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Protracted Conflict and Development
in the Arab Region

ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA (ESCWA)

TRENDS AND IMPACTS

Issue No. 4

**PROTRACTED CONFLICT
AND DEVELOPMENT IN THE ARAB REGION**

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Executive summary

The Arab region is presently beset by armed civil conflict, one of the most profoundly devastating social phenomena in the modern world. This report examines the relationships between conflict and development. Today, at least half of the Arab States are affected, directly or indirectly, by armed conflicts of varying intensity; yet, little is known about the effects of conflict on household behaviour and poverty.

Examining the current dynamics of conflict in the Arab region reveals not only the protracted and open-ended nature of the raging conflicts, but also the increasing linkages of these conflicts across national borders. The conflict dynamics have prompted a proliferation of violent non-State actors waging war in the region, some of which are strictly local in focus, some of which form rough coalitions, and some of which form resilient transnational networks.

The accumulation of governance deficits, coupled with the fragmentation of rebel groups, and the spread of radical ideologies have prolonged conflict and challenged peacemaking and peacebuilding efforts. Mounting evidence from conflict-affected countries suggests that conflicts seriously undermine citizens' health and welfare, economic growth, political systems, and the application of human rights. What is more, conflicts increase the risk of renewed conflict. For the Arab region, the negative development outcomes due to conflict are immense, and are of humanitarian, economic and political nature.

In addition to the negative ramifications of conflict, the Arab region is characterized by a set of distinctive development factors. These include low female labour participation, coupled with very high global unemployment rates, and military expenditures that are excessive compared to the rest of the world.

Two additional development challenges are worth mentioning, namely, first, that the Arab region is home to the world's largest refugee population, and many of these are refugees precisely because of conflict and political instability; and, secondly, it currently experiences an unprecedented youth bulge – on average 30 per cent of the population in Arab countries is aged between 15 and 29. These factors are particularly problematic for Governments in the region that are increasingly unable to generate employment and dignified livelihoods, especially for youth. The potential of a youth bulge to act as a catalyst for conflict and instability is likely conditional on opportunities for education and, in particular, employment.

While, on average, there is no statistical effect of unemployment rates on conflict, this study confirms the close and significant relationship between unemployment, a lack of opportunities for youth and conflict intensity in the Arab region, and the most intense conflicts are closely linked to the highest levels of unemployment. As conflict intensity and unemployment grow, the correlation between these two factors intensifies even further.

These trends are obviously troublesome, and a better understanding of the root causes and consequences of conflict is indispensable for mitigating the negative externalities of conflict and leading the way towards sustainable socioeconomic development.

I. PROTRACTED CONFLICT IN THE ARAB REGION

Over the last five years, conflicts in the Arab region have increased, and are proving extremely difficult to resolve for several reasons.

Firstly, it is difficult to negotiate and implement peace agreements in countries where rebel movements are highly fragmented, making coherent negotiations difficult, if not impossible. In Libya, for example, dozens of local political and military committees have emerged since 2011, and have now formed very loosely organized coalitions that struggle to coordinate their members.

Secondly, many violent non-State actors are driven by 'exclusivist' or 'eliminationist' ideologies, such as al-Qaida and Islamic State. For these groups and their affiliates, political accommodation or restraint is impossible without risking organizational collapse.

Thirdly, atrocities and human rights abuses committed by both Government and rebel groups have further radicalized these groups, making compromises harder to reach.

Fourthly, decades of authoritarian rule have caused economic and political power to be concentrated in the hands of a few; created a political economy based on extraction and external revenues; curtailed freedoms and human rights; resulted in weak and dysfunctional civil societies; and led to profound distrust between factional elites, the people and the State.

These four factors are key internal drivers of protracted conflict in the Arab region. The following are three external drivers: strategic competition between regional powers over spheres of influence that results in both overt and covert conflict; the legacy of the United States-led invasion and occupation of Iraq, which shattered already brittle State institutions in the country and led to fierce sectarian violence; and neighbourhood or spillover effects, where conflict in one country creates conditions for conflict in neighbouring countries, either directly, as in the case of Iraq and the Syrian Arab Republic, or indirectly through refugee flows, depressed economic growth or fuelling domestic political tensions.

The Israel-Palestine conflict has also created many spillover effects in the form of refugees, strategic competition and periodic conflict between Israel and its Arab neighbours. Policy¹ and academic research² recognize the determinative role that external factors play in protracted conflict. Civil wars are often quickly resolved once external patrons decide to end their support for local fighters.³

A. FEATURES OF PROTRACTED CONFLICT IN THE ARAB REGION

Compared to other regions, the Arab region has been the most conflict-affected in recent years. Between 2009 and 2013, 41 per cent of Arab countries experienced at least one internal conflict.⁴ Examining conflict dynamics in the region reveals increasing linkages across borders. The conflicts in Iraq, the Syrian Arab Republic and Yemen are just a few examples.

Different groups are fighting across borders and vast areas. Rebel groups are not just practising guerrilla warfare, using hit-and-run tactics; they are also in control of major cities such as Mosul, Iraq, and Derna, Libya. Such conflicts pose profound challenges to the Arab State system, with some commentators speculating on the sustainability of international borders created in the aftermath of the First World War.⁵

¹ See, for example, Dobbins and others, 2013.

² See, for example, Balch-Lindsay and Enterline, 2000.

³ Connable and Libicki, 2010.

⁴ Economic and Social Commission for Western Asia (ESCWA), 2014.

⁵ Gause III, 2014.

Nevertheless, rebel control of territory in Iraq, Libya, the Syrian Arab Republic, and Yemen is constantly shifting. Rebel governance is violent and weak, with groups focusing on securing revenues from rents, external patronage, natural resources, kidnapping, smuggling, and drug and human trafficking.

B. VIOLENT NON-STATE ACTORS AND RADICAL IDEOLOGIES

The Arab region has long been an arena for violent non-State actors, but this phenomenon has dramatically increased since the United States-led invasion of Iraq in 2003 and following the 2011 Arab uprisings. There are now hundreds of violent non-State actors waging war in the region, some of which are strictly local in focus, some form rough coalitions and some establish resilient and ever-expanding transnational networks.

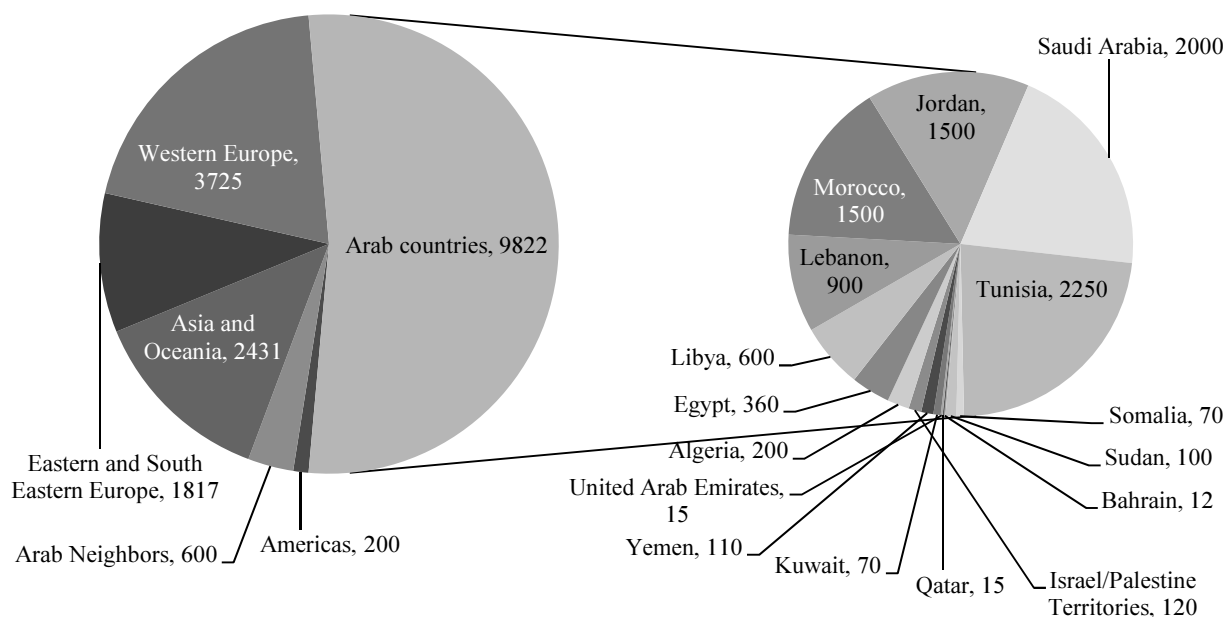
The formation of non-State armed forces is frequently a response to State weakness, a way for communities to protect themselves when the State cannot or will not. For example, the defeat of the Qaddafi regime in 2011 fragmented Libya into regional and municipal groupings controlled by rebel forces. During and immediately after the civil war, citizens formed local militias that patrolled their neighbourhoods to provide basic public order. Larger, more organized and better equipped groups formed revolutionary brigades that conducted most of the fighting against Qaddafi. These groups promoted a variety of ideologies, including mainstream and secular ones. Given that the army and police forces partially collapsed with the Qaddafi regime, the post-war Government relied on these brigades to ensure internal security. As a result, dozens of brigades have become entrenched in Libyan society, and are now a major part of the factional political dynamics that have made establishing peace in Libya so difficult. The brigades and their allies have coalesced into two rival political groupings.

Across the Arab region, violent non-State actors with radical ideologies pose the severest security problems. It is very difficult, perhaps impossible, to predict their behaviour or negotiate settlements with them. These radical groups are typically called *jihadi* or *takfiri*. The longest-tenured major jihadist group in the region is Al-Qaida, which was established by Osama bin Laden and Ayman al-Zawahiri in the early 1990s and carried out a string of bombings in the Middle East and Africa before a major attack on the United States of America on 11 September 2001. Then located in Afghanistan, the core group was almost completely destroyed in 2002 and 2003, after the United States-led invasion. A successful Al-Qaida franchise formed under the leadership of Abu Musab al-Zarqawi. Affiliates then emerged in North Africa (Al-Qaida in the Islamic Maghreb), and in Saudi Arabia and Yemen (Al-Qaida in the Arabian Peninsula). By 2011, this resilient, transnational terrorism network was well positioned to exploit the political tumult that followed the Arab uprisings. Al-Qaida affiliates have entrenched themselves across the region, most notably the Nusra Front in the Syrian Arab Republic and Ansar al-Sharia in Libya and Tunisia. The Somali jihadist rebel group, Al-Shabaab, pledged allegiance to Al-Qaida in 2012.

The most prominent new jihadist organization is Islamic State or *Daesh*, which began as an offshoot of Al-Qaida in Iraq. After its sudden offensive in northern Iraq in early 2014, it secured a considerable portion of Iraq and the Syrian Arab Republic, where it has declared a caliphate with Abu Bakr al-Baghdadi as caliph, and has attempted to establish State institutions, including a currency, legislation and a shura council. It collects steady revenue from taxes, oil and criminal activities. These activities have led to Security Council resolution 2199, condemning the financing of such groups. Islamic State has been responsible for many atrocities and now has its own affiliate organizations in its *wilayat* in Libya and in the Sinai Peninsula in Egypt (Ansar Beit al-Maqdis).

Moreover, conflicts in Iraq, Libya, the Syrian Arab Republic, and Yemen have attracted foreign fighters and radicalized them, with dire consequences for future global stability. Fighters from across the Arab region, Europe, the Russian Federation, and sub-Saharan Africa have enlisted in large numbers in these war-affected countries.

Figure 1. Foreign fighters in the Syrian Arab Republic by country of origin



Source: Neumann, 2015.

* Arab neighbours are countries bordering Arab countries, including Chad, Iran, South Sudan, and Turkey, among others.

The International Centre for the Study of Radicalisation and Political Violence has reported that there were over 20,000 foreign fighters in Iraq and the Syrian Arab Republic as at 26 January 2015. The majority of these fighters originate from Arab States, as can be seen in figure 1.

The highly fragmented nature of many rebel groupings, combined with radical ideologies, makes negotiated settlements extremely difficult to reach in many conflicts. Factional fragmentation also inhibits compromise, even among ostensibly more mainstream groups in Libya, the Syrian Arab Republic and Yemen.

C. ATROCITIES AND HUMAN RIGHTS ABUSES

The report of the Secretary-General on the implementation of Security Council resolutions 2139 (2014), 2165 (2014) and 2191 (2014)⁶ concerning the Syrian Arab Republic found that armed opposition groups, particularly Islamic State and the Nusra Front, continued to violate international humanitarian law and human rights in areas under their control. They have attacked civilians, carried out executions and abductions, and imposed restrictions on the fundamental freedoms of civilians. Local sources have reported that the Nusra Front was increasingly kidnapping and detaining human rights defenders and journalists critical of the group.⁷ Amnesty International and Human Rights Watch have reported numerous violations by Government forces and opposition groups in the Syrian Arab Republic. Many of these attacks were intended primarily to spread terror among the civilian population.

A study by Amnesty International states that “armed groups carried out indiscriminate suicide and car bomb attacks throughout Iraq, killing and injuring thousands of civilians. As they gained control of much of northwestern Iraq, Islamic State fighters embarked on a systematic campaign of ethnic cleansing in which they committed war crimes, including mass summary killings and abductions that targeted religious and

⁶ United Nations Security Council, 2015b.

⁷ United Nations Security Council, 2015c.

ethnic minorities, including Christians, Yezidis, Shi'a Turkmen and Shi'a Shabaks".⁸ The study also claims that "security forces and Shi'a militias abducted or detained Sunnis and carried out scores of extrajudicial executions with impunity. In areas where they regained control from Islamic State, they also destroyed homes and businesses of Sunni residents, in reprisal for the alleged support for Islamic State by members of those communities. Kurdish Peshmerga forces also carried out reprisal destruction of homes of Sunni Arab residents in areas they recaptured from Islamic State".⁹

The conflict in Yemen has also been characterized by atrocities and human rights abuses. On 22 March 2015, the Security Council urged all non-State actors to withdraw from Government institutions, including in the south of Yemen, and to refrain from any attempts to take over such institutions.¹⁰ The United Nations Special Advisor, Mr. Jamal Benomar, also warned that the situation in Yemen was fragile: "Any side that would want to push the country in either direction would be inviting a protracted conflict in the vein of an Iraq-Libya-Syria combined scenario."¹¹ The Houthi takeover of Sana'a and their march southward towards Aden has led to severe international intervention, impeding and reconciliation efforts. The International Crisis Group claims that "the slim chance to salvage a political process requires that regional actors immediately cease military action and help the domestic parties agree on a broadly acceptable president or presidential council".¹² On 14 April 2015, the Security Council adopted resolution 2216, which requests that "all Yemeni parties adhere to resolving their differences through dialogue and consultation, reject acts of violence to achieve political goals, and refrain from provocation and all unilateral actions to undermine the political transition and stresses that all parties should take concrete steps to agree and implement a consensus-based political solution to Yemen's crisis in accordance with the Gulf Cooperation Council Initiative and its Implementation Mechanism and the outcomes of the comprehensive National Dialogue conference".¹³

In Libya, all factions have committed crimes. Amnesty International has reported that "warring parties in the east and west of Libya carried out indiscriminate attacks resulting in hundreds of civilian casualties and damage to civilian buildings and infrastructure including hospitals, homes, mosques, businesses, farms, power stations, airports, roads, and a large fuel storage facility. They fired artillery, mortars, GRAD rockets, and anti-aircraft weapons from and into residential areas. Operation Dignity forces carried out air strikes in Benghazi, Derna, Tripoli, Zuwara, Bir al-Ghanem and Misratah, at times in residential areas, reportedly killing and injuring civilians and damaging civilian buildings. Zintan Brigades allegedly used antipersonnel mines around Tripoli International Airport."¹⁴ Various factions operate with impunity and have detained thousands of low-level former Qaddafi officials without trial, frequently subjecting them to torture.

However, impunity is not only confined to radical or extremist groups in the region but also to States, including Israel. According to the High Commissioner for Human Rights, "impunity prevails across the board for violations of international humanitarian law and international human rights law allegedly committed by Israeli forces, whether it be in the context of active hostilities in Gaza or killings, torture and ill-treatment in the West Bank".¹⁵ The Israeli occupation of Palestine, which began in 1967, is the longest in recent history, with policies that violate international law and have a detrimental social and economic impact on the Palestinian population.

⁸ Amnesty International, 2015, pp. 192-193.

⁹ Ibid., p. 192.

¹⁰ United Nations Security Council, 2015a.

¹¹ <http://www.un.org/press/en/2015/sc11828.doc.htm>.

¹² International Crisis Group, 2015.

¹³ S/RES/2216 (2015), para. 6.

¹⁴ Amnesty International, 2015, p. 231.

¹⁵ Human Rights Council, 2015, para. 670.

Israeli policies can be categorized under the following three broad titles: systematic oppression, including collective punishment, targeting of civilians and civilian structures, arbitrary detention, torture, and ill-treatment; population displacement, including the revocation of residency permits for Palestinians, restrictions on Palestinian construction and the consequent demolition of “illegal” structures and homes, harassment of Palestinians, threats, and denial of access to services; and land grabbing and annexation, which includes the annexation of East Jerusalem and a de facto annexation of the West Bank through the Separation Wall, Israeli settlement activity and direct land confiscation.¹⁶

These policies and practices have not only impeded social and economic development in Palestine, but have caused severe humanitarian crises, increasing dependency of Palestinian households on aid for sustenance and resulting in de-development in many economic and social sectors. Recurrent military operations, the most recent and destructive of which was the offensive on the Gaza Strip in the summer of 2014, have further exacerbated these conditions. This offensive has caused a severe deterioration in socioeconomic conditions, and Israel continues to impede recovery and reconstruction through the blockade.

In the West Bank, economic development remains constrained by a multilayered system of movement and access restrictions, combining checkpoints, the Separation Wall and a complex and arbitrary permit regime.¹⁷ Restricted access to Area C¹⁸ in the West Bank also significantly inhibits Palestinian opportunities to develop a viable economy.

Overall, by 2014 the Palestinian economy was still losing ground. Real per capita income declined, while unemployment, poverty and food insecurity increased. The overall rate of unemployment reached a record high in the fourth quarter of 2014 in Gaza (42.8 per cent) and the West Bank (17.4 per cent).¹⁹ The latest available data indicate that poverty rates stood at 39 per cent in Gaza and 18 per cent in the West Bank in 2011. Conflict in Gaza and stunted economic performance have certainly exacerbated the situation since then, pushing more Palestinian families into poverty.

Another indicator of the worsening socioeconomic conditions in Gaza is the increase in recipients of food aid from the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), which rose from 72,000 (10 per cent of the population) in 2000 to 868,000 (almost 50 per cent of the population) in 2015.²⁰

Food insecurity in the occupied Palestinian territory was very high in 2013, with one third of households (1.6 million Palestinians) considered food insecure and 635,000 vulnerable to food insecurity, primarily because of a lack of access to food, stemming from a continuous erosion of livelihoods.²¹

Atrocities and human rights abuses are self-defeating, because they only prolong conflict without increasing the chances of victory by radicalizing and motivating opponents. The state of affairs in Arab conflict-affected countries was summarized in a 2015 briefing²² to the Security Council by the United Nations High Commissioner for Human Rights, Mr. Zeid Ra’ad Al Hussein:

Fanaticism always finds oxygen and flourishes where tolerance and the universal standards of human rights are battered. It grows in States that betray their people, that fail to respect their own Constitutions, and that do not embrace, genuinely, the ethnic, linguistic and religious

¹⁶ ESCWA, 2015, paras. 3-4.

¹⁷ International Labour Office, 2013.

¹⁸ Area C is under full Israeli administrative and security control and comprises approximately 60 per cent of the West Bank.

¹⁹ Palestinian Central Bureau of Statistics, 2014.

²⁰ Information provided by UNRWA.

²¹ UNRWA, 2014.

²² S/PV.7419, p. 4.

diversity of their societies; in States where the voice and participation of all members of society are smothered; in States that attack civil society activists, whose work, ironically, is the very best antidote against the toxin of extremism. To immunize properly against further radicalism, human rights defenders must be promoted and defended, not imprisoned and tortured. Sadly, there are many such States in the Middle East and other regions, and by their actions they fertilize the soil of intolerance, where extremism takes root.

D. LEGACIES OF AUTHORITARIAN RULE

The primary function of authoritarian institutions is to protect or insulate a regime from its citizens. They do not help peacefully manage political and social differences, especially during crises. A key feature of authoritarian regimes is their brittleness and propensity to collapse under stress, when compared to democratic regimes.²³ Authoritarian regimes are also more conflict prone.²⁴

In times of transition and crisis, countries are often assisted by timely interventions from civil society actors. The end of fascist rule in Spain in the late 1970s was, at key moments, facilitated by the monarchy. The Catholic Church played an important role in the transition to democracy in Hungary and Poland. In Czechoslovakia, an organized group of dissidents, artists and intellectuals stepped in to lead the transitional Government. During the 1990s, the Turkish Union of Chambers of Commerce and Industry and other non-governmental organizations sponsored critical research and organized dialogue processes aimed at settling conflict in south-east Turkey. Since 2011, Tunisia has emerged as the most stable transition country in the region, in part because of the active involvement of powerful labour unions.²⁵ Prominent civil society groups that are moderate, pragmatic, autonomous from the Government and widely trusted by the public have been decisive actors in many political transitions and conflict resolutions.

Civil society actors that meet these criteria are hard to find in the Arab region, owing in part to the thoroughness of the region's authoritarian governance. Civil society groups, even non-political ones, find it difficult to operate independently; they are frequently harassed or are forced to collaborate with the Government. In some countries, they are suppressed violently.

Qaddafi deliberately subverted autonomous social institutions because he viewed them as a threat. By 2011, Libyan society lacked even weak or partially independent social institutions that could help manage a peaceful transition. Libya had no political parties, regional or local governments, trade unions, independent legislators or judges, robust civil society groups, or prominent religious or traditional organizations.²⁶ The only social organizations that can draw on independent sources of legitimacy are Libyan tribes, making them the most likely mediators. Yet, this traditional system has been effectively undermined by 40 years of skilful, highly personalistic patronage-based rule.²⁷ Qaddafi's exploitation of tribal and regional cleavages is directly responsible for many of the current difficulties.

The current Libyan civil war can be explained, in part, by a lack of strong civil society institutions acting as mediating and moderating influences between major political and regional groups. Unlike Iraq and the Syrian Arab Republic, Libya is not divided by major social and political cleavages, and the current political disputes are relatively narrow. The factions, however, do not trust each other to implement the political transition without favouritism. Each faction fears that the other faction, once in power, will use Libyan oil revenues and a reconstituted security sector to crush political opposition. There are no "third parties" in Libyan civil society to mediate this critical challenge to conflict settlement.²⁸

²³ Hegre and others, 2001.

²⁴ Gates and others, 2006.

²⁵ Chayes, 2014.

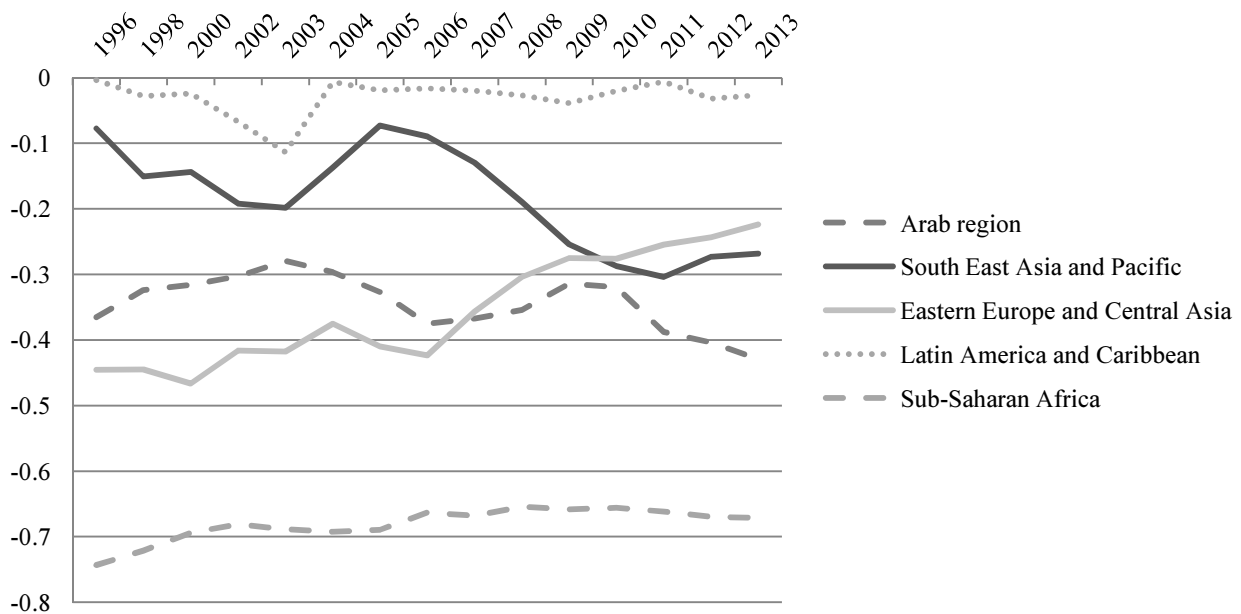
²⁶ Vandewalle, 2012.

²⁷ Ibid.

²⁸ Walter, 1997.

Figures 2 and 3 show indicators from the World Bank that track ‘rule of law’ and ‘voice and accountability’ in developing countries over time. The Arab region scores poorly on both measures. Rule of law, which basically measures whether a State follows the law or implements it arbitrarily, has declined since 2003 in the Arab region.

Figure 2. Rule of law in developing countries by region



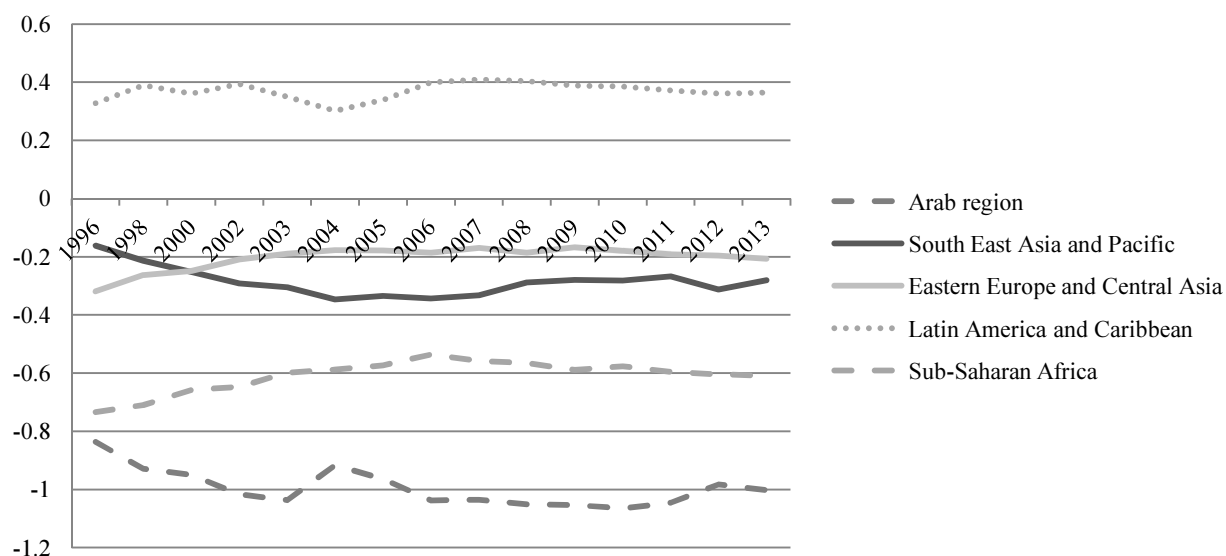
Source: World Bank, Worldwide Governance Indicators database. Available from <http://info.worldbank.org/governance/wgi/index.aspx#home> (accessed 31 July 2015).

The situation is worse in conflict-affected Arab countries. As a result, it is very difficult for Governments to make credible commitments to rebels or potential rebels to implement reform agendas or peace agreements. De Rouen and others (2010) highlight the link between State capacity, on the one hand, and conflict termination and peacebuilding, on the other. They find that:

State capacity is a necessary but not sufficient condition for sustainable peace through its impact on peace agreement implementation... In post-conflict reconstruction, peacebuilding is dependent upon a government’s ability to exercise effective authority in economic, political, and military matters. State capacity is understood as the means of overcoming those problems addressed by a weak government, such as autonomy, effectiveness, accountability, and responsiveness in economic, political, and military dimensions. Accordingly, state capacity contributes to peacebuilding by providing assets when new countries take on major new tasks in the face of unfriendly conditions.

Authoritarian Governments by nature are ill suited to peacebuilding because of their structure; it is difficult for these regimes to adopt policies that mitigate information asymmetry and commitment problems. Closed regimes that rely on secret police to sustain themselves cannot credibly reveal information about their strengths and preferences, because they have an incentive to obfuscate in any negotiation. Their opponents therefore cannot trust them because of these incentives, and there are comparatively fewer independent sources of information available in authoritarian regimes.

Figure 3. Voice and accountability in developing countries by region



Source: World Bank, Worldwide Governance Indicators database. Available from <http://info.worldbank.org/governance/wgi/index.aspx#home> (accessed 31 July 2015).

Authoritarians cannot credibly commit to agreements either. Mattes and Savun (2009) identify the following two ways for actors to credibly commit in negotiations to end civil wars:

Fear-reducing provisions such as third-party guarantees and power sharing alleviate the belligerents' concerns about opportunism by the other side. Provisions such as the separation of forces make the resumption of hostilities undesirable by increasing the costs of further fighting.

Many autocrats in the Arab region have exploited ethnic, religious, and sectarian differences to sustain their rule. This divide-and-rule strategy extends back to the colonial period, when European powers frequently elevated minority social groups to rule over majorities. Having adopted such strategies in the recent past, it is hard to believe that autocrats would not renege on a peace agreement and resort to such strategies in the future. Moreover, the general lack of accountability of Arab Governments means that their societies cannot trust them to implement peacebuilding measures.

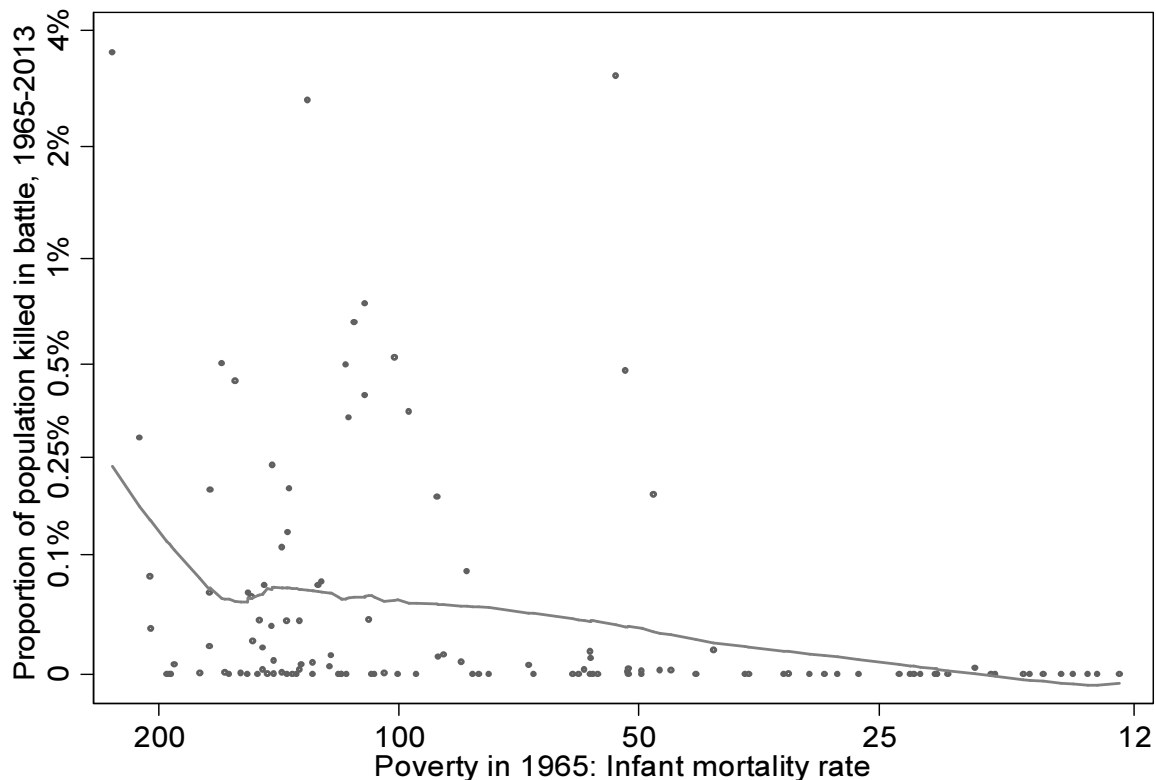
In sum, the accumulation of these governance deficits, in addition to the fragmentation of rebel groups, the spread of radical ideologies and the commission of atrocities, has prolonged conflict and challenged peacebuilding efforts, with a detrimental impact on development.

E. CONFLICT: DEVELOPMENT IN REVERSE

Civil wars and political instability are among the most devastating social phenomena of the modern world. Armed conflicts can have staggering death tolls, as shown in figure 4. Several of the worst episodes since the Second World War have taken place in the Arab region. In Lebanon (1975-1990), for instance, around 145,000 people of a pre-war population of 2.8 million were killed in battle.²⁹ Over 0.1 per cent of the population has been killed in wars in Algeria, Iraq, Iran, Palestine, the Sudan, and Yemen.

²⁹ Lacina and Gleditsch, 2005.

Figure 4. Empirical relationship between deaths from internal conflicts 1965-2009 vs. poverty in 1965



Source: Hegre and Holtermann, 2012.

Note: The figure shows the log infant mortality rate (IMR) in 1965 for all countries along the x-axis, and the number of battle deaths in internal conflicts over the period 1965-2009 divided by the population in 1965 along the y-axis. The line is the average proportion killed as a smoothed function of IMR. Most conflict countries are marked with country names in the figure, whereas countries with no or very minor conflicts appear only with non-marked dots.

Figure 4 only shows the number of people killed in battle-related action. Conflicts have numerous other adverse consequences, such as displacement of large populations, economic distortions, capital flight, and erosion of public health systems and social trust. Civil war is indeed “development in reverse”.³⁰ Figure 4 also indicates how conflicts have disproportionally occurred in countries that had high infant mortality rates in 1965.³¹ Typically, conflicts are the most lethal in the poorest countries. They seriously undermine citizens’ health and welfare, economic growth, political systems and human rights situations. They also increase the risk of renewed conflict.

When conflicts reverse development, they also undermine important factors that help societies to avoid conflicts in the first place.³² One important reason violent conflicts are rare in upper-middle-income and high-income countries is that the entire economy crucially depends on divisions of labour and dense networks of economic exchange. Positive, peaceful and rule-based relations between groups and individuals are desirable for all parties in this network, since everyone benefits from economic exchanges. Large-scale political violence breaks up such networks, even between groups that are not directly involved in the

³⁰ Collier and others, 2003, p. 13.

³¹ The main exceptions are the conflicts in Northern Ireland and the Basque Country, the attacks in New York on 11 September 2001 and the Israel-Palestine conflict. In the latter case, IMR is probably underestimated as the IMR figures exclude mortality in the occupied Palestinian territory.

³² Collier and others, 2003.

fighting, and can gradually transform all relations into zero-sum activities. Another restraining factor in developed economies is the reliance on financial capital and the availability of skilled labour. Such ‘footloose’ capital and labour is liable to move from conflict countries to more peaceful and productive places; when armed conflicts break out, they quickly erode this important constraint. Moreover, armed conflicts empower actors that are specialized in the use of violence rather than in economically productive activities, meaning that political decisions increasingly favour a non-productive environment. Conflicts also undermine interpersonal trust and cause tension between social groups.

F. IMPACT OF CONFLICT ON CITIZENS’ WELFARE

Conflict directly exposes populations to conditions that increase mortality, injury and disability. The most obvious source is battle-related deaths among civilians and soldiers. The effect of this on aggregate life expectancy and mortality levels depends on the war technology utilized by warring parties. Conflicts characterized by low-scale guerrilla warfare will produce far fewer battle deaths than conflicts in which artillery shelling and aerial bombardment are used.

However, the long-term indirect effects of conflict are likely to be much greater than the direct effects. Armed conflicts often lead to forced migration, refugee flows and the destruction of social infrastructure. Social, political and economic institutions are indelibly harmed. Therefore, the consequences of war, especially civil war, for development are profound.

Gates and others (2012) find that a conflict of typical severity increases undernourishment by 3.3 per cent, reduces life expectancy by about one year, increases infant mortality by 10 per cent and deprives an additional 1.8 per cent of the population from access to potable water.

Ghobarah and others (2003) argue that the additional burden of death and disability caused by the lingering effects of civil wars is nearly double that of the immediate and direct effects. Civil war “directly affects all the major contributors to health: exposure to disease, medical care, public health interventions, and overall socioeconomic conditions”.³³

Iqbal (2010) shows that fertility rates increase and life expectancies decrease as a result of conflict. Plümper and Neumayer (2006) and Ghobarah and others (2003) report that the health consequences of conflict are more severe for women than men, although fewer women are directly killed in battle.

Civil wars displace large populations, and temporary accommodation often exposes these populations to new risk factors. As noted by Ghobarah and others,³⁴ “epidemic diseases – tuberculosis, measles, pneumonia, cholera, typhoid, paratyphoid, and dysentery – are likely to emerge from crowding, bad water, and poor sanitation in camps, while malnutrition and stress compromise people’s immune systems.”

Even without displacement, conflict may destroy local health facilities and block access to proximate facilities because of the risks involved in travelling through conflict zones. This particularly affects infant and under-five mortality and birth-related maternal mortality. Epidemiological research argues that diseases, especially diarrhoea, have a greater effect on mortality rates than direct battle deaths. Ghobarah and others (2003) further note that interpersonal violence often escalates in the aftermath of war, adding to mortality and disability rates.

Widespread violence and destruction disrupts transportation, cutting rural populations off from health and education facilities. Military expenditures invariably increase during war, reducing funds available to promote public health, education and poverty alleviation, among other things.³⁵ Local economies may be

³³ Ghobarah and others, 2003, p. 871.

³⁴ Ibid., p. 192.

³⁵ Knight and others, 1996.

disrupted, partly because of disincentives to invest due to capital flight,³⁶ thus reducing public spending. Local effects can be much more severe than national effects. In cases where distinct population groups are perceived as the opposition, the Government will often be tempted to cut off public spending in their territory, where fighting is likely to be the most intense.

Conflict reduces the efficiency of allocated public health resources. Ghobarah and others³⁷ state that “wartime destruction and disruption of the transportation infrastructure (roads, bridges, railroad systems; communications and electricity) weakens the ability to distribute clean water, food, medicine, and relief supplies, both to refugees and to others who stay in place”. Medical personnel tend to flee conflict zones if they can, leaving the poorest and most immobile behind. Military forces often deliberately target health facilities and transportation infrastructure to weaken the opposition.

Figure 5 shows the adverse effects of conflict. Countries experiencing severe armed conflict are generally clustered in the lower left corner of the scatter plot; they remained poor over the period 1965 to 2009. Non-conflict-affected countries that were poor in 1965 managed to improve their development position over the same period. Some poor countries, such as Chile, Oman and the Republic of South Korea, have experienced dramatic reductions in poverty according to this measure. Most countries in the Arab region have done better than the global average on this account. This is true for Gulf countries, Egypt, Jordan, the Syrian Arab Republic and Tunisia. The exceptions are Iraq and Lebanon, both of which suffered extremely devastating wars during that period. A disproportionate number of countries across the world that were poor in 1965 and remain poor today have witnessed long and destructive civil wars, including Afghanistan, Burundi, Cambodia and Somalia.

Figure 5. Poverty reduction 1965-2009 vs. deaths from internal conflict 1965-2009



Source: Hegre and Holtermann, 2012.

³⁶ Collier, 1999.

³⁷ Ghobarah and others, 2003, p. 193.

G. IMPACT OF CONFLICT ON POVERTY, HUNGER, CHILD MORTALITY AND EDUCATION

Several studies confirm the popular perception that conflicts exacerbate poverty and hunger. Messer and Cohen (2004) argue that conflict causes food insecurity and that civil wars in Africa since the mid-1960s until 2000 have cost the region over \$120 billion worth of agricultural production. Gates and others (2012) find that a single year of minor conflict increases the proportion of undernourished people by 0.8 per cent; five years of major conflict is estimated to lead to an 8 per cent increase. A conflict of average severity (2,500 deaths over five years) increases the undernourished population by 3.3 per cent.

Many studies³⁸ have found that conflict increases infant mortality, which is highly correlated with other indicators of socioeconomic development, such as gross domestic product (GDP) per capita. Infant mortality rates are often employed as a proxy for a State's general socioeconomic development as an independent variable,³⁹ since data on infant mortality is generally available in all regions. Gates and others (2012) show that one year of minor conflict increases log infant mortality rates by approximately 1.11 per cent. For a country with an infant mortality rate of 75 per 1,000 live births, this would result in an increase to 75.9 per 1,000. These estimates imply that a five-year major conflict increases mortality rates to 84 per 1,000 live births. In the average conflict-affected country, more than 1 million children are born every year. An infant mortality rate of 75.9 per 1,000 live births would lead to a surplus mortality of 900 children per year; a rate of 84 deaths per 1,000 live births would imply a surplus mortality of 9,000 infants per year. These estimates imply that surplus infant mortality rates actually exceed the number of direct battle deaths.

The effect of conflict on education is especially interesting given education's importance for development in general. On the aggregate level, Lai and Thyne (2007) find that, during civil war, a State reduces its educational expenditures by 3.1-3.6 per cent each year. Perhaps more significantly, the authors find that this reduction in spending is not due to a "guns-for-butter" trade-off but rather that civil wars disrupt a State's general ability to provide social services, such as education, to its citizenry. Conflict has a similar effect on education enrolment. This is perhaps more disturbing, since such an effect is likely to linger long after the conflict has ended, reflected in low literacy rates. However, Gates and others (2012) do not find a clear relationship between conflict and education. Their estimates indicate that conflicts adversely affect enrolment rates for both primary and secondary education, but these results are not statistically significant. This finding was discussed and corroborated in the 2012 Human Security Report.⁴⁰

H. EFFECT OF CONFLICT ON ECONOMIC GROWTH

Civil wars reduce GDP growth by over 2 per cent on average for each year of conflict,⁴¹ making them more damaging than international wars.⁴² Cerra and Saxena (2008) examine a variety of political and financial crises and find that in civil wars, output declines by 6 per cent initially on average. Half the loss is recuperated after four years, but 3 per cent of cumulative loss remains even after a decade. The findings of Mueller (2012) are more severe: on average, output declines by about 18 per cent initially.

Murdoch and Sandler (2002; 2004) find effects of a similar magnitude and also demonstrate that civil wars have adverse growth effects in neighbouring countries. Blomberg and Hess (2002) show that recession may increase the risk of both internal and external conflict, which in turn raises the probability of new

³⁸ Davis and Kuritsky, 2002; Ammons, 1996; Stewart and others, 1997; Iqbal, 2010; Gates and others, 2012.

³⁹ Abouharb and Kimball, 2007.

⁴⁰ Human Security Report Project, 2012.

⁴¹ Collier, 1999; Gates and others, 2012; and Staines, 2004.

⁴² Collier, 1999; Koubi, 2005.

economic downturns. Several studies have found that political violence reduces international trade, which in turn depresses growth.⁴³

Collier (1999) classifies the way conflict reduces development into the following categories: destruction, disruption, diversion, and dissaving. War destroys production and health facilities; war-related deaths and maiming reduce the workforce; and destruction of roads hinders economic exchange and increase transportation costs. Disruption results from insecurity created by violence and a general breakdown of the social order, as well as the effects of large populations fleeing their homes and jobs.

Civil wars lead to great diversions of public funds through increased military spending. War economies suffer from dissaving and massive capital flight. The negative effects on capital result from the destruction of infrastructure and increases in transaction costs. “The ability to enforce contracts is reduced as the institutions of civil society are weakened, trust declines, time horizons shorten due to uncertainty, and opportunism becomes more profitable.”⁴⁴ Focusing specifically on capital flight, Davies (2008) shows that capital flight is significant in conflict and post-conflict countries, and is coupled with high inflation. Financing a war is costly and is often done by incurring unsustainable debts.⁴⁵ Short-term war funding can lead to inflation; trade and finance are also disrupted, and mobile capital flees.⁴⁶

Armed conflict also adversely affects the structure of an economy. Since land-specific capital such as agriculture and other primary commodities is less mobile, the flight of mobile capital means that conflict transforms economies into more primary commodity-dependent economies.⁴⁷

I. POLITICAL CONSEQUENCES OF CONFLICT

Gates and others (2010) study the effect of conflict on human rights violations, concentrating on the Middle East and North Africa (MENA) region. They measure a State’s human rights situation through the Political Terror Scale.⁴⁸

Figure 6 describes the probability of being in each of the five Political Terror Scale levels under four different conflict scenarios. The probabilities are broken down according to whether the conflict is intense (war) or less violent (minor conflict), and whether the conflict erupted recently (new) or not (durable). A MENA country with a durable war is over 80 per cent likely to be in the highest level of political terror and more than 95 per cent likely to be in the highest and second highest levels. Human rights violations become more severe as a war continues, but even in the first year, a conflict-affected country is 80 per cent likely to be in either the highest or second-highest level of the Political Terror Scale.

⁴³ Blomberg and Hess, 2006; Bayer and Rupert, 2004; Long, 2008; Magee and Massoud, 2011.

⁴⁴ Collier, 1999, p. 178.

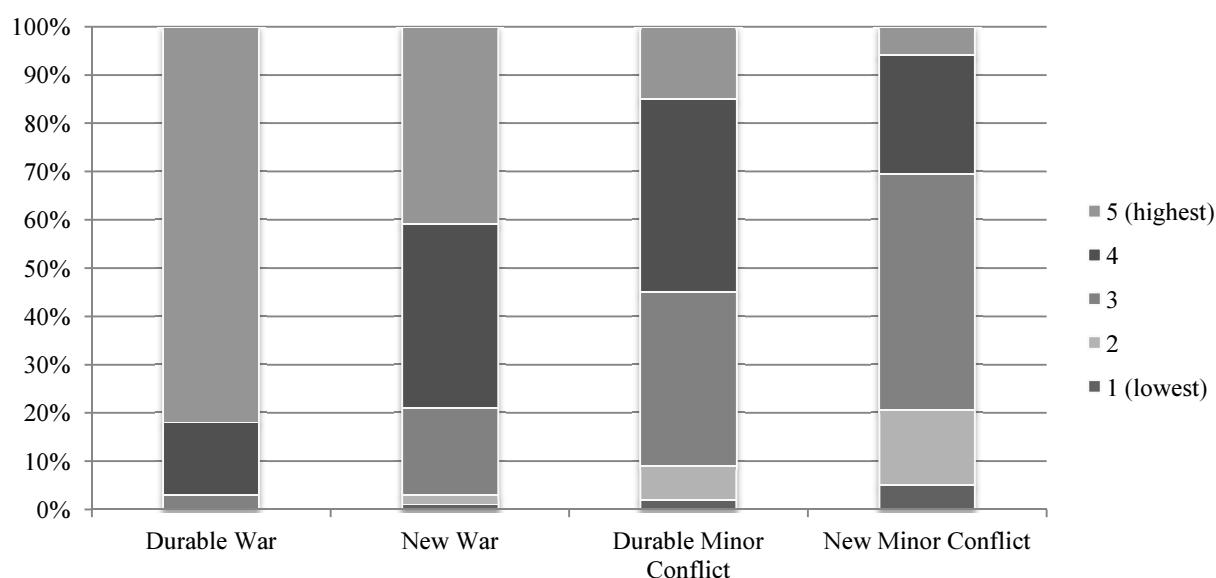
⁴⁵ Slantchev, 2012.

⁴⁶ Prominent economic works, such as Pigou (1916; 1921), and Keynes (1919) studied interactions between war, peace and economics. These early works focused almost exclusively on the economic consequences of inter-State wars.

⁴⁷ Collier and others, 2003, p. 84.

⁴⁸ Gibney and others, 2015. The measure comprises a five-point scale, with 1 indicating a country under secure rule of law, 3 indicating extensive political imprisonment, political executions and little or no due process, and 5 indicating that leaders place no limits on the means used to pursue personal or ideological goals. Political Terror Scale data are based on reports by Amnesty International and the United States State Department. See the Political Terror Scale website, available from www.politicalterroryscale.org/ptsdata.php.

Figure 6. Political Terror Scale by conflict category



Source: Gates and others, 2010.

J. FUTURE CONFLICT RISKS

Conflicts increase the risk of future unrest within the conflict-stricken country and in its neighbour countries. Some countries become ensnared in a “conflict trap” from which it is hard to escape. Collier and others (2003) argue that about a fifth of the world’s countries are caught in a conflict trap, whereby intermittent fighting effectively prevents them from escaping the factors that facilitate conflict. Conflicts trap countries through several mechanisms: they undermine trust and reduce opportunities; allow the formation of “conflict capital”; and aggravate factors that make societies prone to conflict. Hegre and others (2012) find that the trapping effect of conflict is considerable: five years of conflict increase the risk of renewed conflict by at least 25 years.

A post-conflict society is often characterized by anger and hate among groups victimized during the conflict. Prolonged armed conflicts also place violent actors in elite positions in society. These individuals are more likely to resort to violence if underlying tensions persist.

Moreover, post-conflict societies retain an “organizational capital” for conflict: thousands of battle-hardened war veterans are imperfectly reintegrated in society, and remain interlinked through informal networks that can be used to re-recruit into rebel armies. Even if weapons are destroyed, they are frequently easy to reacquire.

Conflicts increase poverty, resulting in frustration, a strong sense of injustice and a revolutionary mood.⁴⁹ Such persisting deprivation may lead to civil strife. This mechanism is subject to considerable debate, however. Several empirical studies⁵⁰ have found insignificant links between conflict and ‘grievance-related’ issues, such as inequality, dictatorship, and ethnic and religious discrimination. Consequently, they argue that the explanation for the correlation between poverty and risk of armed conflict must be sought outside of grievances and motivations for conflict.

⁴⁹ Davies, 1962; Gurr, 1968.

⁵⁰ Collier and Hoeffler, 2004; Fearon and Laitin, 2003.

The economic destruction caused by war opens up new opportunities for entrepreneurs of violence. Collier and Hoeffler (2004) argue that greed may be a more powerful motivator for conflict than political grievances, referring to cases such as the so-called Revolutionary United Front in Sierra Leone, which soon showed that it was more interested in diamond extraction than in revolution.⁵¹

The argument that greed is an exclusive or dominant motivation for armed conflict has been heavily contested, however.⁵² In his more recent account of the development-conflict relationship, Collier (2000) argues that, given the problems of recruiting merely on the basis of a revolutionary agenda, rebel leaders have to rely on private incentives to recruit, rather than appealing to lofty motives of justice seeking. A regularly salary or 'bonus payment' in the form of opportunities for looting are among such incentives.⁵³ This links rebellion to development, since salary costs for rebel groups are low where there is an abundance of poor, unemployed young males.⁵⁴ Studies using systematic data on rebel combatant backgrounds suggest that the poor tend to be overrepresented among rebel and Government forces.⁵⁵

Wars also undermine the capacity and legitimacy of Governments. Hobbes (1651/1968) saw anarchy as the main explanation for war, and called for a 'Leviathan' to keep citizens from killing each other. Gat (2006) and Pinker (2011) review accounts of how the emergence of early States substantially reduced the propensity of humans to kill each other. Translated into the domain of modern poor States, the feasibility of rebellion depends, not on the absolute amount of fighters and resources available to a rebel group, but on its resources relative to what the Government can invest in the contest. Fearon and Laitin (2003) highlight the conditions that assist Governments in opposing insurgents. At least four aspects of State capacity are relevant, and all are partly linked to socioeconomic development and to the consequences of previous conflict discussed above: physical access to State territory, the military capabilities of the Government, the intelligence required for effective counter-insurgency activities, and the State's ability to implement policies designed to reduce support for the opposition.⁵⁶

Guerrillas can operate more easily if Governments lack resources to physically control or access parts of the territory they govern. Fearon and Laitin (2003) and Collier and Hoeffler (2004) stress the challenges posed by rebel safe havens: rural regions where the terrain is mountainous, forested or poorly served by roads. Governments of poor countries, including many countries in the Arab region, tend to control core areas but have weak presence in the hinterlands.⁵⁷ Such physical-demographic features add to the challenges faced by poor Governments.⁵⁸

In addition to accessibility, Governments must have sufficient military capabilities to quell rebellions. States with large armies relative to their populations tend to have shorter wars.⁵⁹ However, conflicts that aggravate tensions between various social groups tend to undermine the efficiency of Government armies, since the Government sometimes becomes reluctant to trust personnel from population groups that oppose it, who may increasingly question the value of fighting for the Government. Such demoralization and distrust might lead to purges, reorganizations or other measures that weaken Government fighting capacity.

⁵¹ Collier, 2000.

⁵² Regan and Norton, 2005; Stewart, 2008; Cederman and others, 2010; 2011.

⁵³ Also see Lichbach (1994; 1995) for a detailed discussion of the importance of selective incentives. Relatedly, many rebel groups rely on forced recruitment, and some may recruit individuals that value violent behaviour for its own sake.

⁵⁴ Lichbach, 1995, p. 44.

⁵⁵ Arjona and Kalyvas, 2006; Humphreys and Weinstein, 2008; Viterina, 2006, p. 10.

⁵⁶ For a discussion of State capacity in relation to civil conflict, see Sobek, 2010; and Hendrix, 2010.

⁵⁷ Herbst, 2000.

⁵⁸ Herbst, 2000; Kocher, 2004; Buhaug and others, 2009; Holtermann, 2012.

⁵⁹ Mason and Fett, 1996; DeRouen and Sobek, 2004.

As discussed above, armed conflicts routinely lead to massive capital flight, disinvestments and out-migration of skilled labour; only non-movable assets remain. In the Arab region, oil is the most important of these. Land control becomes a more dominant factor for both production and power. If a territory can be seized and made profitable by means of physical force, renewed conflict is more likely.⁶⁰ This is another aspect of ‘development in reverse’. Development means that the mobile factors of production - capital and labour - are more important than land for productive strength, and States, elites and social groups are better off trading with owners than attempting to conquer their assets.

K. NEIGHBOURHOOD EFFECTS

The economic effects of civil war tend to spill over into neighbouring countries.⁶¹ Murdoch and Sandler (2002; 2004) focus on the spillover effects from conflicts in neighbouring countries and the magnified costs of being located near conflicts in the same region or subcontinent. They show that a neighbouring civil war affects GDP directly and indirectly.⁶² The direct effect is from collateral damage, whereby border battles might destroy infrastructure and capital in neighbouring countries. The indirect effect occurs by increasing the perceived risk to would-be investors, which might divert foreign direct investment away from peaceful neighbours. The authors find that a civil war creates significant negative influences on short-term growth within a country and its neighbours.⁶³ They also argue that, owing to regional economic integration and multiplier effects, spillover effects may go beyond a country’s immediate neighbours.⁶⁴ For neighbours within an 800 kilometre radius, they find that “a civil war at home is associated with a decline in economic growth of 0.1648, while an additional civil war in a neighbour is associated with a decline of approximately 0.05 or about 30 per cent of the home-country effect”.⁶⁵ This implies that “a country in a region with three or more civil wars may be equally impacted as a country experiencing a civil war”.⁶⁶ Moreover, conflict in one country also increases the risk of tensions spilling over into neighbouring countries.⁶⁷

Refugees also cause major neighbourhood effects. As a consequence of the Syrian civil war, the world today has more refugees than at any time since the end of the Second World War. Davenport and others (2003) find that a civil war lasting 10 years results in 744,000 refugees, on average, in its tenth year. Moore and Shellman (2004) report similar results, but also find that dissident violence and human rights abuses are important factors explaining refugee flows. However, contradictory to the literature, and given the intensity of the conflict, the Syrian war, in its fifth year, has produced by far more refugees, estimated at 4,289,792 in November 2015.

Refugee flows are not, however, only a consequence of conflict; several studies have shown that refugee flows aid the spread of civil wars between countries. Salehyan and Gleditsch (2006) and Salehyan (2007) argue that refugees constitute a negative externality of civil wars and that they potentially expand rebel social networks across borders, thereby increasing the potential of conflict contagion. The presence of refugees and displaced populations also increases the risk of subsequent conflict in both the host country and the countries of origin.

⁶⁰ Rosecrance, 1986.

⁶¹ Buhaug and Gleditsch, 2008; Salehyan and Gleditsch, 2006.

⁶² Murdoch and Sandler, 2002, p. 96.

⁶³ Ibid., pp. 106-107.

⁶⁴ Murdoch and Sandler, 2004.

⁶⁵ Ibid., p. 145.

⁶⁶ Ibid., p. 150.

⁶⁷ Buhaug and Gleditsch, 2008; Gleditsch and Ward, 2000; Salehyan and Gleditsch, 2006.

L. CONCLUSION

The Arab region is currently beset by violent conflicts in Egypt, Iraq, Libya, Palestine, the Sudan, the Syrian Arab Republic, and Yemen. Many countries neighbouring the Arab region are also conflict-affected, including Chad, Mali, Somalia, and Turkey. The negative humanitarian, economic, environmental, social, and political outcomes from conflict in the region are immense, severely impacting development. Moreover, current conflicts increase the potential for future conflicts, which means that the Arab region will most likely be dealing with such issues for many years to come.

II. MEASURING CONFLICT

This chapter assesses the impact of conflict and political instability on economic, social and political aspects of development. The statistical analysis is carried out in the next chapter; this one details the data sources used in the analysis. As a general rule, non-proprietary data that is widely used in the academic community is employed in this analysis.

All of the data sources discussed below are combined into a country-year database: every country that qualifies as a State according to the criteria developed by Gleditsch and Ward (1999) is observed once per year. The database spans from 1815 to 2100, including projections. However, for most countries and data sources, the temporal span is much narrower.

In the analysis, conflict and political stability are linked to improvements in development indicators. Conflict and politically unstable States are expected to have slower improvements, or declines, than countries that avoid these phenomena. However, many of the indicators described in detail below have a natural maximum: primary education attainment cannot exceed 100 per cent; infant mortality rates do not drop below five per 1,000 live births; and certain measures such as our democracy index have a fixed maximum. Many industrial countries have almost reached the maximum values for many indicators, and have not improved much beyond that level. These countries are not affected by armed conflict, or have witnessed only relatively limited conflicts, such as in Northern Ireland. To avoid the analysis being affected by non-improvement in these countries, countries classified as industrialized in the first World Bank Development Report⁶⁸ have been dropped, as have a few other countries that became industrialized by the 1970s, including Austria, Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom of Great Britain and Northern Ireland, and the United States of America. South Africa is retained because only parts of it can be considered fully industrialized.

A. DESCRIPTION OF DATASETS

Conflict can be defined narrowly or broadly. Narrow definitions tend to mainly focus on the following two aspects: the organizational features of actors, and the number of battle-related deaths. In short, these definitions focus on what is often labelled ‘negative peace’. Broader ‘positive peace’ definitions do not only require that direct conflict does not occur, but also that individuals are generally safe from violence and destitution. Past research on the impact of conflict and political instability in the Arab region has overall been influenced by ‘positive peace’. The United Nations Development Programme (UNDP), for instance, focuses on the concept of ‘human security’, defined as “the liberation of human beings from those intense, extensive, prolonged, and comprehensive threats to which their lives and freedom are vulnerable”.⁶⁹

This study utilizes a much narrower understanding of conflict, based on the Uppsala Conflict Data Program (UCDP), which is the most widely used database for armed conflict: “An armed conflict is a contested incompatibility that concerns government and/or territory over which the use of armed force between two parties, of which at least one is the Government of a State, has resulted in at least 25 battle-related deaths in one calendar year.”⁷⁰

An important aspect of this definition is “contested incompatibility”, which implies that both parties have a stated political aim that motivates the use of armed force, which rules out non-violent conflict even if it occasionally leads to unorganized violence. The threshold in terms of the intensity of violence is “25 battle-related deaths per year.

⁶⁸ World Bank, 1978, p. 77.

⁶⁹ UNDP, 2009.

⁷⁰ Uppsala University, UCDP Battle-Related Deaths Dataset v.5-2015.

This definition explicitly focuses on political conflicts, meaning criminal violence is not included even if it looks like civil war, such as drug-related organized crime and counternarcotics operations in Mexico. Furthermore, this definition also focuses on conflicts in which the State is an actor. In some cases, conflicts do not involve the Government, either because it has ceased to function (e.g. Somalia in the late 1990s) or they are conflicts between ethnic groups, such as the Dinka-Nuer conflicts in South Sudan or the Afar-Issa conflicts in Ethiopia. UCDP terms such conflicts as “non-State conflicts”. Although non-State conflicts naturally fall within the scope of civil conflict, the literature has predominantly focused on armed conflicts involving the Government. This is partly because good data have been available for several years through the Correlates of War Project⁷¹ or UCDP/PRIO (Peace Research Institute Oslo)⁷² for this type of conflict, but not for others.

UCDP annually records whether countries are experiencing minor (over 25 but under 999 battle-related deaths per year) or major (over 1,000 battle-related deaths per year) armed conflict. The database covers most countries from 1946 to 2013. For a more detailed measure of the intensity of conflict, this study also runs all analyses with a count of the number of battle-related deaths incurred in a conflict year. These data are collected from Lacina and Gleditsch (2005) and cover the period 1946-2009. Table 1 provides descriptive data on conflict for the global mean and the Arab region mean. Although mean estimates of battle deaths have been declining globally since the 1980s, the Arab mean has not declined at the same rate, with observed mean conflict and battle deaths substantially higher than the rest of the world since the 1990s.

TABLE 1. CONFLICT INDICATORS

Indicator	Source	Time span covered	Global mean	Arab mean
Conflict	Gleditsch et al. (2002)	1946-2013	0.16	0.20
Conflict	(1950s)		0.10	0.04
Conflict	(1960s)		0.13	0.17
Conflict	(1970s)		0.15	0.17
Conflict	(1980s)		0.20	0.23
Conflict	(1990s)		0.21	0.22
Conflict	(2000s)		0.16	0.20
Battle deaths	Lacina and Gleditsch (2005)	1946-2009	1077	780
Battle deaths	(1950s)		244	44
Battle deaths	(1960s)		1106	581
Battle deaths	(1970s)		1522	619
Battle deaths	(1980s)		1535	1592
Battle deaths	(1990s)		570	716
Battle deaths	(2000s)		323	787

Source: Lacina and Gleditsch, 2005.

B. MEASURING POLITICAL STABILITY

Some disagreements still exist on how to define armed conflict but, for the most part, the academic community has more or less agreed on how to define the concept. However, at present no consensus exists on how to define ‘political instability’. How political instability is operationalized varies significantly from study to study. For the most part, however, operationalizations of instability come in three forms. Firstly, instability can be defined in terms of changes in formal political institutions. A country is politically unstable according to this definition if it witnesses, for instance, substantial regime changes that alter the fundamental character of the regime by making it more or less democratic. Political instability defined as the possibility of coups follows the same logic. Secondly, instead of focusing on institutional aspects of the regime, some studies focus on the behaviour of groups of actors, such as rioting and other forms of mass unrest. Under this

⁷¹ Sarkees, 2000.

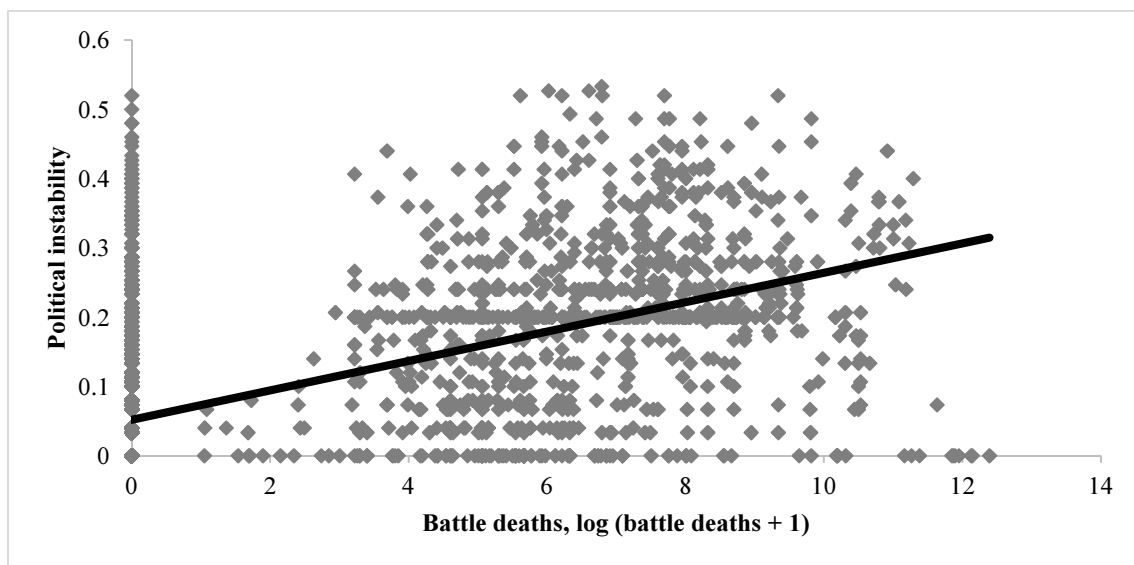
⁷² Gleditsch and others, 2002.

strategy, focus can be put both on civil society and more elite actors, such as political parties. A focus on political parties and elite actors often leads to discussion on how such actors respond to electoral losses. Countries are then perceived as unstable if key actors do not acknowledge electoral defeat – Anderson and others (2004) refer to this as “losers’ consent”.

Sets of definitions that focus on behaviour or institutional characteristics (or changes in these) more or less explicitly assume that political instability can be observed. The third approach to conceptualizing political instability deviates from this and assumes instead that instability is a latent phenomenon to be inferred from data rather than being directly observed. How to measure instability therefore becomes critical. Alesina and others (1996), for instance, study the relationship between economic growth and political instability. They argue that instability is a latent phenomenon and measure it using a structural equation model where instability is inferred from data measuring constitutional or unconstitutional changes to executive power. Perceiving instability as a latent concept allows defining it as a multidimensional issue, which it arguably is, without forcing the researcher to define exactly how important each dimension is in terms of weighting. However, inferences made from latent concepts do not lend themselves easily to policy recommendations, as it is not always readily clear what part of the latent variable is producing the results.

The scatter plot in figure 7 shows the relationship between the battle-deaths conflict measure and the political instability measure. The two measures are positively correlated ($r=0.56$), but are not overlapping. It is not uncommon for a country to be politically unstable without having conflict, and conflicts often occur in politically stable situations.

Figure 7. Relationship between conflict and political instability



Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

1. *Elite-level stability*

This study acknowledges that instability is a latent trait, but also draws on insights from the institutional and behavioural schools. The following index of political stability has been constructed to strike a balance between these approaches. The index varies between 0 and 1, where 1 is most politically unstable. The index is an unweighted average constructed from the following indicators that are summed and normalized to range between 0 and 1:

- (a) The number of regime changes in the last five years;
- (b) The number of coups in the last five years;
- (c) The number of years with a significant increase in repression in the last five years.

A regime change is defined as a minimum 3-unit change in the Polity 2 score from $t-1$ to t . A significant increase in repression is defined as an increase of two standard deviations (from $t-1$ to t) in the Fariss (2014) protection measure. The sources for the different indicators are listed in table 2.

TABLE 2. INDICATORS OF POLITICAL INSTABILITY AT THE ELITE LEVEL

Indicator	Source	Time span covered	Global mean	Arab mean
Regime change	Marshall and Jaggers, 2003	1815-2012	0.04	0.03
Regime change	(1950s)		0.05	0.05
Regime change	(1960s)		0.03	0.03
Regime change	(1970s)		0.05	0.03
Regime change	(1980s)		0.03	0.01
Regime change	(1990s)		0.06	0.04
Regime change	(2000s)		0.03	0.05
Coups d'état	Powell and Thyne, 2011	1946-2012	0.04	0.05
Coups d'état	(1950s)		0.08	0.11
Coups d'état	(1960s)		0.09	0.13
Coups d'état	(1970s)		0.07	0.10
Coups d'état	(1980s)		0.05	0.05
Coups d'état	(1990s)		0.03	0.05
Coups d'état	(2000s)		0.02	0.03
Human rights	Fariss, 2014	1949-2009	-0.10	-0.25
Human rights	(1950s)		-0.17	-0.27
Human rights	(1960s)		-0.28	-0.48
Human rights	(1970s)		-0.36	-0.25
Human rights	(1980s)		-0.29	-0.39
Human rights	(1990s)		-0.00	-0.35
Human rights	(2000s)		-0.31	-0.11

Source: Compiled by ESCWA from sources listed in the table.

The measure covers, for the most part, elite-level political stability. It measures the extent to which there is continuity in the incumbent regime, and how that regime governs.

2. Civil society instability

Political instability can also be measured more directly by civil society actions. Arguably, a country that regularly witnesses riots and uprisings is not perceived by civil society to be governed in a legitimate manner, which in turn could be a source of political instability. Political instability can therefore be defined as the frequent occurrence of civil unrest. Below is a second political instability measure that covers the following indicators:

- (a) The number of mass civil society uprisings in the last five years;
- (b) The number of riots and small-scale uprisings in the last five years.

The number of mass civil uprisings is collected from Chenoweth and Lewis (2013) and covers larger scale organized civil society campaigns. These campaigns have “have discernible leadership and often have organizational and operational names, distinguishing them from random riots or spontaneous mass acts”.⁷³ Data from Banks (2008) is added to this, covering riots involving at least 100 people. Table 3 shows the likelihood for uprisings globally and for the Arab region. The Arab mean is higher at 0.19 compared to a global mean of 0.15.

⁷³ Chenoweth and Lewis, 2013, p. 416.

TABLE 3. INDICATORS OF POLITICAL INSTABILITY AT THE CIVIL SOCIETY LEVEL

Indicator	Source	Time span covered	Global mean	Arab mean
Uprisings	Chenoweth and Lewis, 2013	1945-2006	0.15	0.19

C. MEASURING DEVELOPMENT

As argued above, development is a multifaceted concept. Instead of attempting to build one cohesive measure of development, this study follows the 2011 World Development Report,⁷⁴ focusing on indicators that measure the Millennium Development Goals (MDGs), a set of eight goals for world development agreed upon by all Member States of the United Nations. They are: eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality; reduce child mortality; improve maternal health; combat HIV/AIDS; ensure environmental sustainability; and develop a global partnership for development. Not all MDGs are equally relevant to the Arab region, however; this study does not analyse the impact of conflict and instability on HIV/AIDS, maternal mortality and achieving a global partnership for development. The Arab region has some of the lowest HIV/AIDS prevalence rates in the world. There is a significant lack of data on maternal mortality in the Arab region, impeding analysis of the issue. Achieving a global partnership falls outside the immediate scope of socioeconomic development covered by this study and is therefore also excluded.

This report focuses on the following indicators: infant mortality rates, widely used as a general measure of socioeconomic development, which report the number of children per 1,000 live births who die by year one; the overall unemployment rate and the youth (ages 15-24) unemployment rate; female labour participation, defined as the percentage of the total labour force occupied by women; education, defined as the proportion of the population aged 15-24 with no education; GDP per capita; military expenditures as a percentage of central Government expenditures; and governance. The indicators and their sources, as well as some descriptive statistics, are listed in table 4.

TABLE 4. DEVELOPMENT INDICATORS

Indicator	Source	Time span covered	Global mean	Arab mean
Infant mortality	World Bank, 2013	1960-2012	63.7 (48.3)	53.8 (47.2)
Unemployment	World Bank, 2013	1991-2012	9.1 (6.5)	9.9 (5.9)
Female labour participation	World Bank, 2013	1990-2012	39.2 (10.1)	20.9 (8.0)
No education	IIASA, 2014	1960-2013	2.2 (3.3)	3.1 (2.6)
GDP per capita (log)	IIASA, 2014	1820-2013	9.0 (1.5)	9.6 (1.5)
Military expenditure	World Bank, 2013	1990-2012	10.9 (10.4)	22.2 (18.8)
Governance	Hegre and Nygård, 2014	1960-2008	-0.26 (0.80)	-0.52 (0.65)

Abbreviation: IIASA, International Institute for Applied Systems Analysis.

Source: Compiled by ESCWA from sources listed in the table.

D. CONSIDERATIONS SPECIFIC TO THE ARAB REGION

The Arab region mainly comprises middle-income countries that have already overcome many of the development challenges facing sub-Saharan Africa, in particular.

⁷⁴ World Bank, 2011.

The Arab region is characterized by a set of distinctive development factors. These include low female labour participation, overall unemployment and high military expenditures. As table 4 shows, female labour participation rates in the Arab region are about half the global average and the proportion of the population without any education is significantly high. In addition, Arab Governments typically spend more than double the percentage of their central Government budgets on military expenditures compared with the rest of the world. Given the significance of these factors for the region, estimating the impact of conflict and political instability on them is of particular interest.

1. *Refugees*

The Arab region is home to the world's largest refugee population, many of whom have fled conflict and political instability. This study focuses on the direct effect of conflict and political instability on both the inflow and outflow of refugees. Data on refugees is collected from the United Nations High Commissioner for Refugees' (UNHCR) Statistical Online Population Database and covers most of the world from 1978 to 2012. Crucially, the database contains information about refugees' country of origin and their country of asylum, thus facilitating analysis of factors contributing to both the outflow and inflow of refugees. The database also includes information on internally displaced persons. This study adds data on Palestinian refugees in Jordan, Lebanon, the Syrian Arab Republic and the West Bank.

2. *Youth bulges*

The Arab region is currently experiencing an unprecedented youth bulge – on average 30 per cent of the population is between the ages of 15 and 29. Within the context of the Arab uprisings, this youth bulge is an important catalyst for unrest. In general, youth bulges have been found to increase the likelihood of armed conflict.⁷⁵ The causal mechanisms linking youth bulges to conflict and instability is, however, unclear. Many countries, perhaps most notably the East Asian tigers, managed their early youth bulges without conflict. The potential of a youth bulge to act as a catalyst for conflict and instability is generally dependent on education opportunities and, in particular, employment. This study includes data on youth bulges, defined as the total population aged between 15 and 29, from the International Institute of Applied Systems Analysis (IIASA).

E. ADDITIONAL CONTROLS

In addition to conflict, political instability, neighbourhood effects and the Arab-specific measures discussed above, this study's analyses also include decade dummies, logged total population and an Arab country marker. Most of the indicators analysed below show improvement over time. Given these strong overall trends, countries experiencing conflict and political instability may see general improvements. Dummy variables for each ten-year period are included to account for secular trends. Logged total population is included as an additional control.

F. MISSING DATA AND MEASUREMENT ERROR

The country-year dataset constructed using the indicators discussed above contains significant data gaps, mainly because many indicators are not being collected on a yearly basis. The source of these gaps is random in the sense that, regardless of whether a country in a given year has witnessed conflict or political instability, this does not affect the likelihood of it being included in the dataset. Decisions by the World Health Organization and the United Nations Children's Fund (UNICEF) on when to collect data determines countries' inclusion, and these decisions are not correlated with a given conflict. In statistical terms, this is data that is "missing at random".⁷⁶ It can be problematic to discard such data: it will produce a loss of efficiency, but usually not bias, provided that the excluded country-years are random. This study therefore runs most of its analysis with list-wise deletion, discarding all observations with missing data.

⁷⁵ Urdal, 2006.

⁷⁶ Little, 2002.

For some indicators, this study has endeavoured to impute missing values. For education data, collected from IIASA, imputed data from Hegre and others (2013) is used, who perform both ‘hot-deck’ imputation whereby countries with missing data are matched to countries with observed time series, and these countries are then used as models to impute missing values. Since the education variable changes slowly over time, this procedure also involves linear interpolation.⁷⁷

As an additional robustness check, this study performs multiple data imputations using all the information available in the dataset to predict missing values. For each missing value m (typically between 5 and 10), candidate values are predicted. The variation between these candidate values is directly interpretable as a measure of imputation uncertainty. This is highly desirable since, by definition, the missing value is unknown, thus including information about the uncertainty of missing data estimates is appropriate. The actual analysis is performed on all the different candidate values and parameters (estimated coefficients and standard errors), which are easily combined into one overall result.⁷⁸ This study performs multiple imputations using the Amelia programme.⁷⁹ In the imputation, the time series and panel nature of data is taken into consideration, yielding highly plausible imputed values.

Missing data is, however, only one extreme case of a more general problem of measurement error. Data quality is not a trivial issue. Jerven (2011) shows that, depending on the specific source of GDP data used, researchers can conclude that Tanzania was, in the same time period, growing, stagnating and regressing. Taking a regional view, Jerven (2010) concludes that data on GDP and economic growth is so poor that it cannot be said, with any reasonable degree of reliability, with the exception of some resource-rich enclaves, a few island States, and South Africa, that the income of one African economy is different from another. Unfortunately, this study has no general knowledge of the degree to which measurement error is a problem for development indicators, with the exception of GDP in Africa. This information comes primarily from development economics. Jerven (2010) argues that the main reason for the low quality of African GDP data is the lack of efficient and fully competent statistical agencies in these countries that can supply the data. This critique extends to most development indicators, such as the World Development Indicators, since these data largely originate from the same agencies as the economic data. This is not just a problem with data from Africa; official inflation data from Argentina is thought to be so unreliable that the Economist no longer reports inflation from Argentina in its weekly list of financial and economic indicators.⁸⁰

If an independent variable is measured with error, it becomes in essence stochastic, meaning that it is to some extent random, and thus varies by chance from unit to unit.⁸¹ When this randomness is not modelled, results can be severely biased. In general, measurement error attenuates the effect of a variable, making the variable an unreliable statistical covariate.⁸² Unfortunately, an attenuated effect does not necessarily imply that the end result of a model estimate with measurement error is a conservative estimate. This would only be the case if there is measurement error in one, and only one, variable. When measurement error is found in several variables, or the error is non-random, the effect of the error is unpredictable and could produce sign reversal.⁸³ Importantly, measurement error in more than one variable will not only affect the parameter estimates for these specific variables, it will also contaminate the effects of every estimated parameter in unpredictable ways. It should also be noted that the bias introduced by measurement error persists

⁷⁷ For further details, see Hegre and others, 2013.

⁷⁸ Little and Rubin, 2002.

⁷⁹ King and others, 2001; Honaker and King, 2010; Honaker, King, and Blackwell, 2011.

⁸⁰ The Economist, 2012.

⁸¹ Kennedy, 2008.

⁸² Fox, 2008, p. 115.

⁸³ Jackman, 2008.

asymptotically, meaning that the “remedy to the ‘error-in-variables’ problem is not more data, but more reliable data”.⁸⁴

To guard against this, this study estimates conservative models where measurement error is likely to be confined to only one or a few variables. This should make measurement error less of a problem. In this study’s models, measurement error is likely to be greatest among dependent variables. Measurement error on the left hand side of the regression will not bias results, but will rather ‘end up’ in the error term. Nonetheless, it cannot be completely ruled out that this study’s findings may, to some extent, be influenced by measurement error.

⁸⁴ Ibid., p. 127.

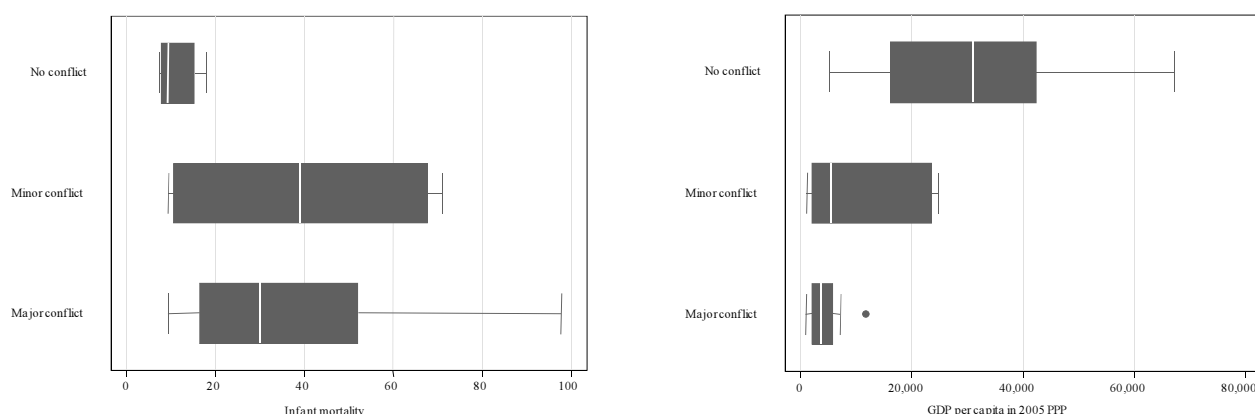
III. QUANTITATIVE ANALYSIS OF THE CONSEQUENCES OF CONFLICT AND POLITICAL INSTABILITY

This chapter closely investigates how conflict affects development. More up-to-date data is used than in chapter I, and the UCDP definition of conflict is applied. Some figures are divided into ‘no conflict’, ‘minor conflict’ and ‘major conflict’; others use the log of total battle deaths incurred in a country-year as a more fine-grained measure. The measures of political instability set out in chapter II are applied. This chapter examines how conflict and instability affect the following development indicators: infant mortality; GDP per capita; education; unemployment; military expenditures as a proportion of Government expenditures; female labour force participation; and governance.

A. DEVELOPMENT IN CONFLICT COUNTRIES COMPARED TO NON-CONFLICT COUNTRIES

Initial analysis shows that conflict countries in the Arab region perform poorly according to many of the above-mentioned development indicators. The box plots in figure 8 show how countries that had experienced conflict at some point between 1946 and 2010 performed compared to non-conflict countries in terms of infant mortality and GDP per capita in 2009. A distinction is made between countries that have had conflicts serious enough to reach at least 1,000 battle-related deaths in a single year (major conflicts), and minor conflicts that have reached at least 25 deaths in a single year.

Figure 8. Infant mortality rates and GDP per capita in conflict and non-conflict countries in the Arab region, 2009



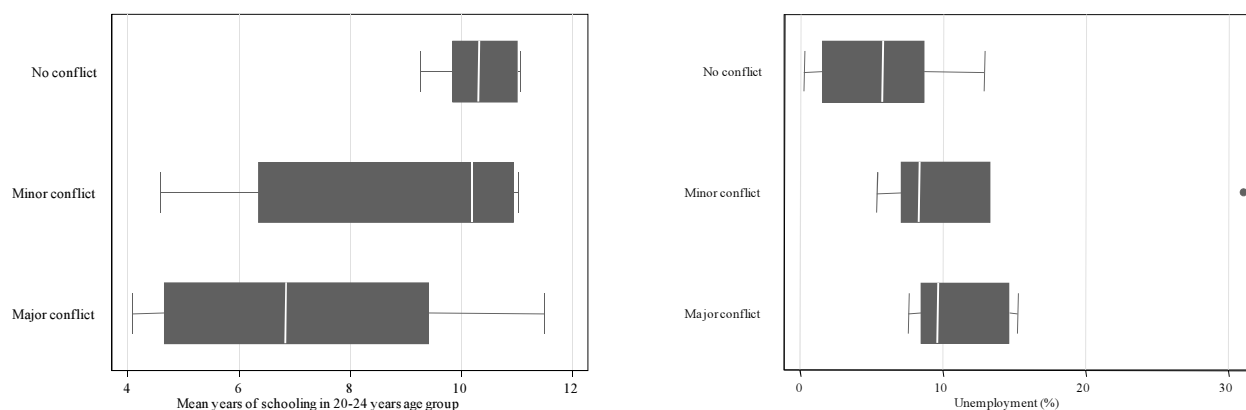
Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

The median value in each of the three groups is given by the vertical line inside the box in the centre of each box-whisker combination. The outer values of this box are the twenty-fifth and seventy-fifth percentiles. Conflict countries are clearly poorer than non-conflict countries.

Regarding GDP per capita, there is also a clear difference between countries that have suffered major conflicts and those that have had less serious conflicts. This is because the majority of non-conflict countries are small, stable Arab kingdoms that enjoy vast incomes from oil and natural gas. However, oil producers that have witnessed serious conflicts, namely Algeria and Iraq, are considerably less wealthy than those that have avoided conflict (figure 11). Non-conflict countries also completely avoid the extremely high levels of infant mortality seen in some conflict-affected Arab countries.

This general picture holds for several of the development indicators. Figure 9 shows that education levels in the 20-24 age group are consistently higher in non-conflict countries and, in most cases, lower in major conflict countries. Unemployment is also much higher in conflict countries, despite the fact that conflicts in several of these countries ended well before 2009. The pattern for youth unemployment resembles that of overall unemployment, but is weaker.

Figure 9. Education and unemployment levels in the Arab region, 2009

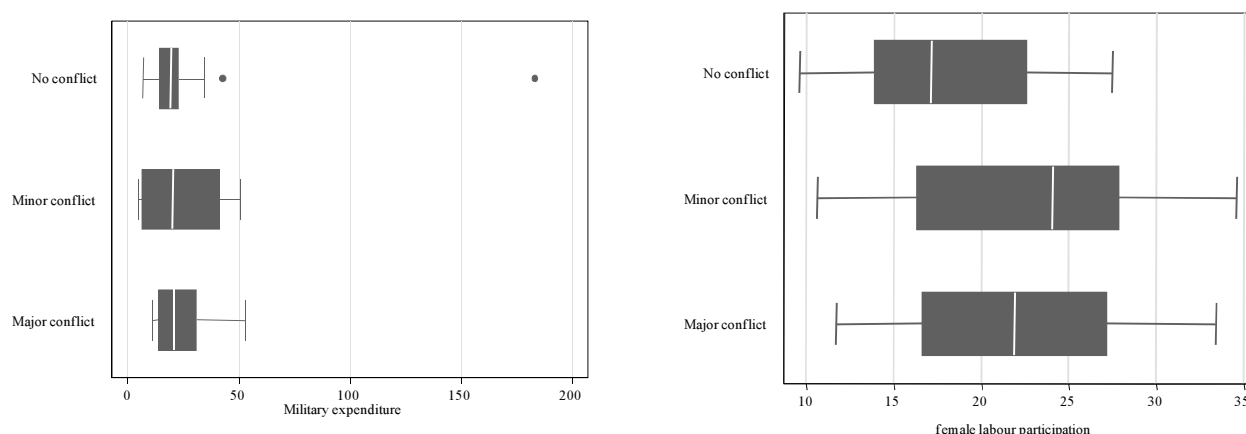


Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

Figure 10 shows the distribution for military expenditure as a proportion of Government expenditures. Almost all Arab countries have high military expenditures—the typical Arab country spends twice as much, as a proportion of all Government spending, as the global average of developing countries. Whether a country in the region has seen conflict, however, does not appear to greatly impact the amount it spends on the military. This pattern is also seen in other regions; Collier and Hoeffler (2006) find that post-conflict military spending is often high and in most cases counter-productive.

This study does not find any clear relationship between conflict countries and female labour force participation.

Figure 10. Military expenditure and female labour participation in conflict and non-conflict countries in the Arab region, 2009



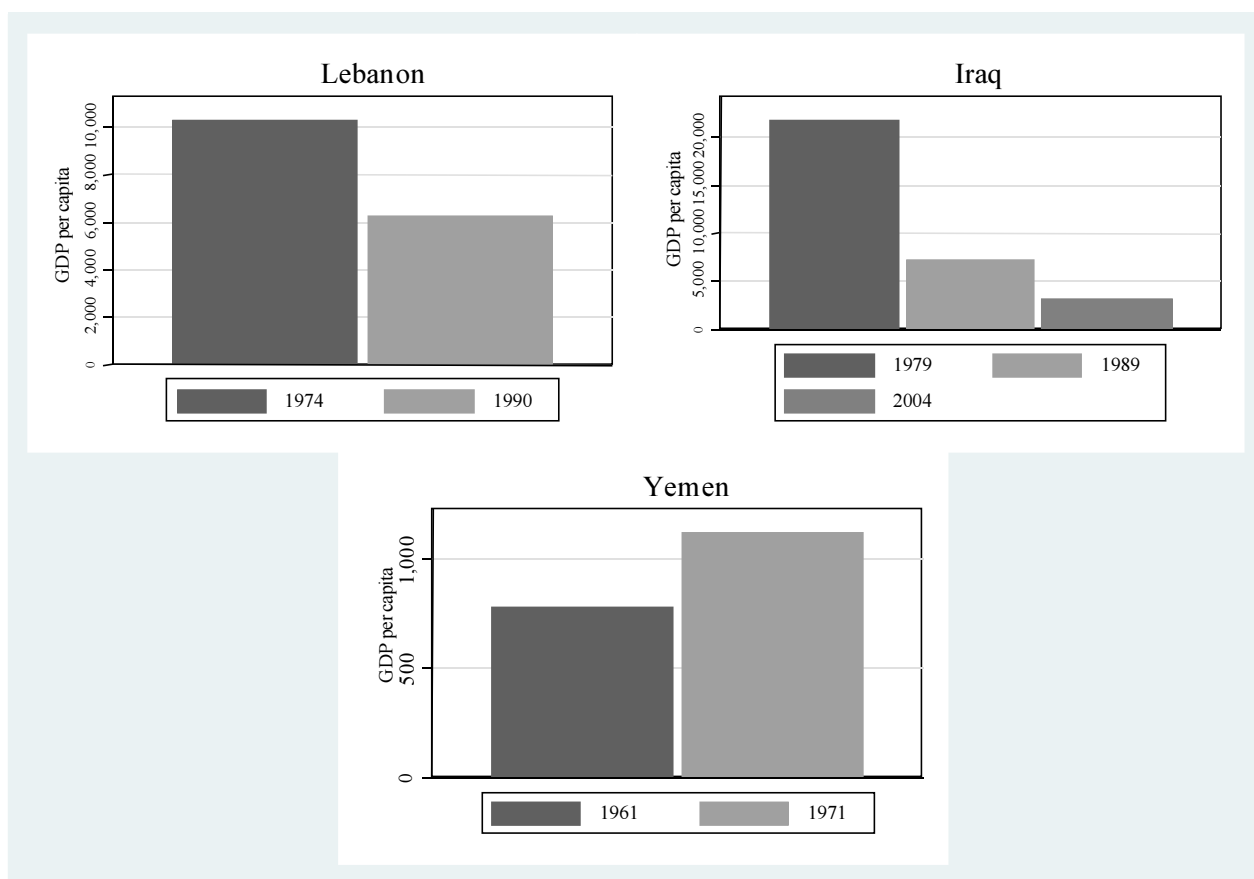
Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

B. SOME EXAMPLE COUNTRIES

The consequences of conflict vary substantially between countries. To illustrate this, figures 11 and 12 plot GDP per capita and infant mortality prior to and following wars in Lebanon (1974 vs. 1990), Iraq (1979 vs. 1989 vs. 2004) and Yemen (1961 vs. 1971). There are interesting variations both across these countries and across the two indicators.

Lebanon and Iraq saw their GDP levels shrink significantly as a result of conflict. Figure 11 shows that, in Lebanon, GDP per capita was around 40 per cent lower at the end of the war than immediately before. This fall in income happened over a period where average income increased by 65 per cent in the Arab region as a whole. This trend is starker for Iraq where GDP fell by a factor of three from the start to the end of the Iran-Iraq war. This downwards trend continued through the period of sanctions after the 1991 war and the United States-led invasion in 2003.

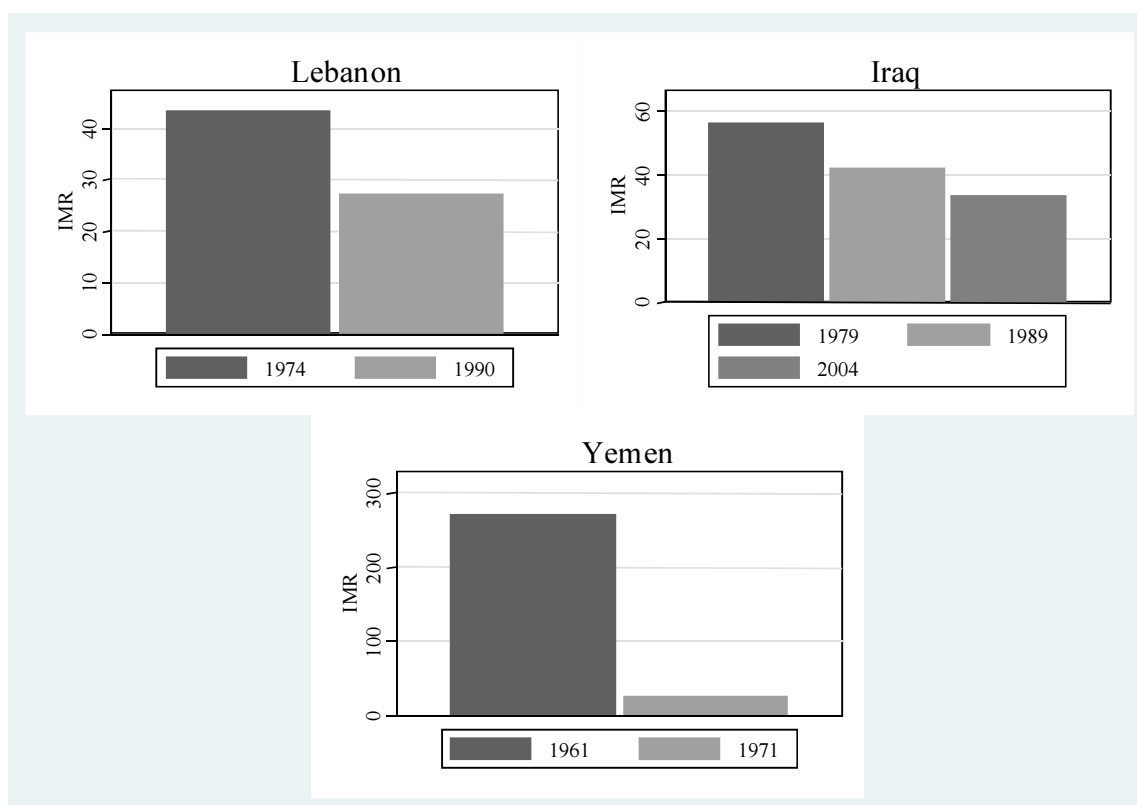
Figure 11. GDP per capita prior to and following wars



Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

The picture is different with regard to infant mortality. Iraq, Lebanon and Yemen each saw an improvement in infant mortality from the start to the end of their respective wars, as shown in figure 12. This improvement is most evident in Yemen over the period 1961-1971, where the drop in infant mortality mirrors strong economic growth. Iraq and Lebanon also experienced decreases in infant mortality, but their improvement is weaker. However, it is important to evaluate these figures against dramatic improvements in public health over this period. In 1974, the Arab average (unweighted) infant mortality rate was 84 per 1,000 live births; in 1990, it was 49 per 1,000 live births. Lebanon had a smaller improvement in infant mortality from 1974 to 1990 compared with the rest of the Arab region. From 1979 to 2004, infant mortality dropped by more than 50 per cent in the Arab region as a whole, but only 40 per cent in Iraq. As Gates and others (2012) show, one important consequence of conflict is that it slows down the speed by which infant mortality improves. This slower improvement, in turn, translates directly into more infant deaths than would have occurred had infant mortality improved at the same speed as it would have in lieu of the conflict.

Figure 12. Infant mortality prior to and following wars



Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

Note: IMR, infant mortality rate.

These country and indicator variations are interesting but, to study them properly, more detailed data on the dynamics of particular conflicts are needed. Since the consequences of conflict are likely to be related to the tactics pursued by warring parties, such a subnational analysis would potentially explain why the conflict in Yemen had much less dramatic developmental effects than the conflict in Iraq and Lebanon.

C. A MORE PRECISE ANALYSIS OF THE CONSEQUENCES OF CONFLICT

Table 5 shows results from the fixed-effects analysis of the affect of armed conflict, measured in terms of battle deaths, on our development indicators. To account for the global changes in average levels for the indicators briefly discussed above, dummy variables are included for each ten-year period. A standard set of control variables are also included.⁸⁵

Column 1 shows the results using log infant mortality rates as the dependent variable. The sign of the coefficient suggests a positive statistically significant association between conflict and infant mortality rates. Column 2 estimates a regression using log GDP per capita as a dependent variable. The results suggest a negative and statistically significant correlation between lagged battle deaths and GDP per capita growth. The estimates suggest a -0.0296 elasticity between GDP per capita and battle deaths: increasing the number of battle deaths by 1 per cent decreases GDP per capita in the subsequent year by 0.0296 per cent. The catastrophic trend in Iraq is possibly the worst example of how costly conflicts are. Battle deaths in Iraq increased from 861 in 2011 to 1,870 in 2013.

⁸⁵ As a result of missing data, the point estimates for battle deaths are not comparable across columns, as they are estimated using different subsamples of the data set.

TABLE 5. REGRESSION OF CONFLICT INTENSITY ON DEVELOPMENT OUTCOMES

Dependent variables	(1) IMR	(2) GDP	(3) Education	(4) Unemployment	(5) Military expenditure	(6) Female labour	(7) Governance
Conflict intensity							
Ln (battle deaths), t-1	1.399*** (0.479)	-0.0296** (0.0146)	-0.108*** (0.0395)	-0.183 (0.119)	0.769** (0.322)	0.0834 (0.364)	-0.0497*** (0.00960)
Control variables							
Ln (population)	1.036 (1.266)	-0.0699* (0.0391)	-0.0285 (0.0985)	-0.366 (0.340)	-0.644 (0.522)	-0.365 (0.730)	-0.0426** (0.0213)
Polity 2	-1.140*** (0.318)	0.0184** (0.00760)	0.0367 (0.0227)	0.171* (0.0903)	-0.416** (0.196)	-0.409** (0.174)	0.0774*** (0.00381)
(Polity2) ²	-0.0352 (0.0582)	0.00357** (0.00158)	0.000806 (0.00408)	-0.00978 (0.0178)	-0.0104 (0.0356)	-0.0152 (0.0339)	0.00196* (0.00107)
Youth bulges	1.517*** (0.388)	-0.0844*** (0.0120)	-0.120*** (0.0286)	0.222** (0.101)	-0.262 (0.199)	-0.156 (0.193)	-0.0316*** (0.00659)
Neigh. Conflict, t-1	-5.004 (3.294)	-0.0466 (0.0778)	0.00534 (0.243)	-0.420 (0.857)	-0.643 (1.088)	-0.0693 (1.430)	-0.0406 (0.0400)
East Asia and the Pacific	-0.265 (8.521)	-0.309 (0.252)	-1.375** (0.612)	-7.896*** (1.265)	6.125* (3.262)	11.02*** (4.217)	0.254* (0.142)
Other Middle East and North Africa	-10.32 (10.74)	1.109*** (0.207)	-0.588 (1.071)	-1.962 (1.661)	7.968** (3.249)	-18.16 (13.61)	0.449*** (0.106)
South Asia	57.55*** (7.907)	-0.892*** (0.202)	-4.805*** (0.555)	-7.800*** (1.493)	13.66** (5.377)	-6.539 (10.11)	0.0332 (0.133)
Sub-Saharan Africa	47.61*** (8.010)	-0.577*** (0.207)	-4.107*** (0.553)	-4.771** (1.929)	6.164* (3.335)	15.96*** (3.745)	0.00215 (0.0941)
Arab region	1.853 (7.812)	0.774*** (0.252)	-2.623*** (0.577)	-0.618 (2.213)	12.01*** (4.119)	-27.39*** (3.096)	0.320*** (0.105)
Latin America and the Caribbean	3.152 (6.986)	0.397** (0.183)	-1.547*** (0.488)	-5.237*** (1.612)	3.806 (2.548)	-1.783 (2.766)	-0.126 (0.0856)
Ln (Battle deaths), t-1*Arab	0.868 (1.488)	-0.0373 (0.0492)	-0.0211 (0.104)	0.654 (0.395)	0.0827 (1.017)	-0.251 (0.637)	-0.0457** (0.0217)
1960s		-0.545*** (0.0603)					
1970s	-31.82*** (2.707)		1.709*** (0.123)				0.0758** (0.0357)
1980s	-52.64*** (3.509)	0.0964** (0.0382)	2.675*** (0.157)				0.0754* (0.0432)
1990s	-59.69*** (4.360)	-0.0773 (0.0748)	3.210*** (0.199)	-0.123 (0.208)	3.632*** (0.990)	-2.317*** (0.532)	-0.0138 (0.0461)
2000	-69.63*** (4.886)	0.0211 (0.0904)	3.729*** (0.226)				-0.0800 (0.0496)
Constant	46.54*** (14.31)	11.28*** (0.526)	10.43*** (1.011)	9.995** (4.297)	20.28** (7.890)	60.25*** (8.630)	1.064*** (0.317)
Observations	5,124	5,546	5,556	2,343	1,064	2,470	5,185
Log likelihood	-24353	-6055	-11546	-7514	-3815	-9584	-3364
Adjusted R-squared	0.675	0.616	0.648	0.190	0.324	0.593	0.640

Source: ESCWA calculations.

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

IMR, infant mortality rate; GDP, gross domestic product.

Column 3 shows the impact of conflict on the average years of education of the population aged 20-24. The results show a negative and statistically significant correlation between lagged battle deaths and education.

In column 4, the estimates suggest no average statistically significant association between unemployment and conflict at the global level.

Column 5 shows the impact of conflict on Government military expenditure. Battle deaths have a positive and statistically significant effect on military expenditure in the subsequent period, as expected. Moreover, the effect appears to compound for the Arab region, as suggested by the battle deaths and Arab region interaction term.

The estimates suggest no statistically significant association between conflict and female labour force participation globally, as shown in column 6.

Column 7 estimates the effect of log battle deaths on the composite governance index developed by Hegre and Nygard (2014). The governance index measures both informal (bureaucratic quality, rule of law, corruption, economic policies, repression, and military involvement in politics) and formal (the Scalar Index of Politics)⁸⁶ aspects of governance. Results show that the effect of conflict on governance is detrimental and significant. The Arab region battle deaths interaction term also appears to be statistically significant, suggesting an additional negative outcome for governance as a result of conflict in the Arab region.

Table 6 regresses development outcomes on the log battle deaths of the previous period in the Arab region. The same set of control variables are included, in addition to the dummy variables for each ten-year period.

The results suggest that the effect of battle deaths in the Arab region is only significant on Government military expenditure and the composite governance index. A 1 per cent increase in battle deaths leads to a 0.427 per cent increase in military expenditure and a 0.0348 per cent decrease in the composite governance index.

Moreover, youth bulges have a significant effect on each development indicator. There is a positive correlation between youth percentage of population in the Arab region and infant mortality rates, unemployment, and military expenditure. Table 6 shows that there is a negative correlation between youth bulges and GDP, education, female labour force participation and the composite governance index.

TABLE 6. REGRESSION OF CONFLICT INTENSITY ON DEVELOPMENT OUTCOMES IN ARAB COUNTRIES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variables	IMR	GDP	Education	Unemployment	Military expenditure	Female labour	Governance
Conflict intensity							
Ln (battle deaths), t-1	1.128 (0.946)	-0.0149* (0.00726)	0.0118 (0.0215)	-0.0670 (0.159)	0.427* (0.239)	-0.0597 (0.0549)	-0.0348** (0.0160)
Control variables							
Ln (population)	-8.928 (12.44)	-0.198 (0.151)	0.608 (0.585)	2.276* (1.295)	-4.935 (10.66)	10.55*** (1.952)	0.191 (0.122)
Polity 2	-0.935 (0.590)	0.000673 (0.0142)	0.0811*** (0.0242)	-0.204 (0.388)	1.531 (1.248)	0.0279 (0.158)	0.0615*** (0.0132)
(Polity2) ²	0.0356 (0.121)	-0.00195 (0.00221)	-1.27e-05 (0.00507)	-0.0335 (0.0369)	-0.0990 (0.108)	0.00886 (0.0198)	-0.00259 (0.00181)
Youth bulges	-0.000242 (0.821)	-0.0101 (0.0188)	0.00736 (0.0280)	0.705** (0.276)	3.823** (1.319)	-0.0807 (0.348)	-0.0147 (0.00962)
Neigh. conflict, t-1	-2.867 (5.208)	-0.0192 (0.0976)	0.319 (0.215)	-0.163 (0.528)	4.098 (3.033)	-0.921 (0.948)	0.0332 (0.0406)
Algeria	-27.82** (11.99)	-1.088 (0.753)	-4.146* (2.286)	12.92*** (0.768)	-62.61 (55.26)	-16.40*** (0.827)	-1.517*** (0.530)
Bahrain	-111.3 (64.80)	-0.687*** (0.0997)	0.140 (0.169)	14.21* (7.453)	-15.51 (13.36)	43.64*** (11.50)	0.170** (0.0618)
Djibouti	-26.57 (59.46)	-2.827*** (0.311)	-7.466*** (0.563)			42.87*** (7.335)	-0.930*** (0.156)
Egypt		-1.786* (0.884)	-5.840** (2.701)		-53.56 (55.20)	-15.55*** (0.947)	-1.532** (0.639)

⁸⁶ Gates and others, 2006.

TABLE 6 (continued)

Dependent variables	(1) IMR	(2) GDP	(3) Education	(4) Unemployment	(5) Military expenditure	(6) Female labour	(7) Governance
Iraq	-57.81*** (16.52)	-0.836 (0.705)	-4.879** (2.087)	9.460*** (0.998)		-12.28*** (0.805)	-2.036*** (0.478)
Jordan	-79.44** (36.61)	-2.029*** (0.511)	-1.664 (1.120)	7.611** (3.552)	-82.36* (45.84)	4.236 (3.470)	-0.619* (0.314)
Kuwait	-101.3** (47.87)	-0.00205 (0.294)	-2.199*** (0.709)	6.405 (6.467)	-14.80 (17.43)	41.28*** (9.327)	0.0648 (0.191)
Lebanon	-83.43** (36.76)	-1.137** (0.472)	-2.413** (1.102)	9.029 (6.477)	-54.49 (35.52)	13.87** (6.249)	-0.700** (0.316)
Libya	-61.86* (34.01)	-0.0768 (0.499)	-4.072*** (1.217)	15.96*** (3.269)		15.77*** (4.466)	-1.241*** (0.331)
Mauritania	-35.56 (42.40)	-2.732*** (0.389)	-6.037*** (0.876)	29.88*** (4.435)		20.04*** (5.781)	-0.970*** (0.254)
Morocco	-27.24** (12.79)	-1.975** (0.720)	-7.409*** (2.283)	4.034*** (1.164)	-48.77 (45.05)	-0.0760 (1.449)	-1.131** (0.525)
Oman	-71.32 (50.35)	-0.762*** (0.256)	-0.606 (0.780)	12.58* (6.015)	6.546 (16.30)	19.47** (9.247)	-0.276 (0.183)
Qatar	-114.7 (69.35)			12.28 (8.821)		52.48*** (13.14)	
Saudi Arabia	-55.24** (22.32)	0.104 (0.642)	-3.564* (1.961)	1.995 (2.503)		-8.893*** (2.983)	-0.907* (0.451)
Somalia	13.93 (29.20)	-3.101*** (0.588)	-7.629*** (1.467)	0.393 (3.096)		23.33*** (2.899)	-1.443*** (0.379)
Sudan	-25.98** (11.59)	-2.609*** (0.770)	-9.032*** (2.258)	5.630*** (0.825)	-34.39 (49.16)		-2.261*** (0.518)
Syrian Arab Republic	-66.59*** (20.39)	-1.877** (0.685)	-5.040** (1.852)	-0.728 (1.173)	-55.27 (44.48)	-1.713 (1.105)	-1.777*** (0.459)
Tunisia	-45.42 (26.39)	-1.730*** (0.557)	-4.119** (1.631)	11.07*** (3.430)	-63.61 (39.98)	7.324* (4.134)	-1.043** (0.403)
United Arab Emirates	-98.55* (49.57)	0.704*** (0.232)	-0.670 (0.770)	7.886 (6.060)		27.55*** (9.351)	0.0840 (0.186)
Yemen	23.28 (20.34)	-2.561*** (0.649)	-8.888*** (1.881)	4.830** (1.992)	-55.91 (52.75)	-2.010 (2.105)	-1.614*** (0.465)
1960s	77.87*** (21.37)	-0.459*** (0.111)	-1.412*** (0.297)				0.0192 (0.0782)
1970s	45.91*** (14.42)						
1980s	17.21* (8.271)	0.104 (0.103)	1.031*** (0.203)				-0.0608 (0.0726)
1990s	4.497 (3.703)	0.00995 (0.188)	1.720*** (0.324)	-0.414 (0.278)			-0.188 (0.114)
2000		0.180 (0.244)	2.488*** (0.473)		-0.00110 (3.250)	-0.0907 (0.723)	-0.265* (0.142)
Constant	160.2 (150.9)	12.19*** (1.115)	4.185 (3.500)	-37.54 (21.96)	5.909 (72.18)	-77.25** (30.84)	0.0318 (0.754)
Observations	877	912	912	346	139	385	826
Log likelihood	-3761	-274.5	-979.2	-671.4	-439.8	-757.5	-229.4
Adjusted R-squared	0.851	0.932	0.937	0.950	0.817	0.963	0.759

Source: ESCWA calculations.

Notes: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

IMR, infant mortality rate; GDP, gross domestic product.

D. ARAB-SPECIFIC CHALLENGES

The Arab region is home to three of the largest refugee populations in the world (Palestinians, Syrians and Iraqis). Table 7 shows the results of the analysis on conflict on inflows and outflows of refugees. To analyse refugee flows, a negative binomial regression is estimated, which is well suited to study variables that are essentially counts. Such count models have been widely used in the literature to study refugee

flows.⁸⁷ The negative binomial model is a special case of the generalized linear model, which assumes that the dependent variable, here inflows and outflows of refugees, has a conditional Poisson distribution, where the variance of the distribution is a function of the explanatory variables and the estimated β 's plus a random error.⁸⁸

Column 1 in table 7 shows the results for the number of refugees fleeing into a country and column 2 shows the results for refugees fleeing from a country. The conflict indicators and controls are the same as those discussed above. Column 1 shows that countries neighbouring a conflict-affected country will experience an increased likelihood of refugees flows into them. In line with the literature on the topic, conflict in a country is a significant and important predictor of refugee emigration, as shown in column 2.

TABLE 7. NEGATIVE BINOMIAL REGRESSION ON REFUGEES, BATTLE DEATHS

	(1) In refugees	(2) Out refugees
Conflict intensity		
Sum (battle deaths), t-1	0.0221 (0.0269)	0.283*** (0.0391)
Neigh. Conflict, t-1	1.287*** (0.264)	0.405* (0.203)
Control variables		
1970s	0.445 (0.356)	-0.348 (0.431)
1980s	0.720* (0.291)	-0.800* (0.322)
1990s	0.472*** (0.136)	-0.259 (0.213)
Ln (population)	0.525*** (0.118)	0.0550 (0.109)
Polity 2	-0.0552** (0.0203)	-0.134*** (0.0216)
(Polity 2)^2	-0.00726 (0.00401)	-0.0190*** (0.00424)
Youth bulges	0.0464* (0.0226)	-0.0237 (0.0264)
Constant	3.529** (1.331)	11.03*** (1.530)
Ln alpha		
Constant	1.099*** (0.0591)	1.404*** (0.0462)
Observations	2607	3153
Log likelihood	-28744.2	-31936.8
Aic	57510.3	63895.6

Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

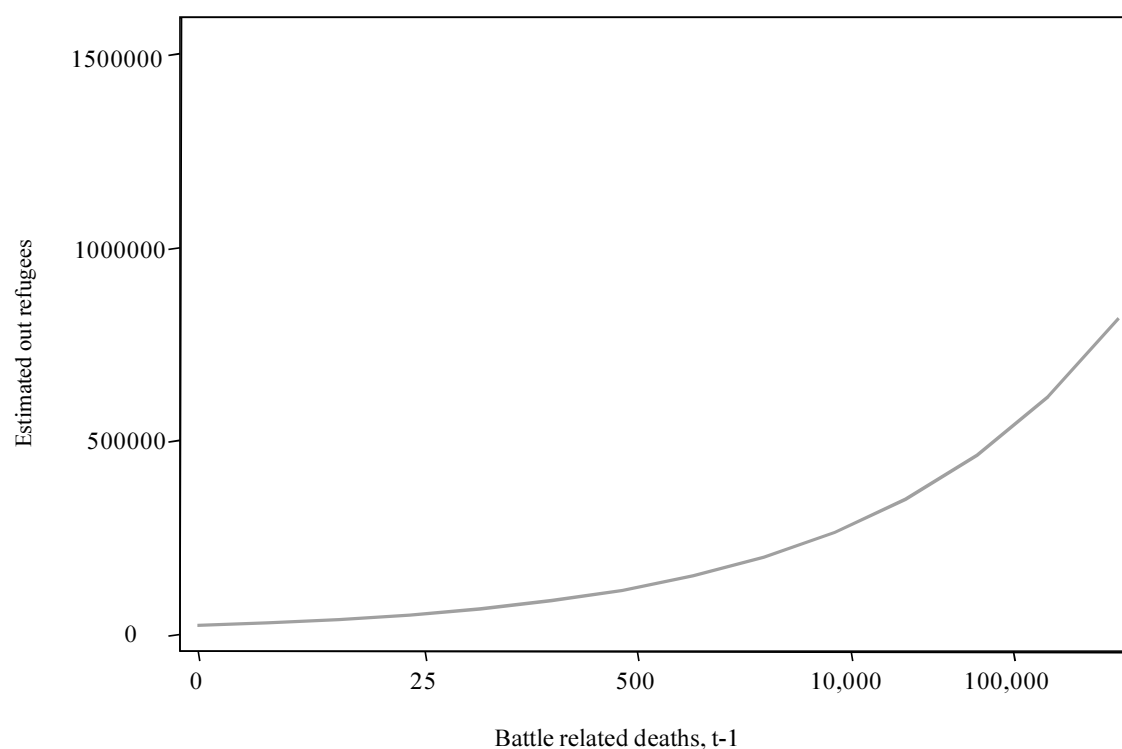
Notes: Standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 13 reports the estimated number of refugees a conflict will produce as a function of the number of battle deaths incurred. The larger the conflict in terms of battle deaths, the more refugees it is estimated to cause.

⁸⁷ Moore and Shellman, 2004.

⁸⁸ Long, 1997.

Figure 13. Refugees and internal armed conflict



Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

Figure 14 shows the shares of refugees in host countries in the region and the percentage of the population internally displaced in conflict-afflicted countries.⁸⁹ With close to 3.9 million refugees in 107 countries, the Syrian Arab Republic became the leading country of origin for refugees in 2014. Adding an estimated 7.6 million persons displaced within the country makes Syrians the largest displaced population worldwide.⁹⁰

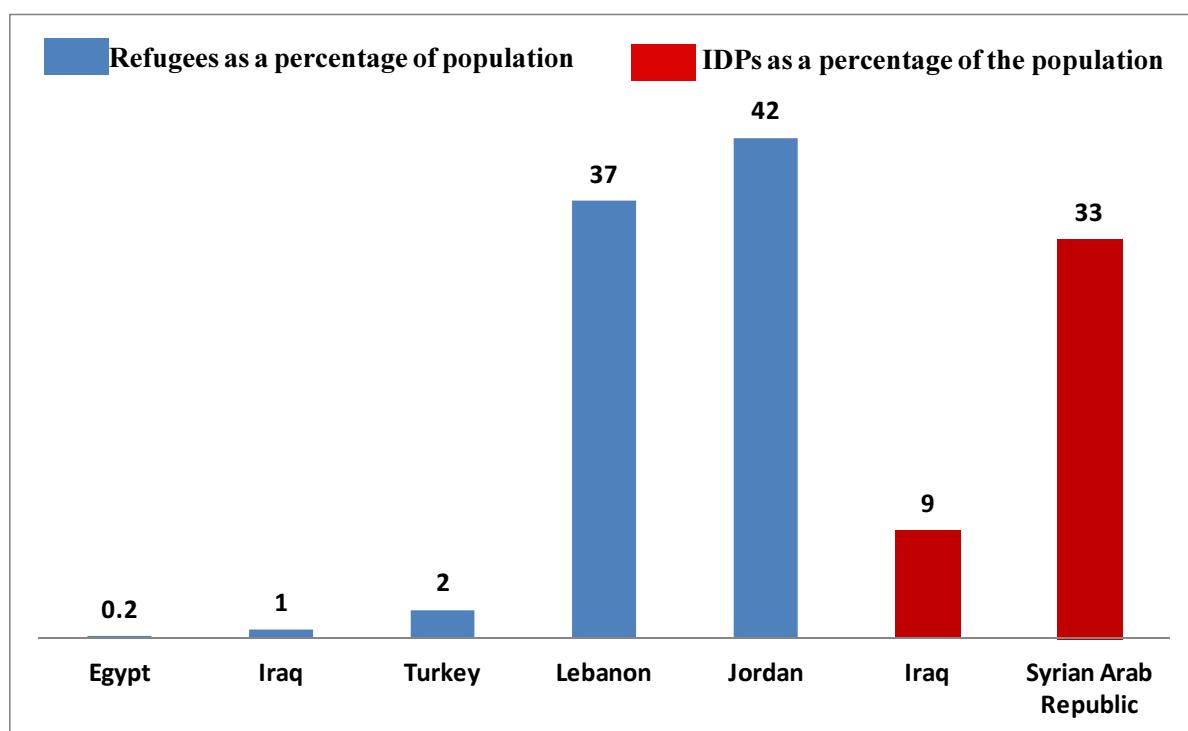
This flow of displaced populations has occurred in a relatively short time, exacerbating poor economic conditions in both origin and host communities. There is increasing concern among policymakers in the region about the challenge of incorporating refugees into the mainstream economy. Refugees and host populations often compete for resources, intensifying poverty among vulnerable groups in host countries.

One of the most formidable challenges to the post-2015 development agenda is protracted conflict in the Arab region. Although displacement has been widely acknowledged as a humanitarian concern, this report argues that it should also be regarded as a development concern, impacting not only those displaced, but also the communities and countries that host them. Since 2011, 4 of 22 Arab countries have been immersed in ever-intensifying conflict, and Palestine has been occupied for over six decades.

⁸⁹ ESCWA estimates of the shares of refugees, including refugees of Palestinian origin.

⁹⁰ UNOCHA, 2015.

Figure 14. Share of refugees and internally displaced persons (IDPs) as at 2015



Source: ESCWA calculations based on the World Development Indicators database, and on data from UNHCR, UNRWA and the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA).

IV. CRIME AND CONFLICT IN THE ARAB REGION

This chapter considers the complex link between several demographic and socioeconomic variables and the intensity of civil conflict in the Arab region. The link between these variables and crime has been extensively studied in economic literature. In conflict literature, Collier and Hoeffler (2004) investigate whether the socioeconomic determinants of homicide and civil war are similar, and explore potential interrelationships. Their findings suggest that there are certain socioeconomic determinants associated with both types of violence. This chapter aims to clarify how these socioeconomic determinants correlate with conflict and, more specifically, with conflict intensity measured by battle deaths.

Table 8 shows the mean battle deaths per 100,000 people in developing countries that have experienced civil war.

TABLE 8. MEAN BATTLE DEATHS IN 1991 v. 2013 IN COUNTRIES EXPERIENCING CIVIL WAR

			Developing countries	Arab countries	Difference
Battle deaths per 100,000 people	1991	Mean	1.39	9.82	-8.44***
		t-statistic			-2.69
		P-value			0.008
	2013	Mean	0.35	11.09	-10.74***
		t-statistic			-4.47
		P-value			0.00

Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset v.5-2015.

The estimates suggest that the observed differences in battle deaths per 100,000 people in the Arab region are statistically higher than those of other developing countries that experienced conflict between 1991 and 2013.

The economics of crime approach argues that unemployment lowers the opportunity cost of joining a rebellion.⁹¹ Moreover, studies using systematic data on rebel backgrounds suggest that the poor are overrepresented among rebel and Government forces.⁹² In the Arab region, high unemployment is singled out as a particularly important factor for understanding the dynamics fuelling the Arab uprisings and their aftermaths.

Malik and Awadallah (2013) argue that poverty, unemployment and lack of economic opportunity constituted the structural causes of the Arab uprisings. The relatively large number of young people in Arab populations has exacerbated this problem. In fact, the labour force in the Arab region has grown three times faster annually than in the rest of the developing world, resulting in one of the largest rates of youth unemployment worldwide. Table 9 shows unemployment rates for developing countries compared to Arab countries for the period 1990-2013, indicating relatively high unemployment for Arab countries compared to other developing countries. The problem is more pervasive for youth unemployment, where average differences of more than 17 percentage points are observed.

In the economics of crime literature, the link between unemployment, demographics and crime is explained by an opportunity story. The idea is that would-be criminals rationally weigh up the expected costs and benefits of breaking laws. Benefits of engaging in criminal activities may outweigh the costs; in this case, crime can be rational. Crime also appears to have an age profile, as the proportion of the population

⁹¹ Collier and Hoeffler, 2004.

⁹² Arjona and Kalyvas, 2006; Humphreys and Weinstein, 2008; Viterna, 2006.

involved in crime tends to peak in adolescence and early adulthood and then declines with age. As such, unemployment and demographics appear to be important determinants of criminal behaviour.

This chapter takes this idea further and examines whether the effect of demographics and unemployment on conflict depends on the intensity of conflict, by taking a quantile regression approach. This allows the identification of non-linear conflict-unemployment relationships that are usually averaged out in ordinary least square regressions. There is a high correlation between unemployment rates and battle deaths as conflict intensifies. The quantile analysis conducted in this chapter is based on a panel data set covering 136 developing countries and 14 Arab countries over the period 1991-2013.

A. SOCIOECONOMIC DETERMINANTS OF CONFLICT

1. *Unemployment*

The hypothesized channel through which unemployment affects battle deaths was briefly mentioned above: deteriorating labour market opportunities worsen lawful income opportunities and concomitantly make illicit, rebel ‘labour’ more attractive. Grogger (1998) and Raphael and Winter-Ebmer (2001) show that involuntary unemployment increases relative returns to illegal activities. Grogger develops a model that can be used to predict how unemployment affects criminal behaviour. Table 9 shows the mean differences in unemployment and youth unemployment rates between developing countries that have experienced conflict and Arab countries. The estimates suggest huge statistically significant differences between unemployment rates, in particular for young people.

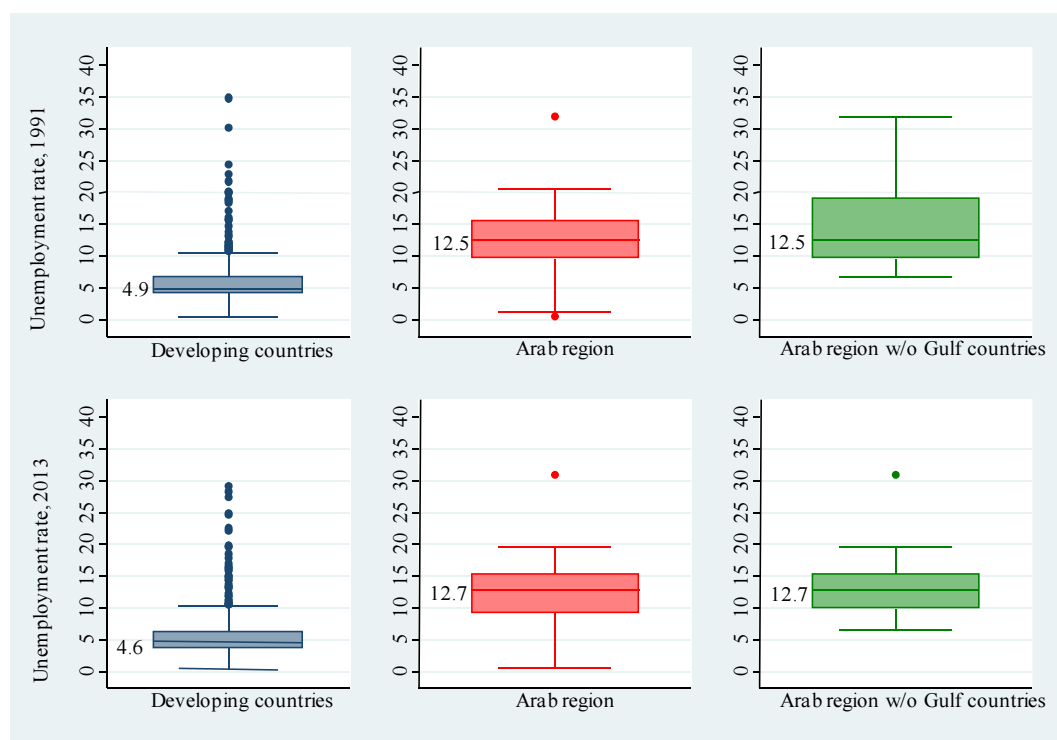
TABLE 9. TOTAL AND YOUTH UNEMPLOYMENT RATES, 1991-2013

			Developing countries	Arab countries	Difference
Unemployment rate	1991	Mean	5.99	13.87	-7.87***
		t-statistic			-4.44
		P-value			0.00
	2013	Mean	5.49	13.00	-7.51***
		t-statistic			-7.42
		P-value			0.00
Youth unemployment rate	1991	Mean	12.29	28.08	-15.79***
		t-statistic			-5.57
		P-value			0
	2013	Mean	12.72	30.24	-17.52***
		t-statistic			-5.58
		P-value			0.00

Source: ESCWA calculations based on data from the International Labour Organization.

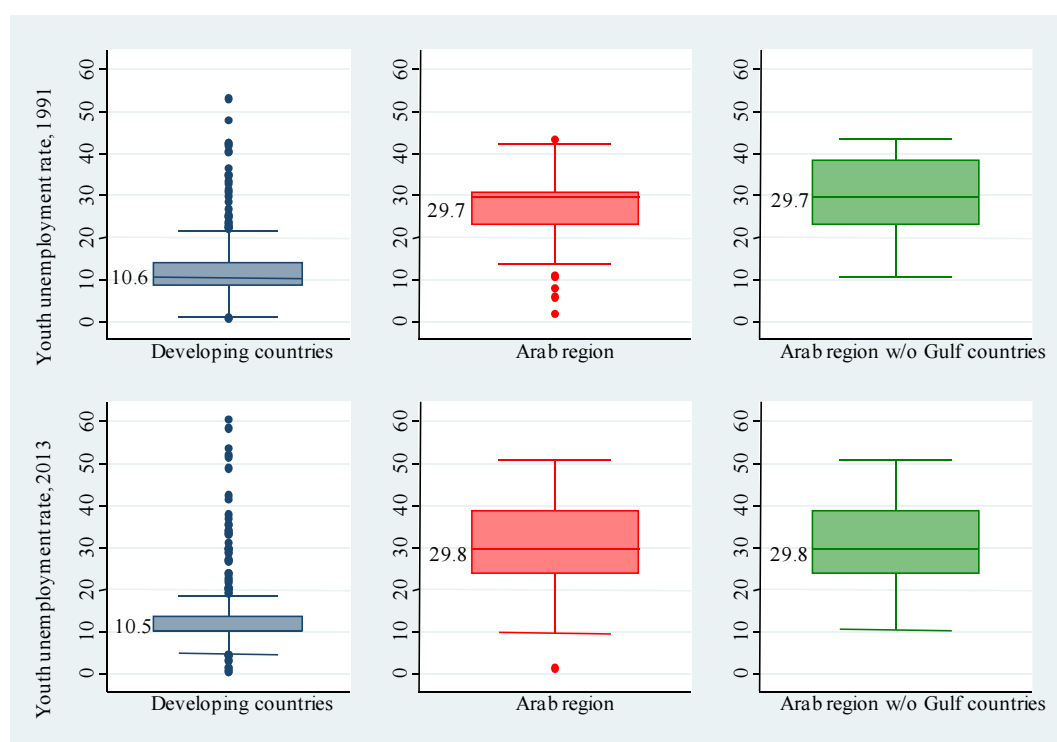
Furthermore, there are large differences in unemployment rates across the whole distribution. Figures 15 and 16 are box plots reflecting how spread-out the rates of unemployment and youth unemployment are in developing countries that experienced conflict and the Arab countries, including and excluding Gulf countries. Figure 15 shows that the average unemployment rate in 1991 in the Arab countries was over twice as high as that of other developing countries that have experienced conflict. The median youth unemployment rate in 1991 and 2013 was almost threefold that of other developing countries that have experienced conflict. Moreover, the gap in both unemployment and youth unemployment rates in the Arab countries and other developing countries widen over the period 1991-2013.

Figure 15. Distribution of unemployment rates for developing countries, Arab countries and Arab countries excluding Gulf countries



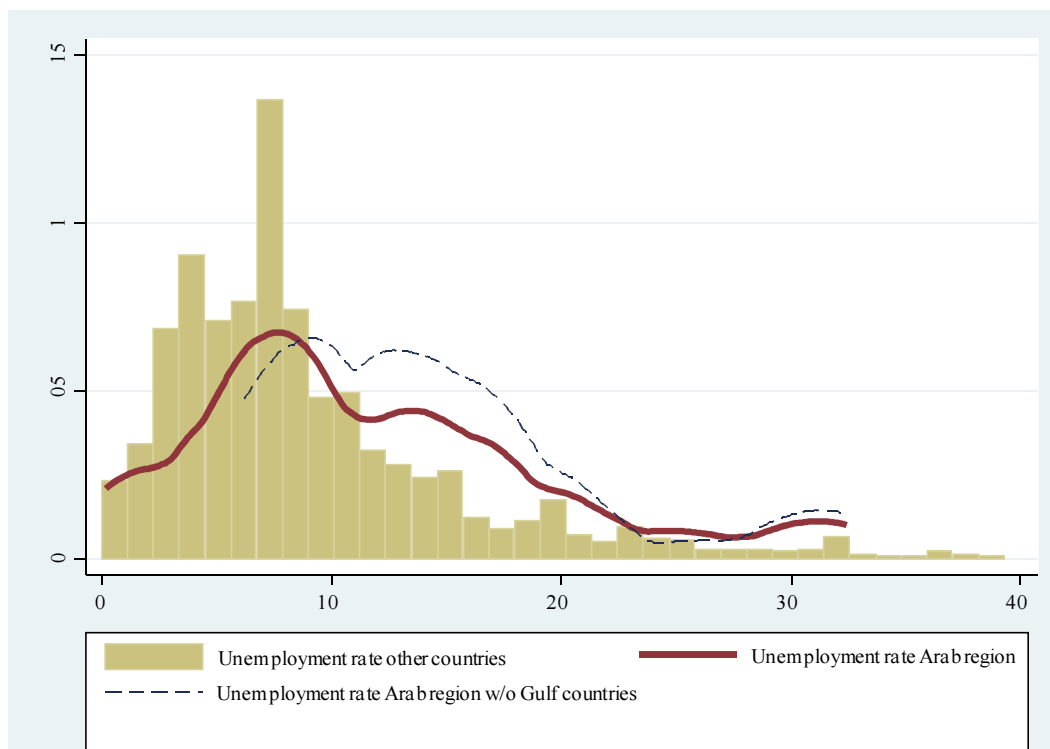
Source: ESCWA calculations based on data from the International Labour Organization.

Figure 16. Distribution of youth unemployment rates for developing countries, Arab countries and Arab countries excluding Gulf countries



Source: ESCWA calculations based on data from the International Labour Organization.

Figure 17. Distribution of unemployment rates for developing countries, Arab countries and Arab countries excluding Gulf countries



Source: ESCWA calculations based on data from the International Labour Organization.

Figure 17 is a histogram showing the distribution of unemployment rates for developing countries in the sample and the Arab countries, including and excluding Gulf countries. Unemployment in the Arab countries, and in particular in the non-Gulf countries, is shifted to the right. This shows that unemployment in these countries differs from other developing countries beyond the mean and median differences.⁹³

2. Female labour force participation

Calderón, Gáfaró and Ibáñez (2011) show that female labour force participation is likely to increase during civil conflict. Women might be obliged to become breadwinners because of forced migration. An indicator for female labour force participation is included in the estimates to test if conflict intensity is associated with changes in female labour force participation.

3. Education

A second determinant of criminal behaviour is education. Lochner (2004) emphasizes the role of education as a human capital investment that increases future legal work opportunities, which then discourages participation in crime. This hypothesis is tested by estimating the relationship of average years of education for the population aged 20-24 on battle deaths. The correlation between secondary school enrolment and battle deaths is also estimated. Table 10 shows the mean differences in secondary school enrolment rates between developing countries that experienced conflict and the Arab countries. The

⁹³ These differences are tested using the Kolmogorov-Smirnov test for equality of distributions. In all cases, the null hypothesis of equality of distributions is rejected.

estimates suggest very large statistically significant differences in mean enrolment rates during the analysis period. While enrolment appears to have increased in other developing countries, it has remained stagnant in the Arab countries.

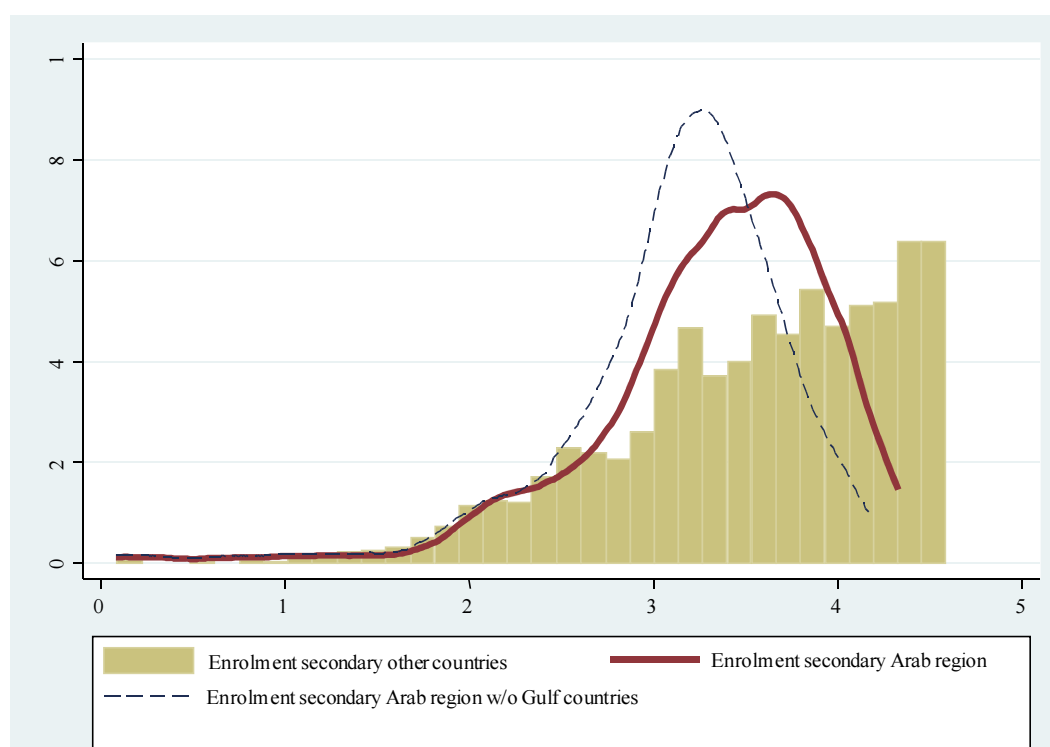
TABLE 10. SECONDARY ENROLMENT RATES, 1991-2013

Secondary enrolment			Developing countries	Arab countries	Difference
	1991	Mean	31.93	19.35	12.58
		t-statistic			2.60
		P-value			0.01***
	2013	Mean	57.85	20.49	37.37
		t-statistic			12.62
		P-value			0.00***

Source: ESCWA calculations based on data from the International Labour Organization.

Figure 18 shows the distribution of secondary enrolment rates for developing countries in the sample and the Arab countries, including and excluding Gulf countries. Arab countries appear to have a distribution of enrolment rates in secondary school different from that of other developing countries and Arab countries excluding Gulf countries.

Figure 18. Distribution of log secondary enrolment rates for developing countries, Arab countries and Arab countries excluding Gulf countries



Source: ESCWA calculations based on data from the International Labour Organization.

4. Refugees

In-Refugees are those flowing into a given country and out-refugees are those flowing out of a given country. Conflict-driven displacement is one of the most important spillover effects of civil war. Large migrations from one country to neighbouring countries significantly increase the likelihood that host

countries will experience civil unrest. Salehyan and Gleditsch (2006) argue that population movements are an important mechanism that spreads conflict across regions. Chaitani and Cantú (2014) suggest that there is a large conflict neighbourhood effect transmitted via cultural channels and population movements across borders. “The presence of refugees and displaced populations can also increase the risk of subsequent conflict in host and origin countries. Although the vast majority of refugees never directly engage in violence, refugee flows facilitate the transnational spread of arms, combatants, and ideologies conducive to conflict, they alter the ethnic composition of the state, and they can also exacerbate economic competition.”⁹⁴

5. Youth bulge

Grogger (1998) shows that there is an age-crime relationship, implying that areas with a youth bulge should have higher crime rates. The estimates include demographic measures for a youth bulge and secondary school enrolment rates, which have a twofold effect on conflict. Firstly, education appears to increase the likelihood of legitimate labour market opportunities, so high secondary enrolment rates translate into more human capital accumulation. Secondly, education appears to have an incapacitation effect on young people who, while at school, cannot engage in criminal activities.

6. GDP growth

Collier and Hoeffler (2004) find that higher per capita GDP and faster growth substantially reduce the risk of civil war, whereas a higher share of primary commodities in GDP increases the risk. This chapter tests the effect of GDP growth on battle deaths in the Arab countries and other developing countries.

B. DATA DESCRIPTION

The empirical analysis is based on data covering 116 developing countries and 14 countries Arab countries, excluding the rich Gulf countries. Table 11 describes the indicators used and their sources.

TABLE 11. TABLE OF SOURCES

Indicator	Source	Time frame
Battle deaths per 100,000 people	UCDP Battle Deaths Dataset	1989-2013
Female labour force participation	World Bank	1989-2013
Unemployment rate	ILO estimates	1989-2013
Secondary enrolment	IIASA, VID, Barro and Lee, UNDP	1989-2013
Average years of education of the adult population	UCDP Battle-Related Deaths Dataset v.5-2015	1989-2013
In-refugees per 100,000 people	UNHCR	1989-2013
Out-refugees per 100,000 people	UNHCR	1989-2013
Youth bulge	IIASA	1989-2013
GDP growth	World Bank	1989-2013

Source: Compiled by ESCWA.

Table 12 shows the descriptive statistics for developing countries and those for the Arab countries used in the analysis.

⁹⁴ Salehyan and Gleditsch, 2006 (abstract).

TABLE 12. DESCRIPTIVE STATISTICS ARAB COUNTRIES VS. OTHER DEVELOPING COUNTRIES

Variable	Arab mean	Arab std. dev.	Global mean	Global std. dev.
Battle deaths per 100,000 people	1.90	8.62	0.74	8.21
Unemployment rate	15.02	7.33	8.17	5.88
Female Labour force participation	21.22	6.62	53.48	15.54
Years of education adult population	7.56	2.29	8.35	2.97
In-refugees per 100,000 people	643.47	1524.37	403.89	1195.50
Out-refugees per 100,000 people	656.63	1344.87	652.28	2902.82
Secondary enrolment rate	28.83	11.75	47.15	27.12
Youth bulge	32.52	3.69	28.33	7.34
GDP growth	3.84	9.66	3.99	8.39

Source: ESCWA calculations.

The mean values for battle deaths per 100,000 people, the unemployment rate, the share of refugees flows and the youth bulge are lower in other developing countries compared to Arab countries. Whereas, the mean values for the female labour force participation rate, the average years of education for the adult population, the secondary enrolment rate and GDP growth are higher in other developing countries compared to Arab countries.

The dependent variable used in this chapter is battle deaths per 100,000 people in each country experiencing at least one instance of conflict over the period 1990-2013. Conflict is defined as experiencing more than 25 battle related deaths per calendar year, with the State as one of the actors. Given that the analysis focuses on conflict intensification, the following threshold has been established according to the battle deaths per 100,000 distribution: since not all countries in the sample experienced conflict throughout 1990-2013, we are interested in understanding what happens beyond the seventy-fifth percentile. Tables 13 and 14 present the different thresholds to define conflict intensity. For the developing countries in our sample, the seventy-fifth percentile threshold is zero battle deaths per 100,000, and the ninety-ninth percentile is 15.003 battle deaths per 100,000. For the Arab countries used in our analysis, the seventy-fifth percentile threshold is 0.739 battle deaths per 100,000, and the ninety-ninth percentile is 42.869 battle deaths per 100,000. The two thresholds are higher in the Arab region relative to the other developing countries.

TABLE 13. BATTLE DEATHS - DEVELOPING COUNTRIES

Observations	2412		
Sum of weights	2412		
Mean	0.74		
Standard deviation	8.21		
Percentiles			
75%	0		
90%	0.46	Variance	67.35
95%	2.25	Skewness	33.56
99%	15.00	Kurtosis	1359.01

Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset.

TABLE 14. BATTLE DEATHS - ARAB REGION

Observations	252		
Sum of weights	252		
Mean	1.90		
Standard deviation	8.62		
Percentiles			
75%	0.28		
90%	4.08	Variance	74.33
95%	9.83	Skewness	9.39
99%	29.87	Kurtosis	103.28

Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset.

C. QUANTILE REGRESSION ESTIMATES

Quantile regression estimates are carried out for all developing countries that experienced civil conflict in the period 1990-2013; the sample is divided between Arab and non-Arab countries. The result estimates are presented in table 15 and table 16, where the impact of several socioeconomic determinants on battle deaths per 100,000 people from the seventy-fifth percentile are estimated. Estimates for all countries, excluding Arab countries, are presented in table 15. Technical specificities are presented in the annex to the present study.

TABLE 15. QUANTILE REGRESSION ESTIMATES FOR DEVELOPING COUNTRIES EXPERIENCING CONFLICT IN THE PERIOD 1990-2013
(Excluding Arab countries)

Variables	q75	q80	q85	q90	q95
L. Unemployment rate	-3.90e-05 (4.45e-05)	-0.000203 (0.000181)	-0.00136 (0.000943)	-0.00279 (0.00206)	0.00216 (0.00961)
L. Female labour force participation (LFP)	-3.03e-05 (3.78e-05)	-8.06e-05 (0.000153)	0.000660 (0.000875)	0.00255* (0.00152)	0.00490 (0.00427)
L. Average years education	-0.0245 (0.0243)	-0.101*** (0.0341)	-0.120* (0.0633)	-0.153 (0.113)	-0.110 (0.239)
L. Average years education sq	0.00112 (0.00111)	0.00456*** (0.00154)	0.00521* (0.00285)	0.00621 (0.00517)	0.00144 (0.0110)
L. In refugees per 100,000	-6.33e-07 (2.73e-06)	-2.87e-06 (1.20e-05)	-4.03e-06 (5.63e-05)	8.88e-05 (0.000183)	0.000442 (0.000519)
L. Out refugees per 100,000	2.99e-05 (6.25e-05)	0.000147 (0.000178)	0.000569* (0.000324)	0.00112*** (0.000370)	0.00169* (0.000906)
L. Secondary enrolment	-9.12e-06 (2.29e-05)	-5.83e-05 (7.92e-05)	-0.000394 (0.000291)	-0.000368 (0.000797)	0.00333 (0.00328)
L. Youth bulge	-5.31e-07 (3.33e-05)	3.03e-05 (0.000122)	0.000743 (0.00124)	0.00557 (0.00376)	0.0206** (0.00967)
L. GDP growth	2.53e-05 (4.49e-05)	2.70e-05 (0.000158)	0.000394 (0.000774)	0.000825 (0.00269)	-0.00261 (0.0109)
Observations	2412	2412	2412	2412	2412

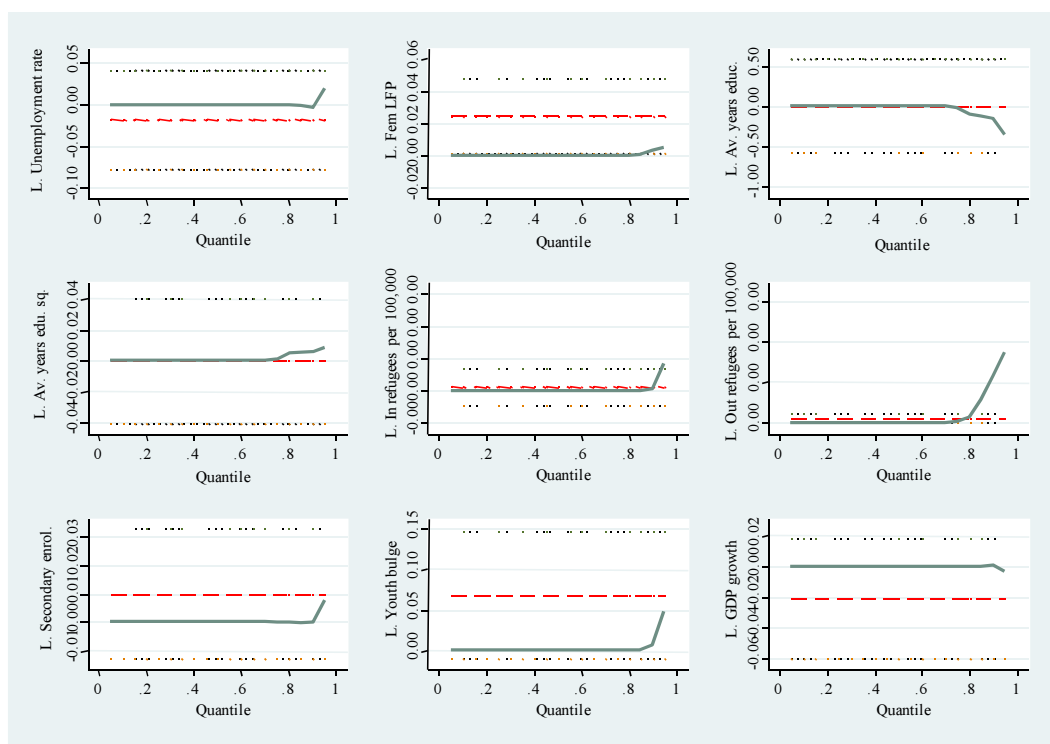
Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset, and data from ILO and the World Development Indicators database.

Note: Bootstrapped standard errors in parentheses (1,000 replications); *** p<0.01, ** p<0.05, * p<0.1.

The results suggest that lagged unemployment is negatively correlated with battle deaths; the correlation becomes more negative as battle deaths intensify. Yet, these estimates do not appear to be statistically different from zero. Only in- and out-refugees appear to be correlated with battle-death intensity. Out-refugees in particular may be capturing potential future intensification of the conflict, and its impact on battle deaths will be larger as conflict intensifies.

Figure 19 shows the results of estimates for all quantiles. The red line depicts the ordinary least squares estimate and its confidence interval. Note that for the seventy-fifth quantiles and above the estimates of these factors on battle deaths are statistically different than the mean estimates shown in the graph.

Figure 19. Quantile regression estimates for developing countries experiencing conflict in the period 1990-2013
(Excluding Arab countries)



Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset, and data from ILO and the World Development Indicators database.

Table 16 shows the quantile regression estimates for Arab countries. In contrast to estimates from the other developing countries, there is a large negative and statistically significant correlation between unemployment and the intensity of civil conflict measured by battle deaths per 100,000 people. Female labour force participation also appears to be negatively correlated with the intensity of conflict, in particular for high conflict quantiles. Average years of education of the population also appears to be an important protective factor for the intensity of civil conflict. As predicted by the literature, more education reduces the likelihood of civil unrest. While the coefficients on this variable are large and increase as conflict intensifies, its impact will have decreasing marginal effects.

Moreover, increasing the average years of education of the population by one year will take 10 years on average, so the likely effects on battle deaths of increasing average years of education will be protracted. In- and out-refugees do not appear to have a statistically significant effect on intensity of conflict, except for higher conflict quantiles. School enrolment in secondary education does not appear to be statistically significant, but the size of the youth bulge appears to matter, in particular for higher intensity quantiles. GDP growth does not appear to have a statistically significant effect across the civil conflict intensity distribution. The estimates suggest that unemployment is the single most relevant factor correlated to the intensification of conflict. Some countries have experienced large increases in their unemployment rates in a relatively short period, contributing to deteriorating conditions that appear to be correlated with the intensity of civil unrest. While these results are mere correlations, more research needs to be carried out to understand the potential links between labour market opportunities, in particular for young people in the Arab region.

TABLE 16. QUANTILE REGRESSION ESTIMATES FOR COUNTRIES IN THE ARAB REGION
EXPERIENCING CONFLICT IN THE PERIOD 1990-2013

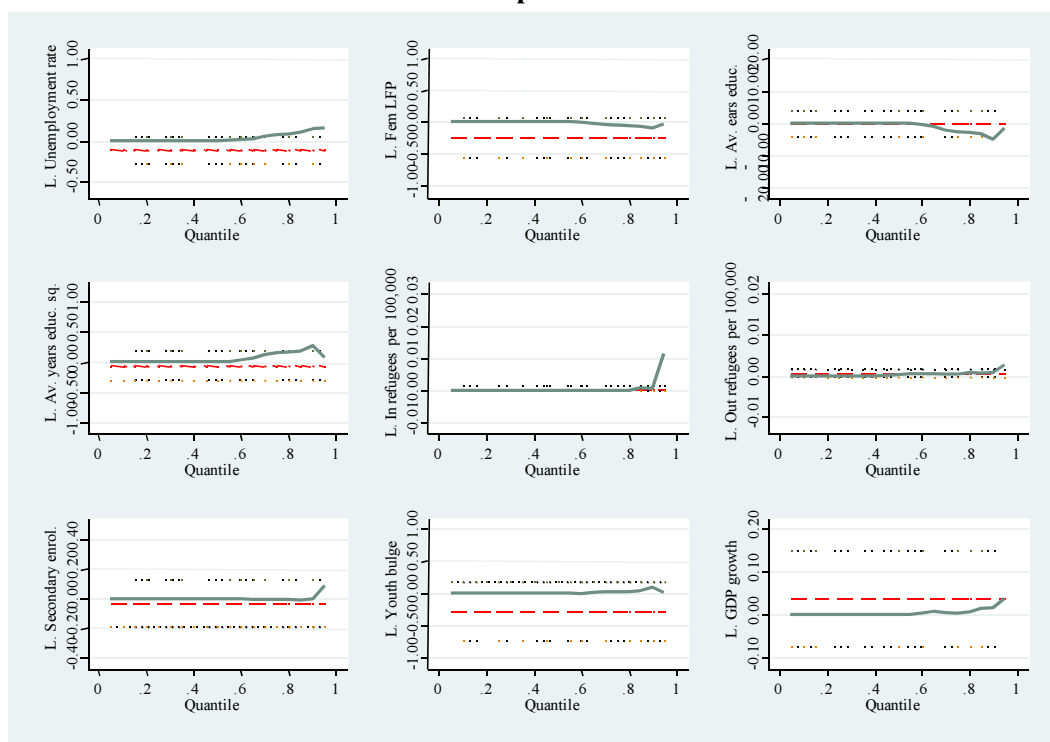
Variable	q75	q80	q85	q90	q95
L. Unemployment rate	0.0523* (0.0297)	0.0699* (0.0368)	0.111** (0.0461)	0.136** (0.0568)	0.158** (0.0683)
L. Female labour force participation (LFP)	-0.0556* (0.0321)	-0.0742* (0.0401)	-0.112** (0.0529)	-0.152** (0.0726)	-0.178** (0.0872)
L. Average years education	-2.119** (0.989)	-2.529** (1.085)	-3.643*** (1.233)	-3.543** (1.430)	-4.883*** (1.658)
L. Average years education sq	0.124** (0.0588)	0.147** (0.0653)	0.208*** (0.0748)	0.188** (0.0883)	0.272*** (0.103)
L. In refugees per 100,000	-0.000130 (0.000323)	-0.000165 (0.000481)	-0.000216 (0.000683)	-0.000199 (0.00102)	-0.000335 (0.00132)
L. Out refugees per 100,000	0.000372 (0.000267)	0.000690** (0.000299)	0.000629* (0.000342)	0.000796* (0.000443)	0.000672 (0.000554)
L. Secondary enrolment	-0.0225 (0.0163)	-0.0281 (0.0185)	-0.0260 (0.0233)	-0.0162 (0.0317)	-0.0292 (0.0415)
L. Youth bulge	0.0924 (0.0677)	0.123 (0.0852)	0.115 (0.110)	0.0183 (0.146)	0.109 (0.176)
L. GDP growth	0.00287 (0.0164)	0.00382 (0.0192)	0.00592 (0.0222)	0.00258 (0.0259)	0.00300 (0.0286)
Observations	252	252	252	252	252

Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset, and data from ILO and the World Development Indicators database.

Note: Bootstrapped standard errors in parentheses (1,000 replications); *** p<0.01, ** p<0.05, * p<0.1.

Figure 20 shows the results of the estimates for all quantiles. The red line depicts the ordinary least squares estimate and its confidence interval. Note that for the seventy-fifth quantiles and above the estimates of these factors on battle deaths are statistically different than the mean estimates shown in the graph.

Figure 20. Quantile regression estimates for Arab countries experiencing conflict in the period 1990-2013



Source: ESCWA calculations based on UCDP Battle-Related Deaths Dataset, and data from ILO and the World Development Indicators database.

D. CONCLUSIONS

Solving the youth unemployment problem must be a collaborative effort; education reforms and the creation of viable employment opportunities for young people can turn a potential calamity into an opportunity for the Arab region. There is limited empirical evidence on the link between unemployment and demography on conflict. The results point out the importance of understanding the potential relationship between socioeconomic variables and conflict beyond mean estimates. They also suggest that the problems of youth unemployment are particularly relevant for conflict-afflicted countries in the Arab region. Establishing viable options for young people that address the unemployment crisis could be a potential key to stability in the Arab region.

V. FROM PROTRACTED CONFLICT TO DEVELOPMENT IN THE ARAB REGION

The Arab region is presently beset by armed civil conflict, one of the most profoundly devastating social phenomena in the modern world. This study examines the relationships between conflict and development, focusing on the Arab region.

The accumulation of governance deficits, coupled with the fragmentation of rebel groups and the spread of radical ideologies, have prolonged conflicts and challenged peacebuilding efforts. Protracted conflict has a detrimental impact on development for the region as a whole.

Conflict is development in reverse. Developed countries rarely experience conflict because the entire economy crucially depends on divisions of labour and dense networks of economic exchange. Large-scale political violence breaks up such networks, even between groups that are not directly involved in fighting, and can gradually transform all relationships. Conflicts erode confidence and make capital and labour flee from conflict-afflicted countries to more peaceful and productive places. Moreover, armed conflict empowers actors specialized in the use of violence rather than in economically productive activities, so that political decisions increasingly favour a non-productive environment. Conflicts also undermine interpersonal trust and give rise to security dilemmas among social groups. More saliently, conflict in the Arab region appears to have large neighbourhood effects, as the economic effects of civil war also tend to spill over into neighbouring countries. Refugees also carry with them major neighbourhood effects.

In the Arab region, the devastating consequences of conflict are palpable. The ever-deteriorating economic environment has contributed to an intensification of civil unrest. Moreover, demographic trends appear to be largely contributing to the challenges faced by the region. Large cohorts of young people, who are ill prepared by schools and unable to join the labour market, are being marginalized and drawn in by multiple non-State actors that profess their empowerment.

While globally, on average, there is no statistical effect of conflict on unemployment rates, this study confirms the close and significant relationship between unemployment, lack of opportunities for young people and conflict intensity in the Arab region. The most intense conflicts are closely linked to the highest levels of unemployment. As conflict intensity and unemployment grow, the relationship compounds. Establishing viable options for young people that address the unemployment crisis could be a potential key to stability in the Arab region. Any successful transition out of conflict must include policies to target youth problems as a top priority on the political agenda.

This cannot happen until political actors address the ever-expanding governance deficit, in particular the worsening trends of voice and accountability. A crucial prelude to that in Arab conflict-affected countries remains a peacebuilding process that starts with reconciliation, firmly based on human rights for all. This remains the essential ingredient for a viable peacebuilding process.

THE LINK BETWEEN PEACE, DEVELOPMENT AND HUMAN RIGHTS IN THE PEACEBUILDING PROCESS

1. Human rights and reconciliation

Human rights are inherent to all human beings irrespective of their nationality, residence, sex, colour, religion and language; they are interrelated, interdependent, indivisible and inalienable. They form the cornerstone of a successful reconciliation process and set the fundamentals for renegotiating a new social contract in polarized societies.

Human rights violations have served both as a root cause and trigger of conflict. Unlawful attacks on civilians, involuntary disappearances, imprisonment, starvation, massacres, war crimes and sexual violence

all testify to how conflict can exacerbate human rights violations. International peacebuilding literature calls for an early settlement of human rights breaches through transitional justice mechanisms.⁹⁵ However, there is no best practice on how and when to proceed. The timing of such processes can be “inimical to establishing enduring non-violent relations”.⁹⁶ Consequently, if left unaddressed, impunity can compromise public trust for the overall peace process. A strenuous context analysis and legislative framework, in addition to people’s perception and trust of a new settlement, should inform the sequence and pace of reforms tackling human rights violations. Non-judicial forms of justice can complement, or even in some cases substitute, for official and lengthy judicial reform processes.

2. Peacebuilding and economic recovery

Evidence from peacebuilding initiatives across the world suggest that economic recovery can serve as a mitigating factor for conflict occurrence or relapse. The recent United Nations Peacebuilding Review highlights that economic recovery may be the “true exit strategy for international peacebuilding”.⁹⁷ This study has demonstrated that ill-developed social, political, economic and administrative accountability mechanisms have, for decades, marginalized large segments of the population, leaving their needs unaddressed. Economic and social grievances are therefore inflated by the inability of Governments to promptly react and encourage their citizens to channel their concerns in non-violent ways.

Institutions at the national and local levels have a critical role in forging fair economic participation and greater employment generation activities for the citizens they serve. An integrated approach to economic and labour market policies, inducing broader participation in the economy and the guarantee of decent jobs, is critical, especially among young people. Tackling youth unemployment requires raising productivity through economic reforms and the use of wide support through basic social protection floors that cater for the most vulnerable.⁹⁸

Peacebuilding efforts require both short- and long-term strategies to respond to institutional deficits that generate support for a new political settlement.⁹⁹

In the immediate aftermath of conflict, people need to feel that their core needs are met and basic services delivered. This can entail a wide array of activities, ranging from emergency employment, growth, access to electricity and water, and ensuring a fair distribution of goods.¹⁰⁰ Emergency employment, through self-employment or small viable enterprises with targeted provisions for young people, women and internally displaced persons, has demonstrated potential in signalling positive change and hope for a return to normalcy. Peacebuilding reviews over the last 20 years demonstrate that it is critical to set the basics of what is known as ‘process legitimacy’, whereby citizens start regaining trust in institutions responding to their needs.¹⁰¹ In the longer term, addressing possible key institutional deficiencies in economic institutions and exclusionary tendencies triggering conflict require investment and political commitment towards reform, including judicial, social development and security sector reform.

⁹⁵ United Nations Office of the High Commissioner for Human Rights, 2011.

⁹⁶ United Nations, 2015, p.20, para. 39.

⁹⁷ Ibid.

⁹⁸ UNDP and ILO, 2012.

⁹⁹ UNDP, 2013.

¹⁰⁰ Ibid.

¹⁰¹ Organisation for Economic Co-operation and Development, 2010.

3. Institutional reform

The comprehensive implementation of reforms in national institutions is a slow and lengthy process, whereby certain reforms will have to be prioritized over others and may fall short of donors' expectations. Peacebuilding requires much longer than what is usually anticipated;¹⁰² the behavioural changes related to attitudes needed to move from opposition/confrontation to a degree of tolerance and acceptance can take a generation or more. In addition, decision-makers need to remain mindful of the fact that the whole process is realized in a context in which “progress is neither linear nor mono-directional”.¹⁰³

Technical assistance in the Arab region has often focused only on ‘hardware’, such as infrastructure, rather than the more intangible outcomes that address the drivers of conflict. This has, in some cases, resulted in more harm through, for instance, premature investments or overcrowded public sectors that disproportionately respond to the needs of one group over another, thereby generating new tensions.¹⁰⁴ Hence, institutional reforms addressing the impact and root causes of conflict need to be tackled both politically and technically.¹⁰⁵

4. Inclusiveness in national dialogue processes

Lessons learned from the United Nations Peacebuilding Review also testify to undue haste and premature investment in national dialogue and reconciliation processes. There is no best practice on how the peacebuilding process should be sequenced and planned, as it is context specific. Evidence shows, however, that peace agreements are formed quickly and are very often driven by international mediators and facilitators. As a result, they “end up revisiting predominant views of the restricted political class competing for power during the conflict in the first place”,¹⁰⁶ jeopardizing the whole process. Due attention to the grassroots level, remote and marginalized communities and mechanisms to include their needs and aspirations in the process is therefore vital.

¹⁰² Geneva Peacebuilding Platform, 2015; United Nations, 2015.

¹⁰³ United Nations, 2015.

¹⁰⁴ O’Sullivan and others, 2012.

¹⁰⁵ UNDP, 2013.

¹⁰⁶ United Nations, 2015.

Annex

A. METHODOLOGICAL NOTES AND APPENDIX MATERIAL FOR CHAPTER III, SECTION B

This study seeks to establish the causal effect of conflict on a number of development outcomes. However, factors associated with low levels of development outcomes may also be associated with a heightened risk of armed conflict. Some countries may, for instance, be subject to external influences that both hinder their ability to provide public health services and to effectively address discontent or intergroup hostilities that escalate into conflict. In that case, there is a risk of attributing the impact of such factors to conflicts. To account for some of these factors, this study uses fixed-effects regression models, which remove between-country differences in the outcome variables and concentrate on the within-country effects. If conflicts increase undernourishment, for example, an increase should be observed relative to the country's average levels in the indicator during the conflict or in the period following the conflict. Fixed-effects models estimate the systematic within-country effect of conflicts

Fixed-effects models may overprotect against such omitted variable bias. In particular, countries that have had conflicts constantly over the entire period for which data are available will not contribute much to the estimated effect of conflict, as conflict is then largely part of the fixed effect itself. Since these countries are also likely to be the most severely affected by conflict, a fixed-effects model may yield too conservative estimates. This is accentuated by having data only for relatively short periods. Some countries may be poor when the data series start (typically between 1970 and 1990) because of conflicts they have had before then. The models will also ignore this effect.

Nevertheless, this study chooses to present a set of conservative estimates. For some indicators, this probably prevents us from identifying the effect of conflict. For other indicators, we find substantial detrimental effects of conflict despite these limitations. This is particularly true for indicators for which long time series are available.

B. METHODOLOGICAL NOTES AND APPENDIX MATERIAL FOR CHAPTER IV, SECTION C

Quantile regression is used in applied econometrics to estimate changes in variables across an entire distribution, rather than estimate how the mean of a dependent variable responds to marginal changes to independent variables (that is, the results of least squares regressions). Quantile regression can deal with complex and multidimensional relationships by modelling the distributions of variables. Standard linear techniques summarize the average relationship between a set of regressors and the outcome variable based on the conditional mean function $E(y|x)$. Such techniques provide only a partial view of the empirical relationship, since this relationship might be quite different at different points in the conditional distribution of y .

The starting point for the empirical analysis is the following model specification for the dependence of conflict related battle deaths per 100,000 people on the socioeconomic variables defined in chapter IV, section B.

$$BD_{per_{100,000}} = \beta L.unemployment + \gamma' L.X + \tau_t + u_{i,t}$$

This model specification suffers from unobserved heterogeneity, which could lead to inconsistent and biased ordinary least squares estimates. This problem can be tackled by including year fixed effects in the regressions. Country-specific fixed effects are not included. Reverse causation problems are avoided by lagging all independent variables in the analysis. Mean estimates appear to average out the potential effects of these socioeconomic determinants on conflict. The regression is further estimated via quantile regression.

Angrist and Pischke (2009) define the conditional quantile function (CQF) of Y_i , a continuously distributed random variable with a well-behaved density, at quantile τ given a vector of regressors, X_i , in chapter 7 of their book, *Mostly Harmless Econometrics*, as the following:

$$Q_\tau(Y_i|X_i) = F_y^{-1}(\tau|X_i)$$

where $F_y(y|X_i)$ is the distribution function for Y_i at y , conditional on X_i . The conditional quantile function solves the following minimization problem:

$$Q_\tau(Y_i|X_i) = \operatorname{argmin}_q E[\rho_\tau(Y_i - q(X_i))], q(X)$$

where $\rho_\tau(u)$ is the check function which weights positive and negative terms asymmetrically and is defined as the following:

$$\rho_\tau(u) = (\tau - 1(u \leq 0))u = 1(u > 0) \cdot \tau|u| + 1(u \leq 0) \cdot (1 - \tau)|u|.$$

When $q(X_i)$ is a linear model, the quantile regression estimator, $\widehat{\beta}_\tau$, is defined as the following:

$$\widehat{\beta}_\tau = \operatorname{argmin}_\beta E[\rho_\tau(Y_i - X_i'\beta)].$$

For each quantile estimation, 1,000 bootstrap replications were performed and the standard deviations of the resulting estimates were computed. Bootstrap standard errors are generally larger than those obtained under homoskedasticity assumptions.

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The Arab region is presently beset by armed civil conflict, one of the most profoundly devastating social phenomena in the modern world. This study examines the relationships between conflict and development. Today, at least half of the Arab States are affected directly or indirectly by armed conflicts of varying intensity, yet little is known about the effects of conflict on household behaviour and poverty.

The study examines the mounting evidence from conflict-affected countries, which suggests that conflicts seriously undermine citizens' health and welfare, economic growth, political systems, and respect for human rights. Furthermore, it highlights a number of significant development challenges facing the Arab region, including an ever-increasing refugee population and a youth bulge. The study advocates that these factors could prove particularly problematic for Governments that are increasingly unable to generate employment and dignified livelihoods for youth. While, in general, there is no statistical effect of unemployment rates on conflict, this study confirms the significant relationship between unemployment, lack of opportunities for youth and conflict intensity in the Arab region. Growing conflict intensity is inseparably linked to increasing levels of unemployment.