

# Conflict, Revival and Neglect: Understanding Spatial Disparities in Welfare

# 4

**I**n Iraq, the legacy of violent conflict has no doubt had a pervasive influence on welfare and related outcomes through multiple channels—directly through the loss of life and livelihoods and the displacement of people, and indirectly, through the destruction of infrastructure and markets, by limiting the access and quality of health, education and basic services, by adversely affecting rule of law and governance, and by severely constraining economic activity.

Relative peace and stability alone, where experienced, has not been sufficient for economic revival. Displacement and civilian deaths during the 2007 to 2012 period have been concentrated in Baghdad, the North, and in some of the Central governorates. The absence of peace and security has implied little change in welfare in Baghdad and the North, where the post-2003 violence was concentrated. It is only in the Centre where peace and stability have to some extent combined with an improvement in economic activity, and where job growth has outpaced the growth in the male working age population. While the South and Kurdistan were both subject to severe prosecution under the Saddam regime, they have remained relatively untouched by the post 2003-violence; yet, they appear to be on opposite trajectories.

Spatial disparities in welfare may be driven by differences in human capital endowments across different parts of Iraq. Iraq's historical endowment and comparative advantage in human capital has been steadily eroded as a consequence of 30 years of violence, and some of these trends are evident across age cohorts.

While Kurdistan and the South were both lagging behind the rest of the nation in terms of the educational attainment of working age adults in 2007, they are now on opposite trajectories. In Kurdistan, outcomes are improving significantly for the young, and they are catching up to the rest of the country. On the other hand, while there is some improvement in educational attainment over cohorts within the South, the gap with the nation is widening.

There is also evidence of long-term deterioration in health outcomes. Until the mid-1970s, Iraqi males enjoyed higher life expectancy than their counterparts in the Middle East and North Africa (MENA) region. Since 1980, the beginning of the Iran-Iraq war, they have lagged behind. In 2011, Iraq's Infant Mortality Rate was the highest in the region, barring Yemen.

Perhaps the most direct correlate of poverty is employment and the associated ability to earn income and finance consumption. Iraq has one of the lowest employment—to-adult population ratios in the region, and male and female rates of employment and labor force participation are low and stagnant. Male labor force participation was around 74 percent and female labor force participation around 11.5 percent in 2012. Male employment has not kept up with the growth in working age male population in the South, and both have actually declined in Baghdad. In contrast, employment growth outpaced growth in the working age population for men in Kurdistan, the North and the Centre, with the gap closing the fastest in the Centre. In the southern governorates, and with the exception

*of Basra, the last five years appear to have compounded the neglect of the past, with declining male employment and labor force participation, declining female employment in agriculture, and with young people falling further behind in human capital.*

*Household size and composition, education and labor market outcomes all play a role in determining consumption expenditure, the basis for measuring poverty, as do other location-specific factors that can imply access to (or lack of) services, employment opportunities, and markets. By far the most consistent and striking correlate of poverty is the education of the head of the household. Further, there is evidence that the labor market is fragmented as a result of continuing violence and insecurity. While individuals are able to move between rural and urban areas within nearby governorates so as to equalize returns to their characteristics; moving across the country is much harder. As a result, similar people have different welfare levels depending on where they live. The lack of internal integration has severely limited the potential for development and sustained welfare improvements.*

This chapter attempts to explain the observed spatial disparities in welfare, and in particular, to examine the direct and indirect implications of three decades of violence, conflict and insecurity on welfare. By construction, poverty is determined by the level of consumption expenditures and therefore, unequal growth in consumption across space and time can directly influence poverty rates, trends and spatial patterns in welfare. In much of the developing world, the poor also tend to have limited access to health, education and other basic services, or to those of relatively lower quality, which in turn imply lower human capital and a limited ability to take advantage of economic opportunities. Access to jobs and earnings also directly determine the ability to consume, acquire assets and invest, as do transfers, from the government or from private citizens.

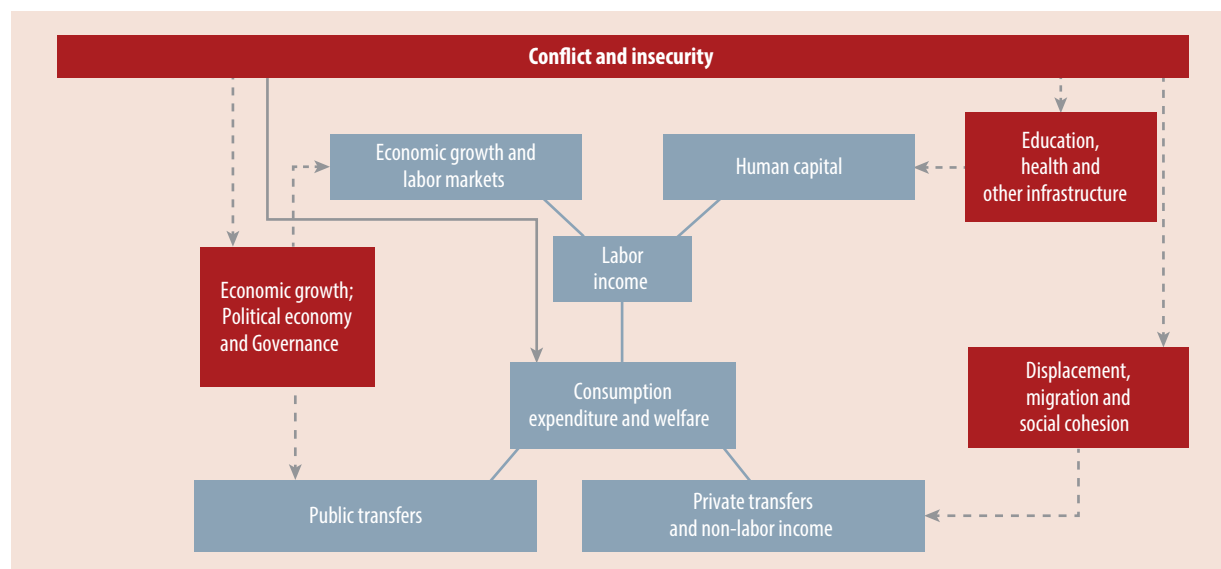
In Iraq, the legacy (and continuation) of violent conflict have no doubt had a pervasive influence on welfare and related outcomes through multiple channels—the direct influence through the loss of

life and livelihoods and the displacement of people, and indirect channels, through the destruction of infrastructure and markets, by limiting the access and quality of health, education and basic services, by adversely affecting rule of law and governance, and by severely constraining economic activity (Figure 87). In this chapter, we examine some of these channels, insofar as data allows.

Given the focus on the period from 2007 to 2012, on the face of it, one may expect that the recent decade of violence and insecurity has been the most proximate factor at work in explaining the spatial dimensions of welfare in Iraq. In other words, that welfare stalled in areas which were particularly affected by the post-2003 violence, and that outcomes improved in places where security conditions improved as normalcy returned. Below we show that in addition, long term neglect of some parts of the country and a recent revival in economic activity concentrated in other parts of the country may also have an important role in explaining the spatial differences in welfare observed today.

Displacement and civilian deaths during the 2007 to 2012 period have been concentrated in Baghdad, the North, and in some of the Central governorates (Anbar and Diyala). While the revival of economic activity in Baghdad and the North has been relatively sluggish, in the Centre, employment among men, who make up a huge majority of the workforce, has grown significantly faster than their working age population, suggesting a significant improvement in economic activity during the 2007 to 2012 period. Starting from a common legacy of neglect and persecution during the previous regime under Saddam Hussein, Kurdistan and the southern governorates, which were relatively untouched by the post-2003 violence, now appear to be on opposite trajectories. While the limited improvement in head count rates in Kurdistan is masking significant improvements in health and education, and in economic activity, in the South, which has long been a lagging region, with the exception of Basra, continued neglect has led to deteriorating welfare for an already vulnerable population. Consumption and labor incomes

FIGURE 87: Understanding Spatial Disparities in Poverty in Iraq



for the poorest 10 percent have actually declined and the share of working age men who are not employed in the South has increased by 15 percent.

### Violence and Insecurity

Conflict, insecurity and civilian displacement in Iraq predates the 2003 US-led invasion. The almost decade long First Gulf War between Iran and Iraq in the 1980s resulted in thousands of civilian casualties, a slowdown in per capita GDP, stalling the development process. In July 1990, Saddam Hussein invaded Kuwait, sparking the Second Gulf War and then the abortive anti-Saddam uprisings in southern Iraq and the Kurdish region. This formed the beginning of autonomy for the Kurdish region, resulting in major economic divergence between this region and the rest of the country. Iraq became subject to a series of stringent United Nations resolutions which included economically crippling sanctions and direct UN involvement in the provision of food and health services. Importantly, other than the use of air power, the Saddam regime was free to use its remaining military power within Iraq outside the Kurdish region—to the detriment of southern Iraq in particular. Between 1990 and 1998, per capita

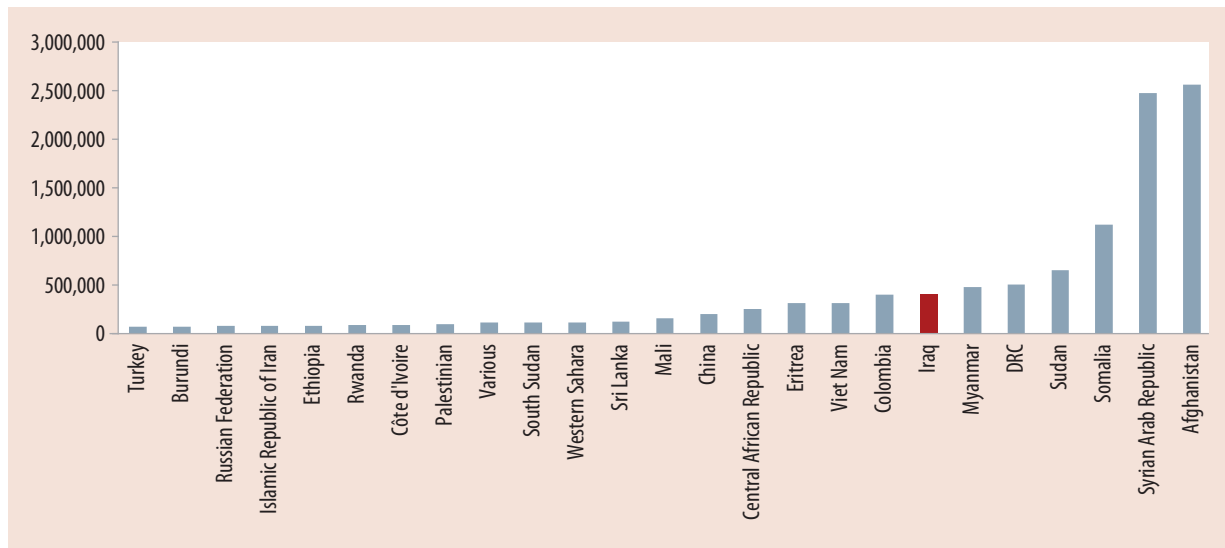
GDP fell from \$2836 to \$466 or to one-sixth of its level. In the intervening years, no estimates of GDP per capita were available until recently.

The 2003 invasion toppled the Saddam Hussein government and sealed autonomy for the Kurdish region, but was also the beginning of a protracted violent conflict among different power-seeking groups. This internal strife has taken an immense toll: since 2003, more than 110,000 civilians have died as a result of violent attacks and millions of Iraqis became internally displaced or left for other countries (predominantly Jordan and Syria).<sup>28</sup> The peak of civilian deaths in 2006–07 coincides with the period covered by the first Iraq Household Socio-Economic Survey (IHSES-I). During the time of the second IHSES survey in 2012, violence still accounted for more than 4000 civilian deaths a year.

The scale of violence over the last decade has been among the worst in recent times and civilians have paid a huge price in terms of dislocation and loss of life. Iraqi refugees are among the most numerous in

<sup>28</sup> Iraq Body Count ([www.iraqbodycount.org](http://www.iraqbodycount.org)); estimates as of May 2013.

FIGURE 88: Number of Refugees, Selected Countries (>50,000 Persons)



Source: UNHCR Population Statistics Reference Database, United Nations High Commissioner for Refugees, year 2013; retrieved 29 July 2014.

the world, ranking only behind a handful of countries (Figure 88 plots the number of refugees and their country of origin in 2012 for selected countries with more than 50,000 refugees, of more than 200 countries in UNHCR's Statistical Online Population Database in 2014). Similarly, the scale of internal displacement has been massive. By June 2014, the number internally displaced people (IDPs) in Iraq was estimated at 2.3 million or roughly 6 percent of the population—less only than those in Syria, Nigeria, Columbia, Sudan, and the Democratic Republic of Congo (Figure 89).<sup>29</sup> The militant insurgency in the northern governorates at the time of writing this report has displaced populations further. IDMC estimates that since late December 2013, more than 1.2 million persons have fled their homes in the governorates of Anbar, Nineveh, Salahaddin and Diyala.

In 2012 IHSES data, 6 percent of individuals reported having lived elsewhere for at least six months because they were forcibly displaced or were returning from forcible displacement, or had moved for security reasons, because of conventional armed conflict or civil conflict.<sup>30</sup> This estimate implies a scale of internal displacement very similar to those implied by IDMC or UNHCR estimates, and refers to movements spanning many decades. These

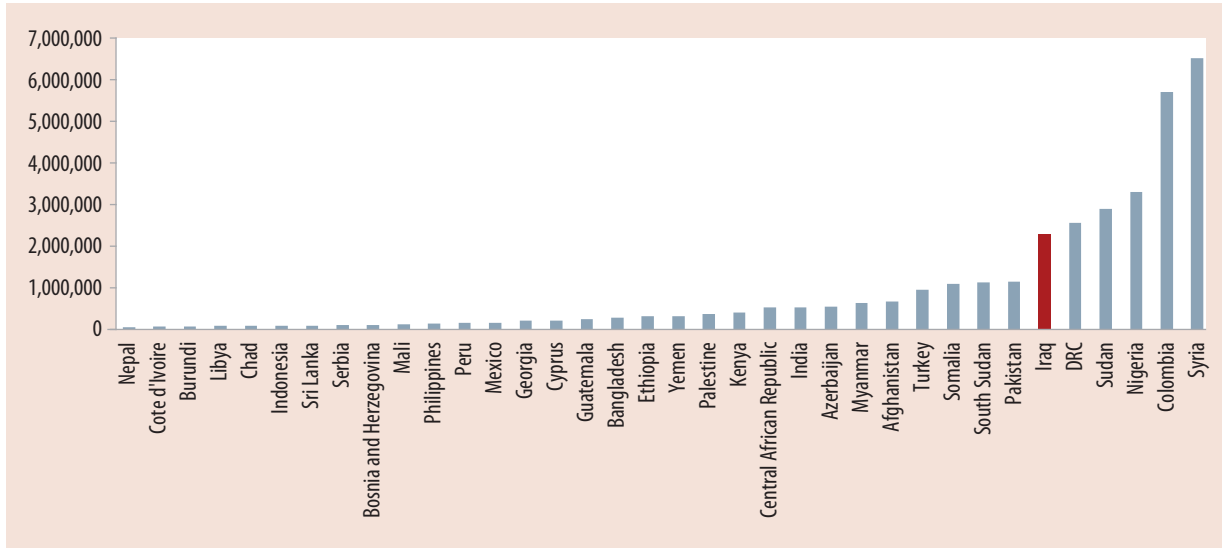
'displaced' people make up 35 percent of all people who had lived elsewhere for a period of 6 months or more. In Kurdistan, more than a third of the population had lived elsewhere for at least 6 months (henceforth *migrants*), and of these, more than a third or almost 15 percent of the population reported themselves as being displaced or returning from forcible displacement (Figure 90). In contrast, Baghdad and the Northern division had the lowest rates of migrant population, but almost 45 percent of these individuals were either forcibly displaced or were returning from forcible displacement.

These estimates mask significant variation within divisions. For example, within the North, 12 percent of the population of Kirkuk reported being displaced forcibly or having returned from forced displacement, and these individuals accounted for more than 60 percent of the migrant population (Figure 91). While the overall rates of displacement in the Centre are relatively low, almost 10 percent of the population of Diyala was displaced, accounting for

<sup>29</sup> Restricted to countries with more than 50,000 IDPs in 2012, of the 60 countries listed in the database.

<sup>30</sup> Overall, 17 percent of Iraqis reported having lived elsewhere for a period of 6 months or more.

**FIGURE 89:** Internally Displaced People, Selected Countries (>50,000 Persons)



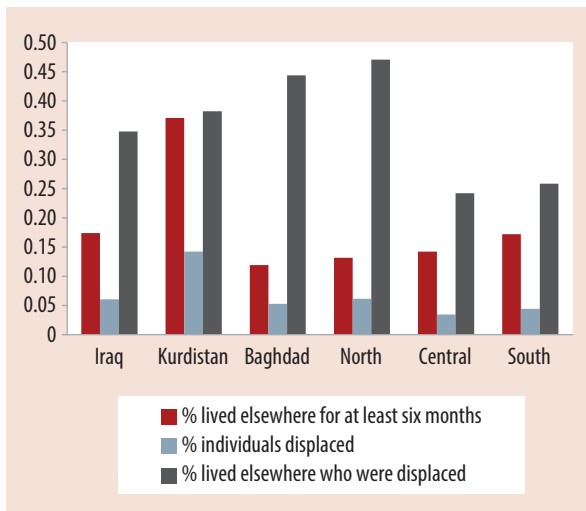
Source: International Displacement Monitoring Center (IDMC), Global Database, retrieved July 29 2014, [http://www.internal-displacement.org/8025708F004CE90B/\(httpPages\)/22FB1D4E2B196DAA802570BB005E787C?OpenDocument](http://www.internal-displacement.org/8025708F004CE90B/(httpPages)/22FB1D4E2B196DAA802570BB005E787C?OpenDocument).

more than 60 percent of migrants. The lowest rates of displacement—2 percent of the population—were in Najaf, Babylon, Qadisiya and Salahadin.

These estimates of displacement are concentrated in two distinct time periods: around the early 1990s and in the 2003 to 2007 period (Figure 92). More

than 20 percent of all reported displacement occurred in 1991–92; 10 percent in 2003, and 14 percent in 2006. These time periods coincide with Saddam Hussein’s invasion of Kuwait in 1990, the US-led coalition invasion of Iraq in 2003 and the peak in internal violence in 2006–07.

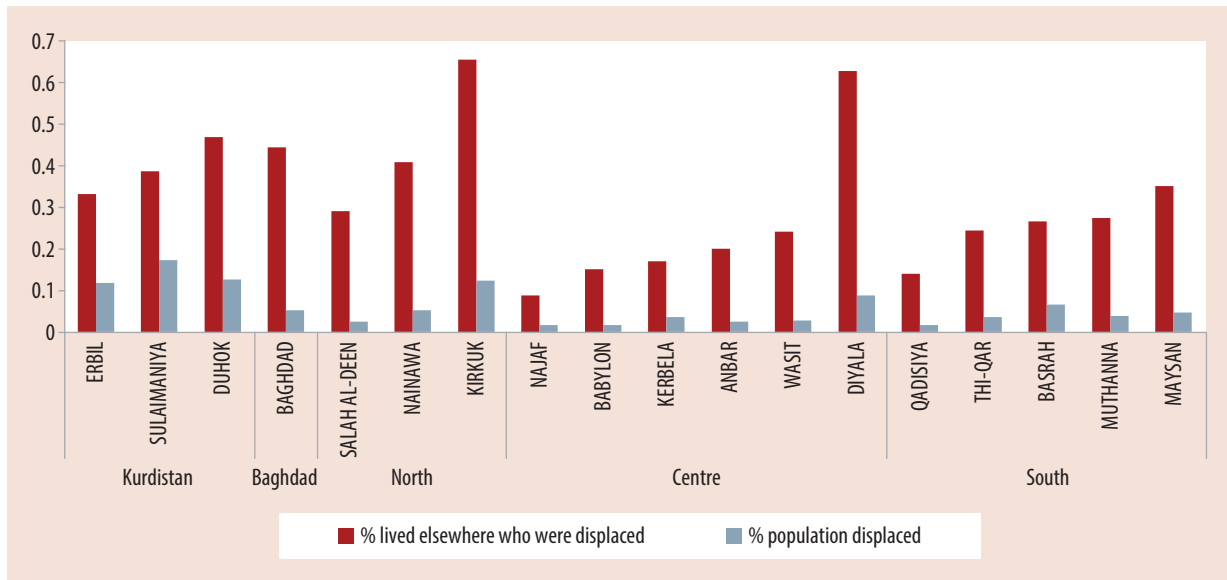
**FIGURE 90:** Estimates of Migration and Displacement, IHSES 2012



Source: Authors’ calculations, IHSES 2012.

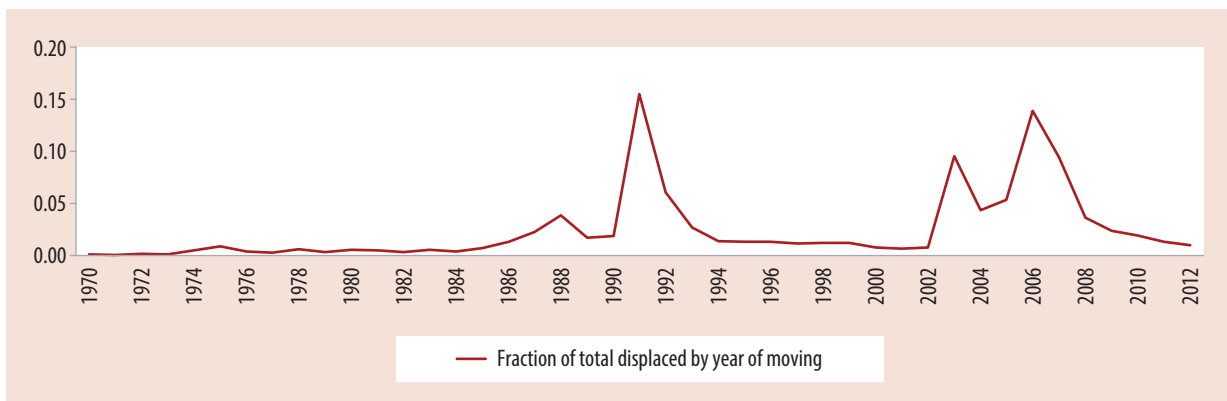
These different periods of displacement disproportionately affected certain parts of the country. Figure 93 shows the fraction of the displaced population within each division by the year of having moved. The scale of movement also varied significantly over time. The number of displaced individuals peaked in 1991, and then in 2006, accompanied by significant displacement in 2003 and 2007 (Figure 94). In Kurdistan, the bulk of the displaced had moved prior to the 2003 US led invasion of Iraq while on the South, 60 percent of the displaced moved prior to 2003, mostly in the 1980s and early 90s. These movements coincided with the Kurdish and Shi’a uprisings of 1991. The uprisings were followed in the South by an intensification of the draining of the Tigris-Euphrates marshes and the forced relocation of Marsh Arabs; and following the establishment of no-fly zones over the northern and southern parts of Iraq, by the establishment of the Kurdistan

**FIGURE 91:** Governorate Level Estimates of Displacement as a Share of Those Who Lived Elsewhere for More Than 6 Months



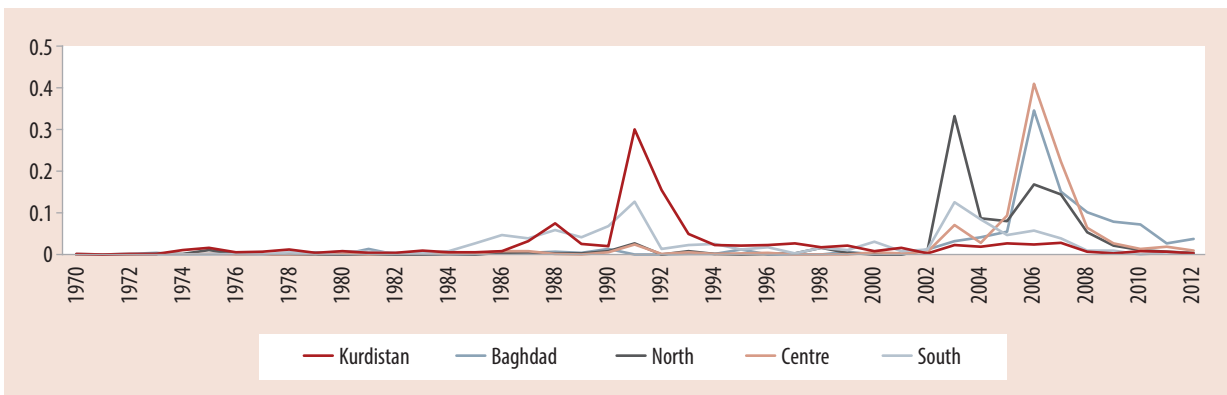
Source: Authors' calculations, IHSES 2012.

**FIGURE 92:** Spells of Displacement, 1970–2012



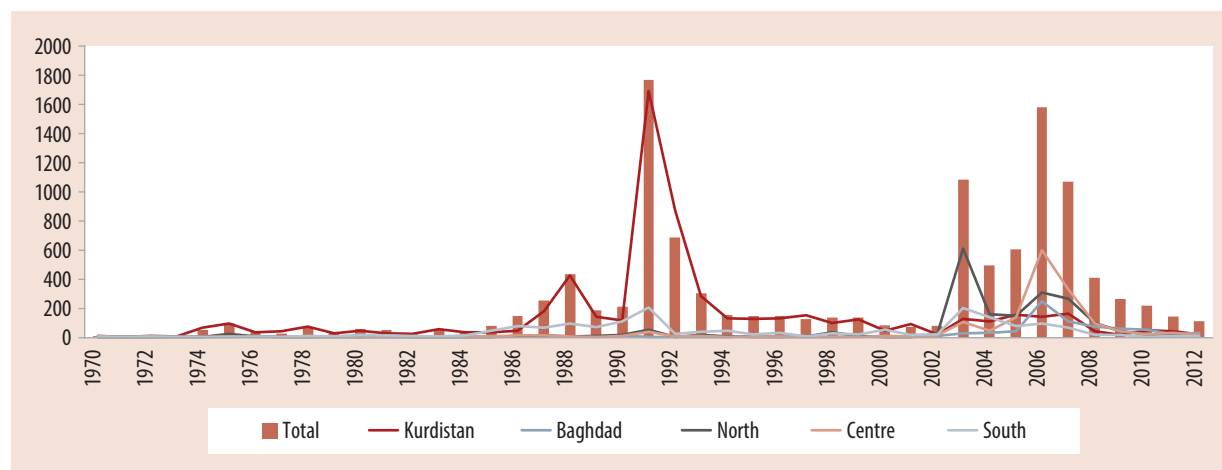
Source: Authors' calculations, IHSES 2012.

**FIGURE 93:** Fraction of Displaced in Each Division, by Year of Moving, 1970–2012



Source: Authors' calculations, IHSES 2012.

FIGURE 94: Estimates of Displacement, by Year of Moving, 1970–2012



Source: Authors' calculations, IHSES 2012.

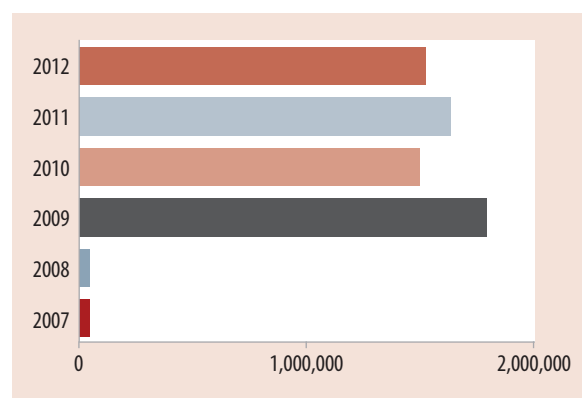
regional government. As we will try and show, since then, while the Kurdistan region has witnessed steady improvement across a range of indicators, relative peace and stability in the South has, on the other hand, not been accompanied by any visible improvement in outcomes.

In contrast, in the other three divisions,—the North, Centre and Baghdad—, almost 95 percent of those displaced moved after 2003, and these movements spiked in 2003 and 2006–07, coinciding with the US-led invasion and the subsequent surge in violence within Iraq.

Within the period covered by this report, UNHCR estimates on *persons of concern* within Iraq have steadily increased since 2007, and have remained high since the 2009 peak of almost 1.8 million persons (Figure 95).<sup>31</sup> The bulk of these populations, primarily comprising internally displaced people, are concentrated in Baghdad and the governorates of Nineveh and Diyala (Figure 96). In each of the years between 2007 and 2012, two of these three provinces together accounted for more than 40 percent of all persons of concern in Iraq.

Data on civilian casualties for the same period from Iraq Body Count finds an identical concentration of violence and insecurity in Baghdad, Diyala and

FIGURE 95: 'Persons of Concern', 2007–2012

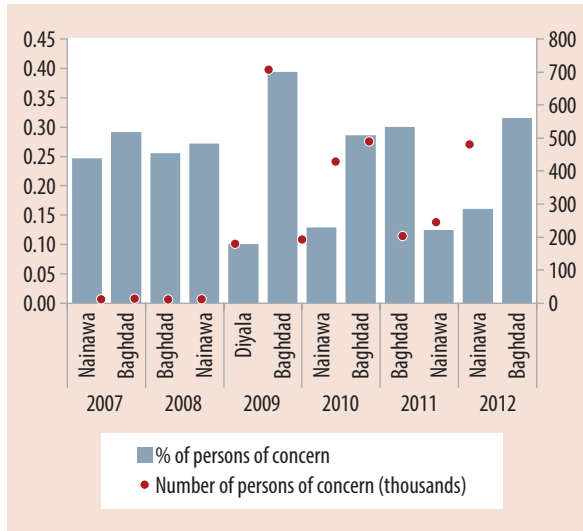


Source: UNHCR Population Statistics Reference Database, United Nations High Commissioner for Refugees.

Nineveh, which together accounted for 70 percent of deaths (Figure 97). Aggregating to the division level, over the 2007–2012 period covered by the two IHSES surveys, Baghdad, the Centre and the North together accounted for 95 percent of civilian deaths (Figure 98). Within the Central division, the more than three-quarters of the casualties were in two governorates, Anbar and Diyala. While internal

<sup>31</sup> "Persons of Concern to UNHCR" is a general term used to describe all people whose protection and assistance needs are of interest to UNHCR, including asylum seekers, stateless people, internally displaced people and return refugees.

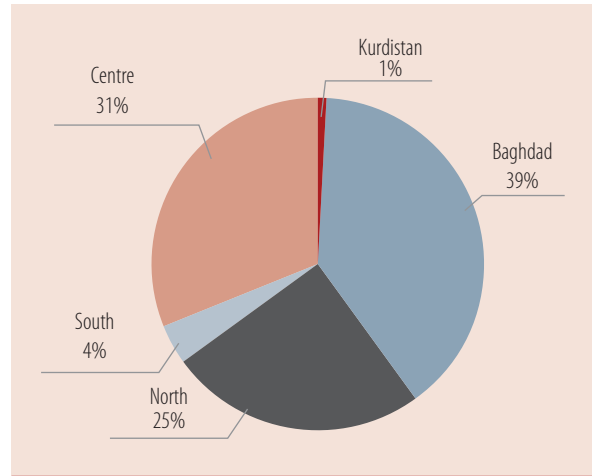
**FIGURE 96: 'Persons of Concern' Concentrated in Baghdad, Nineveh and Diyala**



Source: UNHCR Population Statistics Reference Database, United Nations High Commissioner for Refugees.

violence has indeed declined since 2007, the pattern of spatial concentration of violence has remained an enduring feature (Figure 99). In the 2011 Arab Barometer survey in Iraq, while 40 percent of respondents expressed insecurity about their own and their family's safety, 60 percent of those living in Baghdad expressed the same concern, reflecting these relatively higher risks.

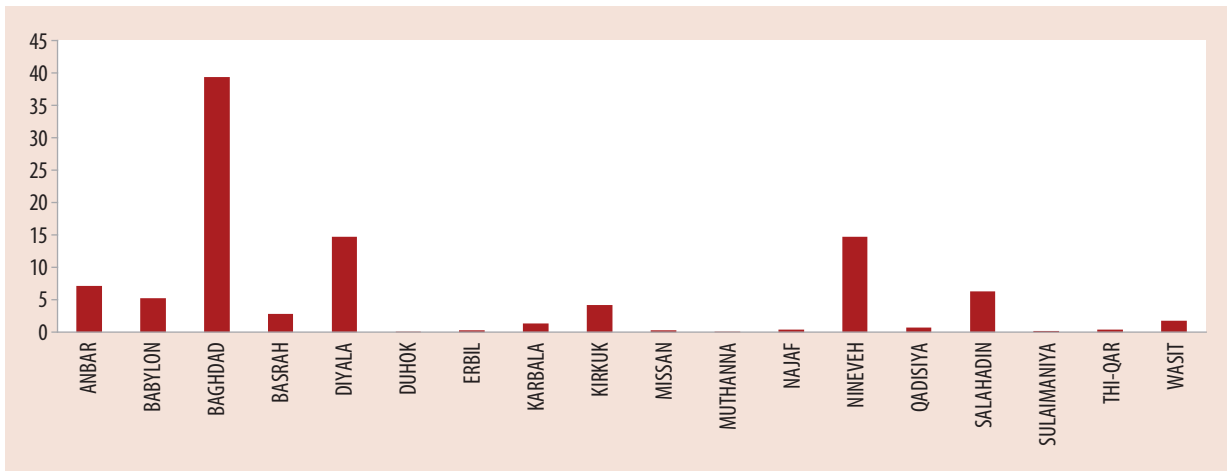
**FIGURE 98: Casualties by Division (%): 2007–2012**



Source: Iraq Body Count, 2013.

Undoubtedly war, sanctions and violent insecurity in Iraq have had far-reaching and significant impacts on the nation as a whole. However, the spatial distribution of violence and insecurity during the period covered by the surveys suggests that Kurdistan and the South were relatively unaffected, at least according to these measures. While the immediate explanation for the levels and trends in poverty in the South may lie in more structural factors rather than in the violence of the recent decade, the latter may explain the limited improvement in welfare in Baghdad and

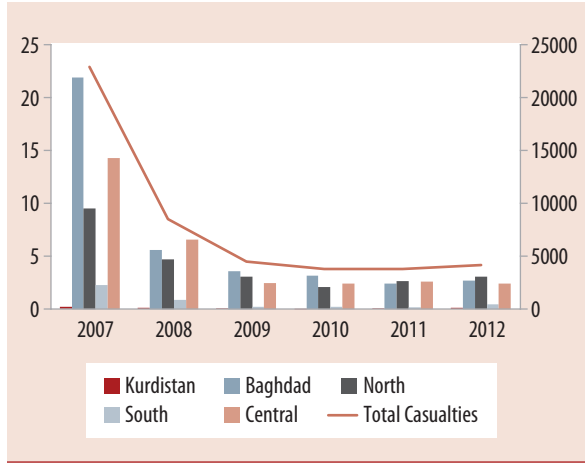
**FIGURE 97: Civilian Casualties by Governorate (percent), 2007 to 2012**



Source: Iraq Body Count, 2013.



**FIGURE 99:** Share of Divisions in Total Civilian Deaths and Number of Deaths, 2007–2012



Source: Iraq Body Count, 2013.

the North over the 2007 to 2012 period, and the increase in poverty in Nineveh in particular.

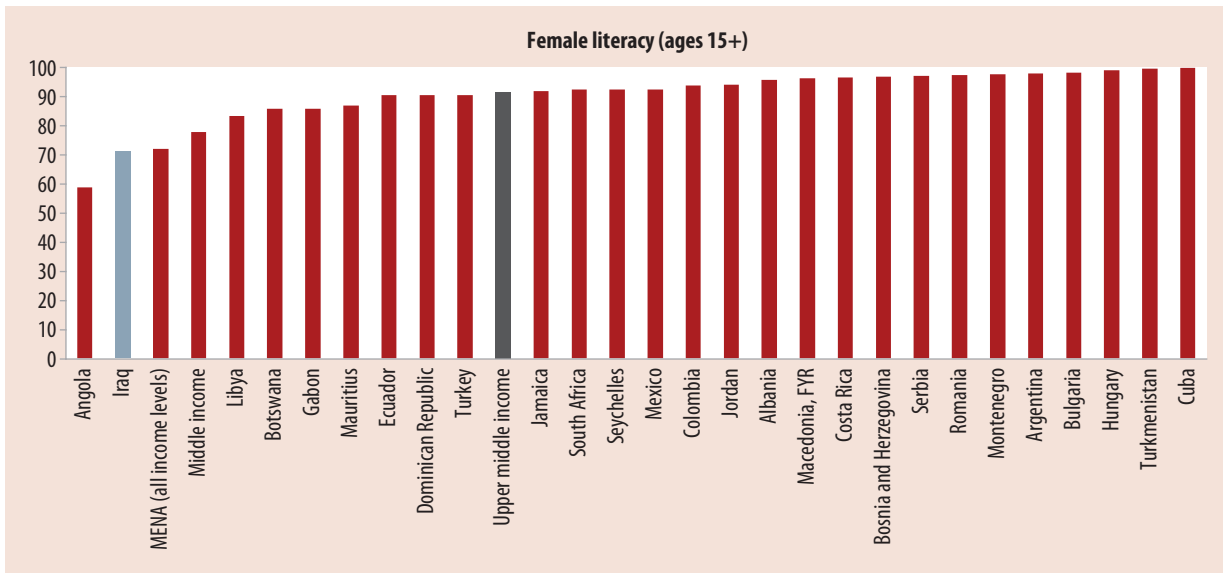
### Human Development and Access to Basic Services

Spatial disparities in welfare may also be driven by differences in human capital endowments across

different parts of Iraq. It is widely acknowledged that in the 1980s, Iraq had one of the best educational systems in the region. Iraq’s 1970 Provisional Constitution guaranteed the right to free education at all levels for all its citizens and stated that education was compulsory. In 1978, the state launched a mandatory campaign for combating illiteracy, in which it was obligatory for all Iraqi citizens between the ages of 15 and 45 to join. The program supported participants until they achieved fourth-grade level of reading, writing and mathematics. The Iran-Iraq war, the first Gulf war and the subsequent sanctions, as well as the decades of violence that followed led to large scale destruction and deterioration in infrastructure and severe shortages of qualified teachers. Today, adult male and female literacy rates in Iraq are below the MENA average and well below the average for similar upper middle income countries (Figure 100 and Figure 101).

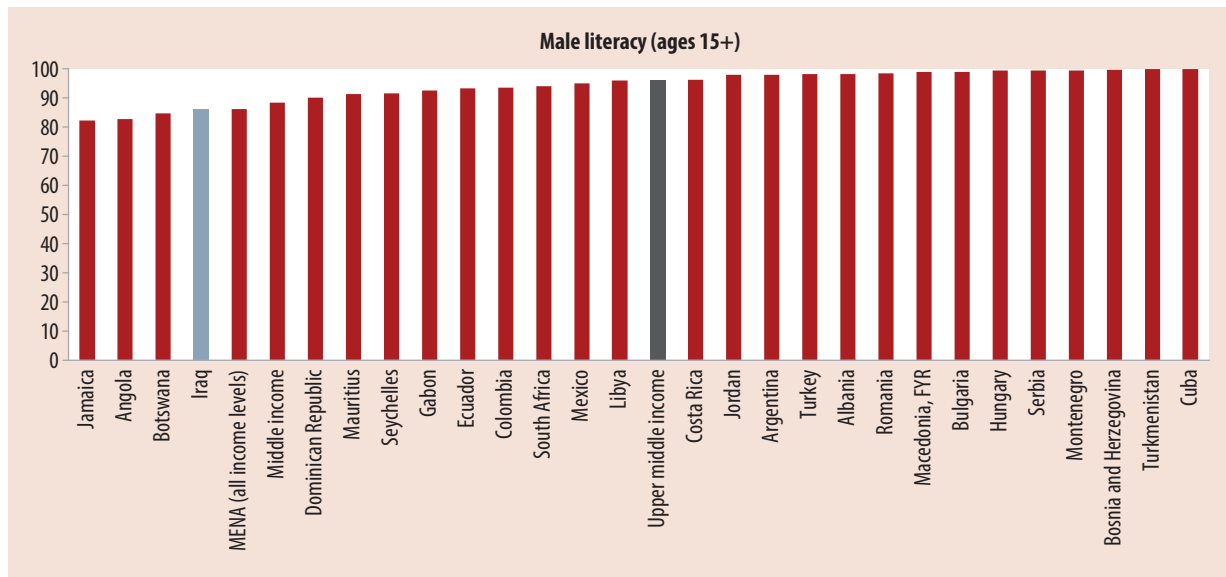
While long term trends on educational outcomes are not available for Iraq, data from IHSES provides some evidence of the long term impact of conflict. Figure 102 plots the fraction of people in 5-year age cohorts in 2012 (birth years below age in 2012) with a certain educational attainment. Overall, the incidence of illiteracy declines as we move to younger

**FIGURE 100:** Adult Female Literacy, Iraq and other Countries



Source: World Development Indicators, 2012.

FIGURE 101: Adult Male Literacy, Iraq and other Countries



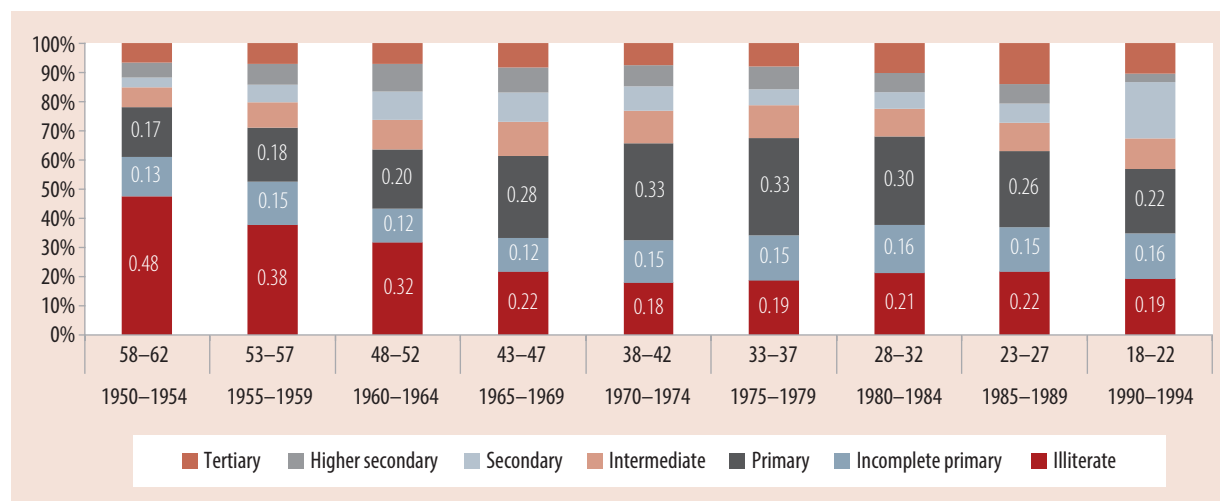
Source: World Development Indicators, 2012.

cohorts, but for those in their mid-30s or younger in the 2012, it has increased relative to those in their late 30s. These cohorts were born after 1975, were of school-going age during the Iran-Iraq war and thereafter, when the mandatory literacy campaign became harder to implement. 12 percent of those born in the 1980s, who might have been in primary school at the time of the first Gulf war, are illiterate in 2012. For Iraqis of all ages, the most prevalent level of education is primary schooling or less: among 18–27 year olds, about 60 percent of have no more than primary education. Over time, one may expect that while illiteracy and incomplete primary schooling decline, primary school completion increases. In Iraq, the trend is somewhat in the opposite direction, with a relative increase in incomplete primary schooling compared to primary completion with age. 18 year olds in Iraq today are as likely to have completed primary school as those 30 years older.

The incidence of intermediate, secondary and higher secondary school taken together is around 30 percent for young Iraqis ages 18–22, the same as for Iraqis in their 40s. While this in itself is worrying, within this group, over time, the share of higher secondary graduates has remained stagnant with some

improvements in tertiary education only evident among the youngest cohorts. Overall these trends suggest a stalling of progress in education and a possible worsening of outcomes for some cohorts.

Are spatial differences in education correlated with patterns of poverty across Iraq? Table 19 shows the share of the working age population of Iraq in each education level in 2007 and 2012, followed by the percentage point difference in education levels across the working age population in each division in 2007 and 2012, relative the Iraqi average. Overall, more than 80 percent of Iraqis of working age have secondary education or less; and there has been an increase in the share with less than primary education from 34 to 40 percent in 2012. Only two regions lag behind the national average. People in the working age (15–64 years) living in the South, where poverty rates increased, were 3 to 4 percentage points more likely to have less than primary education relative to the national average and less likely to have primary or higher education. In 2007, Kurdistan's working age population was much more likely than that of the South to be illiterate or have less than primary education. In 2007, for instance, the share of working age adults

**FIGURE 102:** Current Educational Outcomes by Age in 2012 and Year of Birth, Ages 18–62\*

Source: Authors' calculations, IHSES 2012.

Note: \* As younger cohorts may not have completed tertiary schooling, the results on tertiary education may not be comparable across ages and should be interpreted with caution.

in Kurdistan with less than primary education was 23 percentage points higher than the national average of 34 percent. However, outcomes have been improving over time and the deficit is being gradually bridged. In the North and the Centre, the gap with the average appears to be closing. Despite no change in headcount rates, working age adults in Baghdad have the highest educational attainment relative to the nation, but appear to be slowly losing their relative advantage except at the highest levels of education.

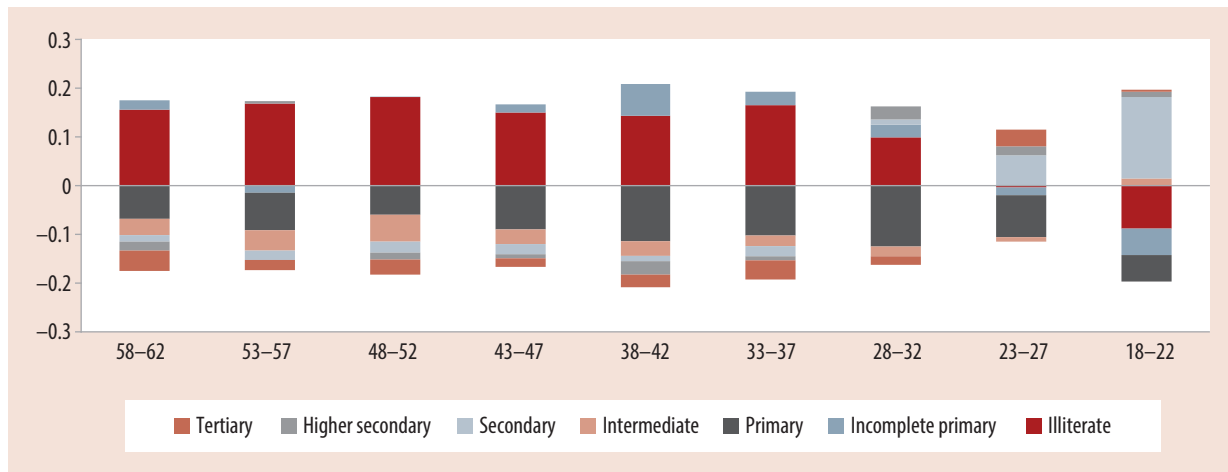
While Kurdistan and the South were both lagging behind the rest of the nation in terms of the educational attainment of working age adults in 2007, they are in fact on opposite trajectories. In Kurdistan, outcomes are improving significantly for the young, and they are catching up to the rest of the country. On the other hand, while there is some improvement in educational attainment over cohorts within the South, the gap with the nation is widening. Figure 103 and Figure 104 plot, for each 5-year age cohort in Kurdistan and

**TABLE 19:** Completed Level of Education, Share of Iraqis Aged 15–64: Division Relative to National, 2007–2012

Education level (Share of working age population), All Iraq	2007		2012							
	2007	2012	2007	2012						
Illiterate or incomplete primary	0.34	0.40								
Complete primary to secondary school	0.47	0.45								
Higher secondary and higher	0.16	0.15								
	Kurdistan relative to Iraq		Baghdad relative to Iraq		North relative to Iraq		Centre relative to Iraq		South relative to Iraq	
	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
Illiterate or incomplete primary	23.01	17.81	-13.01	-12.51	4.85	3.60	-3.51	-4.07	4.27	3.35
Complete primary to secondary school	-19.03	-14.26	12.62	7.29	-2.18	-1.18	0.11	3.91	-4.17	-1.75
Higher secondary and tertiary	-5.92	-3.56	1.75	5.24	-2.13	-2.40	2.62	0.12	-0.27	-1.59

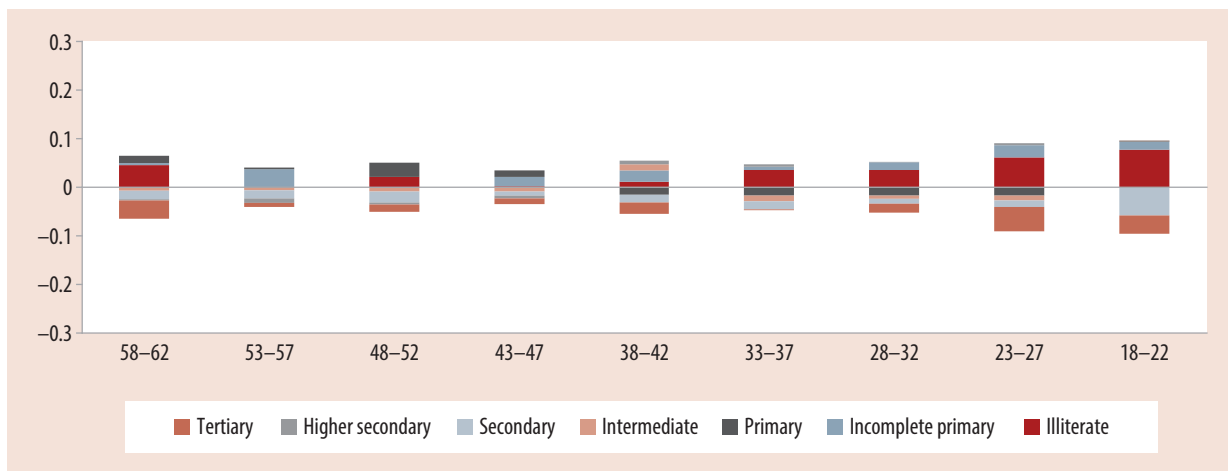
Source: Authors' calculations, IHSES 2007 and 2012.

FIGURE 103: Educational Attainment by Age Cohort in 2012, Kurdistan Relative to Iraq



Source: Authors' calculations, IHSES 2012.

FIGURE 104: Educational Attainment by Age Cohort in 2012, South Relative to Iraq



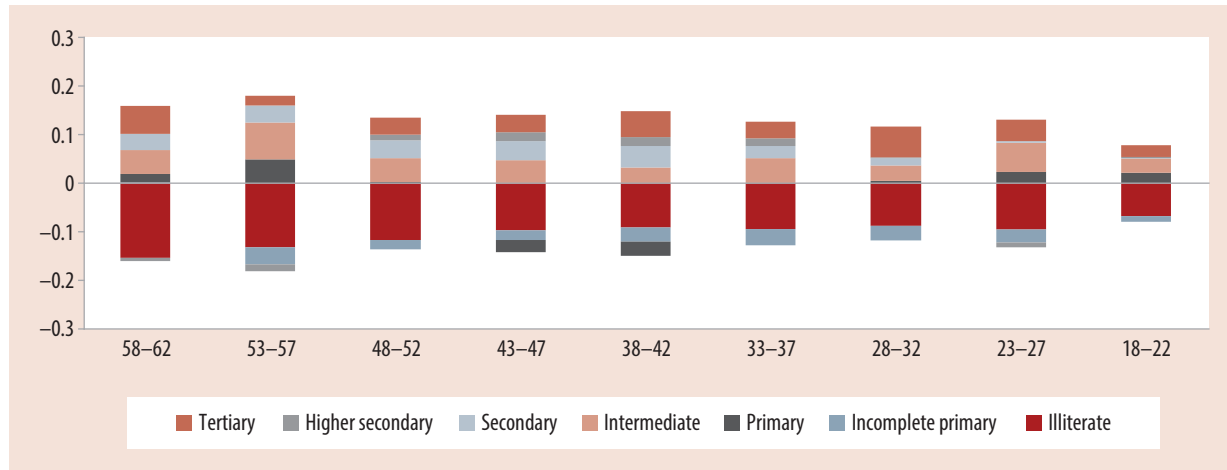
Source: Authors' calculations, IHSES 2012.

in the South, by how much education levels are higher or lower relative to the national level. Older generations in Kurdistan (those 30 and above in 2012) started out with much higher levels of illiteracy and incomplete primary education relative to Iraq and lower levels of complete primary education and higher education. In contrast, the pattern is reversed for those in their 20s. These young people are much more likely than their counterparts to have secondary and higher levels of education. In the South, in contrast, young people in their 20s are further behind their peers than their

fathers were. A 60 year old in the South was 5 percent more likely to be illiterate and 2 percent less likely to have secondary education than an average 60 year old Iraqi while a 20 year old person is 8 percent more likely to be illiterate and 6 percent less likely to have secondary education.<sup>32</sup>

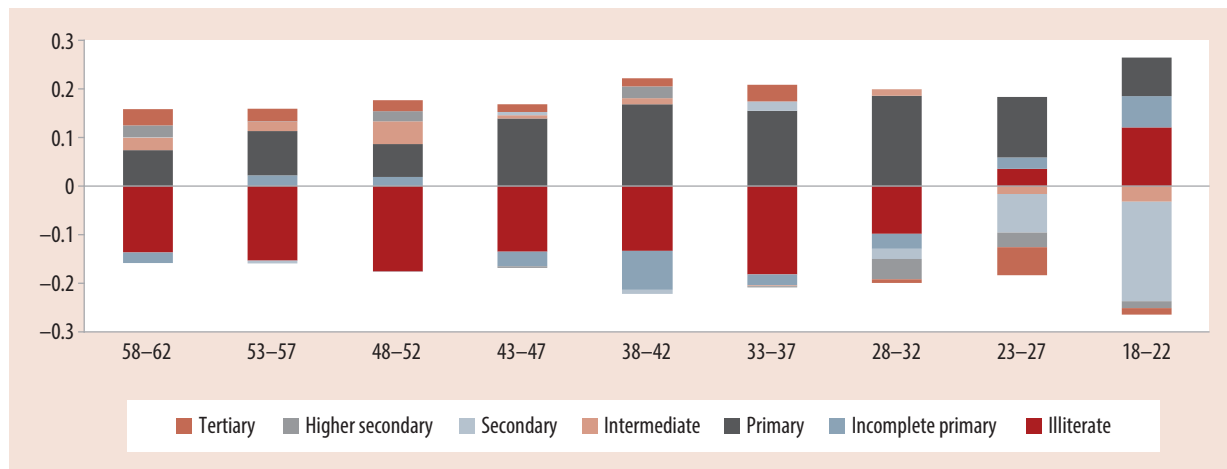
<sup>32</sup> Some age groups in the South appear to have bridged the gap with the rest of Iraq, but this is likely a result of the overall stalling of progress in education than improvements in the South.

**FIGURE 105:** Educational Attainment by Age Cohort in 2012, Baghdad Relative to Iraq



Source: Authors' calculations, IHSES 2012.

**FIGURE 106:** Educational Attainment by Age Cohort in 2012, North Relative to Iraq

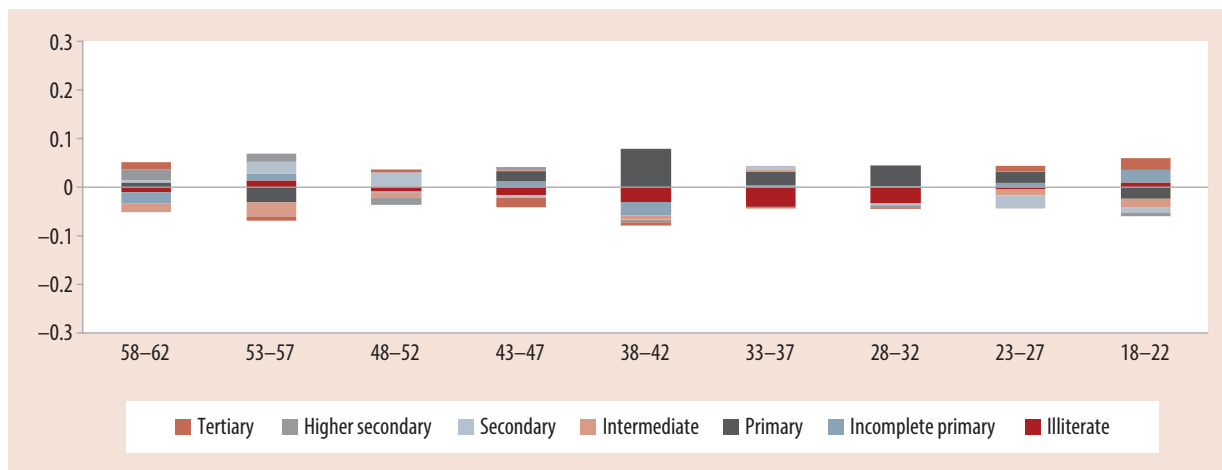


Source: Authors' calculations, IHSES 2012.

In Baghdad, starting from a position of significant advantage, where 50 year olds were less likely to be illiterate and more likely to have completed tertiary education relative to the average, younger cohorts are moving closer to the national average (Figure 105). A 58–62 year old in Baghdad was 15 percent less likely than the average to be illiterate, compared to an 18–22 year old, who is only 7 percent less likely. While individuals living in Baghdad continue to be more educated than those in other parts of the country, the erosion of this advantage over time may be related to the continuing violence and insecurity.

In the North, which was also affected by the post-2003 violence, deterioration in education over generations is starker (Figure 106). The cohorts in their 30s and older in 2012, were more likely than their counterparts to have completed primary and higher education, and less likely to be illiterate. But for those below the age of 30, the situation has worsened considerably. An 18–22 year old in the North was 20 percentage points less likely to have completed secondary school and 26 percentage points more likely to have primary education or less compared to their Iraqi counterparts. In the Central division, there is no clear trend of improvement or

FIGURE 107: Educational Attainment by Age Cohort in 2012, Centre Relative to Iraq



Source: Authors' calculations, IHSES 2012.

deterioration across time, although it appears that for all age groups, education levels have been fairly similar to the national average (Figure 107).

There is also evidence of long term deterioration in health outcomes. Until the mid-1970s, Iraqi males enjoyed higher life expectancy than their counterparts in the Middle East and North Africa (MENA) region. Since 1980, the beginning of the Iran-Iraq war, they have lagged behind (Figure 108). As may be expected in periods of violent conflict, this trend is linked to the increased rates of adult male mortality since 1980 (since when data is available, Figure 109). Despite the Iran-Iraq war, adult male mortality fell slightly between 1980 and 1990. This trend appears to continue until the mid-1990s. However, since 2002, Iraq has witnessed a sharp increase in male mortality: from 167 per 1000 to 295 per 1000 in 2011. A WFP survey reports that in 2007, 4 percent of household members below the age of 18 were orphans, with 4 in 5 having lost their father.<sup>33</sup>

Worryingly, the adverse impacts of the protracted insecurity on health and basic services infrastructure is also reflected in rising adult female mortality since the 1980s, and a deterioration in infant mortality relative to the rest of the region. In 1960, Iraq's ranking by infant mortality rate within the region was roughly in the middle (World Development Indicators, 2012).

While across the region, these rates have come down sharply, Iraq has not brought down IMR at the same pace. In 2011, Iraq's IMR was the highest in the region, barring Yemen (and possibly Djibouti).

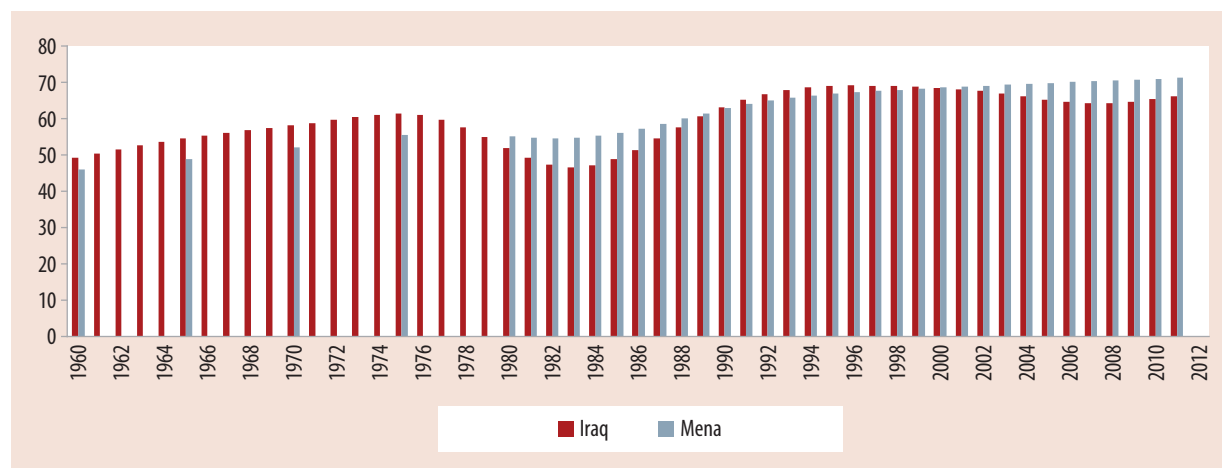
There is also evidence of deteriorating nutritional outcomes for young children: according to a 2007 World Food Program report, 22% of children aged 0–5 were stunted; and almost 10 percent of children were underweight.<sup>34</sup> As noted in chapter 2, more recent analysis of IHSES 2012 not only reveals high rates of stunting (low height for age, and indicator of chronic malnourishment) and wasting (low weight for height), but also important spatial disparities in these outcomes (Table 20). 35 percent of children aged 0–5 are stunted in the South, double the rate in Kurdistan and significantly higher than that in other divisions. The prevalence of wasting and underweight children is also significantly higher in the South than in the other divisions.

Stagnation and deterioration in human capital matter especially because they are currently affecting

<sup>33</sup> Orphans are defined here as children who have lost at least one parent. World Food Program, 2007. Comprehensive Food Security and Vulnerability Analysis: Iraq.

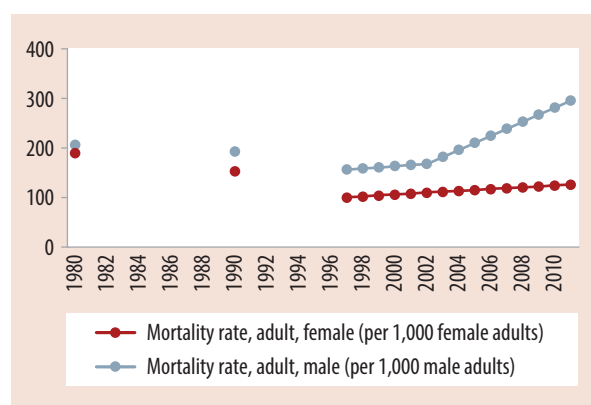
<sup>34</sup> World Food Program, 2007. Comprehensive Food Security and Vulnerability Analysis: Iraq.

FIGURE 108: Male Life Expectancy, Iraq Versus MENA, 1960–2011



Source: World Development Indicators (2012).

FIGURE 109: Mortality Rate, Adult (per 1,000 Adults), Iraq, 1980–2010



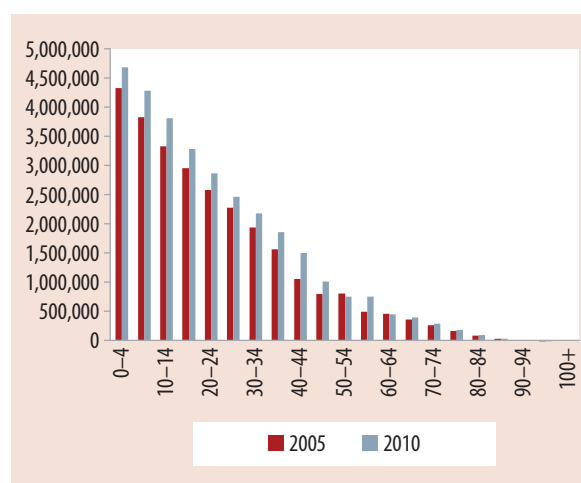
Source: World Development Indicators (2012).

the younger cohorts of Iraq’s working age population. Almost half of the population of Iraq is below the age of 30, and the generational deficit in human capital will have significant implications for the future (Figure 110 and Figure 111). Young Iraqis are entering the labor market with much the same education as their fathers and mothers. In the South in particular, which accounts for a fifth of the national population, there is little evidence of improvement, even for younger cohorts, who continue to fall behind their peers in the rest of the country.

TABLE 20: Anthropometrics, Children Aged 0–60 Months (share)

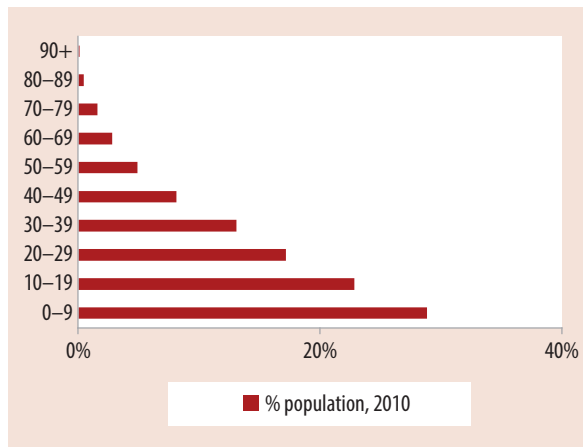
	Stunted	Wasting	Underweight children
Kurdistan	0.17	0.07	0.05
Baghdad	0.30	0.08	0.09
North	0.25	0.07	0.08
Central	0.26	0.07	0.09
South	0.35	0.11	0.17

FIGURE 110: Population by Age Group, 2005–2010



Source: UN DESA.

FIGURE 111: Population Share, 2010



Source: UN DESA.

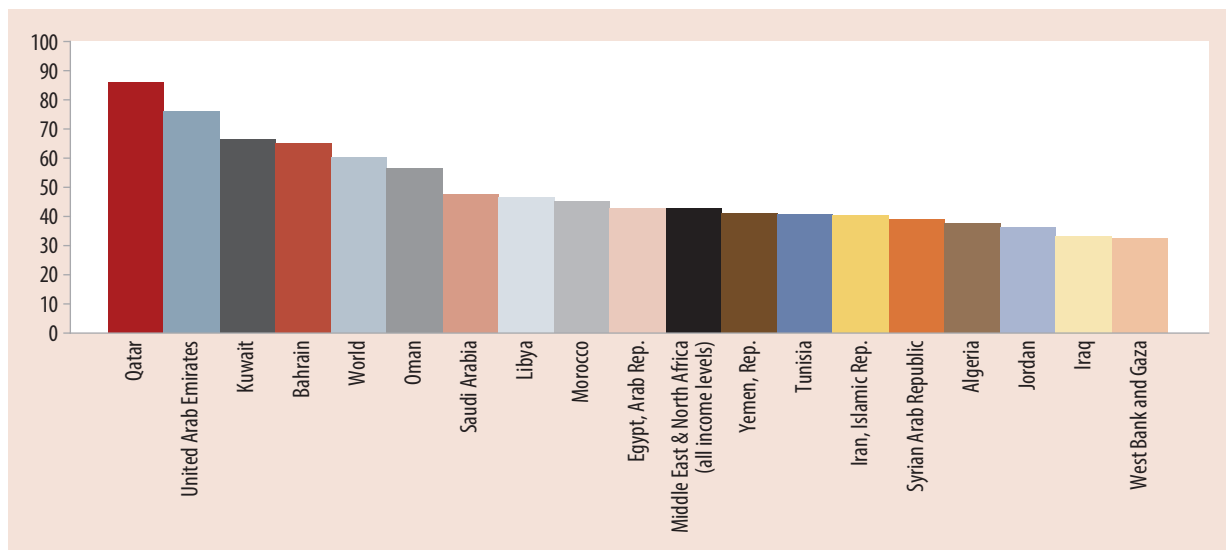
## Labor Market Outcomes

Perhaps the most direct correlate of poverty is employment (or the lack thereof) and the associated ability to earn income and finance consumption. Iraq has one of the lowest employment—to-adult population ratios in the region; only the Palestinian Territories have a lower rate (Figure 112). This is also in contrast to many of the other oil-rich countries in the region. Moreover, in the last two

decades, the adult male employment-to-population ratio has remained stagnant at 58 percent, and at the same time, male labor force participation (LFP) has declined, especially among the youth (Figure 113). While the latter could suggest increasing years of education, it is also likely that the ten percentage point decline in male youth LFP is because the decades of insecurity, violence and limited job opportunities have left young people frustrated and discouraged. As in the rest of the MENA region, gender differences in labor market participation are striking in Iraq. Contrary to men, data from the World Development Indicators suggest that adult female labor force participation has been slowly increasing over time, albeit from much lower levels.

Two rounds of IHSES data reveal a more detailed picture of labor market outcomes for men and women in the working age population (aged 15–64) in Iraq (Figure 114). Based on a seven day recall period, a staggering 90 percent of Iraqi women of working age are not in the labor force, and only 10 percent are employed, with the bulk of them employed in part-time jobs. For men as well, labor force participation has been stagnant around

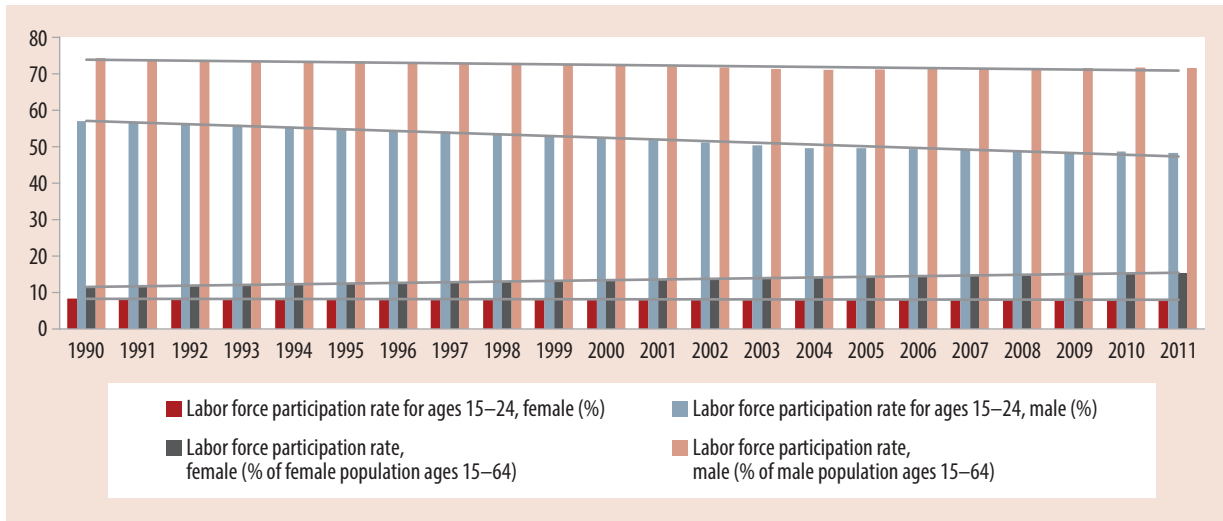
FIGURE 112: Employment to Population Ratio (ages 15+), 2011



Source: World Development Indicators (2012).

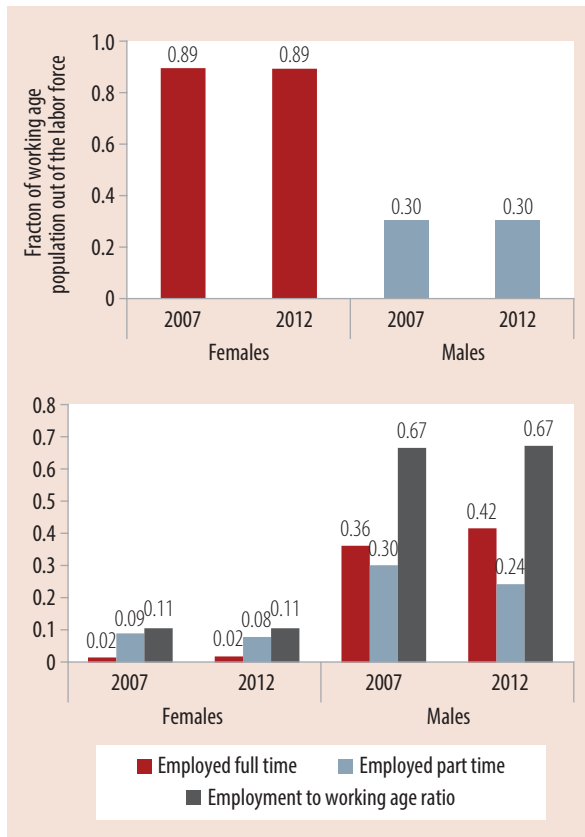


FIGURE 113: Labor Force Participation, by Age and Gender, 1990–2011



Source: World Development Indicators (2012).

FIGURE 114: Labor Market Outcomes, Share of Working Age Population (ages 15–64), 2007–2012\*



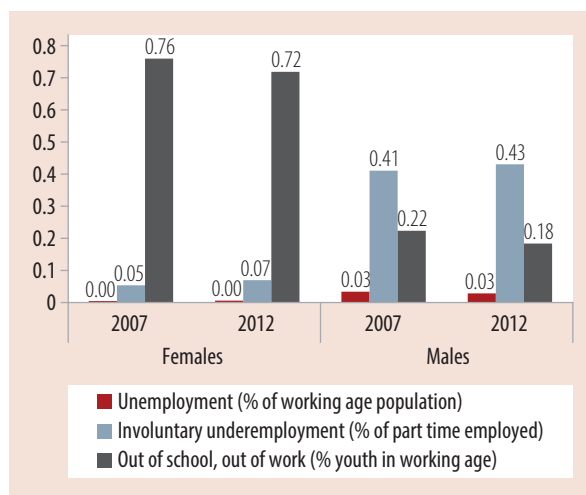
Note: \* ILO definition, 7 day recall.

70 percent.<sup>35</sup> The only positive sign has been a shift from part-time work to full-time work for men: in 2007, 54 percent of employed Iraqi men were in full-time jobs; by 2012, this rate had increased to 63 percent.

Other labor market indicators suggest a worsening of outcomes. While unemployment rates for men have not changed much and remain low (similarly, very few women who are not employed and of working age report that they are looking for work), more than 40 percent of men and 15 percent of women in part-time jobs stated that they were looking for more work (Figure 115). This measure of involuntary underemployment has increased over time, especially for women. And among the youth aged 15–29, 72 percent of women and 18 percent of men were neither in school nor employed in 2012. At the same time, unemployment rates for young men and women in this age group were only 5 and 1 percent respectively. Combined with the rates of low labor force participation, this suggests significant labor market discouragement among young Iraqis.

<sup>35</sup> Students are not included in the labor force.

**FIGURE 115: Unemployment, Underemployment and Joblessness\***



Source: Authors' calculations, IHSES 2007 and 2012.

Note: \* ILO definition, 7 day recall.

Across Iraq, one may expect that areas where employment rates are higher than average and growing and where labor force participation is relatively high and increasing, will also be areas where poverty headcount rates are declining. This is true to some extent. Male labor force participation is the highest in the Central division, and increased between 2007 and 2012 in Kurdistan and the North, to reach the national average of 70 percent (Table 21). In the South, in contrast, the share of men out of the labor force has actually increased. Excluding Basra, and focusing on the four southern governorates where

poverty increased, it is apparent that not only is male participation in the workforce the lowest in the country, it has been declining: in 2012, 35 percent of men of working age in these governorates were out of the labor force, an increase of 5 percentage points since 2007.

Increasing male labor force participation in Kurdistan and the North has been accompanied by an increase in male employment rates, and a relative shift towards full time work, especially in the North, where 46 percent of men of working age were working in full time jobs in 2012 (Table 21). In Baghdad, there was a significant drop in part time male employment, by 13 percentage points and a large increase in full time employment by ten percentage points. On the other hand, in the South, while male employment has declined, so has the unemployment rate, suggesting that the increase in men out of the labor force is due to discouragement. These southern governorates also had the lowest rates of full time employment in 2012, and among the lowest rates of part-time employment. Male underemployment is significant across Iraq: even in Kurdistan, which has the lowest rates of involuntary underemployment, a quarter of those in part-time jobs would like to work more and cannot find work. In the Centre and the South, over half of part-time workers are involuntarily underemployed by this measure.

For women, labor force participation has remained very low and has not changed much over the 2007

**TABLE 21: Employment Status, Men in the Working Age (aged 15–64), by Division, 7 Day Recall**

	Kurdistan		Baghdad		North		Centre		South		South excl Basra	
	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
Full time employed	0.37	0.40	0.31	0.41	0.34	0.46	0.44	0.41	0.40	0.39	0.37	0.36
Part time employed	0.27	0.27	0.37	0.24	0.30	0.21	0.26	0.26	0.26	0.24	0.27	0.25
Employment to working age ratio	0.64	0.69	0.68	0.66	0.64	0.68	0.70	0.69	0.66	0.64	0.64	0.62
Out of the labor force	0.33	0.30	0.28	0.30	0.33	0.30	0.27	0.29	0.29	0.33	0.30	0.35
Unemployment	0.02	0.01	0.04	0.04	0.03	0.03	0.02	0.03	0.04	0.03	0.06	0.03
Involuntary underemployment	0.35	0.24	0.33	0.41	0.37	0.38	0.53	0.52	0.54	0.53	0.54	0.52

Source: Authors' calculations, IHSES 2007 and 2012.

**TABLE 22:** Employment Status, Women in the Working Age (aged 15–64), by Division, 7 Day Recall

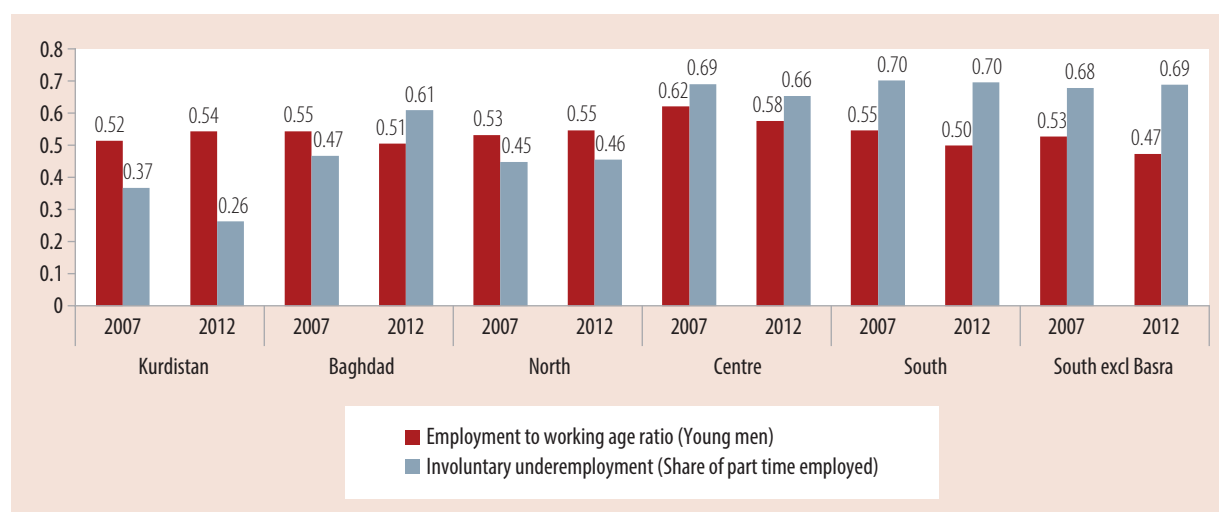
	Kurdistan		Baghdad		North		Centre		South		South excl Basra	
	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
Full time employed	0.02	0.02	0.02	0.03	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01
Part time employed	0.09	0.10	0.09	0.08	0.09	0.07	0.11	0.09	0.08	0.07	0.09	0.08
Employment to working age ratio	0.11	0.13	0.10	0.11	0.10	0.09	0.13	0.11	0.09	0.09	0.10	0.09
Out of the labor force	0.89	0.87	0.89	0.88	0.89	0.90	0.86	0.89	0.90	0.91	0.89	0.90
Unemployment	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00
Involuntary underemployment	0.14	0.08	0.04	0.06	0.03	0.03	0.06	0.07	0.03	0.09	0.03	0.11

Source: Authors' calculations, IHSES 2007 and 2012.

to 2012 period. Of the few women who participate in the labor force, the majority are engaged in part-time work in each of the divisions (Table 22). Employment rates among women of working age vary from 13 percent in Kurdistan to 9 percent in the North and the South. Among women who are employed part-time, the incidence of involuntary underemployment—those who work less than 40 hours a week and are looking for more work—has declined from 14 percent to 8 percent of part-time employment in Kurdistan, which is in line with other evidence that this labor market has been performing relatively well. In all other divisions, the opposite is true, especially in the four

southern governorates except Basra, where involuntary underemployment increased from 3 percent of part-time female workers in 2007 to 11 percent in 2012.

Young men in general appear to have worse labor market outcomes than their older counterparts. Among men aged 15–29, full time employment varies from 39 percent in the North to 30 percent in the South in 2012, compared to 50 percent for adults aged 20–64 (Figure 116). On average, 19 percent of young men have part-time jobs, and among these men, rates of involuntary underemployment are high. With the exception of Kurdistan,

**FIGURE 116:** Employment Status, Young Men (aged 15–29) in the Working Age, by Division

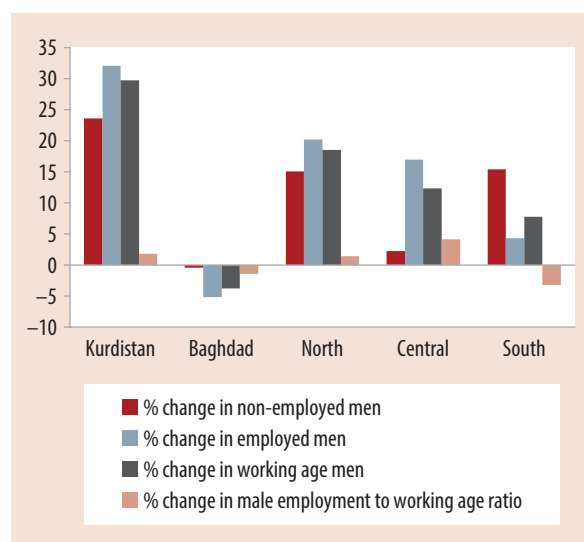
Source: Authors' calculations, IHSES 2007 and 2012.

more than 40 percent of young men in part-time jobs work fewer hours than they would like to. In the South, involuntary underemployment is as high as 70 percent among young men.

In 2012, 42 percent of young Iraqi men and 93 percent of young women were out of the labor force (neither employed nor looking for work). As is typical, this measure counts students as being out of the labor force, and as many young people tend to still be in school, it may overestimate inactivity among the young. A useful measure of inactivity in this context is the proportion of young men and women who are neither in school nor at work. This then includes young people who are actively seeking employment, as well as those who are not, for various reasons including discouragement. Overall, 72 percent of women and 18 percent of men in the 15 to 29 age group fall in this category, with lower rates for Kurdistan and relatively higher rates in the other divisions. For young women, the main reason cited for not looking for work is social reasons and being a housewife. In contrast, for young men, the bulk those who fall in this category say they are not actively looking for a job because they cannot find a job, and this is another indicator of labor market discouragement among young men.

These estimates of labor market outcomes are based on the standard ILO definition and use a 7 day recall period. The IHSES surveys also ask respondents to report on any work for pay over a 12 month period, which allows us to estimate measures of long-term or ‘usual employment’. These estimates are broadly consistent with the ILO measure, with male labor force participation of 74 percent and female labor force participation of 11.5 percent in 2012. They do reveal starker disparities across the five divisions, and seem to be in line with the trends in poverty rates across space and time. In what follows, we focus on men who make up an overwhelming majority of the labor force. Male employment has not kept up with the growth in working age men in the South, and both have actually declined in Baghdad (Figure 117). Between 2007 and 2012, the male working

**FIGURE 117:** Percentage Change in Non-Employment, Employment, Working Age Population and Employment to Working Age Ratio between 2007 and 2012, by Division, for Men (15–64) Based on One Year Recall



Source: Authors' calculations, IHSES 2007 and 2012.

age population in the South grew by 8 percent, but the share of employed men increased by only 4 percent. As a result, the proportion of men of working age who were unemployed or out of the labor force increased by 15 percent, and the male employment to working age ratio fell. In Baghdad, there was a 4 percent decline in the male working age population and a 5 percent decline in male employment.

In contrast, employment growth outpaced growth in the working age population for men in Kurdistan, the North and the Centre, with the gap closing the fastest in the Centre. In the Centre, there was in fact, a 4 percent increase in the male employment rate, as a result of faster job growth relative to working age population growth. In Kurdistan, which witnessed the largest increase in the working age male population of 30 percent between 2007 and 2012, male employment also increased at a slightly higher rate, leading to a small increase in the employment to working age ratio for men.

The bulk of this increased employment for men in the Centre and in Kurdistan was concentrated in the financial, insurance and professional services sector, which now accounts for 16 percent of male employment, where 140,000 jobs were added in each division (Figure 118). This sector accounts for a fifth of all male employment in Kurdistan. While male employment declined in agriculture and in public administration in the Centre and the North, jobs were added in manufacturing, construction, commerce and retail and in transport, storage and communication. The net increase in male employment was largest in magnitude in Kurdistan, but it was in the Centre where it significantly outpaced the working age male population, and as a result, the Centre was the only division where the increase in non-employed men was very small.

On the contrary, in the South, the increase in non employment (almost all men dropping out of the labor force) was accompanied by declining male employment in agriculture, a sector which accounted for 10 percent of jobs for men in the South in 2007 (Figure 119). In the two largest employment sectors, construction and public administration,

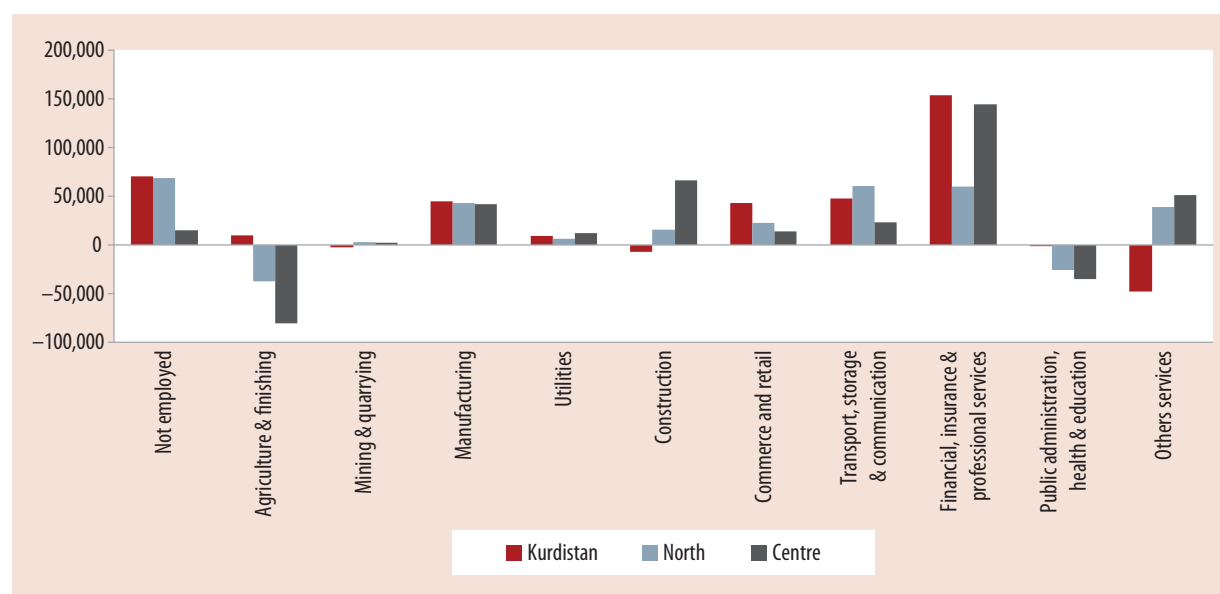
accounting for almost a fifth of male employment each, very few jobs were added. Consequently, in the South, more than 80,000 additional men were not employed in 2012 relative to 2007. In Baghdad, male employment in the public administration, health and education and commerce and retail sectors declined sharply, while male employment in construction and financial services increased. In total however, male employment fell in Baghdad, and it is only because of the slightly larger decline in male working age population that the number of non-employed men in Baghdad also decreased.

## Consumption, Income and Transfers

### Inequality in Consumption Growth

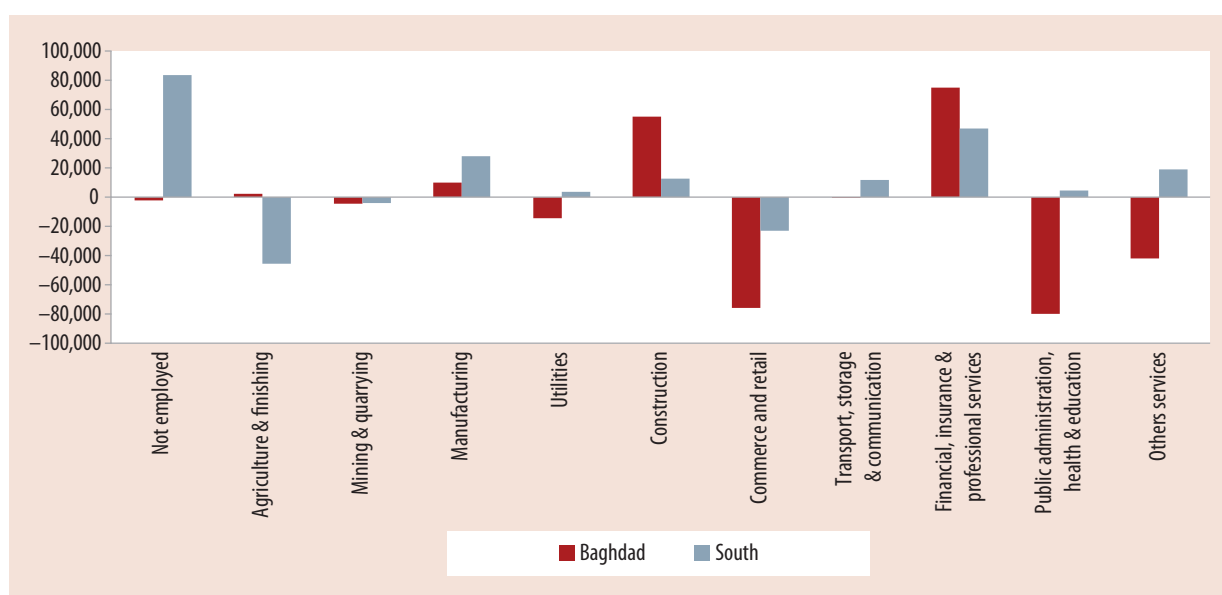
The spatially uneven pattern of poverty reduction is also in part, a story of unequal growth in consumption: across quintiles and across space. Between 2007 and 2012, consumption grew faster for Iraq's relatively better off, amongst the highest quintiles. But it also grew where consumption levels were lower to start with: in rural Iraq and in the RoI. Among the governorates where poverty rates increased, Nineveh,

**FIGURE 118:** Changes in the Number of Jobs for Men by Sector of Employment between 2007 and 2012 in Kurdistan, the North and the Centre (One Year Recall)



Source: Authors' calculations, IHSES 2007 and 2012.

**FIGURE 119:** Changes in the Number of Jobs for Men by Sector of Employment between 2007 and 2012 in Baghdad and the South (One Year Recall)



Source: Authors' calculations, IHSES 2007 and 2012.

Thi-Qar and Missan also experienced increases in inequality as measured by the Gini coefficients.

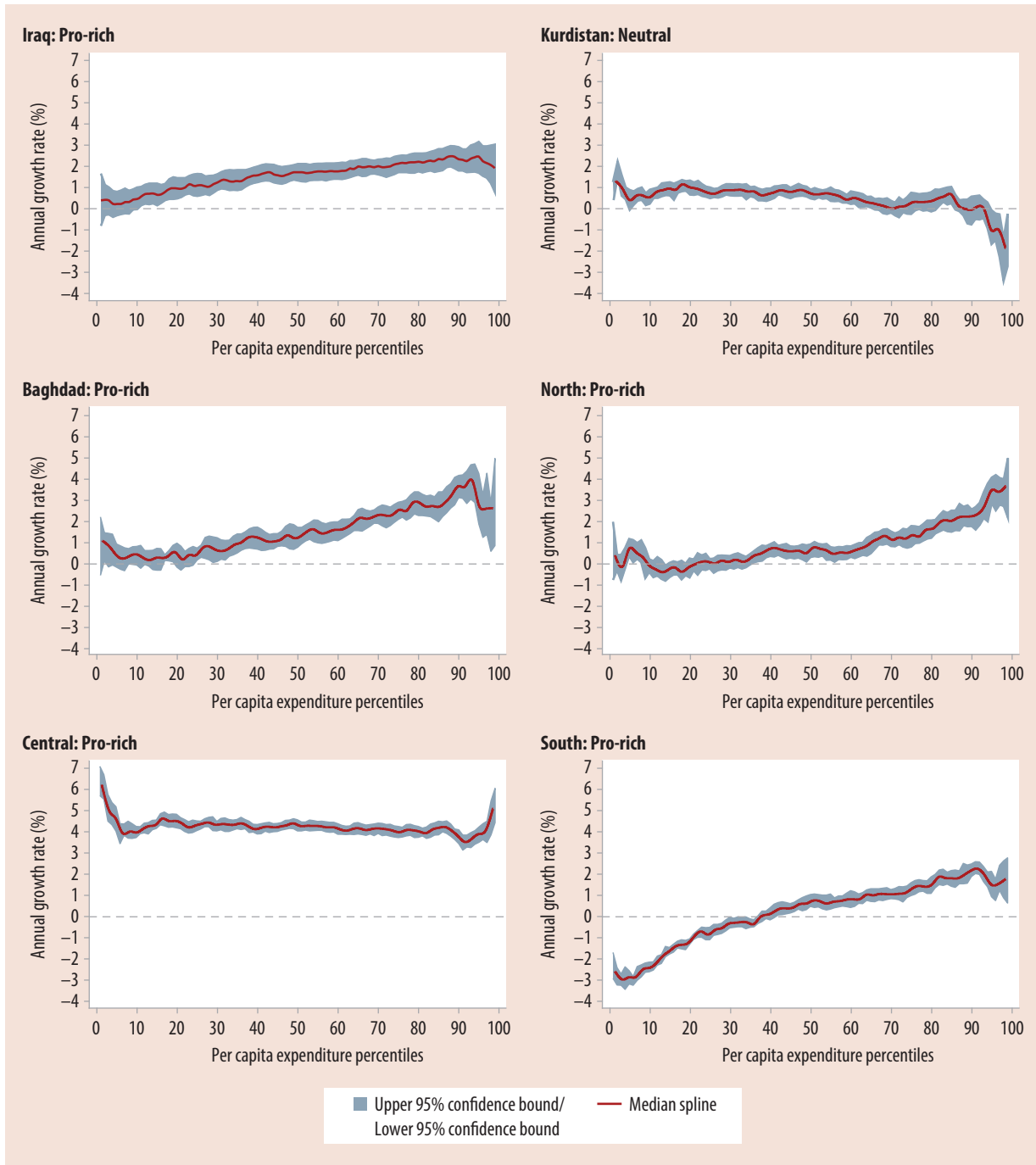
With the exception of Kurdistan and the Central division, consumption per capita grew faster for the well-off than for the less-well off, as is evident in the growth-incidence curves for Iraq as a whole and for the five divisions (Figure 120). In contrast, the growth-incidence curves for Kurdistan and the Centre are relatively flat, indicating that consumption grew evenly across the distribution. The major difference between Kurdistan and the Centre is the higher rate of consumption growth in the latter: almost entirely throughout the consumption distribution, growth was around 4 percent in the Centre, compared to 1 percent or less in Kurdistan. This is reflected in the significant decline in headcount rates in the Central governorates and the limited improvements in poverty in Kurdistan. In Baghdad and the North, while overall consumption growth was positive, there was almost no change in consumption among the lower deciles of the distribution, and this is in turn, captured in the trends in poverty. In the South, consumption growth was actually negative

between 2007 and 2012 for the lowest deciles, while growth in consumption among the top deciles is on par with the Centre. This declining consumption among the bottom 40 percent of the distribution is directly reflected in the increase in headcount poverty rates.

### Incomes and Transfers

The trends in male employment and labor force participation across divisions appear to be reflected in changes in per capita labor income, especially among the lower deciles of the consumption distribution. Figure 121 shows the changes in per capita labor income for the bottom three deciles of the consumption distribution for Iraq as a whole, and for each of the divisions. In Iraq as a whole, per capita labor income increased for the bottom three deciles, although the increase was smallest for the bottom 10 percent of the consumption distribution. In the Centre and in Kurdistan, the bottom 3 deciles experienced significant increases in per capita labor income, exceeding the national average; whereas in the North, labor incomes appear to have increased on par with the national average. In

FIGURE 120: Growth Incidence Curves – National, Divisional

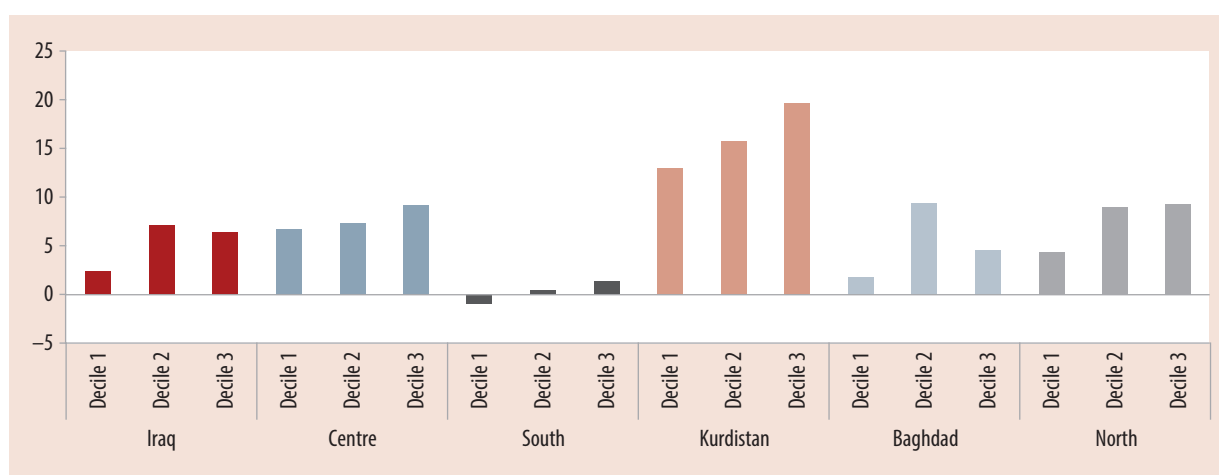


Source: Authors' calculations, IHSES 2007 and 2012.

Baghdad, the increase in per capita labor income among the poorest decile was quite low. In line with the declining male employment to working age ratio in the South, the bottom three deciles in the South either experienced declining per capita

income and per capita labor income or negligible increases, and these may in turn be related to the declining consumption observed at the lower end of the consumption distribution in the southern governorates.

**FIGURE 121:** Changes in Per Capita Labor Income between 2007 and 2012 ('000s of Iraqi Dinar) for the Bottom 3 Deciles of the Consumption Distribution, National and by Division



Source: Authors' calculations, IHSES 2007 and 2012.

Consumption expenditures may be financed not only through labor income but also through non-labor income and transfers. In 2012, for the average Iraqi, 68 percent of income came from labor, with some variation across divisions: non-labor income shares were the highest in Baghdad, 37 percent, and the lowest in the North, 28 percent (Table 23). However, for the lowest deciles, the dependence on non-labor income and transfers is significantly higher. On average, only 49 percent of the income of an Iraqi belonging to the lowest decile stems from labor income. This is likely

because the incidence of poverty is higher among the non-employed, and because among the employed poor, earnings are lower relative to the non-poor. The dependence on non-labor income and transfers is highest in the South, where these sources constitute 60 percent of total income among the poorest decile, and the least in Kurdistan, where 42 percent of total income derives from non-labor income and transfers. This is in line with other indicators of a relatively well functioning labor market in the latter and poor labor market outcomes in the former.

**TABLE 23:** Share of Labor Income in Total Income, and Shares of Major Sources of Non-Labor Incomes and Transfers in Total Non-Labor Income, Overall and Lowest Consumption Decile, 2012

			Iraq	Kurdistan	Baghdad	North	Centre	South
Share in total income, 2012	Labor income	Overall	68.00	69.16	63.02	71.81	68.02	68.71
		Lowest decile	49.24	58.18	52.80	49.82	49.21	41.70
Share of non-labor income, 2012	Rations	Overall	38.92	19.72	41.45	42.20	38.69	48.21
		Lowest decile	59.96	42.04	53.72	64.09	59.53	62.10
	Pensions	Overall	26.25	30.40	33.33	23.87	24.39	21.78
		Lowest decile	13.27	19.40	18.10	9.72	16.86	11.43
	Domestic remittances	Overall	14.45	12.09	16.18	13.30	17.10	12.24
		Lowest decile	11.43	13.39	18.36	9.11	8.61	12.72
	Capital income	Overall	8.27	14.41	3.84	8.13	11.14	3.89
		Lowest decile	3.39	6.31	1.81	5.66	4.30	1.62

Source: Authors' calculations, IHSES 2007 and 2012.



In Iraq, there are four major sources of non-labor income and transfers—income from capital (including income from assets and property ownership), public transfers (primarily implicit incomes from subsidized food rations and pension income), and private transfers, especially domestic remittances. In 2012, for the average Iraqi, 8 percent of non-labor income was comprised of capital income, 39 percent from rations, 26 percent from pensions and 14 percent from domestic remittances. Among the lowest consumption deciles, while the share of domestic remittances declines somewhat to 11 percent, the share of capital and pension income declines sharply (halves in the case of pension income), but the dependence on subsidized rations as an implicit income source increases to 60 percent on non-labor income and transfers.

While a larger share of labor income and of capital income in non-labor income is a sign of income earning opportunities, a greater dependence on private and public transfers is likely a sign of greater vulnerability. The share of capital income in non-labor income is correlated with the importance of labor income across divisions. In Kurdistan, almost 15 percent of all non-labor income on average stems from income from capital, while in Baghdad and the South it is only 3.8 percent. But amongst the bottom 10 percent of the per capita consumption distribution, the share of capital as a source of non-labor income declines significantly, falling to less than 2 percent in Baghdad and the South. Thus, both income from labor and from capital are significantly lower amongst the poor, but especially so in the South.

It is no surprise then that the lowest deciles are heavily dependent on transfers, which make up more than 95 percent of their non-labor income. In 2012, rations from the Public Distribution System made up 60 percent of non-labor income for the lowest deciles, with domestic remittances making up another 11 percent, and pensions accounting for a further 13 percent. However, while pension income comprises a lower share of non-labor income for the poorest 10 percent relative to the average, the transfers associated with rations are much more

important for the lowest deciles, with more than half of all non-labor income coming from rations everywhere except in Baghdad. Dependence on rations is lower on average and for the bottom decile in Kurdistan, where it accounts for only 20 percent of non-labor income on average and 42 percent of non-labor income for the bottom decile. It is highest in the South, where the corresponding shares are 48 and 62 percent respectively. While domestic remittances are on average, the largest (in terms of their share in non-labor income) in the Centre, they constitute a relatively larger share of non-labor income for the poorest 10 percent in Baghdad.

Between 2007 and 2012, while labor incomes for the lower consumption deciles in Iraq have been increasing on average, non-labor income has been falling, primarily due to a decline in the implicit income transfer through rations owing to a reduction in the number of items covered by the PDS (Table 24). To some extent, the latter was compensated by an increase in domestic remittances, and in some divisions, by an increase in pensions. In all divisions except the South and the lowest decile in Baghdad, labor incomes increased relatively substantially for the lowest 20 and lowest 30 percent of the population. For these groups, little change in non-labor income was also accompanied by stagnation and even declining labor incomes. While incomes do not one to one translate with consumption, the higher dependence of the poor on transfer income rather than income from labor or capital as well as declining income from labor in the South are very likely related to the increase in poverty headcount rates in four of the five southern governorates.

## Determinants of Consumption and Poverty Across Iraq

Household size and composition, education and labor market outcomes all play a role in determining consumption expenditure, the basis for measuring poverty, as do other location-specific factors that can imply access to (or the lack of) services, employment opportunities, and markets. In this section, we

**TABLE 24:** Changes in Labor Income and Main Non-Labor Income Sources between 2007 and 2012 for the Bottom 3 Consumption Deciles, National and Divisions  
*Absolute Change ('000s of Iraqi Dinars), 2012 Relative to 2007*

	Deciles	Capital	Pensions	Domestic remittances	Rations	Main Non Labor Income components	Labor income
Iraq	1	0.32	0.34	1.09	-2.64	-0.90	4.02
	2	-0.12	0.46	0.32	-2.91	-2.24	7.93
	3	0.10	1.13	1.31	-3.08	-0.54	8.00
Kurdistan	1	0.33	1.53	0.87	-3.82	-1.09	14.08
	2	-0.03	1.81	0.13	-3.37	-1.46	23.33
	3	0.19	3.15	2.25	-3.42	2.17	23.30
Baghdad	1	0.40	-0.45	1.62	-3.13	-1.56	-2.73
	2	0.08	-4.28	0.32	-3.54	-7.42	7.24
	3	0.11	-2.84	2.54	-3.26	-3.45	10.27
North	1	0.45	0.25	1.06	-2.80	-1.04	4.60
	2	0.02	-0.54	0.91	-1.99	-1.59	10.00
	3	0.23	3.30	-0.13	-2.54	0.86	11.15
Centre	1	0.21	0.70	-0.36	-3.97	-3.42	9.08
	2	-0.27	0.92	0.62	-3.96	-2.69	10.77
	3	0.30	1.36	0.80	-3.61	-1.16	9.04
South	1	0.04	0.42	2.27	-1.71	1.02	-0.93
	2	0.06	1.44	1.01	-2.12	0.38	0.05
	3	-0.73	1.63	0.54	-2.21	-0.77	3.20

Source: Authors' calculations, IHSES 2007 and 2012.

attempt to estimate the influences of these factors in determining consumption expenditures, poverty (whether consumption falls below the threshold poverty line) and relative poverty (defined as belonging to the bottom 40 percent of the national consumption distribution). This analysis examines each division in the two survey years so as to identify common and division-specific factors that may explain spatial differences in welfare outcomes.

There are some important factors that are consistently correlated with per capita consumption expenditures across all the divisions of Iraq. Controlling for other household characteristics that may also be correlated with per capita consumption, households living in urban areas have on average, higher consumption than those living in rural areas, with the exception of Baghdad in 2007 where there was no difference

(Table 25 and Tables A 4.1–A 4.5 in the Annex). Similarly, among otherwise similar households, larger households and those with more children systematically tend to have lower consumption, when compared with smaller households and households with fewer children. The presence of elderly persons in the household is associated with higher consumption, especially in the North and the Centre, and is probably reflecting the role of pensions in increasing household incomes. The education of the head of the household is strongly correlated with per capita consumption expenditures. In all divisions, and in both survey years, each education level above primary schooling is positively and significantly correlated with higher levels of per capita consumption expenditures.

In 2012, similar households with more employed working age males had higher consumption than

TABLE 25: Significant Correlates of Per Capita Expenditure in 2007 and 2012 in Each Division\*

Correlates of per capita consumption expenditure		Kurdistan		Baghdad		North		Centre		South	
		2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
<b>Living in an urban area</b>		+	+		+	+	+	+	+	+	+
Household size and dependency	Number of household members	—	—	—	—	—	—	—	—	—	—
	Number of children 0–6	—	—	+	—	—	—	—	—	—	—
	Number of children 7–17	—	—	—	—	—	—	—	—	—	—
	Number of elderly			+	+	+	+	+	+	—	
<b>Number of employed working age males</b>			+		+		+	+	+	+	+
Sector of employment of the head of household (relative to non-employed head of household)	Agriculture and fishing			+	+		+	+	—		
	Mining and Quarrying						+				+
	Manufacturing		—		+			+	+		+
	Utilities		—								+
	Construction	—	—			—	—		—		—
	Commerce and retail	+	+	+	+	+		+	+	+	+
	Transport, storage and communication	+		+				+	+		+
	Finance, insurance and professional services			+		+	+	+	+	+	+
	Public administration, health and education	—	—	+			+	+	+	+	+
	Other	—	—	+							
Education level of the head of household (relative to illiterate head of household)	Incomplete primary	+	+		+			+	+	+	+
	Complete primary	+	+	+	+	+	+	+	+	+	+
	Intermediate	+	+	+	+	+	+	+	+	+	+
	Secondary	+	+	+	+	+	+	+	+	+	+
	Higher secondary	+	+	+	+	+	+	+	+	+	+
	Tertiary	+	+	+	+	+	+	+	+	+	+

Source: Authors' calculations, IHSES 2007 and 2012.

Note: \* This table reports the signs of the coefficients of multivariate analysis of the significant correlates of per capita log real consumption, reported in Tables A 4.1 to A 4.5 in the Annex.

those with fewer. The role of the head of household's sector of employment appears to be more nuanced. Certain sectors have a strong and consistent relationship with consumption whereas others do not. In 2012, employment of the head of household in commerce and retail (all divisions) and finance, insurance and professional services (except in Kurdistan and Baghdad) is correlated with higher consumption, while employment in construction is correlated with lower consumption (except in Baghdad). Jobs in public administration are associated with higher consumption in the Centre and

the South but with lower per capita consumption in Kurdistan. In places where the few oil-related jobs are concentrated (the North and the South), households with heads employed in the sector are likely to have higher consumption compared to otherwise similar households.

The important correlates of consumption identified above also broadly predict the likelihood of being poor, i.e., of a household having consumption below a certain level. Table 26 summarizes the partial effects or marginal probabilities of various characteristics on

TABLE 26: Probability of Being Poor: Marginal Effects of Characteristics\*

Marginal probability effects: Partial effects of each explanatory variable (evaluated at mean values) on the probability that a household is poor		Kurdistan		Baghdad		North		Centre		South	
		2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
Living in an urban area		-12.8	-4.7			-0.06	-0.06	-0.19		-0.14	-0.12
Household size and dependency	Number of household members	2.0		0.12	0.06	0.07	0.05	0.08	0.02	0.08	0.07
	Number of children 0–6	3.6	2.7		2.8	3.9	2.7	4.5	2.8	3.1	4.9
	Number of children 7–17	2.5	2.7		2.5		2.6	3.8	2.9	2.9	6.2
	Number of elderly							-5.3			4.3
Male headed household					7.4				3.5		6.6
Head of household lived elsewhere for at least 6 months							-12.9	-13.2			-8.3
Number of employed working age males					-2.6		-3.9	-6.5	-2.1		
Sector of employment of the head of household (relative to non-employed head of household)	Agriculture and fishing										9.9
	Mining and Quarrying										-12.9
	Manufacturing										-8.4
	Utilities	-5.0									-10.9
	Construction		6.4			15.8				11.4	10.2
	Commerce and retail	-5.5			-8.2			-11.3	-5.4		-10.7
	Transport, storage and communication	-4.1									
	Finance, insurance and professional services				-4.9			-14.6		-15.0	-7.1
	Public administration, health and education				-6.0			-10.3	-5.8		-9.3
Other		-3.8				17.2					
Education level of the head of household (relative to illiterate head of household)	Incomplete primary	-2.8	-3.5		-7.7				-4.6		-9.4
	Complete primary	-4.5	-5.0		-9.0		-6.2		-7.2	-9.3	-15.2
	Intermediate	-6.3	-5.1		-10.2	-7.8	-9.4	-15.2	-8.9	-15.1	-15.9
	Secondary	-5.1	-7.2		-12.5	-12.3		-14.5	-9.0	-14.1	-16.1
	Higher secondary	-6.1	-7.9		-9.2	-13.2	-9.3	-14.3	-9.7	-15.0	-18.8
	Tertiary	-7.6	-8.0	-12.1	-12.4	-10.2	-13.5	-16.1	-10.1	-15.2	-24.0

Source: Authors' calculations, IHSES 2007 and 2012.

Note: \* This table and the following figures summarize results of probit regressions (marginal effects) reported in Tables A 4.6 to A 4.10 in the Annex.

the likelihood of a household being poor. In other words, the coefficients of the regression indicate the change in probability of a household being poor with a unit increase in the independent variable.

The advantage of this type of multivariate analysis relative to the consumption regressions above is that it allows us to quantify and compare the marginal effects of each factor (holding all other factors constant) as well as to isolate characteristics that are correlated with poverty in particular rather than with

consumption as a whole. For instance, in 2012, an increase in the number of employed working age males in a household was correlated with higher consumption in each division, but it did not significantly alter the odds of a household being poor in the South. Similarly, per capita real consumption was lower among households with heads employed in construction in each division in 2012, but in the Centre, such households were no more likely to be poor than similar households with non-employed heads. In the other divisions, the relationship between employment in

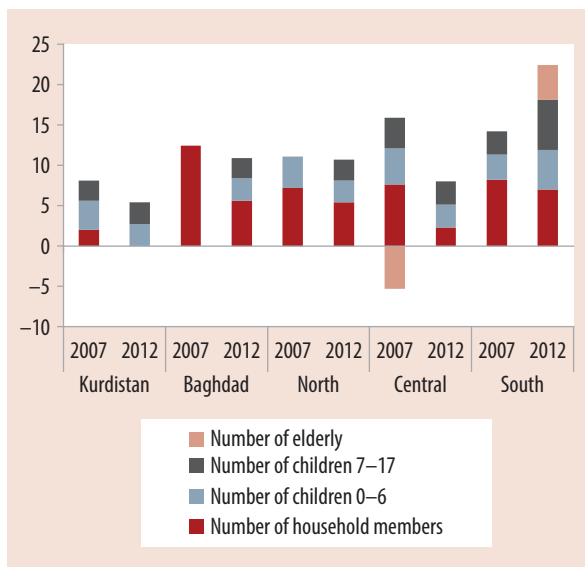
construction and consumption translates into sufficiently low consumption as to increase the likelihood that such households were poor.

Household size and dependency are significant predictors of poverty in Iraq, and in general, increase the probability of being poor. In Kurdistan, it is the presence of children below the age of 18 that significantly increases the odds of being poor along with household size (Figure 122). In 2012, each additional child increased the odds of being poor by 3 percent on average. In Baghdad, while the overall effect of household demographics has remained stable, in 2012, the presence of dependent children has become important compared to 2007. In the North and in the Centre, an increase in the number of household members and in the number of children significantly increases the likelihood that a household is poor. In 2007, the presence of an additional elderly household member reduced the likelihood that a household was below the poverty line by 5 percent in the Centre. In the South, household size and composition were important predictors of poverty in 2007, but their role seems to have become even more important in 2012. This primarily stems from dependency: in 2007, an

additional aged 7 to 17 years increased the likelihood of poverty by 3 percent while in 2012, this effect has doubled. Moreover, an additional elderly person further increases the odds of being poor by 4 percent in 2012, implying that pension receipts may not have been sufficient to overcome the effect of increased dependency within the household.

Living in a rural area generally increases the odds of poverty compared to otherwise similar households except in Baghdad and in the Central division in 2012, where there is no difference (Figure 123). While the rural disadvantage has remained stable in the North and in the South, where it increases the marginal likelihood of being poor by 6 and 12 percent respectively, it has fallen sharply in Kurdistan (from 13 to 5 percent between 2007 and 2012) and has disappeared entirely in the Centre. In 2012, households whose heads had been migrants (lived elsewhere for 6 months or more) were significantly less likely to be poor in the North and the South. Male headed households faced higher odds of being poor in 2012 in Baghdad, the Centre and the South, which may be reflecting an expansion in social protection transfers towards widow-headed households. A higher number

**FIGURE 122:** Marginal Effects: Household Size and Composition



Source: Authors' calculations, IHSES 2007 and 2012.

**FIGURE 123:** Marginal Effects: Household Characteristics

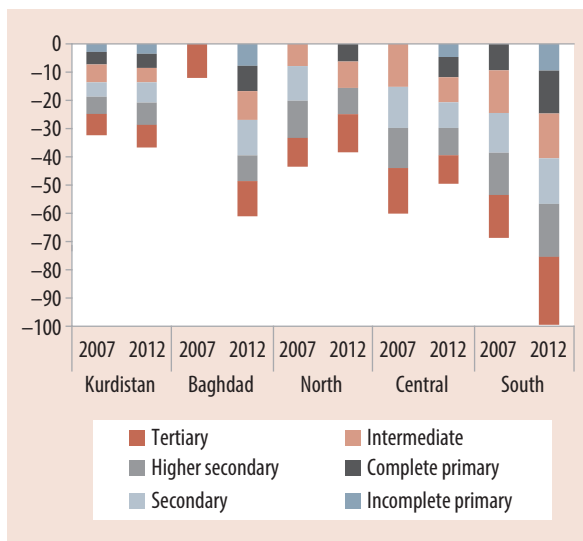


Source: Authors' calculations, IHSES 2007 and 2012.

of employed working age males is associated with a small decrease in the odds of poverty everywhere in 2012 except in Kurdistan and the South.

By far the most consistent and striking correlate of poverty is the education of the head of the household. Even in Kurdistan, where the magnitudes of the partial effects are the lowest, primary and intermediate schooling in themselves each lower the likelihood that a household is poor by 5 and 10 percent respectively; and secondary education and higher reduce these odds further by more than 7 percent each (Figure 124). In Baghdad in 2007, it was tertiary education that really distinguished the non-poor from the poor, but the picture has become more in line with the national pattern in 2012, with the likelihood of being poor falling with each additional level of education. In the South, where education levels are the lowest, education reduces the odds the poverty the most. In 2012, household with heads with even complete primary education were 15 percent less likely to be poor (compared to 9 percent less likely in 2007) relative to similar households with illiterate heads. Higher education starkly reduces the likelihood that a household is below the poverty line in the South: by 16 percent if the head

**FIGURE 124:** Marginal Effects: Education of the Head of Household

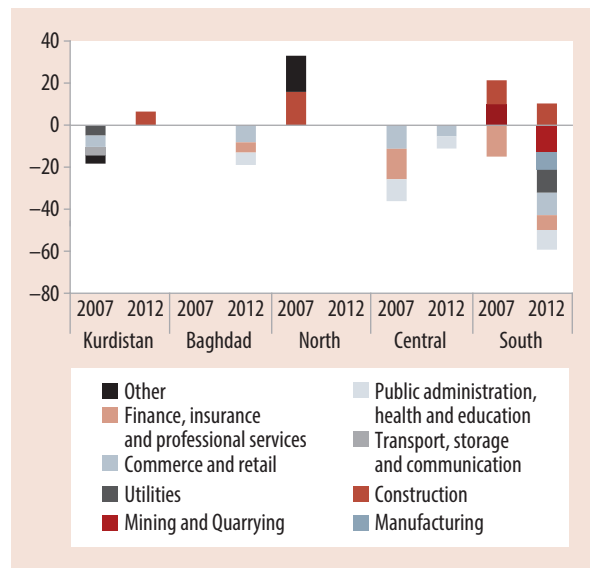


Source: Authors' calculations, IHSES 2007 and 2012.

has completed secondary education, by 19 percent if the head has completed higher secondary education and by 24 percent if the head has tertiary education.

The relationship between employment sector and poverty and varies across divisions (Figure 125). For instance, in 2007, households in Kurdistan with heads employed in utilities, transport and storage, and commerce and retail were 4 to 5 percent less likely to be poor compared with otherwise similar households. In 2012, in contrast, no sector of employment significantly lowered the odds of poverty relative to non-employment; and construction jobs actually increased the likelihood of being poor. In Baghdad, in 2012, commerce and retail, transport, finance and public administration jobs lower the likelihood of poverty in 2012. In the North, no employment sector affected the odds of a household being poor in 2012. In the Central division, in contrast, no employment sector increases the likelihood that the household is poor—public administration and commerce and retail lower poverty in 2007 and 2012. In the South, where labor market outcomes are the poorest, and where the male employment to working age ratio has fallen between 2007 and 2012, the

**FIGURE 125:** Marginal Effects: Sector of Employment of the Head of Household



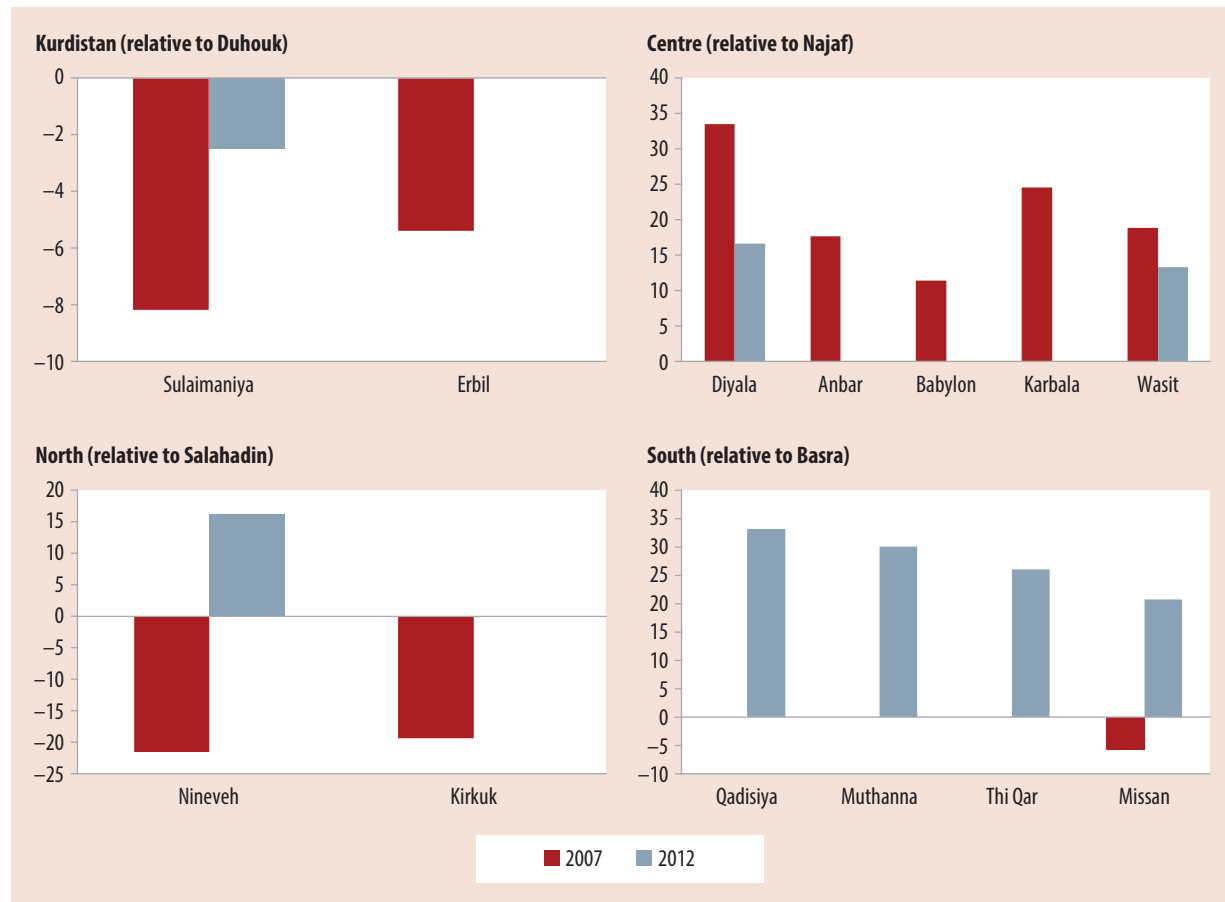
Source: Authors' calculations, IHSES 2007 and 2012.

relationship between employment and poverty has become stronger. Mining, utilities, public administration and finance in 2012—which are predominantly public sector jobs—lower the likelihood of living below the poverty line by 13, 11, 9 and 7 percent respectively, as do commerce and manufacturing. In contrast, households with heads employed in construction are 10 percent more likely to be poor compared to similar households.

It is also interesting to note how the relative positions of different governorates within each division have altered between 2007 and 2012. In these probit regressions, we also include dummy variables for governorates within that division, and the coefficients on these dummies measure the effect on governorate-specific factors. In other words, these coefficients estimate the higher or lower odds of

poverty associated with living in that governorate relative to the excluded or reference governorate within the division (among households with similar size and composition, education and employment of the head of household, etc). In 2007, households in both Sulaimaniya and Erbil were 8 and 5 percent less likely to be poor, but by 2012, only households in Sulaimaniya enjoyed a small advantage over households living in other governorates (Figure 126). This is consistent with the fact that Duhok was the only governorate within Kurdistan to significantly reduce poverty headcount rates. The Central division, like the Kurdistan region, has witnessed a remarkable convergence across governorates. In 2007, living in any governorate outside Najaf increased the likelihood of a household being poor. By 2012, this was true only of Diyala and Wasit.

FIGURE 126: Marginal Effects: Governorate Effects



Source: Authors' calculations, IHSES 2007 and 2012.

In the North, Kirkuk began with a relative advantage compared to Salahadin in 2007, but the gap appears to have bridged (Salahadin was one of the governorates to reduce poverty significantly). In contrast, in Nineveh, where households were less likely to be poor relative to Salahadin by more than 20 percent in 2007, five years later, they were 16 percent more likely to be poor (consistent with the increase in poverty in Nineveh). In the South, in 2007, after accounting for the effect of household characteristics, only households in Missan had a 5 percentage point lower likelihood of being poor relative to Basra. By 2012, each governorate in the South was associated with significantly higher odds of poverty relative to Basra (from 20 percent in Missan to 33 percent in Qadisiya).

Table 27 summarizes the marginal or partial effects of the same set of characteristics—household size and composition, the education and sector of employment of the head of household and other household characteristics—on the probability that a household belongs to the bottom 40 percent of the consumption distribution. In terms of four sets of factors—living in an urban area, household size and dependency, education of the head of household—there is a remarkable overlap in terms of poverty and belonging to the bottom 40 percent, with significant increases in the magnitudes of the coefficients. This suggests that the same set of factors that are highly correlated with poverty are also associated with belonging to the bottom 40 percent, or in other words, that these are very similar households. The relationship with sectors of employment is not such a linear and straightforward one. For example, in 2012, construction jobs for the household head are associated with higher odds of poverty in Kurdistan and the South; but they also increase the likelihood that a household belongs in the bottom 40 only in Kurdistan.

### Explaining Rural – Urban Welfare Disparities *Within* Divisions

We now explore the scale urban-rural welfare disparities within divisions in Iraq, examine how these

have changed over time, and try to understand why these disparities exist. Figure 127, panel A presents the mean differences in the welfare ratios between urban and rural areas within each region in 2007 and 2012 (Baghdad is excluded because it is an overwhelmingly urban governorate).<sup>36</sup> In Iraq, as in most other countries, households in urban areas have higher levels of welfare than those living in rural areas, even after taking into account cost of living differences. The largest differential between urban and rural welfare is in Kurdistan followed by the South. In three of the four divisions, the urban-rural welfare gap declined between 2007 and 2012 while it actually widened in the South, where rural poverty increased at a faster rate than urban poverty in three governorates.

These differences in welfare between rural and urban areas can be due to differences in portable (or non-geographic, mobile) household characteristics such as education or household composition or due to differences in returns to these characteristics, i.e., their marginal effects. The estimated decompositions of welfare differences between urban and rural areas within divisions reveal that characteristics explain a larger share of the welfare differences within regions (see panel b in Figure 127). Differences in household characteristics explain around 60% of the welfare differences between the urban and rural areas in 2007, and their contribution has increased to more than 70% in 2012. Thus, rural-urban welfare differences within each division in Iraq are driven by the (increasing) concentration in urban areas of individuals with a higher level of endowments. For instance, individuals who live in urban areas have significantly higher levels of education which appears to explain a large part of the differential in welfare levels. In Kurdistan, this factor contributes more than 40% of the difference explained by characteristics in both years.

<sup>36</sup> The welfare ratio is the ratio of the household's expenditure to the contemporaneous poverty line in the region of residence of the household. The welfare ratio as defined is a number that measures the standard of living as a multiple of the poverty line. See Annex for details on methodology.



TABLE 27: Probability of Being in the Bottom 40 Percent\*

Marginal probability effects: Partial effects of each explanatory variable (evaluated at mean values) on the probability that a household belongs to the bottom 40 percent of the consumption distribution		Kurdistan		Baghdad		North		Centre		South	
		2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
Living in an urban area		-21.5	-11.5		-11.2		-6.1	-19.5		-12.1	-12.0
Household size and dependency	Number of household members	7.4	7.2	21.5	17.1	10.2	5.8	8.1	7.7	10.9	9.4
	Number of children 0–6	10.5	7.2		6.2	6.8	6.4	4.7	6.2	3.7	5.6
	Number of children 7–17	7.2	7.8	3.7		2.2	5.0	3.7	6.5	3.5	6.9
	Number of elderly				-9.3	-6.7		-6.1			
Male headed household					16.0				6.9		12.9
Head of household lived elsewhere for at least 6 months					17.8						
Number of employed working age males					-6.6		-5.5	-8.7	-3.9		
Sector of employment of the head of household (relative to non-employed head of household)	Agriculture and fishing			-26.1	-16.0		-15.3			11.7	
	Mining and Quarrying					-29.2					-21.7
	Manufacturing								-8.5		-11.4
	Utilities					-22.7					
	Construction		14.0			21.0		11.8		16.0	
	Commerce and retail	-15.7		-14.9	-12.6						-11.4
	Transport, storage and communication			-23.5					-8.6		
	Finance, insurance and professional services					-14.5	-11.3	-17.2	-12.8	-13.0	
	Public administration, health and education	11.1		-21.0			-10.1	-8.6	-12.1		-12.4
	Other			-18.6							
Education level of the head of household (relative to illiterate head of household)	Incomplete primary	-12.3	-8.4		-24.2		-6.2	-11.0			-11.8
	Complete primary	-9.9	-16.1			-7.3	-9.0	-12.0	-8.7	-14.5	-19.5
	Intermediate	-19.8	-16.7		-30.4	-12.2	-17.3	-21.0	-16.0	-26.5	-24.6
	Secondary	-21.4	-27.0		-34.4	-18.9	-19.3	-23.6	-23.8	-23.4	-26.3
	Higher secondary	-29.0	-22.9	-26.0	-30.0	-28.5	-23.7	-23.6	-21.4	-24.9	-28.5
	Tertiary	-33.6	-28.5	-35.2	-35.7	-14.8	-30.9	-27.4	-30.7	-30.4	-35.7

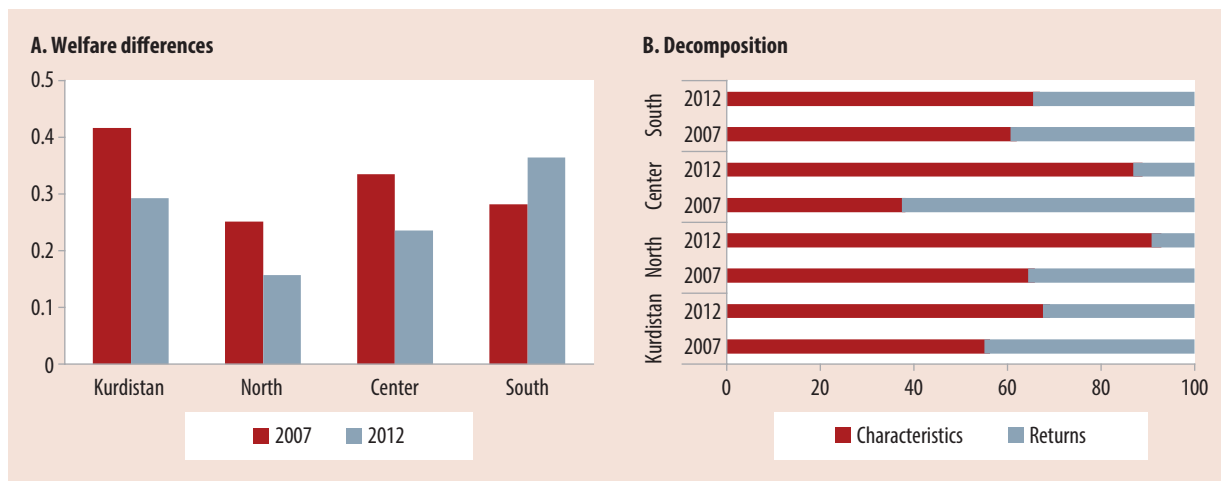
Source: Authors' calculations, IHSES 2007 and 2012.

NOTE: \* This table summarizes results of probit regressions (marginal effects) reported in Tables A 4.11 to A 4.15 in the Annex.

Another pattern that is important to note is that in the division where headcount rates fell, the Centre, the contribution of characteristics has more than doubled: differences in individual endowments between rural and urban areas explained less than 40 percent of welfare differences in 2007, compared to 87 percent in 2012. In general, this pattern holds in every division where rural-urban welfare differences have fallen. In contrast, in the South, where poverty increased, there has been almost no change in the relative contribution of characteristics and returns.

There are two potential explanations as to why differences in characteristics between urban and rural areas of the same region may be large. First, it could be that the nature of productive activities in urban and rural areas may require inherently different characteristics. Farming activities in rural areas, for instance, require little formal education and might be carried out more efficiently by households with more family members. However, a lower education level and larger number of family dependents would be less likely to lead to better economic outcomes in an urban setting. A second, complementary

FIGURE 127: Differences Within Regions – Urban Versus Rural Areas



Source: Authors' calculations, IHSES 2007 and 2012.

possibility is that people sort themselves across space based on their characteristics. That is, individuals migrate between urban and rural areas within regions to the location where they can earn the highest returns for their set of characteristics.

Why did these rural-urban differences in characteristics become more important over time? While it is unlikely that the nature of economic activities changed enough to explain this trend in the five year time period considered here, it is more probable that mobility between rural and urban areas increased, potentially induced by existing income differentials, so as to reduce the welfare premium associated with living in urban areas, holding all else equal.

### Explaining Welfare Differences between Divisions

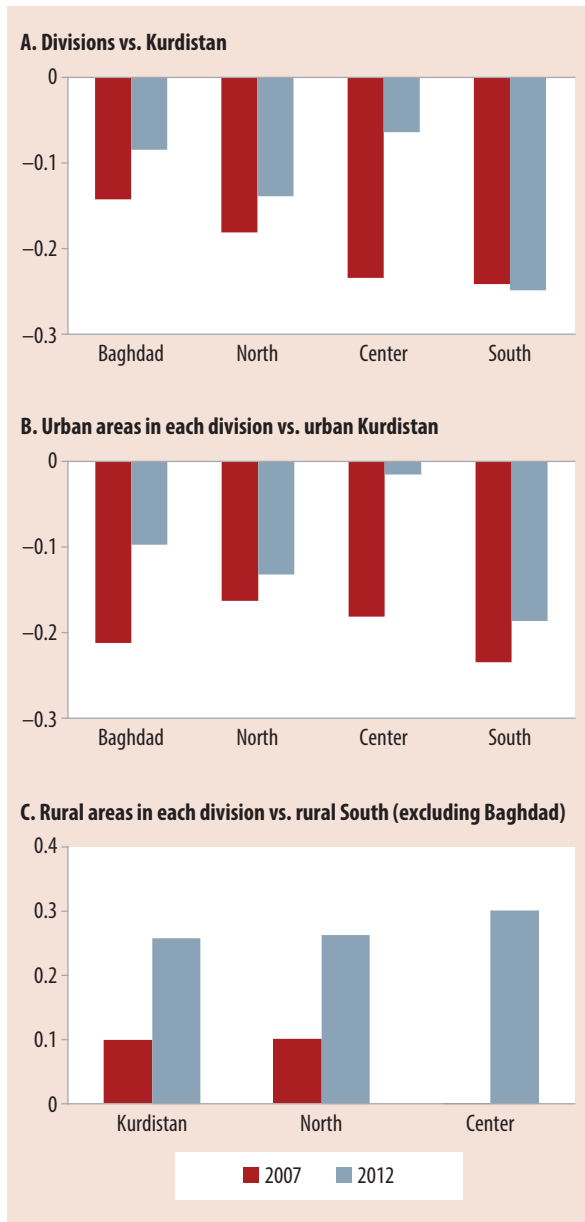
To carry out the “between-region” comparisons, we first compare the differences in welfare in each division (urban and rural areas pooled) against Kurdistan, which has the lowest poverty levels. Acknowledging that the pooling of urban and rural areas into one regional aggregate may be “mixing apples with oranges”, we also construct additional comparisons of urban areas in each division against urban Kurdistan (the least poor urban sub-division)

and rural areas in each division against the rural South (the poorest rural sub-division).

Figure 128 presents the mean differences in the welfare ratios between divisions in 2007 and 2012. Comparing the welfare ratios between divisions, not surprisingly, Kurdistan has the highest welfare of any division (panel A in Figure 128) or any of the urban areas of Iraq’s divisions. The South is the poorest division relative to Kurdistan in both 2007 and 2012 though the gap seems to have declined somewhat in 2012 in urban areas (panel B in Figure 128) while it has increased in rural areas (panel C in Figure 128). Moreover, the rural areas of the South appear to have lower welfare ratios than the rural areas of other divisions and this has worsened over time. In line with the rapid welfare improvements in the Centre, the welfare difference between Kurdistan and the Centre have come down sharply in 2012, in both rural and urban areas.

The decomposition of welfare differences “between” divisions in Iraq reveals that differences in returns to characteristics of households play a larger role in explaining welfare differentials than they did between urban and rural areas within the same divisions. This result is robust to different types of comparisons. Thus, welfare differences between the

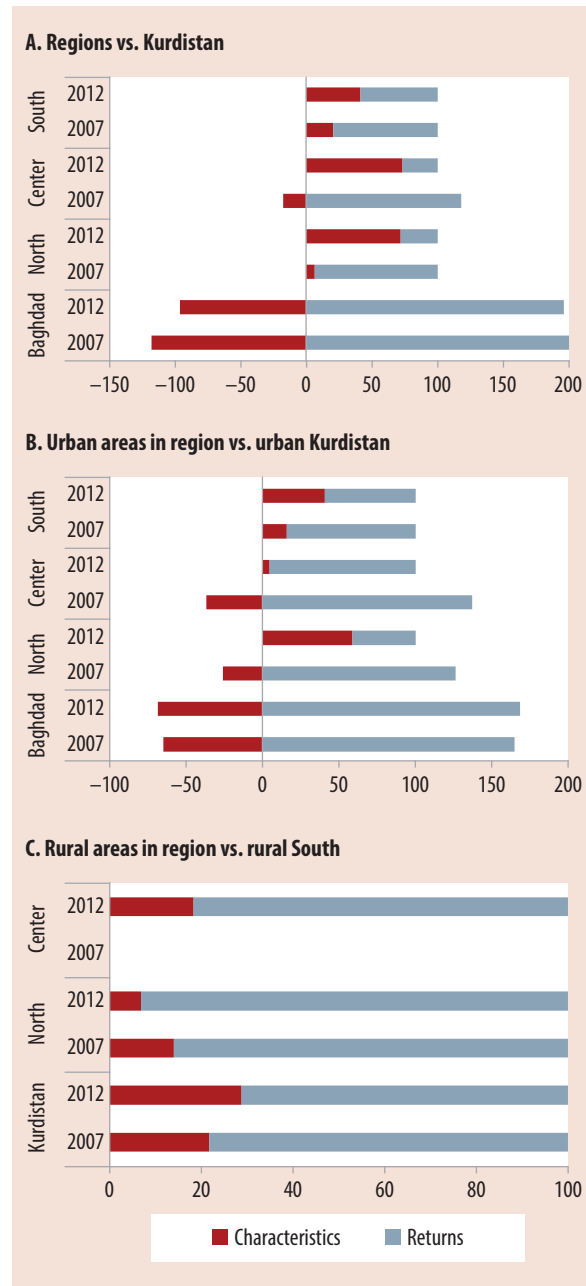
**FIGURE 128:** Welfare Differences between Divisions



Source: Authors' calculations, IHSES 2007 and 2012.

urban areas of other divisions and urban Kurdistan are mostly due to differences in returns to characteristics rather than due to differences in characteristics. That is, people living in urban Kurdistan have roughly comparable characteristics to urban residents of the other divisions, but the latter receive much lower returns for these characteristics. An exception is the case of the North region in

**FIGURE 129:** Explaining Welfare Differences between Regions



Source: Authors' calculations, IHSES 2007 and 2012.

2012 (see panel B of Figure 129). Differences in welfare between the urban areas in the North and the urban areas in Kurdistan appear to be explained for the most part (close to 60%) by differences in the characteristics of the household endowments in these areas.

The results of the analysis also reveal some interesting changes in the primary factors explaining inter-division welfare disparities over time. In 2012, welfare differences across urban areas in different divisions and urban Kurdistan seem to be less due to differences in the returns compared to 2007. For example, in 2007 about 16 percent of the welfare differential between urban areas in the South and Kurdistan could be attributed to differences in characteristics with the remaining 84 percent attributed to differences in returns. By 2012, differences in characteristics seem to play a bigger role (just over 40 percent), while differences in returns seem to become less important (just below 60 percent).

When comparing differences in welfare across rural areas in Kurdistan, the North and the Centre with respect to the rural South, differential returns to characteristics account for around four-fifths of the welfare differences in both years. Thus, rural individuals in the South with a certain set of characteristics earn much lower returns than similar individuals in rural areas of other divisions.

Taken together, these suggest that urban-rural mobility within divisions may be bridging the welfare gap; and that to some extent a similar trend is true (although much smaller in scale) between urban areas of different divisions. However, differential returns to characteristics continue to be very important in explaining welfare differential across rural areas in different divisions. In the South in particular, the rural-urban welfare gap has increased, accompanied by an increasing disparity between rural areas in the rest of the country and the rural South.

In this chapter, we argue that spatial disparities in welfare across Iraq are explained in part by economic revival in relatively stable and peaceful governorates in the Centre, in the Kurdistan region and in Basra, in part by the immediate effect of the post-2003 violence (which continues to this day) in Baghdad and the Northern governorates, and to the continued neglect of the southern governorates. Violence and insecurity has been a pervasive feature of many parts of the country for a long time, and are evident in long term trends of displacement and a stalling of progress in health and education. Since 1990 however, beginning from a common legacy of persecution and neglect during the Saddam era, Kurdistan and the South have been on divergent trajectories. Poverty trends mask the improvements in education and labor market outcomes that have been experienced in the three Kurdish governorates, which have also experienced a significant increase in population. In the southern governorates, and with the exception of Basra, the last five years appear to have compounded the neglect of the past, with declining male employment and labor force participation, declining female employment in agriculture, and with young people falling further behind in human capital. Relative peace and stability has not been sufficient for economic revival. But the absence of peace and security has implied little change in welfare in Baghdad and the North, where the post-2003 violence was concentrated. It is only in the Centre where peace and stability have to some extent combined with an improvement in economic activity, and where job growth has outpaced the growth in the male working age population.