The Labor Market for the Poor: The Rural-Urban Divide

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The labor market for the poor looks significantly different from that facing the non-poor in Iraq, and it varies considerably across rural and urban areas. Poverty is not only correlated with lower rates of employment and labor force participation, but also with important differences in the types of economic activities. Comparing urban and rural households, not only are the characteristics of rural households starkly different—larger household sizes and lower educational attainment, for instance—, but even for the same characteristics, poverty rates are much higher for rural households.

In terms of the labor market, the most important headline indicators that distinguish non-poor households from poor households are higher participation and employment rates, and in particular, public sector employment rates. In 2007, 76 percent of the urban poor and 81 percent of the rural poor worked in the private sector, compared with 60 percent and 72 percent of the urban non-poor and the rural non-poor. Over time however, the role of the public sector as a source of employment has increased, especially for the non-poor, but also for the poor. In 2012, 27 percent of the employed urban poor and 22 percent of the employed rural poor worked in the public sector.

The differences in the sectors of employment are only one of the many differences in characteristics between urban and rural households. Rural households have on average much lower levels of education than urban households, and while educational attainment among the urban working age population has remained stagnant between 2007 and 2012, rural Iraq does not show signs of catching up and continues to lag behind significantly.

The urban labor market and poverty:

Between 2007 and 2012, the employed urban poor became increasingly concentrated in three sectors, in addition to commerce and retail—construction; transport, storage and communication; and financial, insurance and professional services—which together accounted for approximately 58 percent of the urban employed poor. Most of the urban poor work in the private sector. Poverty rates among households with heads employed in the public sector are significantly lower than among other urban households. Households with heads employed in the public sector earn the highest per capita income, driven by the highest per capita labor income, compared to other types of urban households. The results of the Oaxaca-Blinder decomposition method show that households with heads employed in the public sector had on average better characteristics, which were associated with lower poverty.

The rural labor market and poverty:

In terms of the type of employment, the most important change between 2007 and 2012 among rural households has been in the large increase in the share of the rural poor working in salaried non-farm employment rather than in self-employed farm work. There has been a shift away from agriculture among the rural poor: in 2007, 47 percent of the rural poor worked in this sector, compared to 30 percent in 2012.

In 2007, agriculture was the main sector of employment for 27 percent of employed Iraqi women and 10 percent of employed Iraqi men. By 2012, agriculture's share in female and male jobs had fallen to 23 percent for women and 7 percent for men. The bulk of this declining dependence on agriculture occurred in the North, Centre and the South; which all recorded sharp declines in agricultural households accompanied by no change in or decreases in the share of diversified households.

Overall, within the 2007 to 2012 period, rural poverty reduction was driven by households who were diversified—with at least one member employed in agriculture, and at least one working off the farm. Poverty rates fell sharply (almost halved) among diversified households, while there was little change in the welfare of other types of households. The primary reason why agriculture households are poorer than diversified households is largely explained by differences in the coefficients and not attributable to differences in characteristics. Welfare improvements experienced by households who were diversified were limited to Kurdistan, the North and the Centre. In Baghdad and the South, poverty increased for almost all types of rural households.

Overall, poverty reduction has been largely explained by increases in labor income, and over the five year period between 2007 and 2012, new job creation and significant increases in labor earnings have been concentrated in the public sector. Neither employment nor earnings have expanded as fast in the private sector, and in particular in sectors where the poor work. At the same time, while Iraq is a relatively urbanized country, poverty reduction in Iraq between 2007 and 2012 was faster in rural areas, and trends in rural poverty also drove trends in headcount rates within the country. In this chapter, we take a closer look at the labor market for the poor, and examine whether the drivers of poverty reduction were different across rural and urban Iraq, given the differences in the main sectors of economic activity across the country. We also try and understand whether welfare improvements have been accompanied by an improvement in education and labor market outcomes and favorable changes in demographics or whether welfare improved only for particular types of households, perhaps because the returns to employment in certain sectors improved.

Where do the Poor Work?

Compared with non-poor households, labor force participation rates and employment rates are lower among men and women in poor households. Female labor force participation rates among the rural poor were almost three and a half times higher than among the urban poor in 2007; and although rural female workforce participation has declined by 6 percentage points since then, it is still higher than in urban areas (able 30). While male participation and employment rates are fairly similar among the rural poor and the urban poor, one important difference is the decrease in male participation and employment rates among the urban poor between 2007 and 2012; and the decrease in female participation and employment rates among the rural poor during the same period.

In terms of the type of employment, the most important change between 2007 and 2012 has been in the large increase in the share of the rural poor working in salaried non-farm employment rather than in self-employed farm work. This is turn is reflected in the shift away from agriculture among the rural poor: in 2007, 47 percent of the rural poor worked in this sector, compared to 30 percent in 2012. Instead, the rural poor have shifted into construction (23 percent) and the financial, insurance and professional services sector (9 percent). The urban poor have become increasingly dependent on construction, with 28 percent employed in this sector in 2012; but have also moved to transport, storage and communication (15 percent) and the financial, insurance and professional services sector.

The differences in the type and sector of economic activity notwithstanding, the employed poor are much more dependent on the private sector as a source of labor earnings (Figure 164). In 2007, 76 percent of the urban poor and 81 percent of the

rural poor worked in the private sector, compared with 60 percent and 72 percent of the urban non-poor and the rural non-poor. Over time however, the role of the public sector as a source of employment has increased, especially for the non-poor, but also for the poor. In 2012, 27 percent of the employed urban poor and 22 percent of the employed rural poor worked in the public sector.

Thus, in terms of the labor market, the most important headline indicators that distinguish non-poor households from poor households are higher participation and employment rates, and in particular, public sector employment rates. Within the poor, urban and rural households are employed in different types of economic activity, with an increasing dependence on construction, and to a smaller extent, on predominantly public sector jobs in the financial sector in both rural and urban areas. In rural areas, agricultural employment has declined sharply among the poor, whereas in urban areas, employment in the commerce and retail sector and the manufacturing sector has decreased among the poor.

TABLE 30: Labor Market Outcomes for the Urban and Rural Poor, 2007 to 2012

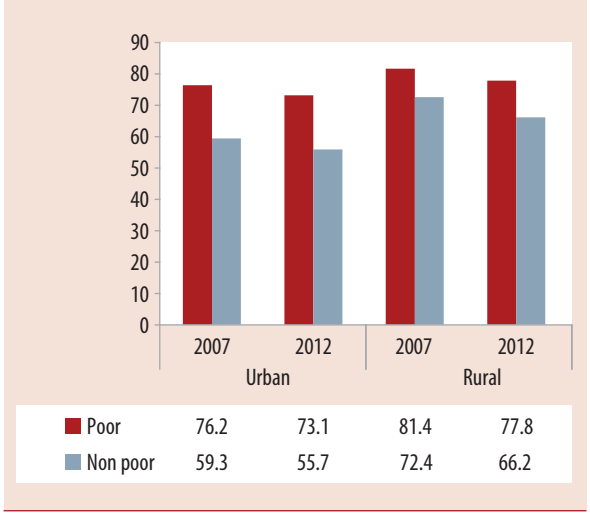
		Urban poor		Rural poor	
		2007	2012	2007	2012
Labor force participation	Male	74.6	72.7	71.9	69.9
	Female	4.4	3.6	14.8	8.6
Employment to working age ratio	Male	68.2	64.9	65.1	65.6
	Female	3.7	3.2	14.3	8.5
Labor relation	Salaried farm	1.9	0.7	3.7	3.0
	Salaried nonfarm	76.7	81.2	44.3	62.0
	Self-employed farm	2.1	1.8	43.2	26.3
	Self-employed nonfarm	19.4	16.2	8.8	8.7
Sector of employment	Agriculture & fishing	3.9	2.9	46.9	30.4
	Mining & quarrying	1.3	0.3	0.2	0.4
	Manufacturing	14.7	9.6	3.5	6.0
	Utilities	1.4	3.7	0.9	1.8
	Construction	21.3	27.7	17.5	22.6
	Commerce and retail	20.0	13.9	4.1	5.9
	Transport, storage &	9.4	14.8	8.3	9.2
	Financial, insurance	6.4	12.1	3.3	8.9
	Public administration	14.1	8.4	12.4	9.3
	Other services	7.7	6.5	2.9	5.6

Source: Authors' calculations, IHSES 2007 and 2012.

Differences in Economic Activity are Only One of Many Dimensions of Differences between Urban and Rural Households

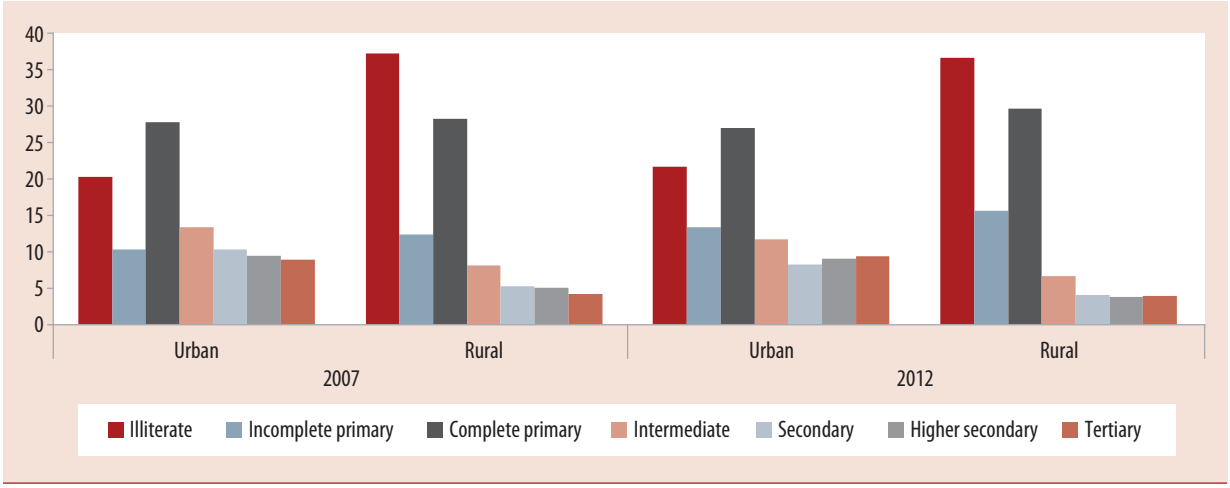
These differences in the sectors of employment are only one of the many differences in characteristics between urban and rural households. Rural households have on average much lower levels of education than urban households, and while educational attainment among the urban working age population has remained stagnant between 2007 and 2012, rural Iraq does not show signs of catching up and continues to lag behind significantly (Figure 165). While there are minor increases in the share of working age individuals in rural Iraq with incomplete and primary education, less than a fifth of the rural workforce has intermediate or higher education (in contrast to 38 percent of the urban workforce).

FIGURE 164: Share of Employment in the Private Sector, Urban and Rural, 2007 to 2012



Source: Authors' calculations, IHSES 2007 and 2012.

FIGURE 165: Education Levels, Working Age Population, Urban and Rural Households, 2007 and 2012

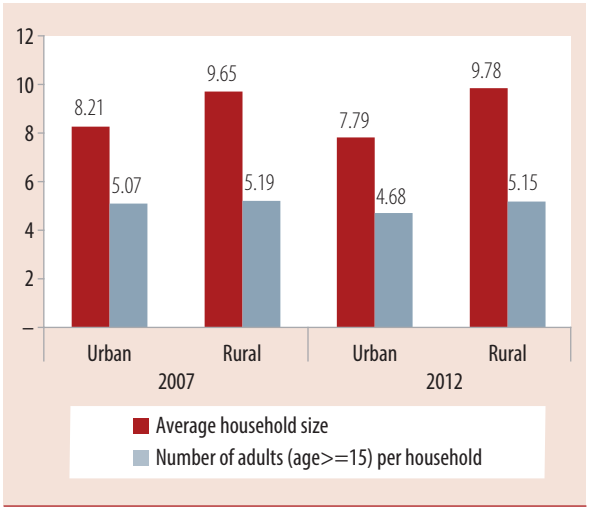


Source: Authors' calculations, IHSES 2007 and 2012.

Rural households continue to be significantly larger than urban households. Moreover, while average household size in urban areas has come down from 8.2 to 7.8 persons, accompanied by a similar decline in the average number of adults aged 15+, average household sizes and the number of adults in rural areas has remained unchanged (Figure 166). At the same time, there has been an increase in dependency in rural and urban areas, with declines in the share of household members of working age. Finally, this has been accompanied by a decline in the share of household members who are occupied or employed adults (Figure 167).

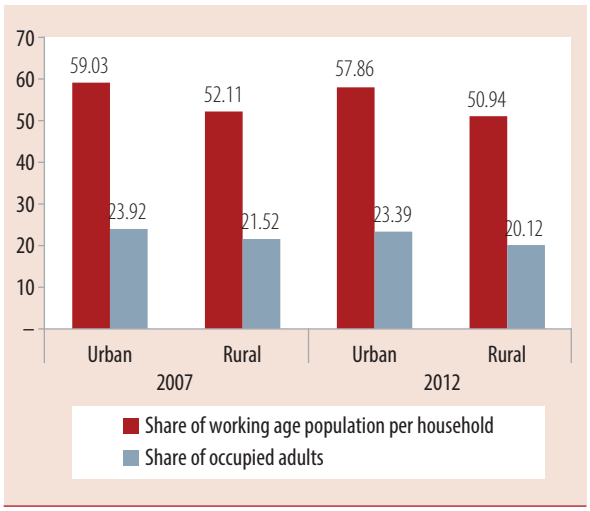
Thus, it appears that demographics have also not been in favor of poverty reduction across Iraq, but especially in rural areas, where dependency has been

FIGURE 166: Household Size and Composition Across Urban and Rural Areas, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

FIGURE 167: Dependency and Employment Across Urban and Rural Areas, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

increasing without a commensurate increase in earning adults. In any case, the rural working age population of Iraq is younger than the urban working age population: in 2012, 41 percent of the rural working age population is between 15 and 25 compared to 38 percent in urban areas; while 16 percent is between 46 and 65 in rural areas, compared to 19 percent in urban areas. This suggests that investments in education and improving labor market outcomes are even more important in rural Iraq, if young entrants into the labor market are to be able to find productive employment and contribute to household welfare.

While the differences between the urban and rural poor in terms of the type and sector of work are large, in terms of household size and composition, as well as the education of working age adults, a typical poor household in rural Iraq in 2012 appears to be more similar to a poor urban household than to a rural non-poor household (Table A 7.1).

The average poor rural household has 11 members, 7 of whom are dependents. Almost 85 percent of heads of households have primary education or less, and more than a third are illiterate. More than 60 percent of the heads of poor rural households are either not employed (32 percent) or work in agriculture (21 percent) or construction (11 percent). A typical non-poor household in rural Iraq is smaller, with 9 members and around 5 children, and 70 percent of heads have primary education or less (with a quarter being illiterate). In terms of the employment status of heads of households, this is somewhat similar to those of poor households in rural areas, with 44 percent being non-employed or working in agriculture; but with 12 percent holding jobs in the public administration sector.

Poor urban households on average had 10 members, 6 of who were children, and with 80 percent of household heads having primary education or less, and 32 percent of heads being non-employed. A similar pattern of larger household sizes, higher dependency, the relative importance of construction and transport as sectors of employment for the poor, and of lower levels of education for the poor is also evident in urban areas. Urban non-poor households are significantly smaller in size, about 7 members, less than half of whom are children; and with much more educated heads: only 31 percent of heads had less than primary education.

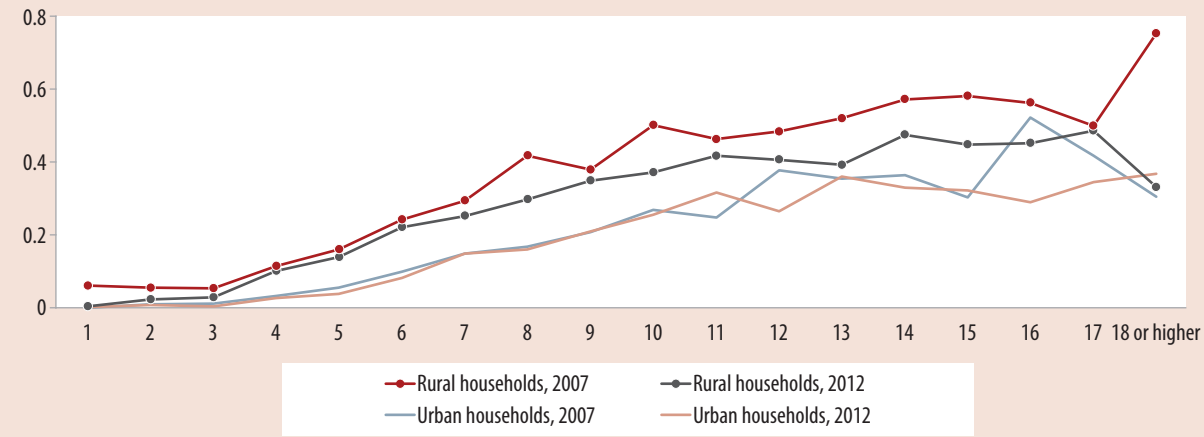
For Any Given Characteristic, Rural Households Face Higher Poverty Rates Than Urban Households

Despite these similarities between urban and rural poor households in terms of their average characteristics, for any given characteristic, headcount poverty rates in rural areas are much higher.

Rural households and poor households are typically much larger in size than non-poor urban households. Headcount poverty rates increase steeply among larger households, but more so in rural areas than in urban areas (Figure 168). Poverty rates among households of 4 or less are around 10 percent in rural areas, less than 3 percent in urban areas. Rural households with 10 or 11 members face headcount rates of around 40 percent, while similarly large households in urban areas experience poverty rates around 10 percentage points lower. Between 2007 and 2012, headcount rates of poverty among large rural households have significantly reduced, while they have remained stable among large urban households.

Poverty also declines starkly with education, especially in rural areas. Between 2007 and 2012, headcount rates have declined at almost every level of education in both urban and rural areas, but at each level of education, poverty is almost double in rural areas (Figure 169). For instance, in 2012, headcount rates among urban households with heads with incomplete primary education were around 15 percent; a little lower than poverty rates among rural households with secondary education. 16 percent of urban households with illiterate heads were poor in 2012, as compared to 32 percent of similar households in rural areas. Note that while education levels of household heads are fairly similar across poor and rural households, the incidence of poverty in rural areas is much higher, irrespective of level of education.

FIGURE 168: Poverty Headcount Rates by Household Size, Urban and Rural Households, 2007 and 2012

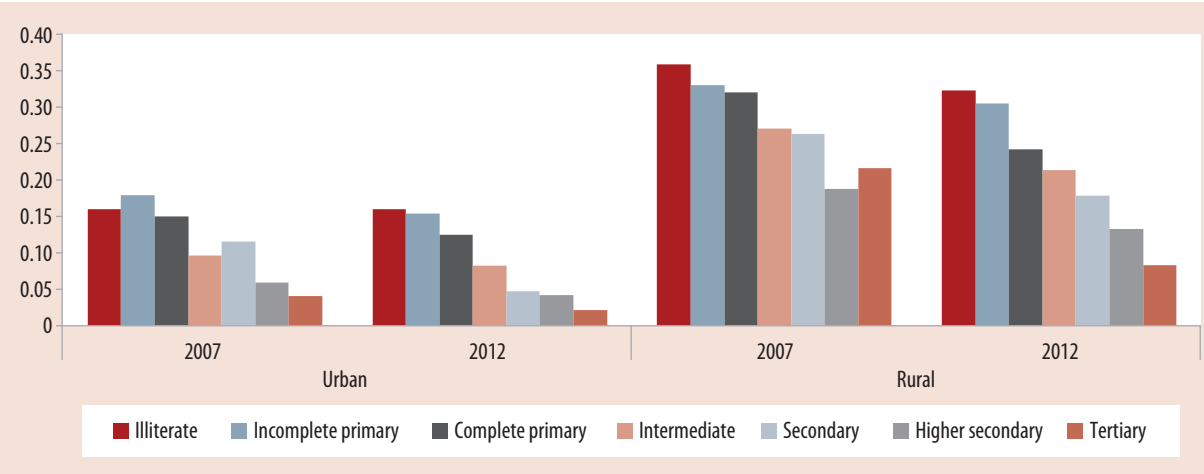


Source: Authors' calculations, IHSES 2007 and 2012.

This pattern is mirrored in the relationship between poverty rates and the household head's employment status. While poverty has declined among households with employed heads in both rural and urban areas, there has been an increase in poverty among rural households with unemployed heads. However, irrespective of the employment status of the head, headcount rates are higher in rural areas (Figure 170). In fact, households with unemployed heads face the highest rates of poverty in urban areas, 24 percent, which is significantly lower than poverty among rural households with employed heads, which is almost 30 percent.

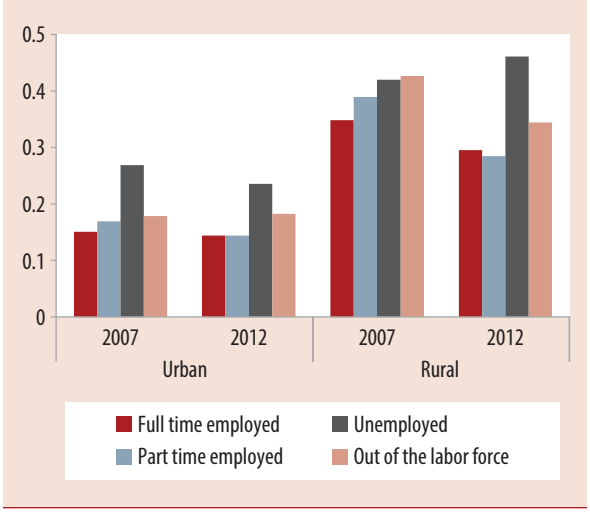
Thus, not only do the rural poor have different types of opportunities for employment, these are also accompanied by large human capital gaps and significant differences in household size and composition compared to the urban poor, each of which is also correlated with lower welfare.

FIGURE 169: Poverty Headcount Rates by Education, Urban and Rural Households, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

FIGURE 170: Poverty Headcount Rates by Employment Status, Urban and Rural Households, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

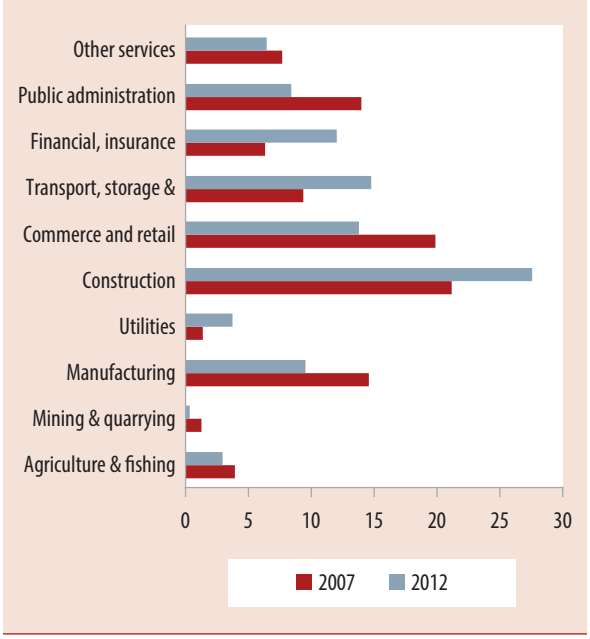
Next, we examine how these household characteristics correlate with consumption across urban and rural households (Table A 7.2). Among urban households, the relationship between household size, composition and education with consumption are very similar to the national average, and similar to those for rural households (although education has stronger effects in urban areas). In both years, employment in manufacturing, commerce and retail, finance, insurance and professional services, and in public administration, health and education are associated with higher per capita consumption relative to non-employment, whereas construction becomes negatively associated with consumption in 2012. In rural areas, employment in construction is negatively correlated with per capita consumption expenditures in both years relative to households whose heads are unemployed or out of the labor force. The presence of elderly household members in general increases consumption, except among rural households in 2012, perhaps suggesting that pension receipts no longer compensate for the increased dependency rates. Comparing 2007 and 2012, living in a rural area is by and large no longer associated with lower consumption in the governorates where poverty fell. Where poverty rates increased, however, the negative association between consumption and rural areas has become even stronger between 2007 and 2012.

Table A 7.3 shows the results of multivariate analysis that estimates estimate the marginal effects of these characteristics in predicting poverty and similar patterns are evident there as well. Across both survey years and for urban and rural households, larger household sizes and more children increase the likelihood of poverty. But the marginal effect of having an additional household member on whether the household is poor or not has substantially declined in rural areas, and is now equal in magnitude to that in urban areas. Education of the head of household significantly lowers the odds of poverty. For instance, in 2012, tertiary education reduced the likelihood that an otherwise similar household was poor by 19 percentage points in urban areas and by 31 percentage points in rural areas. It is worth noting that the overall relationship between poverty and education is stronger in rural areas, where education levels are the lowest and has been increasing over time.

Employment for the head of household in the public administration sector significantly reduces the odds of being poor, by 3 to 4 percentage points in urban areas. In rural areas, public administration jobs did not significantly lower poverty risks in 2007, but in 2012, they lower the likelihood that a household is poor by almost 12 percent. In 2012, employment in mining and quarrying and commerce and retail also lowered the risk of poverty for urban households while construction increased the likelihood. In rural areas, in 2012, all sectors of employment except manufacturing, utilities, commerce, finance and public administration had no effect on the likelihood of being poor. Overall, public sector employment—public administration and mining and quarrying in urban areas; and public administration, finance and utilities in rural areas—lower the odds of poverty; however, agriculture and construction, which offer primarily private sector jobs, have a weak relationship with poverty or actually increase the likelihood that the household is poor.

In urban areas, the limited improvement in welfare may be related to the decline in employment rates for men, which may have been counteracted by the prevalence of public sector jobs in mining, utilities and public administration. Moreover, as we show below, public sector employment and the expansion of public transfers, especially pensions, is associated with lower poverty in urban areas. What limited welfare improvements that have occurred have happened without any perceptible improvement in private sector employment and earnings. Among the rural population, despite higher poverty rates at each education level relative to urban areas, poverty reduction has taken place despite any perceptible change in education or in labor market outcomes. Indeed, rural households with employed heads face higher poverty rates than urban households with unemployed heads, in part because two major sources of male employment—agriculture and construction are not associated with lower odds of poverty.

FIGURE 171: Share of the Urban Poor, by Sector of Employment



Source: Authors' calculations, IHSES 2007 and 2012.

Public Sector Employment, Public Transfers and Urban Poverty

Between 2007 and 2012, the employed urban poor became increasingly concentrated in three sectors, in addition to commerce and retail—construction; transport, storage and communication; and financial, insurance and professional services—which together accounted for approximately 58 percent of the urban employed poor. With the exception of financial, insurance, and professional services, which have become dominated by the public sector, most of the urban poor work in the private sector.

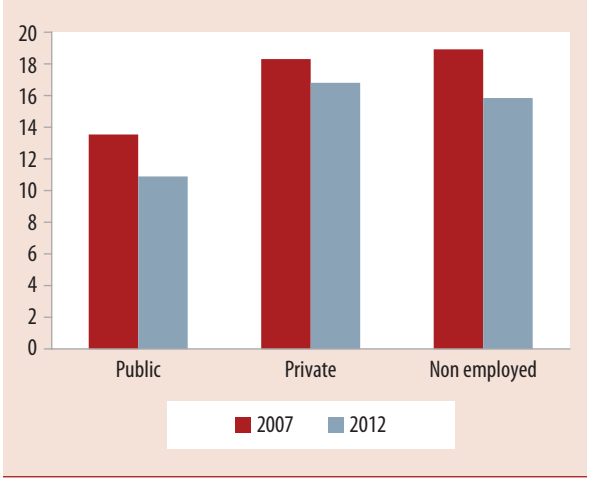
To further understand urban poverty, we therefore consider three types of households: those with heads employed in the public sector, those with heads employed in the private sector; and those with non-employed heads (including heads of household who are not of working age). Figure 172 shows the poverty headcount rates for each of these types of households, the trends between 2007 and 2012, and Figure 173 graphs their contribution to the total urban poor population. Poverty rates among households with heads employed in the public sector are significantly lower than among other urban households, and have reduced from 13.6 percent to 11 percent between 2007 and 2012. While households with heads employed in the private sector and non-employed heads both had relatively high rates of poverty in 2007, the decline in poverty has been sharper among households with non-employed heads—from 19 percent in 2007 to 16 percent in 2012. The bulk of the urban poor, almost four-fifths belong to households whose heads are not employed in the public sector. Overall, though, between 2007 and 2012, the distribution of the urban poor across these categories has changed little.

Households with heads employed in the public sector earn the highest per capita income, driven by the highest per capita labor income, compared to other types of urban households. Between 2007 and 2012, these households have also experienced the largest average increases in per capita labor income. Non-labor incomes on the other hand, have declined over time, primarily because the increase in pension incomes, domestic remittances and other

transfers has not compensated for the decline in implicit incomes from ration receipts. In line with the findings in the previous chapter, welfare improvements among these types of households are probably related to the large and increasing earnings and benefits associated with public sector employment.

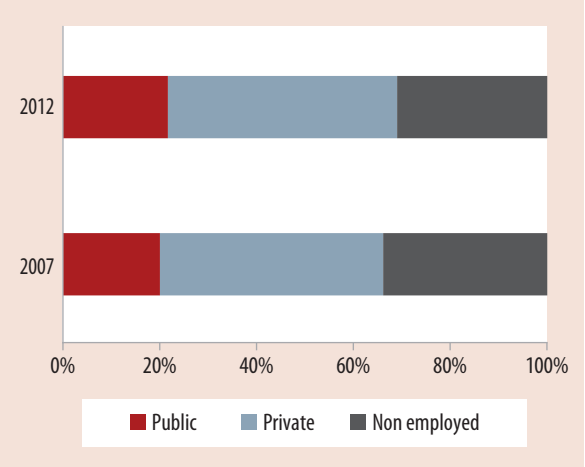
On the other hand, households with non-employed heads have the lowest levels of per capita income because of relatively low per capita labor earnings (earned by other household members), and both have grown slowly (Table 32). However, these types of households receive the highest levels of non-labor income, more than twice the levels received by households with public sector employed heads. Moreover, these have increased by 16 percent over the 2007 to 2012 period; compared with a decline in non-labor incomes among households with heads working in the public sector. While ration incomes have declined over time, these have been more than compensated by a 45 percent increase in pension incomes, which now makes up the single largest source of non-labor incomes and a doubling of incomes received as domestic remittances. These types of households therefore, receive much larger public and private transfers compared to other urban households, and have likely allowed household heads to remain non-employed; and the increases in these transfers over time has probably led to the observed welfare improvements.

FIGURE 172: Headcount Rates, by Types of Urban Households



Source: Authors' calculations, IHSES 2007 and 2012.

FIGURE 173: Share of the Poor, by Types of Urban Households



Source: Authors' calculations, IHSES 2007 and 2012.

TABLE 31: Labor and Non-Labor Income, Households with Heads Employed in the Public Sector

Per capita Income by components			2007	2012	Percentage change
Total			158.46	196.85	24.23
Labor			112.10	145.18	29.50
Non Labor			21.16	19.58	–7.46
Imputed Rent			25.19	32.10	27.40
Non Labor Income components	Capital		1.73	1.36	–21.35
	Pensions		2.09	2.75	31.58
	Remittances	Intl'	0.73	0.23	–68.86
		Domestic	2.58	3.15	22.12
	Social protection		0.05	0.24	365.29
	Other Transfers	Public	2.03	3.39	66.69
		Private	0.35	0.08	–76.56
	Rations		11.58	8.35	–27.88
	Zakat		0.01	0.03	341.84
	Public		15.76	14.73	–6.50
	Private		5.40	4.85	–10.24

Source: Authors' calculations, IHSES 2007 and 2012.

TABLE 32: Labor and Non-Labor Income, Households with Non-Employed Heads

Per capita Income by components			2007	2012	Percentage change
Total			141.73	168.62	18.97
Labor			77.23	84.36	9.23
Non Labor			38.00	44.02	15.86
Imputed Rent			26.50	40.23	51.84
Non Labor Income components	Capital		3.76	3.35	−10.98
	Pensions		13.50	19.61	45.28
	Remittances	Intl'	1.57	0.54	−65.82
		Domestic	4.00	8.01	100.21
	Social protection		0.52	1.49	189.47
	Other Transfers	Public	2.19	1.61	−26.67
		Private	0.49	0.36	−26.68
	Rations		11.90	8.96	−24.70
	Zakat		0.06	0.09	55.26
	Public		28.11	31.68	12.68
	Private		9.88	12.34	24.90

Source: Authors' calculations, IHSES 2007 and 2012.

TABLE 33: Labor and Non-Labor Income, Households with Heads Employed in the Private Sector

Per capita Income by components			2007	2012	Percentage change
Total			150.02	181.70	21.12
Labor			104.66	128.46	22.74
Non Labor			22.53	23.63	4.85
Imputed Rent			22.83	29.62	29.74
Non Labor Income components	Capital		1.88	2.29	22.04
	Pensions		3.75	5.55	47.93
	Remittances	Intl'	0.61	0.29	−51.61
		Domestic	2.38	4.31	80.76
	Social protection		0.26	0.83	221.97
	Other Transfers	Public	1.77	1.62	−8.74
		Private	0.25	0.10	−60.42
	Rations		11.62	8.58	−26.15
	Zakat		0.01	0.05	366.30
	Public		17.41	16.58	−4.73
	Private		5.13	7.04	37.37

Source: Authors' calculations, IHSES 2007 and 2012.

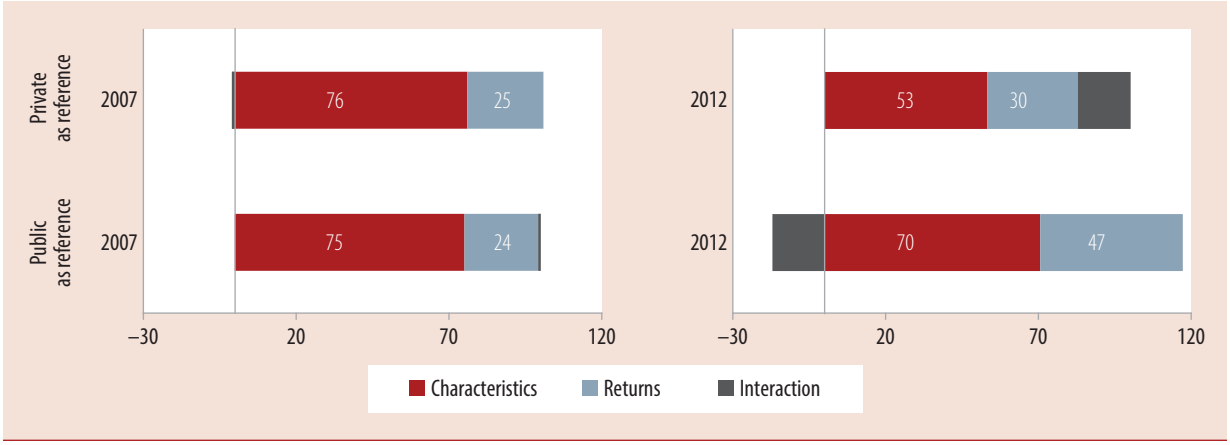
On average, urban households with heads working in the private sector earn lower per capita incomes and per capita labor incomes relative to those with public sector employed heads and higher per capita incomes and labor incomes compared to those with non-employed heads. On average, both have increased by slightly more than 20 percent between 2007 and 2012. However, there has been only a negligible increase in non-labor incomes, as the increase in pensions and domestic remittances has barely compensated for the decline in ration incomes.

Breaking down this aggregate picture by different employment sectors within the urban private sector, Figure 174 shows that headcount rates have significantly increased in the sectors where more of the urban poor are now concentrated—in construction and financial, insurance and professional services. Note that poverty rates have almost doubled among urban households with heads employed in private sector jobs in financial, insurance and professional services. In contrast, poverty has fallen among households with heads working in commerce and

FIGURE 174: Headcount Rates by Employment of the Head (Urban Private Sector), 2007–2012

Source: Authors' calculations, IHSES 2007 and 2012.

FIGURE 175: Decomposing Differences in Headcount Rates between Private and Public Sector Employed Heads of Household



Source: Authors' calculations, IHSES 2007 and 2012.

retail and manufacturing, both of which now account for a smaller share of the poor than they did in 2007.

Explaining the Differences in Welfare between Public and Private Sector

The vast majority of poor households in Iraq, 70 percent, have employed heads of household. Within these types of urban households, poverty is lower among those with heads employed in the public sector; and these rates have come down faster, by 2.5 percentage points between 2007 and 2012 (as opposed to 1.5 percentage points among households with heads in the private sector). Were these changes driven by differences in endowments or due to other factors? In order to understand the factors underlying poverty headcount differentials, we utilize the Oaxaca-Blinder decomposition method. This approach is typically used in the labor market literature to disentangle the share of the wage gap attributable to characteristics from that attributable to coefficients (which may be due to discrimination).

In this case, we are applying this method to explain the poverty headcount difference between households with heads employed in the private and public sector in 2012. The idea is to quantify the part of that difference explained by differences in characteristics and the part explained by differences in coefficients (which in this case measure the strength and nature of the relationship between the characteristic and poverty). In order to do that, we estimate the probability of being poor or not on a set of characteristics of the household and household head among others for both types of households in urban Iraq.[46]

The results of this exercise show that in both years, differences in characteristics between these two types of urban households explain the bulk of differences in headcount rates (Figure 175). In other words, households with heads employed in the public sector had on average better characteristics, which were associated with lower poverty. In 2012, in addition, the returns associated with having similar characteristics appear to have become more important, and may explain the faster welfare improvements among households with heads in the public sector. This is in line with the increasing returns on the labor market from public sector employment observed earlier. Next, we turn to the labor market facing the poor in rural Iraq and begin with a brief description of the nature of the agricultural sector, on which so many of the rural poor still depend.

[46] We use the nldecompose command to perform the Oaxaca-Blinder decomposition for non-linear model.

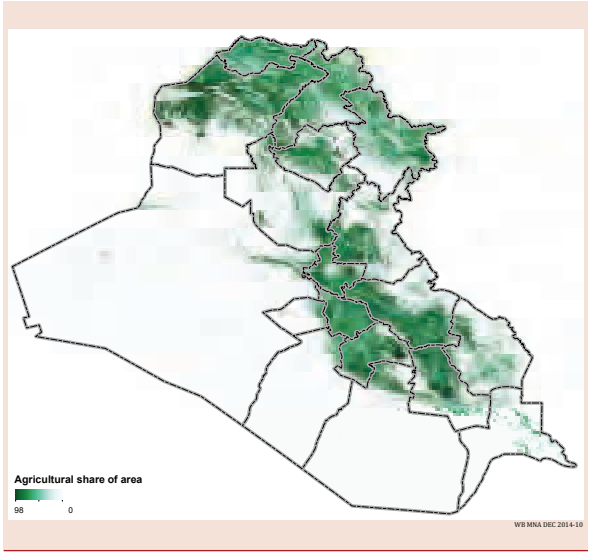
Rural Employment and Agriculture in Iraq, 2007 to 2012

Iraq's historical endowment of agriculture has been steadily and it appears, irrevocably eroding. In 1971, agriculture accounted for 16 percent of value added, around a fifth of GDP and 55 percent of total employment. At the time, it was recognized as a lagging sector, with little investment towards increasing productivity and building the necessary infrastructure. A 1974 World Bank report notes that "agricultural yields, reflected centuries of abuse and neglect of the land, much of which had been allowed to deteriorate to the point of being uncultivable."[47]

During Saddam Hussein's early years, the state attempted to promote private sector investment in agriculture through the distribution of high yielding variety seeds, higher output prices, expanded subsidies to agriculture and heavy investments in irrigation. While area and production expanded throughout the 1980s, cereal yields continued to stagnate.[48] The Iran-Iraq war diverted labor and investment away from the sector, and caused significant damage to infrastructure in the southern governorates on the border with Iran. Following the invasion of Kuwait by Saddam Hussein, wide-ranging sanctions were imposed, and the inability to export oil severely limited access to imports of food and agricultural inputs. While the introduction of the Public Distribution System thereafter guaranteed some degree of food security to the Iraqi population, it introduced significant disincentives for cereal production, depressing producer prices and private investment.

The establishment of the autonomous Kurdistan region in the early 90s comprising a large part of the northern rain fed agricultural zone was followed by decades of relative peace and stability in the three Kurdish governorates. In the rest of Iraq, agricultural activity runs along and between the Tigris and Euphrates rivers, and is dependent on irrigation. Salinization has historically been a major challenge, given the low and saline water table in this zone, and it became widespread as agricultural services

MAP 2: Percentage of Land Used for Agriculture Per Square Kilometer



Source: Fritz et al. 2011.

and physical infrastructure, especially the irrigation network, were degraded as a result of inadequate maintenance and funding. In the South, the adverse impact on livelihoods was compounded by the massive drainage of the Mesopotamian marshlands in the 90s.[49]

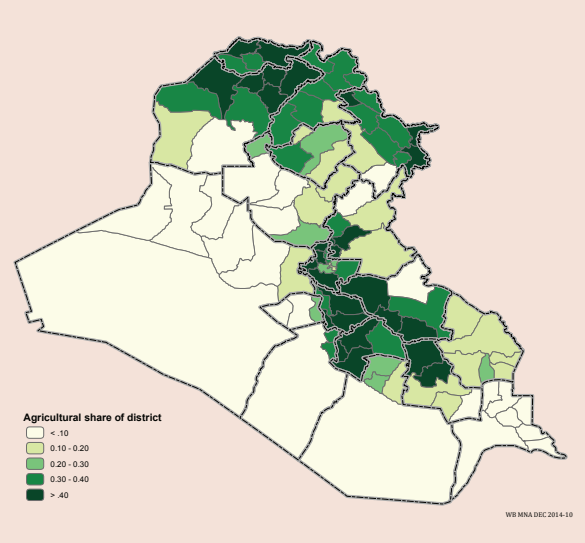
The spatial variation in agricultural activity across Iraq is quantified and visualized below. In order to measure agricultural land use in Iraq, we use the Global Hybrid dataset (0611–2012 V2) produced by Fritz et al. (2011) which estimates the percentage share of land used for agriculture within a one square kilometer pixel (Map 2). By multiplying this percentage by the total pixel area we derive a measure of total agricultural land use area. By aggregating the agricultural area of each pixel we calculate agricultural land use at a district level. This allows us to determine the total share of agricultural land

[47] World Bank (1974). Current Economic Position and Prospects of Iraq. Report No. 419a-lRQ.

[48] http://digital.library.unt.edu/ark:/67531/metacrs7073/m1/1/high_res_d/RS21516_2003May13.pdf.

[49] Joint World Bank FAO Agriculture Sector Note, 2011.

MAP 3: Share of Agricultural Land Use of Total District Land Area



Source: Staff calculations based on Fritz et al. 2011.

use within the total district land area, shown in Map 3, which clearly shows the concentration of agricultural activity in Kurdistan and around and between the Tigris and Euphrates rivers in Baghdad, Diyala, Babylon, Wasit, Kerbala, Qadisiya and Thi Qar.

But agricultural activity can also vary over time, especially as a response to weather shocks and conflict. Below we use a measure of greenness or the intensity or density of vegetation within a district over time, which identifies areas vegetation, including agricultural land and forest cover. The most common measure of greenness is the Normalized Differentiated Vegetation Index (NDVI), which is derived from remote sensing data. The NDVI calculates greenness values between of –1, (indicating complete absence of vegetation,) and 1, (indicating the greatest intensity of vegetation).[50] In this analysis, we use NDVI data constructed by the U.S. National Aeronautics and Space Administration (NASA) Global Inventory Modeling and Mapping Studies (GIMMS) at a bi-monthly frequency between 2003 and 2009 that measure greenness over 8 square kilometers pixels available for the entire area of Iraq (Zhu et al. 2013). From each bi-monthly pixel data, we derive three statistical measurements at the district level: the bi-monthly grid mean, bi-monthly grid standard deviation, and bi-monthly grid maximum. Each of these bi-monthly statistics is then aggregated in time to produce analysis at the annual level. Map 4 displays the district level variation in 2003, 2005, 2007 and 2009 that shows high greenness in the far North as well as the districts near Baghdad and along the Tigris and Euphrates rivers. Because of climate conditions, the Northern districts of Iraq have on average higher levels of greenness than the Southern districts. Variation in annual precipitation levels over the period of our analysis also affects the measure of greenness. For example, the 2007 and 2008 drought in the Northern districts of Iraq corresponds to lower measures of greenness.

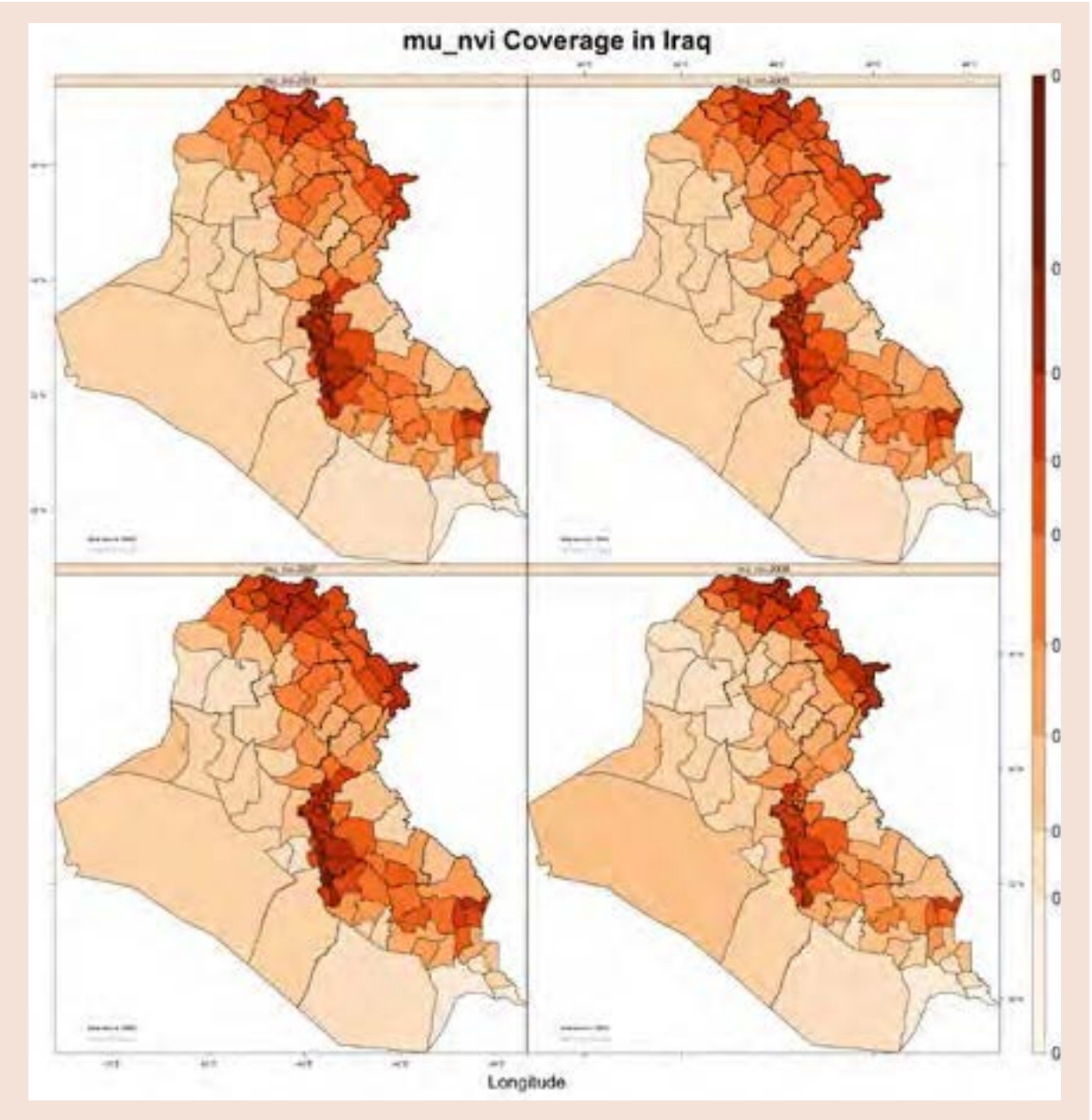
The post-2003 conflict in Iraq led to a further diversion of resources and widespread destruction of infrastructure. Violence was predominantly focused in Baghdad and the North, and in the governorates of Anbar and Diyala in the Center; while the rest of the Centre, Kurdistan and the South remained relatively peaceful. The improvements in the security situation in the countryside have been accompanied by a revival of the rural economy in some parts of the country, as we will show below; but in the southern governorates, poverty among households dependent on agriculture has risen sharply, and while people are leaving agriculture, they have nowhere to go as the local economy continues to stagnate.

Agricultural Jobs: Evolution Across Time and Space

In 2007, agriculture was the main sector of employment for 27 percent of employed Iraqi women and 10 percent of employed Iraqi men. By 2012,

[50] Using the NDVI from multiple Landsat satellite images to estimate the total cultivated area for a portion of Iraq, Gibson et al. (2012) present the decline of cultivated area from the Late Sanctions period derived from NDVI calculated from images between 2000 to 2003 compared to the Operation Iraqi Freedom (OIF) period derived from NDVI calculated from images between 2008 to 2011.

MAP 4: NDVI Changes in Greenness Over Time

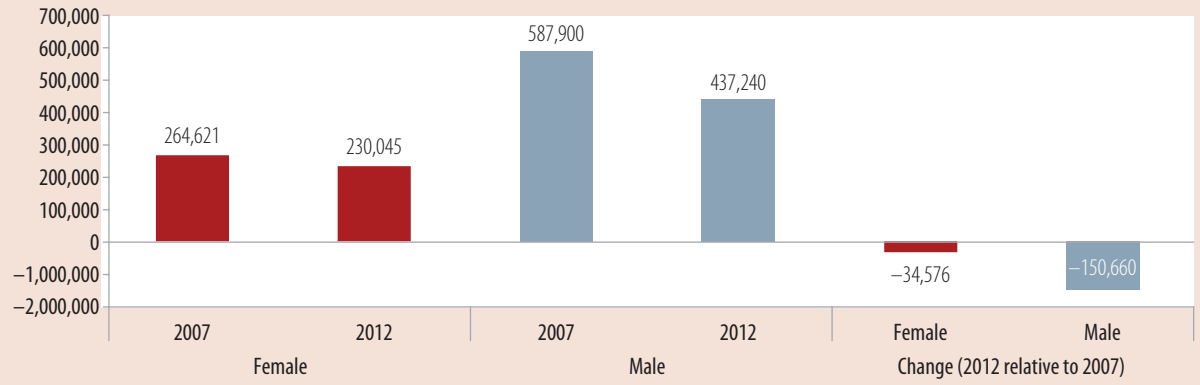


Source: Authors' calculations.

agriculture's share in female and male jobs had fallen to 23 percent for women and 7 percent for men.[51] In line with these, there has been a decline in the share of the population belonging to households with heads employed in agriculture from 10 percent in 2007 to 7 percent in 2012. The declining importance of agriculture as a sector of employment is not the result of static employment in agriculture combined with growing non-agricultural employment. It is due to an absolute decline in agricultural employment for both men and women

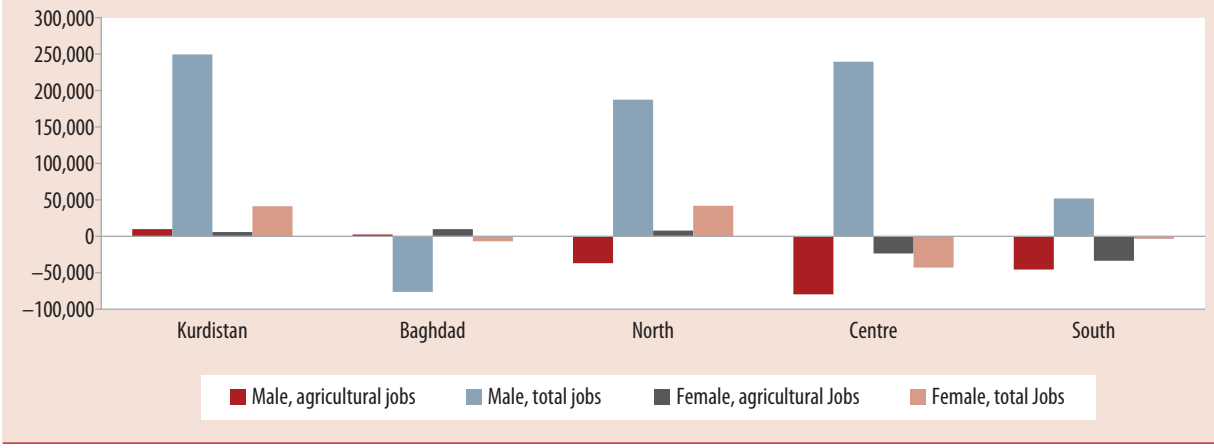
[51] In 2007, agriculture employed 8 percent of the male working age population and 3 percent of the female working age population. By 2012, these estimates had fallen to 6 percent and 2 percent respectively.

FIGURE 176: Jobs in Agriculture for Men and Women, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

FIGURE 177: Changes in Number of Jobs in Agriculture and Total Jobs, Men and Women, by Division



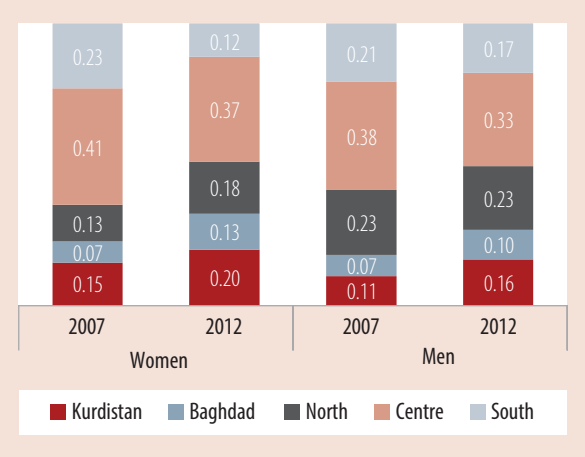
Source: Authors' calculations, IHSES 2007 and 2012.

between 2007 and 2012, with 34,500 fewer jobs for women and 150,600 fewer jobs for men of working age (Figure 176).

This has happened for the most part, due to a decline in the number of people working in agriculture: men in the North, Centre and South, and women in the Centre and South. While in Kurdistan, the North and the Centre, it has been accompanied by a significant increase in the number of jobs for men between 2007 and 2012, in the South, there was little additional job creation to compensate for the decline in agricultural employment (Figure 177).

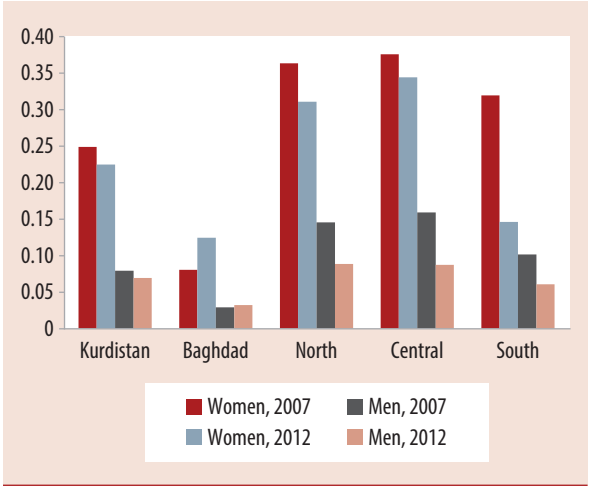
These changes are reflected in the spatial distribution of agricultural jobs across Iraq (Figure 178). In 2007, Kurdistan, Baghdad and the North together accounted for 35 percent of all agricultural jobs for women. By 2012, each witnessed an increase in their share and now account for almost half the jobs for women in agriculture. In contrast, the importance of the Centre and the South in agricultural jobs for women has declined significantly, where it was a much larger employer in 2007 (accounting for more than 40 percent and 23 percent respectively), especially in the South, where its share has halved.

FIGURE 178: Share of Agricultural Jobs in Each Division, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

FIGURE 179: Share of Agriculture as a Source of Employment for Men and Women Within Each Division, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

A similar trend is true somewhat for men, with an increase in Kurdistan and Baghdad's share in agricultural jobs for men, although from relatively low levels; no change in the North (around 23 percent), and declines in the Centre (by 5 percentage points) and in the South (by 4 percentage points). But still, the Centre and the South accounted for half of all agricultural jobs for men and women in 2012.

Across the country, with the exception of Baghdad, agriculture is an important source of jobs for the few women who work: in 2007, it accounted for a quarter of employed women in Kurdistan, more than 35 percent in the North and the Centre, and more than 30 percent in the South. While its share has somewhat declined, with a sharp decrease in the South, where overall female employment fell, it is still one of the most important sectors of work for women. For men, on the other hand, only 15 percent of employed men in the North and the Centre work in agriculture, and less than 10 percent in other divisions. The decline in agriculture's role in male employment by 2012 is evident across all divisions (Figure 179).

Rural Poverty and Non-Farm Diversification

To better understand the rural economy, the changing role of agriculture and examine the opportunities for non-farm diversification; we define four types of (mutually exclusive) households:

1. Non-agricultural household: A household where no employed member works in agriculture
2. Agricultural household: A household where all employed members work in agriculture
3. Diversified household: A household where at least one employed member works in agriculture and at least one works outside agriculture
4. Non-employed household: A household where no member is employed

Non-agricultural households account for a large majority of the population of Iraq: 83 percent of the population in 2012, and 92 percent of the urban population in 2012 belong to non-agricultural households (Table 34). In rural areas, there was a large increase in the share of these households, from 47 percent in 2007 to 63 percent in 2012; and a substantial decline in the share of households attached to agriculture. For instance, the share of the population in agricultural households fell by 10.5 percentage points; and those in diversified households fell by 5 percentage points. In 2012, less than

TABLE 34: Share of Different Types of Households in Urban and Rural Areas, 2007 and 2012

Share of population belonging to	Total		Rural		Urban		Change (percentage point)		
	2007	2012	2007	2012	2007	2012	Total	Rural	Urban
Non-agricultural household	79.03	82.90	47.08	63.38	91.96	91.91	3.87	16.30	–0.05
Agricultural household	7.92	5.27	24.60	14.10	1.16	1.20	–2.65	–10.50	0.04
Diversified household	7.34	6.02	20.66	15.52	1.95	1.63	–1.32	–5.14	–0.32
Non-employed household	5.71	5.81	7.65	7.01	4.92	5.26	0.10	–0.64	0.34

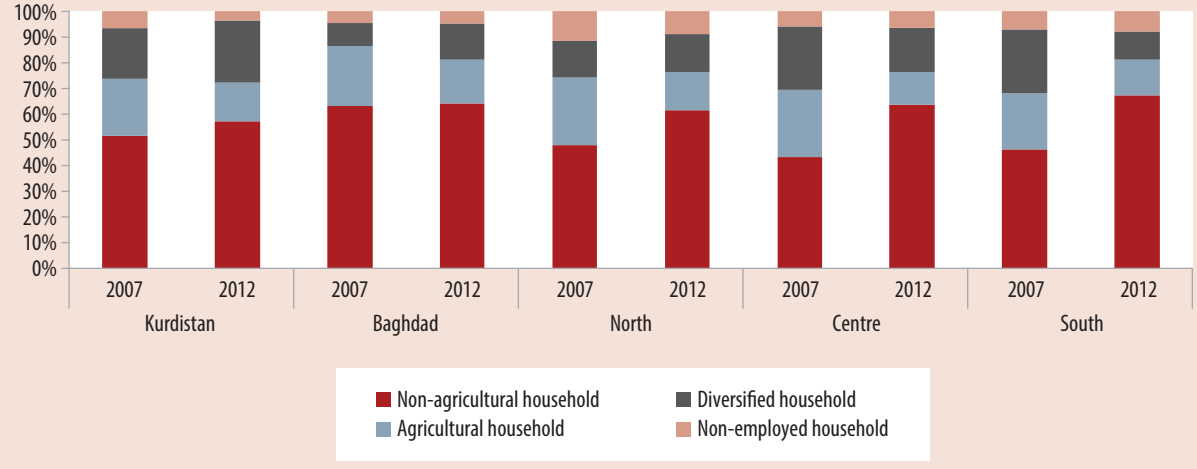
Source: Authors' calculations, IHSES 2007 and 2012.

30 percent of the rural population belonged to a household where at least on member was employed in agriculture, compared to 45 percent in 2007. In addition, almost 6 percent of the population and 7 percent of the rural population in 2012 belonged to households where no member was employed.

The bulk of this declining dependence on agriculture occurred in the North, Centre and the South; which all recorded sharp declines in agricultural households accompanied by no change in or decreases in the share of diversified households (Figure 5). In the North, the share of the population in households where all employed members were working in agriculture fell by 11 percentage points while there was almost no change in diversified households. In the South and the Centre, the shares of both these types of households fell, although the larger decline occurred among agricultural households in the Centre and among diversified households in the South. In contrast, in Baghdad and Kurdistan, while the share of non-agricultural households increased somewhat, the share of agricultural households fell, but the share of diversified households increased.

In rural areas, non-agricultural households had the lowest poverty rates in 2007 and in 2012, and their headcount rates fell by 4 percentage points in the intervening period (Table 35). However, because of a large increase in their share, they now make up 60 percent of the rural poor. Neither agricultural households nor non-employed households experienced substantial welfare improvements over the

FIGURE 180: Share of Different Types of Households in Each Division, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

TABLE 35: Poverty Rates of Different Types of Households in Rural Areas, 2007 and 2012

Rural households	Headcount poverty rates		Share of the poor	
	2007	2012	2007	2012
Non-agricultural household	33%	29%	40.26	59.75
Agricultural household	41%	40%	25.71	18.22
Diversified household	50%	27%	26.33	13.45
Non-employed household	39%	37%	7.69	8.57

Source: Authors' calculations, IHSES 2007 and 2012.

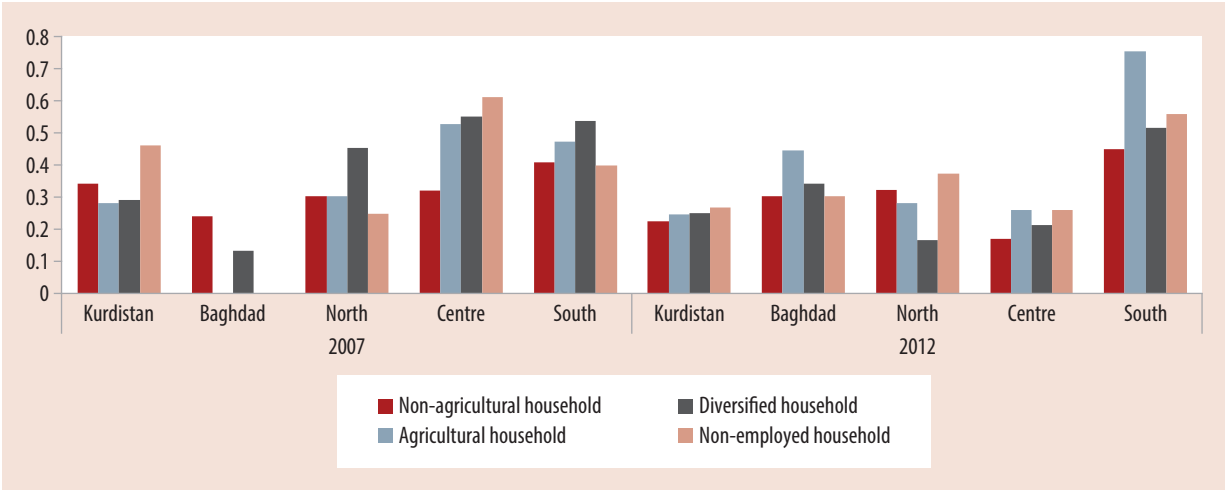
five year period, and continue to have high rates of poverty in 2012, 40 percent and 37 percent respectively. The share of agricultural households among the rural poor has come down from 26 percent in 2007 to 18 percent in 2012 because their share in the population has shrunk. The largest welfare improvements occurred among diversified rural households, whose headcount rates almost halved, from 50 percent to 27 percent; as did their share in the rural poor, from 26 percent to 13 percent. Thus, it appears that the observed reduction in rural poverty was driven by welfare improvements experienced by diversified households.

These overall trends mask significant improvement and worsening in different rural parts of the country (Figure 181):

- decline in poverty among all rural households in Kurdistan, and in particular among non-employed households;
- very large and significant declines in poverty rates (between 47 and 61 percent) among all rural households in the Central division;
- sharp decreases in headcount rates for diversified households and substantial increases in poverty for non-employed households in the rural North;
- increases in poverty in rural Baghdad; and
- large and significant increases in poverty headcount rates among rural agricultural and non-employed households in the South.

Thus, welfare improvements experienced by households who were diversified were limited to Kurdistan, the North and the Centre. In Baghdad and the South, poverty increased for almost all types of rural households, but especially among rural households in the South who were completely dependent on

FIGURE 181: Trends in Headcount Rates of Different Types of Households, by Division, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

agriculture for employment: from an already high 47 percent in 2007 to a whopping 75 percent in 2012.

These divisional trends in rural poverty are even more apparent when disaggregated to the governorate level (Table A.4). In the four southern governorates of Qadisiya, Missan, Thi Qar and Muthanna, more than 70 percent of agricultural households were poor in 2012. These represent a significant increase in poverty relative to 2007 among these households, more than 15 percentage points in Muthanna and Qadisiya, and more than 30 percentage points in Missan and Thi Qar. Even among non-agricultural and diversified households, headcount rates were above 50 percent in 2012 in each of these governorates, as a result of increases in poverty in Qadisiya, Thi Qar and Missan, and despite decreases in headcount rates among these households in Muthanna. Within the Central divisions, large decreases in poverty rates among agricultural and diversified households were experienced in all governorates, with the exception of Najaf, where poverty fell modestly from relatively low levels.

It is also not always the case that poverty is higher among agricultural households compared to those who diversify out of agriculture. In Najaf and Erbil, for instance, headcount rates among diversified households are almost twice those of households solely in agriculture. In contrast, in Basra, half of the households completely dependent on agriculture are poor, relative to a fifth of diversified households. It is also striking that almost without exception, overall rural poverty declined in governorates where the welfare of diversified households and non-agricultural households improved; while rural poverty increased when that was not the case (Table A 7.5).

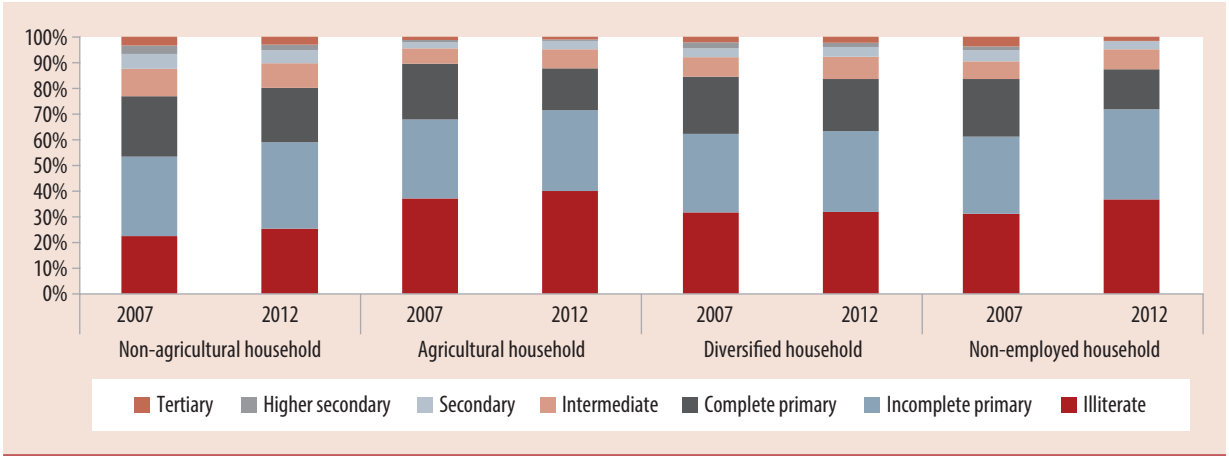
Overall, within the 2007 to 2012 period, there appears to have been a shift in rural households away from agriculture. At the same time, poverty rates fell sharply (almost halved) among diversified households, while there was little change in the welfare of other types of households. Looking across Iraq, these patterns and trends mask significant variation: in the Centre for example, poverty declined among all rural households; while in the South the opposite was true, and especially for agricultural households. Next, we try to understand the factors behind some of these changes to the extent possible.

Human Capital: Education

Perhaps the patterns and trends in poverty are simply representing differences in the human capital endowments of these households. In other words, perhaps households dependent on agriculture are poorer because they are less educated; and the improvement in welfare among diversified households represents a shift in the composition of these households towards higher education. Among rural households, it does appear to be the case that agricultural households have on average lower education levels, with almost 90 percent having primary education or less (Figure 182). On the other hand, diversified households have relatively higher levels of education than agriculture households but lower than non-agriculture households. However, there does not appear to be a significant improvement in education levels among diversified households between 2007 and 2012.

Just as the overall picture on poverty and the role of agriculture in the rural economy hides significant spatial variation, so does education, with relatively better and improving education in Kurdistan, and with the lowest education levels in the South. In Kurdistan, there has been a significant improvement in the education levels of all types of rural households between 2007 and 2012, with shifts from primary education or less to intermediate education and higher. Among agricultural households in rural Kurdistan, the share of individuals with primary education or less was 82 percent in 2012, a decline of 8 percentage points since 2007, while in the other divisions, there has been little change. Rural agricultural households in the South have the lowest levels of education, with 50 percent of individuals illiterate, and another 30 percent with incomplete primary schooling in 2012. Thus, in the South, the increases in poverty among all types of rural households appear to be unrelated to changes in education.

FIGURE 182: Educational Attainment of Different Types of Rural Households, 2007 and 2012



Source: Authors' calculations, IHSES 2007 and 2012.

Sector of employment

Next, we turn to the sectors of employment among the rural individuals, and in particular, among diversified households, to understand whether non-farm diversification was concentrated in certain sectors. Among all rural employed individuals, the share working in agriculture fell from 44 percent to around a quarter between 2007 and 2012 (Table 36). This was compensated by an increase in employment in manufacturing, construction, financial, insurance and professional services and other services. In general, individuals from poor and non-poor households followed the same pattern. However, construction absorbed relatively more workers among the poor while financial, insurance and professional services absorbed more among non-poor households.

The share of agriculture in employment among individuals belonging to rural diversified households remained relatively steady at a little above 50 percent. Individuals belonging to poor diversified households were similar to other rural poor in that the relative importance of manufacturing and financial services in employment went up. In contrast, they were less likely to work in construction which is significantly correlated with higher poverty. In fact, the share of construction in employment among these diversified households declined. The difference in sectors of employment between poor and non-poor diversified households appears primarily to be in a greater dependence on manufacturing and construction among the poor, compared to public administration, financial, insurance and other services, and commerce and retail among the non-poor. This is in line with the strengthened association between public sector employment and lower poverty in rural areas in 2012 in the probit regressions discussed earlier in the chapter.

In order to identify the role of different potentially correlated characteristics in predicting diversification or dependence on agriculture, we model first, the decision of individuals of choosing among sectors of employment; and second, the household's occupation type. Both models are conditioned on a range of individual and household characteristics and are estimated for 2007 and 2012. The sample is restricted to rural areas in all governorates excluding Baghdad (given its small rural sample).

The results in the Annex (Table 7.6a and 7.6b and 7.7a and 7.7b) are reported as relative risk ratios, i.e., for a unit change in the characteristic or predictor variable (such as age), by how much the relative risk of being in a certain category (for example, being a diversified household), relative to the reference group (agricultural household) is expected to change given all other characteristics are held constant.

TABLE 36: Sectors of Employment Individual in Rural Areas, 2007 and 2012

	Share of poor rural employed individuals			Share of poor rural employed individuals (diversified households)			Share of non-poor rural employed individuals (diversified households)		
	2007	2012	Difference	2007	2012	Difference	2007	2012	Difference
Agriculture & fishing	50.14	32.46	–17.68	55.79	53.02	–2.77	55.22	52.23	–2.99
Mining & quarrying	0.20	0.42	0.22	0.26	0.02	–0.24	0.26	0.42	0.16
Manufacturing	3.35	6.06	2.71	3.51	7.98	4.47	1.94	4.69	2.75
Utilities	0.85	1.74	0.89	0.41	0.93	0.52	0.87	1.09	0.22
Construction	16.51	21.89	5.38	15.88	14.09	–1.79	11.91	9.83	–2.08
Commerce and retail	4.02	5.95	1.93	2.84	2.46	–0.38	4.87	4.99	0.12
Transport, storage &	7.64	8.74	1.10	6.78	5.45	–1.33	5.31	6.25	0.94
Financial, insurance	3.12	8.45	5.33	1.89	7.39	5.50	3.40	9.38	5.98
Public administration	11.47	8.86	–2.61	10.85	6.04	–4.81	12.48	8.54	–3.94
Other services	1.53	5.43	3.90	1.79	2.62	0.83	3.72	2.57	–1.15

Source: Authors' calculations, IHSES 2007 and 2012.

Thus, a relative risk ratio of 1 implies that a unit increase in the characteristic increases the likelihood of being in the category by the same amount as of being in the reference category. Similarly, a relative risk ratio greater than 1 implies that for example, a unit increase in education increases the probability of being a diversified household relative to an agricultural household, and vice versa for a ratio less than 1.

The first model (Tables A 7.6a and A 7.6b) predicts the decision of the employed individual among different economic sectors conditioned on individual characteristics including age, education, gender and on household size and demographics, as well as household characteristics such as per capita land owned, cultivated and per capita public and private transfers.[52] The reference or base category is agricultural employment.

The results suggest that agriculture is more likely to be the occupation for young females in rural areas, with low educational attainment, and who belong to the households with large dependency ratios. Individuals belonging to a household with a larger number of children have higher odds of being engaged in agriculture relative to any other sector in 2007 and in 2012; while age reduces the risk of being engaged in agriculture relative to other sectors. Being male vastly increases the odds of employment in each sector relative to agriculture, especially in construction, transport, storage and communication, and other services.[53] Education significantly raises the odds of employment in every sector relative to agriculture; but especially in manufacturing, finance and public administration. Having higher per capita cultivated area in Kurdistan especially increases the odds of being employed in agriculture relative to all other sectors.

The second model (Tables A 7.7a and A 7.7b) predicts whether a household is non-agricultural, diversified, agricultural or non-employed based on several household head and household characteristics. The reference or base category is households where all members are employed in agriculture.

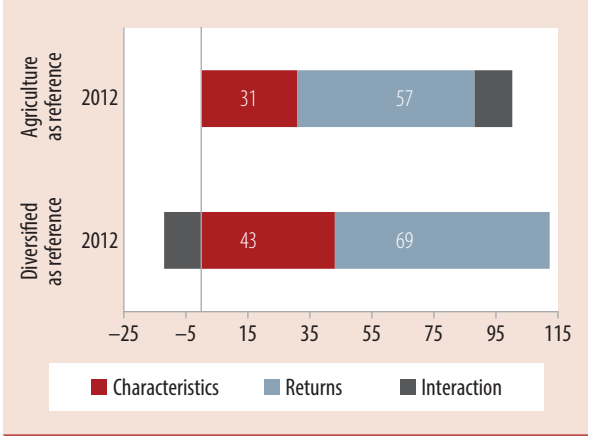
There appears to have been a shift in the effect of the demographic composition of different types

[52] Mining and quarrying and utilities are excluded as they are very small

[53] The large increase in the male coefficient on finance, insurance and professional services in 2012 is in line with the significant increase in male employment in this sector.

between 2007 and 2012. In 2007, an increase in household size raised the odds of a rural household being non-agricultural or diversified while an increase in the number of dependent members lowered the relative odds; by 2012, this relationship had been weakened. An increase in the educational attainment of the household head significantly increases the relative likelihood that a household would be non-agricultural rather than agricultural. While in 2007, having higher secondary and tertiary education for the head of household were the only education levels that distinctly increased the odds of diversification, in 2012, having primary and incomplete primary education also have the same effect. As with the individual level regressions, larger cultivated land per capita in Kurdistan appears to increase the relative likelihood of being agricultural households.

FIGURE 183: Decomposing Differences in Headcount Rates between Agriculture and Diversified Households – 2012



Source: Authors' calculations, IHSES 2012.

What Explains the Lower Poverty Rates of Diversified Households?

Starting from a situation in 2007 where diversified rural households experienced almost 10 percentage points higher poverty rates compared to households completely dependent on agriculture, by 2012, headcount rates among diversified households had halved while agricultural households remained at the same poverty levels. This differential pattern over the 2007 to 2012 period could be explained by differences in the endowments or characteristics of these types of households, or may be attributable to other factors. We again use the Oaxaca-Blinder decomposition method to explain the poverty headcount difference between agriculture and diversified households in 2012.

The results show that the primary reason why agriculture households are poorer than diversified households is largely explained by differences in the coefficients and not attributable to differences in characteristics (Figure 183). We find that only one-third of the difference in poverty among these types of households is explained by their characteristics in 2012. These results do not vary significantly if we change the reference category.

One reason why agricultural and diversified households may have different coefficients on similar levels of characteristics is that diversified households are engaged in different sectors of employment and these may be associated with different returns on the labor market. While we cannot directly introduce employment sectors in the regression models and the decomposition above, the coefficients associated with households or individual characteristics may change due to the indirect effects of changes in diversification sectors and the associated earnings. There is some evidence from descriptive data that this is the case. Table 37 focuses on the main employment sectors for individuals belonging to non-poor diversified households in rural areas. In terms of the non-agricultural employment sectors, there is a marked shift towards manufacturing and financial, insurance and professional services (an increase of 5.5 and 12 percentage points respectively); and a lower dependence on construction and public administration (a decline of 6 and 10 percentage points respectively) as sources of employment. The sectors into which the non-poor have moved, manufacturing and financial, insurance and professional services, have both been associated with a large increase in per capita labor earnings, 78 percent in the former and 68 percent in the latter. At the same time, earnings have increased

TABLE 37: Changes in Non-Agricultural Employment and Labor Earnings for Non-Poor Rural Diversified Households, 2007 and 2012

	Non-agricultural employment share		Median per capita labor earnings		Employment sector, change (Percentage point)	Earnings, change (Percent)
	2007	2012	2007	2012		
Manufacturing	4.34	9.82	63.9	113.7	5.48	77.84
Construction	26.59	20.57	125.1	121.7	–6.02	–2.66
Commerce and retail	10.87	10.44	105.5	125.1	–0.43	18.54
Transport, storage & communication	12.00	13.09	106.2	107.0	1.22	0.78
Financial, insurance & professional	7.60	19.64	79.5	133.6	12.04	67.99
Public administration, health & education	27.88	17.88	122.9	129.5	–10.00	5.43
Other services	8.31	5.39	85.5	109.3	–2.92	27.89

in almost every other non-agricultural sector. These patterns suggest that among diversified households, non-poor households were increasingly likely to be employed in certain sectors that were associated with higher earnings.[54] This in turn may well be evident in the magnitude and signs of coefficients on characteristics that predict poverty in the decomposition exercise.

To conclude, the labor market for the poor looks significantly different from that facing the non-poor in Iraq, and it varies considerably across rural and urban areas. Poverty is not only correlated with lower rates of employment and labor force participation, but also with important differences in the types of economic activities. These differences are compounded by lower levels of human capital and by urban-rural differences. Comparing urban and rural households, not only are the characteristics of rural households starkly different—larger household sizes and lower educational attainment, for instance—, but even for the same characteristics, poverty rates are much higher for rural households. This 'characteristic deficit' is accompanied by differences in the types of economic activity that rural and urban households are engaged in and how these are related to welfare. In urban areas, public sector employment is associated with lower poverty and correlated with higher labor earnings. Increases in public transfers, especially pensions, in urban areas have also perhaps led to some limited welfare improvements.[55] But the largest section of the urban poor belong to the private sector, and here, the sectors where the poor work have seen an increase in head count rates; counteracted by the move of some poor urban household heads from private sector employment to public sector work, which has been associated with higher earnings.

While urban households as a whole have experienced limited welfare gains, rural poverty reduction has been more marked, and has been driven by a significant welfare improvement among households where individuals are employed in agriculture as well as in other types of economic activity. In contrast, households that are wholly dependent on agriculture have seen little welfare improvements. Here spatial differences are again salient: in some parts

[54] A similar comparison for poor rural diversified households also shows a shift towards manufacturing and financial, insurance and professional services which is associated with higher earnings. The difference between the poor and the non-poor within diversified households appears to be a greater dependence on construction and lower earnings within each employment sector, which are likely associated with differences in characteristics between these households.

[55] We take up the role of public and private transfers in greater detail in the next chapter.

of the country, people are leaving agriculture and being absorbed into other sectors, and diversification is associated with better returns. In other parts of the nation, notably the South, poverty has increased especially among those who have not diversified outside of agriculture, while at the same time, employment in agriculture is declining along with male labor force participation. It appears as though the local labor market is barely creating adequate opportunities for diversification in the South, as even diversified and non-agricultural households continue to face high rates of poverty.