbin-Watson	2.00	2.29	1.96	1.71	1.57	1.37	1.58	1.62

*) p-value of 1% (0.01) or lower, **) p-value greater than 1% (0.01) but less than 5% (0.05), and ***) p-value greater than 5% (0.05) but less than 10% (0.10). No. of observations: 42. Standard errors appear in parentheses.

Table 4: OLS estimates for dependent variable: GDPt 1998–2012.

growth, which suggests that the institutional arrangements did not enhance the process of economic development.

It is worth noting here that the model measures one direction of causality from institutional arrangements to growth, while there is the opposite direction from improved growth to better institutional arrangements (see Aron 2000: 115; Chang 2011: 475–76). The latter is not formally explored because the institutional arrangements are still actually under construction.

Though model (II) faces a shortness of data span (i.e., small sample of fourteen observations), the period close to business-cycle frequencies is based on high oil prices in international market. However, even if the data series were available for additional dependent variables, it would essentially include more variables than the degree of freedom allowed us (Wooldridge 2013).

Finally, by considering the results of model (II), I can outline a possible association between growth and institutions. However the results do not provide a definite conclusion and thus should be treated with caution like other models dealing with the same relationship (see Aron 2000). In this context, understanding the causal factors behind mentioned associations remains a challenge. At the same time the obtained results are notably consistent with the economic logic and the actual circumstances on the ground. In the following section, a detailed discussion of the results is provided.

VI. DISCUSSION

In this section, first I carry out a static comparative examination of the pre- and post-war situation. Second, I discuss the implemented institutional policies. The discussion highlights the main obstacles hindering the creation of new institutional arrangements that enhance sustained economic growth.

In my attempt to carry out a static comparative analysis, I utilize the aggregate indicators calculated by the Worldwide Governance Indicators project of the World Bank and Economic and Social Commission for Western Asia (ESCWA) for 1996–2012 and 1997–2008, respectively. In this regard, I build up Table 5, in which I divide the aforementioned periods into two sub-periods as specified above.

The table displays the indicators for the developments in democracy, the quality of state institutions and political instability. Thus, the table shows that the quality of institutional arrangements has been changing in two ways: The first is the development of each indicator and the second the average out as a single measure of institutional quality.

Table 5 shows a remarkable improvement in the index of voice and accountability, likewise for the political index of ESCWA. These demonstrate a milestone in Iraq's progress; compared with the previous regime, there is great political liberalization today. Though elections are the core of any democracy, democracy is much more than just elections (North et al. 2009: 265). The index that measures political instability, violence and terrorism attacks had the biggest decline among the other indexes (–44%). If I take into account the regression in control of corruption and rule of law, the picture would be darker despite a relatively small improvement in the overall index. In the same vein, the ESCWA Index for Security reports regression to half in the period of 2003–2008 compared with 1997–2002 and this includes the regression of the economic index to one-third. As a result, the overall index witnessed a negative change of 18.39%.

In continuing my attempt to carry out a static comparative analysis, Table 6 provides macro-economic indicators for 1996–2012. I also divided the period into two sub-periods (1996–2002 and 2003–2012).

Period	Overall Score for the WIG Index (average)*	Voice and Accountably-	Political Stability and Absence of Violence/Terrorism	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
1996–2002	−1.74	−1.97	−1.71	−1.88	−2.09	−1.38	−1.44
2003–2012	−1.59	−1.28	−2.47	−1.42	−1.28	−1.40	−1.72
Change	**Improve**	**Improve**	**Deteriorate**	**Improve**	**Improve**	**Deteriorate**	**Deteriorate**
% Change	**8.6**	**35**	**−44**	**24**	**38**	**−1.40**	**−19**
Period	**Overall core for the ESCWA Index****	**Political**	**Security**	**Economic**	**Social Welfare**		
1997–2002	3.86	0.72	6.72	4.17	3.84		
2003–2008	3.15	1.59	3.34	2.77	4.89		
Change	**Deteriorate**	**Improve**	**Deteriorate**	**Deteriorate**	**Improve**		
% Change	**−18.39**	**120.83**	**−50.29**	**−33.57**	**27.34**		

*) WIG covers 1996–2012 on an annual basis except 1997, 1999, and 2001. The estimate of governance performance ranges from approximately −2.5 (weak) to 2.5 (strong). For the purpose of this study, first I handled the missing observations by averaging the two years value. Second, I computed the overall index as an average of 6 annual indexes for two sub-periods, 1996–2002 and 2003–2012.

**) The ESCWA Index is a composite Millennium Development Goals (MDG) Index by Basket and Triennium for conflict-affected countries and territories of the ESCWA region. The index covers 1997–2008 and is divided into four sub-periods 1997–1999, 2000–2002, 2003–2005 and 2006–2008; the score ranges from zero (worst) to 10 (best) for each indicator. For the purpose of this study, first I computed the average index for two sub-periods, 1997–2002 and 2003–2008. Second I computed the overall index as an average of above the mentioned two indexes.

Source: World Bank, (2015b), Kler et.al (2011).

Table 5: Aggregate indicators for pro and post Iraq war.

The period	GDP in Billion USD (constant price 2005) (1)	GDP per Capita in USD (constant price 2005) (2)	Crude Oil Production (1000 barrel Daily Average) (3)	Oil Price* (4)	Oil Exports** (1000 barrel per Day) (5)	Oil export revenues USD per day (4*5) (6)	Rate of Exchange (Iraqi Dinars for one USD) (7)
Compound Annual Growth Rate% 1996–2002	10.97	7.63	19.22	7.13	45.10	12.69	−8.95
Compound Annual Growth Rate% 2003–2012	10.85	8.01	8.80	11.75	24.60	39.	−2.08
Average 1996–2002	29.96	1286	2079	23.26***	1398	37.09	1787
Average 2003–2012	42.06	1425	2190	63.36	1575	120.83	1316

*) Crude oil is the average spot price of Brent, Dubai, and West Texas intermediate equally weighted data.

**) There is a significant differences in crude oil export figures reported by Al-Amir(2015) for 2003–2006 in comparison with OPEC annual reports. The cause may lies mainly in the delay in installation of oil meters for southern crude oil exports three years after the break out of the war in 2003 (Khadduri 2011: 103).

Source: UNCTAD (2015), World Bank (2014a), Merza (2008), Central Bank of Iraq (2003–2013), OPEC(2013), Al-Amir (2015), Khadduri (2011).

Table 6: Some Macro-economic Indicators for 1996–2002 and 2003–2012.

Usually, the transition period from dictatorship to democratic political regime is characterized by instability on political and social levels; essentially the period would witness low growth (Alesina and Perotti 1994: 359). For the case of Eastern Europe, the disorganization associated with transition from a planned to a market economy in the 1990s may provide a partial explanation for the case in hand (see Blanchard and Kremer 1997).

The figures of Iraqi GDP show a significant increase (see Table 6), thought the major reason for the rosy view of Iraq's economy for 2003–2012 is the high prices for crude oil. In the meantime, there was only marginal expansion in average oil production and exports, while Iraq's quota in OPEC was suspended. This is reflected in increasing public revenues to the Iraqi government. In this context, the head of the financial committee in the House of Deputies announced that the total amount earned from exported oil for 2006–2014 was US $552.8 billion.[5] Along the same line, the total expenditures for 2006–2009 reached US $158 billion, where $124 billion was allocated to operational expenditures and the rest to investment (General Secretariat for the Council of Ministers 2010).

Nevertheless according to Table 6, the compound growth in GDP for the post-war period (i.e., 10.85%) does not exceed that of the pre-war period

(i.e., 10.97%). One reason is that even when the oil revenues increase, the ability to spend the allocated investment is considered low due to the limited capacity of the Iraqi economy to absorb capital investments (Alnasrawi 1994: 81; Yousif 2007: 47). Thus, Iraq has been characterized by a chronic under execution of its capital budget since the 1950s. Likewise, there has been a lack of systematic prioritization in Iraq's capital budgeting decisions for the post-war era (see the World Bank 2014b). Furthermore, the fragile security, political instability and corruption constitute a serious problem for development programs and reconstruction efforts (see Yousif 2016; Sawaan 2012).

In the post-war era, the cornerstone of political process was formation of the Iraqi Governing Council in 2003 based on religious and ethnic quotas which initially aimed to create a formula of power-sharing rule based on representation of a diversified society. Nevertheless, it sent a clear signal that the new political order is not based on nationalist politics but on sectarian and ethnic identities (Davis 2007: 2; Yousif and Davis 2011: 249). This created additional obstacles for finding alternative institutional arrangements and made the re-establishment of civil peace difficult because it created the grounds for a conflict of identity among Iraqis. In such an environment, the deep-rooted secular forces in the Iraqi society were pushed aside by the violence deployed by various sectarian parties (Atiyyah 2008).

Furthermore, the initial condition of the post-war state institutions was weak and the economy was crippled. The causes lie mainly in the accumulated negative effects of three wars, more than a decade of UN sanctions, widespread looting of Iraq's institutions after the fall of the regime and the elimination of Baath members from state institutions (Dodge 2013a: 252). In addition, the war caused razing of the previous structure of authority, related decision-making institutions and organizational arrangements (Mahdi 2007).

In principle, the Coalition Provisional Authority (CPA) and post-war successive governments identified the need to make the economy market-driven and establish market institutions, which constitutes a clear view to solve the inherited inefficiency in the Iraqi economy. In this context, the real challenge to actual policy is to find an adequate method for transition from one situation to another (Nye 2008: 75). In this vein, Atiyyah (2008) highlighted that, no effective plans existed for the post-war period. This essentially included the lack of a detailed economic plan, although CPA had a clear pro-market approach that it operationalized on the ground.

The CPA adopted an institutional policy based on swift transition to a market-based economy (i.e., privatization of state establishments, including the oil industry, trade liberation, and demolishing agriculture subsidies), which seemed unsuitable. This constituted a dramatic change between the restructured economy along neo-liberal lines by wholesale privatization and the economy pre-2003 in which the economic and administrative institutions were weakened by the sanctions and guided by a personalized system in which benefits were favourably distributed to regime loyalists and those with close tribal links to the head of political regime and his internal circle (Sassoon 2011: 134). Therefore, the adopted market-orientated shock therapy is a grossly ill-suited reform policy because it simply ignores the historical political context of the country and the interventionist role of the state in Iraq's economic history (Yousif 2006: 491).

Actually, a widespread culture of dependence on the state has been developed over decades in which the state used oil revenues to subsidize foods and services (Atiyyah 2008). Furthermore, the level of organizational capacity

5. In a televised interview with Iraqi TV in October 2015, Dr Ahmed Chalabi announced that about US $ 312 billion out of US $552.8 billion had been bought by Iraqi private banks, while only US $ 115 billion had been used to cover the imports of the government. The interview is available at https://www.youtube.com/watch?v=zUY-cbqkfzQ.

and industry are relatively low in comparison with Eastern Europe during its period of transition (Sassoon 2011: 130). In addition , over decades of Ba'thist rule and especially across the sanction period, Iraq lost enormous human and physical capital in comparison with other economies in transition examined in the literature (Rowat 2007: 242).

In the end, application of the CPA's ideological commitment to a free market orientation was haphazard, delayed in certain sectors for several reasons (Merza 2008: 18). First, the available information was not sufficient and this was coupled with a lack of qualified personnel to carry out such task. Second, there was fear that the process would fuel more violence and insecurity. Finally, there was opposition to privatization of the oil industry. However, the CPA officials pointed out that the primary cause for postponing their privatization plans was international legal obligations imposed on the CPA as an occupying authority and not the opposition of labour unions (Foote et al. 2004; Yousif 2007: 53).

While Iraq has always been correctly characterized as a heterogeneous society with high ethnic, religious and cultural variation, since the 1990s the state's capability to provide social services has decreased to a large extent due to sanctions. This decline in state capacity included even basic public goods such law and order (Yousif 2016: 224). The consequences of sanctions in the 1990s were not limited to the relationship between the state and society but likewise related to the positions and relationships among different group in society (Mahdi 2007). Moreover, in response to the political suppression of secular organizations within civil society, many Iraqis increasingly identified themselves with religious, tribal, and ethnic identities and those political actors mobilizing around them (Davis 2007: 5, 2010: 349). These links strengthened within the increasing vacuum of security and rule of law for the post-war period (Atiyyah 2008).

Thought democracy usually opens space for various groups to be better represented in politics, their conflicting demands for distributive polices can be a source of legislative deadlocks and may lead to accommodation of their demands by an increase in the size of government (see Alesina and Perotti 1994).

In the same line, North et al. (2009: 42) explained the governing coalition's behaviour in a fragile state by highlighting that the commitment to the constitution or rules is weak as a consequence of fluidity in the governmental coalition itself. Thus, the newly established Iraqi government was big, unstable and vulnerable. The consensus among the governing coalition was short lived; the size of the disputes was too great, which led to incoherent government programmes and the outcome was that policies did not follow a definite direction. One striking example is that the number of employees in government agencies tripled in 2003–2014[6] fuelled by the leap in oil revenues, while the announced government policy advocated the necessity of increasing the role of the private sector in creating jobs with attendant decline in the relative size of the public sector. Even more, the comparable number of public sector employees is higher in the Kurdistan Regional Government (KRG) (see Yousif 2013: 11). Furthermore, the number of the central governments' ministries increased from 23 in the last cabinet before the war to 31 in the interim government and then to 34 in 2010 and ministries in the (KRG) have risen from 24 in the fourth cabinet (1999–2006) to 45 in 2011.

This explanation is supported by the fact that the quickly produced constitution is not a source of unity for Iraqis but reflects the existing mistrust inherited from the past and is a source for deeper divisions (Allawi 2007:

414–15; Atiyyah 2008; Jawad 2013). Moreover, it left a number of serious issues to be taken up later by the House of Deputies, such as the control of new oil fields and unexplored oil areas (Allawi 2007: 417).

In these circumstances, the constitution became subject to different interpretations (Al-Oraibi 2013:79). This open-endedness is reflected in continuous attempts by different parties and factions to put in force new rules when they presume that circumstances favor them and also includes going further to attempt physical elimination of one another (see Dodge 2013a, 2013b).

On the other hand, the increasing oil revenues led the former role of rentier state to gain more strength with time and the Iraqi economy followed a consistent pathway towards complete dependence on oil, while the notion of development after 2003 was hindered by the priority on achieving progress in specific sectors, namely, production of oil and electricity (Owen 2007: 98–99). Thus, the long-term projects in the industry and agriculture sectors did not receive the required attention (Sassoon 2011: 130). Furthermore, the perception of the state as an agent of public welfare did not recover in the postwar period or at least did not witness any real improvement because the state failed to deliver the basic needs to the Iraqi population; for instance, drinking water was available for only two hours per day in 2012, while 25% of the population still doesn't have access to safe drinking water (Dodge 2013a: 253). In addition, as of late 2012, the Iraqi citizen were provided only ten to twelve hours of electricity per day (O'Hanlon and Livingston 2013:11).

With these things in mind, it is also important to examine the change in the value of citizenship for Iraqis and its status through the lenses of the property rights approach of NIE. According to Furubotn and Richer (2005: 475), there are two vital points. First, there is high material value for the citizens' demand for protection from the state during war and civil war in particular; this is reflected clearly by the insecure position of refugees. Second, the national wealth of the nation determines the economic value of its citizenship. Thus, for citizens, national welfare is very important. This is shown in the attitude of people towards emigrating from poor countries to rich countries.

Over the period under study, the citizenship of ordinary Iraqis was subject to a dramatic decline in value, made evident in the striking volume of emigration. On one hand, the state is unable to provide welfare and sufficient opportunities for employment while the security of the citizens is under serious threat. On the other, the post-war political market created new forms of political competition based on mobilization of supporters according to their ethnic and religious background in exchange for promises of expanded governmental employment and improved living standards for voters. These factors represent a setback to the concept of national citizenship and its value in the eyes of citizens. In the meantime, it constitutes a source of discrimination among citizens who belong to ethno-sectarian minorities. These pushing forces are evident as reflected in the many talented people who have left Iraq since 2003, with this brain drain reaching its peak in 2005–2007 as a consequence of the civil war (Sassoon 2013: 2). In fact the brain drain is not a new event as it seems inseparable from the frequent changes in politics but the brain drain accelerated dramatically after the Second Gulf War.

However, this negative trend did not shift its direction even after relative improvement in the security situation (see Stiglitz and Bilmes 2010: 35–36; Sassoon 2011: 140–51). On the contrary, the desire to emigrate amongst youth between the ages 15 and 29 remains relatively high in spite of the recognized wealth of the nation in terms of oil and gas resources. According to

7. According to Buckley (2006: 141–42), the estimated Iraqi sovereign debt comprised the following:

- US $60 billion to Arab countries, primarily Kuwait and Saudi Arabia
- US $7 billion to Japan
- US $6 billion to Russia
- US $5 billion to France
- US $4.5 billion to Germany
- US $3.5 billion to the United States
- US $2.5 billion to Italy.

the Iraq Human Development Report (2014), the desire for emigration among the youth is 22.2% on the national level for both genders, while it is about 31% in Baghdad and about 41% among males, for whom the motivation is the likelihood of obtaining a higher income or more job opportunities. On the national level, the main reasons behind this desire are building a better future in another country and the lack security or stability (United Nations Development Programme [UNDP] 2014: 180–81).

Despite of this gloomy picture, there were some success stories in rebuilding Iraqi institutions, especially in the financial sector: setting up a new stock exchange, rebuilding an independent central bank, and issuing new currency (Foote et al. 2004: 18–20; Sassoon 2011: 138; Yousif 2006: 459). In addition, the United States played a leading role in the Paris Club, allowing the new Iraqi government to lower Iraqi sovereign debt some 80% – debt relief amounting to an estimated US $120.2 billion (Buckley 2006: 141)[7] and international support for reconstruction of the post-Ba'th Iraqi economy was demonstrated through by the Madrid Conference for Donors in 2003 (see Allawi 2007: 199–201).

With the increase in oil prices, the foreign reserves had increased to US $70 billion at the end of 2012 (International Monetary Fund [IMF] 2013: 8) and the monetary policy implemented by Iraq's central bank played a vital role in improving and stabilizing the currency, with the exchange rate for Iraqi dinar hovering around 1200 per US dollar and the rate of inflation dropping from two digits to one in 2008–2011 (Dagar 2014: 42). However, lowering inflation and strengthening the exchange rate against foreign currencies are still serious concerns despite the intensified efforts by the central bank to control them during the period of study. Likewise, the independence of the central bank was subject to continuous pressure from the central government in Baghdad (see Dodge 2013a, 2013c).

Although the initial figure estimated by the World Bank stated that the required amount to make the Iraqi economy function at a pre-war level is US $17.5 billion (Yousif 2007: 55), the United States alone spent more than US $56 billion to rebuild the infrastructure and institutions in 2003–2012 (O'Hanlon and Livingston 2013: 5). For a nation affected by long periods of war and UN sanctions, the expected resources seemingly were not sufficient to sustain the pre-war 2003 standard of living (Merza 2008: 21). In this context, Yousif succinctly summarized to Fortin (2013) the main causes as to why things had not improved, emphasizing implicitly the role of path dependence and the deteriorated social fabric:

Iraq has gone through wars that completely disrupted civil society. They went through years of [UN] sanctions. They went through de-Ba'athification, which took away a lot of the government personnel. So to expect this country to pop back into shape now is unreasonable. The threats are really quite real, and quite severe.

VII. CONCLUDING REMARKS

The contemporary history of Iraq has witnessed sharp turning points marked by abrupt (discontinuous) rather than incremental processes. Since the 1980s, the turning points have unfolded by drastic disruptions (i.e., the wars and UN sanctions). In this work, I built two econometric models to capture the effect of the abrupt institutional changes on the growth in GDP by using (OLS).

The results obtained demonstrate the negative association between the growth in GDP as a dependent variable and the wars on one hand and the institutional arrangements on the other. This reflects perhaps unsurprisingly, the reality of mass destruction and dislocation caused through the three wars and international sanctions. Likewise, the institutional variable is found to be an important determinant of growth. Moreover, the static comparison provides evidence that the standard of living for Iraqis is not much better than it otherwise has been. Though the models are highly simplified, I believe they capture fundamental aspects of the relationship between economic performance and institutions.

The establishment of an institutional arrangement that could promote sustained economic growth following the 2003 war has proven to be a problematic process even with the availability of financial resources in which politics, economics and social factors interact with each other. Specifically, serious challenges emerged as a consequence of the unsuitable institutional policies adopted by CPA and successor governments. In this vein, the institutional policies chosen led to the establishment of a weak government which was unable to enhance economic growth. Moreover, while an important mean in the institutional policy is state institutions, weakness of state institutions which was inherited from the past has been ignored and these institutions have been further weakened by the implemented policies, including the de-Ba'athification and dissolution of the Iraqi army from one side and the accelerated emigration of professionals and bureaucrats from the other.

This leads me to conclude that, even for a resource-rich country like Iraq in which constraints of financial resources are not a major obstacle, the effects of discontinuous institutional change is neither less risky nor less expensive than the status quo.

The conclusion I draw is that, as with the Iraqi government before the war, institutional policies of both the CPA as well as successive Iraqi governments that followed have failed to develop better institutional policies. Rather, additional evidence in line with the point of view advocated by Yousif (2007: 57) suggests that the post-war situation is an outcome of particular institutional policies within the factual social and economic conditions of a nation that has experienced a decade of armed conflicts and UN sanctions.

These events led to a number of undesirable results, including accelerating the social disintegration of a highly diversified population. The degree of uncertainty remains high, for as with UN sanctions in place prior to the 2003, the increased social tension after 2003, has contributed to a general sense of instability preventing execution of economic policies. Therefore, the new institutional arrangements have not been able to provide incentive for productive economic activities.

The Iraq case constitutes a source of complexity for any efforts to capture the different aspects of abrupt institutional change brought about by the 2003 war and its influence on the path of development. Moreover, the country witnessed a civil war in 2006–2007, which has its own negative effects. Thus, the institutional change in terms of the Iraq war of 2003 and its aftermath is an unusual case. It is a mixture of ongoing conflict, political instability and terrorism attacks, while the economic impacts of each of them are quite different (see Gardeazabal 2010: 22).

While a single essay cannot explore the different effects of institutional change on economic performance at all analytic levels, the two econometric

models used in this study explained important aspects of the macro-economic relationship between the growth in output and the abrupt change in institutions. However, it is worth noting that the models dealt with macro-economic costs while there are also micro-economic costs for individuals, their families, and companies (Stiglitz and Bilmes 2010: 25) which are not included. Thus, more scholarly attention is needed on the regional, sectoral and firm levels.

ACKNOWLEDGEMENTS

REFERENCES

Abboud, S. (2009), 'Failures (and successes?) of neoliberal economic policy in Iraq', *International Journal of Contemporary Iraqi Studies*, 2: 3, pp. 425–42.

Acemoglu, D. (2003), 'Why not a political Coase theorem? Social conflict, commitment, and politics', *Journal of Comparative Economics*, 31: 4, pp. 620–52.

Acemoglu, D., Johnson, S. and Robinson, J. (2005), 'Institutions as the fundamental cause of long-run growth', in A. Philippe and S. N. Durlauf (eds), *Handbook of Economic Growth*, vol. 1, Part A, North Holland: Elsevier, pp. 385–472.

Al-Amir, F. (2015), 'Mu'lahathat a'ala Mukalat al-kasair wa 'a al-Althayia fe Kata'h al-Takaha'/'Notes on the article losses and waste in the energy sector', http://iraqieconomists.net/ar/2015/. Accessed 20 November 2015.

Al-bazaz, S. (1992), *Harab taled Aukra : al-Tariek al-Seri le Harab al-Kalej*/'A war creates another: The secret history of Gulf War', Amman, Jordan : Almaktiba Alahlyia.

Alesina, A. and Perotti, R. (1994), 'The political economy of growth: A critical survey of the recent literature', *The World Bank Economic Review*, 8: 3, pp. 351–71.

Allawi, A. (2007), *The Occupation of Iraq: Winning the War Losing the Peace*, New Haven and London: Yale University Press.

Alnasrawi, A. (1994), *The Economy of Iraq: Oil, Wars, Destruction of Development and Prospects, 1950–2010*, Westport: Greenwood.

—— (1996), 'Political economy of human emergencies: Iraq as a special case', Helsinki: World Institute for Development Economics Research (WIDER).

Al-Oraibi, M. (2013), 'Iraq: A decade of lost opportunities', *The Washington Quarterly*, 36: 2, pp. 77–89.

Alston, L. J. (1996), 'Empirical work in institutional economics: An overview', in L. J. Alston, T. Eggertsson and D. C. North (eds), *Empirical Studies in Institutional Change*, New York, NY: Cambridge University Press, pp. 25–30.

Anon. (2006), 'Paying for Iraq: Blood and treasure', *The Economist*, 33, 6 April, pp. 48–49.

—— (2010), 'How Iraqi politicians get paid $1,000 a minute, don't make laws and live it up for free at Baghdad's finest hotel', *The Daily Mail*, 1 November, http://www.dailymail.co.uk/news/article-1325597/How-Iraqi-politicians-paid-1k-minute-live-freeBaghdad.html. Accessed 19 August 2014.

—— (2014), 'al-Kathban: Ada'd al-Muthafen Azdad thlathat athaf an 2003'/'al-Kathban: the number of government officials triples since 2003', alsumaria.tv, 29 April, http://www.alsumaria.tv/news/99145/الغضبان-عدد-الموظفين-ارتفع-ثلاثة-أضعاف-ع/ar#. Accessed 5 December 2014.

Aron, J. (2000), 'Growth and institutions: A review of the evidence', *World Bank Research Observer*, 15: 1, pp. 99–135.

Atiyyah, G. (2008), 'Iraq: Instability and social integration', https://www.boell.de/de/internationalepolitik/internationale-politik-2127.html. Accessed 20 August 2015.

Barsky, R. B. and Kilian, L. (2004), 'Oil and the macroeconomy since the 1970s', *Journal of Economic Perspectives*, 18: 4, pp. 115–34.

Barzel, Y. (2002), *A Theory of the State: Economic Rights, Legal Rights, and the Scope of the State*, Cambridge: Cambridge University Press.

Bassil, Y. (2012), 'The 2003 Iraq war: Operations, causes, and consequences', *Journal of Humanities and Social Science*, 4: 5, pp. 29–47.

Bernasek, A. (2006), 'An early calculation of Iraq's cost of war', *New York Times*, 22 October, http://query.nytimes.com/gst/fullpage.html?res=9904E1DB163FF931A15753C1A9609C8B63. Accessed 20 January 2015.

Blanchard, O. and Kremer, M. (1997), 'Disorganization', *Quarterly Journal of Economics*, 112: 4, pp. 1091–126.

Boudreaux, K. and Aligica, P. (2007), *Path to Property: Approaches to Institutional Change in International Development*, London: IEA.

Buckley, R. (2006), 'Iraq's sovereign debt and its curious global implications', in M. Heazle and I. Islam (eds), *Beyond the Iraq War: The Promises, Pitfalls and Perils of External Interventionism*, Cheltenham: Edward Elgar Publishing, pp. 141–55.

Central Bank of Iraq [CBI] (2003–2013), *Statistical Bulletin*, Baghdad: Central Bank of Iraq.

Chakravarti, A. (2008), 'A theory of discontinuous change', Working Paper No. 164, Department of International Development, UK: Oxford University.

Chalabi, A. (2015), 'An interview with Iraqyia T.V. Channel', https://www.youtube.com/watch?v=zUY-cbqkfzQ. Accessed 2 December 2015.

Chang, Ha-Joon (2011), 'Institutions and economic development: Theory, policy and history', *Journal of Institutional Economics*, 7: 4, pp. 473–98.

Congressional Budget Office (2008), *Analysis of the Growth in Funding for Operations in Iraq, Afghanistan, and Elsewhere on the War on Terrorism*, Washington, DC: Congress library.

Dagar, M. M. (2014), 'al-Sayasa al-Naqdyia fe al-Iraq min al-Tabayia ela al-Estakilal kair al-Faal'/'The monetary Policy in Iraq: From dependency to ineffective autonomy', *Arab Economic Journal*, 1: 65, pp. 28–46.

Davis, E. (2007), 'Rebuilding a non-sectarian Iraq', *Strategic Insights*, 6: 6.

—— (2010), 'The political economy of modern Iraq', in D. S. Sorenson (eds), *Interpreting the Middle East: Essential themes*, Boulder, CO: Westview Press, pp. 337–62.

Davis, S. J., Murphy, K. M. and Topel, R. H. (2003), 'War in Iraq versus Containment', http://gsbwww.uchicago.edu/fac/steven.davis/research/. Accessed 18 September 2015.

—— (2006), 'War in Iraq versus containment', University of Chicago Graduate School of Business, National Bureau of Economic Research, http://gsbwww.uchicago.edu/fac/steven.davis/research. Accessed 18 September 2015.

Dodge, T. (2003), *Inventing Iraq*: *The Failure of Nation Building and a History Denied*, New York, NY: Columbia University Press.

—— (2013a), 'State and society in Iraq ten years after regime change: The rise of a new authoritarianism', *International Affairs*, 89: 2, pp. 241–57.

—— (2013b), 'Back to the future: The failure to reform the post-war political economy of Iraq', in M. Berdal and D. Zaum (eds), *Political Economy of State Building: Power after Peace. Routledge Studies in Intervention and State Building*, Hound Mills, Basingstoke, Hampshire, UK: Routledge, pp. 191–208.

—— (2013c), *Iraq – From War to a New Authoritarianism*, London, UK: Routledge, Taylor & Francis Group.

Edwards, R. (2010), 'A review of war costs in Iraq and Afghanistan', the National Bureau of Economic Research (*NBER*), *Working Paper* No. 16163, http://www.nber.org/papers/w16163. Accessed 23 November 2014.

Eggertsson, T. (1996), 'A note on the economics of institutions', in L. J. Alston, T. Eggertsson and D. C. North (eds), *Empirical Studies in Institutional Change*, New York, NY: Cambridge University Press, pp. 6–24.

—— (2008), *Imperfect Institutions: Possibilities & Limits of Reform*, 4th ed., Michigan: University of Michigan Press.

—— (2009), 'Knowledge and the theory of institutional change', *Journal of Institutional Economics*, 5: 2, pp. 137–50.

—— (2013), 'Quick guide to new institutional economics', *Journal of Comparative Economics*, 41: 1, pp. 1–5.

Farouk-Sluglett, M. and Sluglett, P. (2003), *Iraq since 1958: From Revolution to Dictatorship*, 3rd ed., London, England, NY: I.B Tauris.

Fortin, J. (2013), 'Ten years in Baghdad: How Iraq has changed since Saddam', *International Business Times*, 19 March, http://www.ibtimes.com/ten-years-baghdad-how-iraq-has-changed-saddam-1138161. Accessed 25 September 2014.

Foote, C., Block, W., Crane, K. and Gray, S. (2004), 'Economic policy and prospects in Iraq', *Journal of Economic Perspectives*, 18: 3, pp. 47–70.

Furubotn, E. G. and Richer, R. (2005), *Institutions and Economic Theory: The Contribution of the New Institutional Economics*, 2nd ed., Ann Arber, MI: University of Michigan Press.

Gardeazabal. J. (2010), 'Methods for measuring aggregate costs of conflict', in M. R. Garfinkel and S. Skaperdas (eds), chapter 11, Oxford: Oxford University Press, http://www.socsci.uci.edu/~mrgarfin/OUP/. Accessed 18 June 2015.

Gately, D. (1995), 'Strategies for OPEC's pricing decisions', *The Energy Journal*, 16: 3, pp. 1–38.

Gately, D., Adelman, M. A. and Griffin, J. M. (1986), 'Lessons from the 1986 oil price collapse', *Brookings Papers on Economic Activity*, 1986: 2, pp. 237–84.

General Secretariat for the Council of Ministers (2010), 'A letter to Ministry of Finance, ref: 29072)', 19 August, http://www.qanon302.net/. Accessed 2 January 2015.

Habermann, S. J. (1955), 'The Iraq development board: Administration and program', *Middle East Journal*, 9: 2, pp. 179–86.

Hamilton, J. D. (2008), 'Oil and the macroeconomy', in S. N. Durlauf and L. E. Blume (eds), *The New Palgrave Dictionary of Economics Online*, Palgrave Macmillan, http://www.dictionaryofeconomics.com/article?id=pde2008_E000233. Accessed 12 July 2015.

Hartley, K. (2003), 'The economics of the UK-Iraq conflict', *Radical Statistics*, 84, pp. 44–48.

—— (2004), 'Economics of conflicts: Iraq', http://carecon.org.uk/RES2005/Keith.pdf. Accessed 18 September 2015.

Hong, J. (2010), 'The War on Terror: Iraq GDP & Unemployment', International Human Rights Law Institute Review (Attorney Publications), College of Law, DePaul University.

International Monetary Fund (IMF) (2013), 'Iraq: IMF Country Report No. 13/217', International Monetary Fund, Washington.

Ismael, T. Y. and Ismael, J. S. (2015), *Iraq in the Twenty First Century: Regime Change and the Making of a Failed State*, New York, NY: Routledge.

Iversen, C. (1954), *Monetary Policy in Iraq*, Baghdad, Iraq: National Bank of Iraq.

Jawad, S. N. (2013), 'The Iraqi Constitution: Structural Flaws and Political Implications', LSE Middle East Centre Paper Series / 01, http://www.lse.ac.uk/middleEastCentre/publications/Paper-Series/Iraqi-Constitution.aspx. Accessed 20 November 2014.

Jiyad, A. M. (2011), 'Oil upstream development: The feasibility of a fast-tempo, big-push strategy', *International Journal of Contemporary Iraqi Studies*, 5: 1, pp. 11–46.

Kaufmann, D., Kraay, A. and Mastruzzi, M. (2010), 'The worldwide governance indicators: A summary of methodology, data and analytical issues', World Bank Policy Research, Working Paper No.5430, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1682130. Accessed 15 January 2015.

Kaufmann, R., Dees, S., Karadeloglou, P. and Sanchez, M. (2004), 'Does OPEC matter? An econometric analysis of oil prices', *The Energy Journal*, 25: 4, pp. 67–90.

Khadduri, W. (2011), 'Iraq grand-upstream opening: Alternatives and challenges', *International Journal of Contemporary Iraqi Studies*, 5: 1, pp. 101–11.

Kingston, C. and Caballero, G. (2009), 'Comparing theories of institutional change', *Journal of Institutional Economics*, 5: 2, pp. 151–80.

Kler, P., Carmignani, F., Ghazi-Boullion, A. and Bou Ali, M. (2011), 'Trend and impacts in conflict setting: conflicts and MDGS', No. 2, http://www.escwa.un.org/divisions/ecri_editor/Download.asp?table_name=ecri_projects&field_name=id&FileID=48. Accessed 16 January 2015.

Libecap, G. (1989), *Contracting for Property Rights*, Cambridge: Cambridge University Press.

Looney, R. (2004), 'Neoliberalism in a conflict state: The viability of economic shock therapy in Iraq', *Strategic Insights*, 3: 6, pp. 1–11.

Mabro, R. (1999), 'Suspending sanction on Iraq : Make haste, slowly', Oxford Energy Comment, The Oxford Institute for Energy Study, http://www.oxfordenergy.org/1999/11/suspending-sanctions-on-iraq-make-haste-slowly. Accessed 22 December 2015.

—— (2003), 'Is the widely expected war on Iraq an oil war? Oxford Energy Comment', The Oxford Institute for Energy Study, http://www.oxfordenergy.org/2003/02/is-the-widely-expected-war-on-iraq-an-oil-war/. Accessed 15 July 2015.

Mahdavy, H. (1970), 'The pattern and problems of economic development in Rentier States: The case of Iran', in J. W. Cook (ed.), *Studies in the Economic History of the Middle East*, Oxford: Oxford University Press, pp. 428–67.

Mahdi, K. (2007), 'Neoliberalism, conflict and an oil economy: The case of Iraq', *Arab Studies Quarterly*, 29: 1, pp. 1–20.

McKibbin, W. J. and Stoeckel, A. (2003), 'The economic costs of a war in Iraq', http://www.brookings.edu/research/papers/2003/03/03globaleconomics-mckibbin. Accessed 22 September 2014.

Merza, A. (2008), 'Policies and economic and social trends in Iraq: 2003–2007', *Third Annual Conference for International Association of Contemporary Iraqi Studies*, SOAS, University of London, London, United Kingdom, 16–17 July.

Nordhaus, W. (2002), 'The economic consequences of a war with Iraq', The National Bureau of Economic Research, Working Paper 9361, http://www.nber.org/papers/w9361. Accessed 20 September 2014.

North, D. (1990), *Institutions, Institutional Change and Economic Performance*, 24th ed., New York, NY: Cambridge University Press.

North, D., Wallis, J. J. and Weingast, B. (2009), *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*, New York, NY: Cambridge University Press.

Nye, J. (2008), 'Institutions and institutional environment', in E. Brousseau and J.-M. Glachant (eds), *New Institutional Economics: A Guidebook*, New York, NY: Cambridge University Press, pp. 67–80.

O'Hanlon, M. and Livingston, I. (2013), 'Iraq index: Tracking variables of reconstruction & security in Iraq', http://www.brookings.edu/iraqindex. Accessed 10 June 2014.

Organization of Petroleum Exporting Countries (OPEC) (1995), *Annual Statistical Bulletin*, Public Relations and Information Department, Vienna: Austria.

—— (2013), *Annual Statistical Bulletin*, Public Relations and Information Department Vienna: Austria.

Opper, S. (2008), 'New institutional economics and its application on transition and developing economics', in E. Brousseau and J.-M. Glachant (eds), *New Institutional Economics: A Guidebook*, New York, NY: Cambridge University Press, pp. 389–406.

Owen, R. (2007), 'Reconstructing the performance of the Iraqi economy 1950–2006: An essay with some hypotheses and many questions', *International Journal of Contemporary Iraqi Studies*, 1: 1, pp. 93–101.

Pejovich, S. (1990), *The Economics of Property Tights: Towards a Theory of Comparative Systems*, Dordrecht, Germany: Klumer Academic Publisher.

Revenue Watch Institute (2013), 'Iraq report', http://www.resourcegovernance.org/countries/middle-east-and-north-africa/iraq/overview. Accessed 10 December 2014.

Rowat, C. (2007), 'Iraqi GDP since 2003: Some simple calculations', *International Journal of Contemporary Iraqi Studies*, 1: 1, pp. 233–45.

Salter, A. (1955), *The Development of Iraq: A Plan of Action*, Baghdad: Iraq Development Board.

Sanford, J. E. (2003), 'Iraq's economy: Past, present, future', Report for Congress, Congressional Research Service: Library of Congress.

Sassoon, J. (2011), *The Iraqi Refugees: The New Crisis in Middle East*, London and New York: I.B. Tauris.

—— (2013), 'The U.S. Administration's Policy in Iraq', Woodrow Wilson International Center for Scholars, Viewpoints No. 38, http://www.wilsoncenter.org/sites/default/files/the_us_administration_policy_in%20iraq_sassoon.pdf. Accessed 14 July 2015.

Sawaan, H. K. (2012), 'The corruption of political elites in Iraq: An economic analysis', *Contemporary Arab Affairs*, 5: 1, pp. 107–27.

Schmidt, B. and Williams, M. (2008), 'The Bush doctrine and the Iraq war: Neoconservative versus realists', *Security Studies*, 17: 2, pp. 191–220.

Stiglitz, J. E. (2004), 'Iraq's next shock will be shock therapy, project syndicate', http://www.project-syndicate.org/commentary/iraq-s-next-shock-will-be-shock-therapy#8b1HhOMUhEp2h8fC.99. Accessed 14 March 2013.

—— (2008), 'The high cost of the Iraq war', in J. E. Stiglitz, A. S. Edlin and J. Bradford Delong (eds), *The Economist's Voice: Top Economists take on Today's Problem*, New York, NY: Colombia University Press, pp. 80–83.

Stiglitz, J. E. and Bilmes, L. J. (2006), 'The economic costs of the Iraq War: An appraisal three years after the beginning of the conflict', The National Bureau of Economic Research, www.nber.org/papers/w12054. Accessed 12 March 2013.

—— (2008), *The Three Trillion Dollar: The True Cost of the Iraq Conflict*, New York, NY: W.W. Norton.

—— (2010), 'Estimating the costs of war: Methodological issues, with applications to Iraq and Afghanistan', in M. R. Garfinkel and S. Skaperdas (eds) *Oxford Handbook of the Economics of Peace and Conflicts*, chapter 13, Oxford: Oxford University Press, http://www.socsci.uci.edu/~mrgarfin/OUP/. Accessed 18 June 2015.

Streeck, W. and Thelen, K. (2005), 'Introduction: Institutional change in advanced political economies', in W. Streeck and K. Thelen (eds), *Beyond Continuity: Institutional Change in Advanced Political Economies*, Oxford: Oxford University Press, pp. 3–39.

Surk, B. (2010), 'Iraqi MPs get handsome pay for little work', *The Washington Times*, 2 November, http://www.boston.com/business/articles/2010/11/01/iraqi_mps_get_handsome_pay_for_little_work/; http://www.washington-times.com/news/2010/nov/2/iraqi-mps-get-handsome-p. Accessed 14 October 2015.

Tang, S. (2012), 'A general theory of institutional change', Working paper, Fudan University, Shanghai, China, http://ssrn.com/abstract=2199709. Accessed 11 February 2015.

Toye, J. (1995), 'The new institutional economics and its implications for development theory', in J. Harriss, J. Hunter and C. M. Lewis (eds), *The New Institutional Economics and Third World Development*, London and New York: Routledge, pp. 49–68.

Tripp, C. (2007), *A History of Iraq*, 3rd ed., New York, NY: Cambridge University Press.

United Nations Conference on Trade and Development (UNCTAD) (2015), 'UNCTADstat', http://unctadstat.unctad.org. Accessed 14 December 2015.

United Nations Development Programme (UNDP) (2014), 'Iraq human development report: Iraqi youth challenges and opportunities', Ministry of Planning And Baytal Hikma, Baghdad.

Warriner, D. (1962), *Land Reform and Development in the Middle East: A Study of Egypt, Syria, and Iraq*, 2nd ed., Oxford: Oxford University Press.

Wallsten, S. (2008), 'The economic cost of the Iraq war', in J. E. Stiglitz, A. S. Edlin and J. Bradford Delong (eds), *The Economist's Voice: Top Economists take on Today's Problem*, New York, NY: Columbia University Press, pp. 73–79.

Wallsten, S. and Kosec, K. (2005), 'The economic costs of the war in Iraq', Working Paper 05-19, AEI-Brookings Joint Center for Regularity Studies, http://ssrn.com/abstract= 848408. Accessed 12 July 2014.

Webster, L. (2007), 'Costs of the War in Iraq', http://www.lvistas.net/Costs_of_the_War_in_Iraq_II_Final.pdf. Accessed 9 August 2014.

Wolfers, J. and Zitzewitz, E. (2004), 'Prediction markets', Working Paper, National Bureau of Economic Research, http://www.nber.org/papers/w10504. Accessed 16 October 2015.

Wooldridge, J. M. (2013), *Introductory Econometrics: A Modern Approach*, 5th ed., Mason, OH: South-West.

World Bank (2014a), 'Commodity markets', http://go.worldbank.org/4ROCCIEQ50. Accessed 12 July 2014.

—— (2014b), *Republic of Iraq Public Expenditure Review: Toward More Efficient Spending for Better Service Delivery*, Washington, DC: World Bank Group.

—— (2015a), 'World development indicators', http://data.worldbank.org/indicator/NY.GDP.PETR.RT.ZS. Accessed 10 October 2015.

—— (2015b), 'Worldwide governance indicators', http://info.worldbank.org/governance/wgi/index.aspx#home. Accessed 10 October 2015.

Yousif, B. (2006), 'Coalition economic policies in Iraq: Motivations and outcomes', *Third World Quarterly*, 27: 3, pp. 491–505.

—— (2007), 'Economic restructuring in Iraq: Intended and unintended consequences', *Journal of Economic Issues*, 41: 1, pp. 43–60.

—— (2008), 'Non-renewable resource depletion and reinvestment: Issues and evidence for an oil-exporting country', *Environment and Development Economics*, 14: 2, pp. 211–26.

—— (2010), 'The political economy of sectarianism in Iraq', *International Journal of Contemporary Iraqi Studies*, 4: 3, pp. 357–67.

—— (2012), *Human Development in Iraq: 1950–1990*, New York. NY: Routledge.

—— (2013), 'Aspiration and reality in Iraq's post-sanctions economy', *Middle East Report*, 43: 266, pp. 10–13.

—— (2016), 'Iraq's stunted growth: Human and economic development in perspective', *Contemporary Arab Affairs*, 9: 2, pp. 212–36.

Yousif, B. and Davis, E. (2011), 'Iraq: Understanding autocracy- oil and conflict in historical and socio-political context', in I. Elbadawi and S. Makdisi (eds), *Democracy in the Arab World: Explaining the Deficit*, New York, NY: Routledge, pp. 227–53.

Zedalis, R. J. (2007), 'Iraqi oil and revenues from its sale: A review of how existing Security Council resolutions affected the past and may shape the future', *European Journal of International Law*, 18: 3, pp. 499–522.

Zunes, S. (2007), 'The United States in Iraq: The consequences of occupation', *International Journal of Contemporary Iraqi Studies*, 1: 1, pp. 57–75.

SUGGESTED CITATION

CONTRIBUTOR DETAILS

Omar A.M. El-Joumayle is a Ph.D. Candidate in Economics and Management, University of Pavia. He holds B.Sc. and M.Sc. in Economics from University of Baghdad, In addition, he has received his Master degree in Management of Development from University of Turin. He was an Associate in The Centre for Arabic & Middle Eastern Studies, American University of Beirut (2014).

Contact: University of Pavia, Faculty of Economics, Dept. of Economics and Management, Via San Felice, 5 – 27100 Pavia, Italy.
E-mail: omareljoumayle@yahoo.com

Private Investigator

Edited by Alistair Rolls and Rachel Franks

ISBN 9781783205233
Paperback
155 x 230mm
£19.50 | $28
ebook available

Part of the Crime Uncovered series

The private investigator is one of the most enduring characters within crime fiction. In *Crime Uncovered: Private Investigator*, the editors delve deep into crime literature and culture, challenging many of the assumptions we make about the hardy P. I.

Assembling a cast of notable crime fiction experts, including Stephen Knight and Carolyn Beasley, the book covers characters from throughout the whole world of international noir. Including essays on the emergence of the protagonist in nineteenth-century fiction; interviews with crime writers Leigh Redhead, Nick Quantrill, and Fernando Lalana; and analysis of the transatlantic exchanges that helped to develop public perception of a literary icon. This volume will be a handy companion for any crime fiction fan.

Alistair Rolls is associate professor of French studies at the University of Newcastle, Australia. **Rachel Franks** is a conjoint fellow at the University of Newcastle, Australia, and a co-ordinator of education and scholarship at the State Library of New South Wales.

To order this book online visit our website:
www.intellectbooks.com