

DISCUSSION PAPER SERIES

IZA DP No. 14597

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Recent Trends**

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ABSTRACT

Poverty and Inequality in Tunisia: Recent Trends*

Tunisia's reforms and agile shift to a more democratic political system since a major political revolution in 2011 has not prevented continued and rising citizen discontent. While this paper does not directly analyze this vexing problem, it assesses welfare indicators and labor markets nationally, regionally, and across different population groups—such as women and youth—over the last two decades. The paper shows that while Tunisia has significantly reduced poverty between 2000 and 2019, the profile of the poor has not changed much: poverty remains concentrated in rural and western regions, mainly among households with younger men without education and headed by someone working in low-productivity sectors such as agriculture and construction. Moreover, the share of the vulnerable Tunisian population at risk of falling into poverty is quite large, especially after the COVID-19 pandemic, even though poverty had been declining over the past two decades. Non-monetary dimensions of well-being, such as access to basic services, are also unevenly distributed across regions and population groups. COVID-19 has further aggravated these disparities and is reversing Tunisia's poverty reduction gains. The paper sheds light into the issues that require policy attention on poverty.

JEL Classification: J31, F16

Keywords: poverty, inequality, Tunisia

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1. Introduction

Tunisia has made significant progress towards a more democratic political system and society since the 2011 revolution. The country adopted a new constitution in 2014 and has held two democratic elections in 2014 and 2019. Meanwhile, the country continues to build its new constitutional institutions in the difficult economic and political context aggravated by the COVID-19 health crisis. Tunisia has enacted some key reforms, laws, and regulations, including measures to enhance the freedom of the press and of free association, ease restrictions on civil society and other organizations, and to improve economic governance, transparency, and access to information. Following through on implementation in some of these areas has been slow, however.

At the same time, Tunisian citizens' frustrations have heightened during the last two decades as their aspirations remain unfulfilled, and Tunisian's trust in state institutions is low. According to Arab Barometer (AB) survey estimates, citizens' evaluation of Government's performance on economic issues suffered a major setback since the revolution. Nearly 50 percent of Tunisian respondents rated the current Government's performance in creating employment and in narrowing the gap between rich and poor as "very poor" in 2019, in contrast to only 20 percent in 2011. Some natural questions this raises are:

- Why are Tunisians so unhappy?
- To what extent is their dissatisfaction linked to changes in living conditions?
- Are we able to connect these events to changes in indicators of well-being, particularly poverty and inequality in their various forms?

The objective of this paper is not to provide precise answers to these questions but only to describe consumption distribution trends and the profile of the poor in Tunisia. This paper updates our understanding of welfare, poverty, and inequality in Tunisia by shedding light on the current situation as well as Tunisian population trends. This includes a demographic and economic profile of the poor population and how it compares to that of the non-poor. Poverty in Tunisia had declined before COVID-19, while vulnerability and inequality persisted. This paper provides a comprehensive look at the extent, nature, and drivers of welfare and inequality in Tunisia, and discusses how some dimensions of inequality, such as inequitable access to services, undermine development goals. Our analysis aims to shed light on the causes of lingering Tunisian discontent by unraveling poverty and inequality dynamics over the last two decades.

We rely on multiple sources of data for this analysis. We conduct the welfare analysis using several rounds of national household survey, or *Enquête Nationale sur le Budget, la Consommation et le Niveau de Vie des Ménages* (EBCNV), between 2000 and 2015. The National Institute of Statistics in Tunisia (INS) carries out the EBCNV every five years. The six preceding surveys were carried out in 1968, 1975, 1980, 1985, 1990, and in 1995. These surveys—coinciding with preparatory work for Tunisia's Development Plans—collect household budget, expenditure, consumption, and standard-of-living data, including on food consumption and the nutritional situation and access to community health and education services. We complement the analysis with more recent panel household survey for the years 2018 and 2019. Unlike household budget surveys until 2015, the latest two rounds do

not capture consumption or income data, hence we use an imputation model and EBCNV 2015 data to impute household expenditure and estimate poverty for 2018 and 2019. These estimates for the years 2018 and 2019 are presented for comparison purposes.

The paper is organized as follows: Section 2 presents recent trends in poverty, inequality, vulnerability and non-monetary indicators in Tunisia in the last two decades at the national and spatial level. Section 3 analyzes the profile of the poor across demographic dimensions. Section 4 highlights the repercussions of COVID-19 on welfare. Section 4 summarizes and concludes.

2. Welfare Indicators: Recent Trends and Drivers

Poverty has declined but the pace of reduction has slowed over time

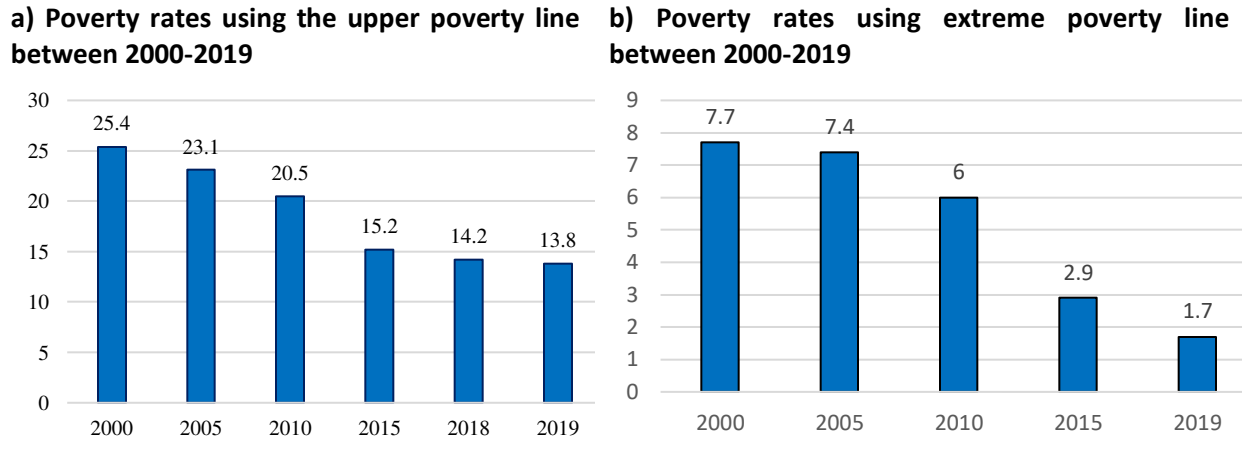
Tunisia has significantly reduced poverty, which consistently declined between 2000-2019. The national poverty rate² fell from 25.4 percent to 15.2 percent—about 1.6 million individuals—between 2000 and 2015. Extreme poverty, according to national standards, declined from 7.7 percent of the population to 2.9 percent during the same period (Figure 1a). Poverty decline was not uniform during this period; poverty declined only modestly despite relatively high growth of 4.3 percent during the pre-revolutionary decade between 2000 and 2010. It is interesting to note that extreme poverty remained fairly high until 2010, reflecting the failure of social programs to reach the poorest. During the 2010-2015 period, and despite low average annual growth of 1.8 percent, poverty fell sharply from 20 to 15 percent, then further to 14.2 percent in 2018 and 13.8 percent in 2019.

However, the pace of poverty reduction slowed between 2015 and 2019. In the post-revolutionary decade, poverty estimated using the upper poverty line³ declined by nearly 5.2 percentage points between 2010 and 2015, representing a decline of about 25 percent, but the rate of reduction slowed between 2015 and 2019. During this period, the poverty rate, again measured using the upper poverty line, declined by 1.4 percentage points, representing only a 9 percent decline in poverty rates.

² The extreme and upper official poverty lines are estimated by INS using the cost of basic needs (CBN) approach. Using this methodology, the poverty line is set at 683 TND per year in 2000, 897 TND per year in 2005, 1206 TND per year in 2010, and 1706 TND per year in 2015. Note that the official extreme poverty lines stood at 418 TND per year in 2000, 546 TND per year in 2005, 733 TND per year in 2010, and 1032 TND per year in 2015. The official poverty lines are defined for large cities, other urban areas, and rural areas separately. The lines are lower for rural areas, as expected.

³ In addition to the \$1.90-per-day international poverty line (also referred as extreme poverty line), the World Bank measures the \$5.50 poverty line for upper-middle-income countries.

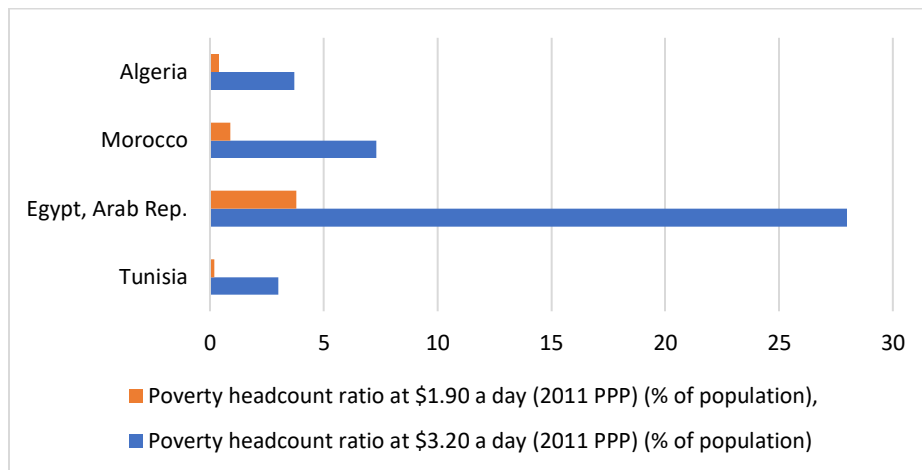
Figure 1: Poverty rates using the upper and extreme poverty line



Source: Calculations using EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015

Tunisia has one of the lowest poverty rates compared to other MENA countries. According to the latest estimates from the World Bank, only 0.2 percentage of the population lives on less than \$1.90 a day at 2011 international prices. This is lower than other countries such as Egypt where the latest data suggest that about 3.8 percent of the people live below \$1.90 a day, and Morocco and Algeria where 0.9 percent and 0.4 percent live below \$1.90 a day, respectively. This is consistent when poverty rates are defined as percent of population living on \$3.20 per day (Figure 2).

Figure 2: Comparison of Poverty headcount ratio at \$1.90 and \$3.20 a day (2011 PPP) (% of population), by country

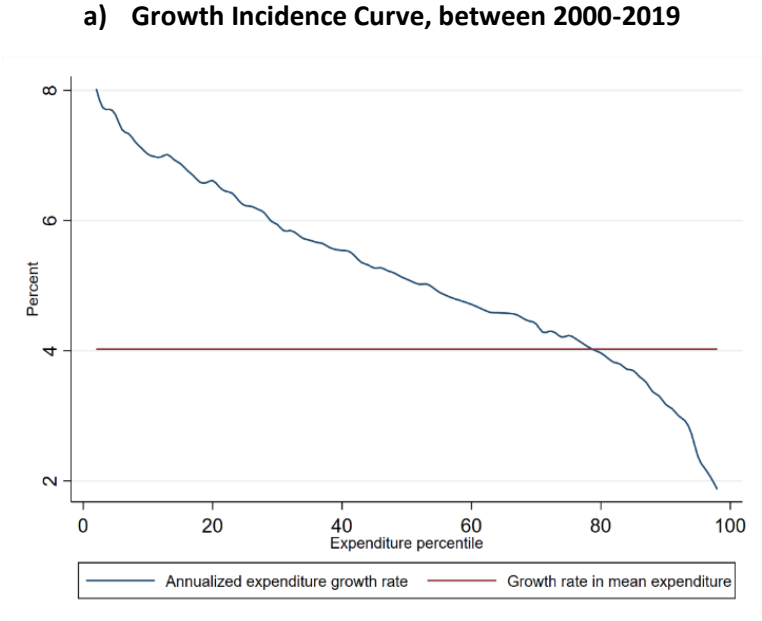


Source: World Development Indicators

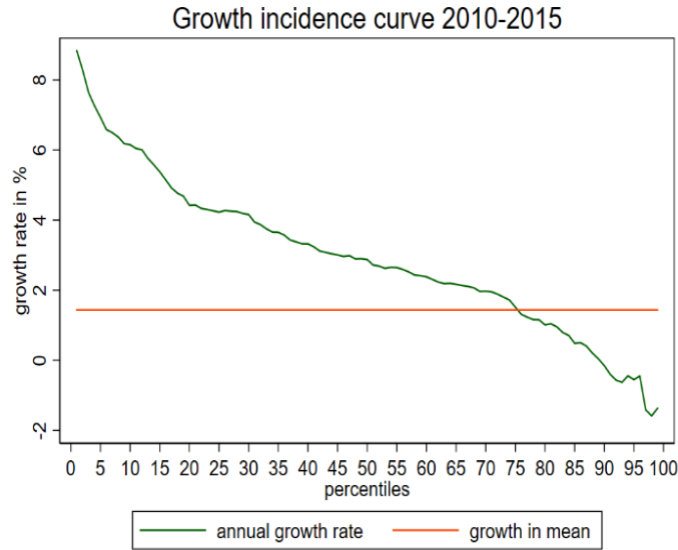
Note: Data reported for latest years available for countries. Poverty headcount ratio at \$1.90 a day is the percentage of the population living on less than \$1.90 a day at 2011 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.

Consumption growth between 2000 and 2019 has been largely “pro-poor”. The poverty reduction trend in Tunisia seems to be a function of the high level of growth before the 2011 revolution. Meanwhile, while inequality has declined, it remains fairly high as measured by the Gini index of around 0.33 in 2019 compared to 0.40 in 2000. Figure 3 demonstrates that the consumption growth rate is decreasing as a function of consumption percentiles; that is, the richer an individual is, the less their consumption has increased over time. The same conclusion can be drawn for the period 2010-2015, even though the rate of economic growth slowed compared to previous years: annual GDP growth averaged 1.8 percent between 2011-18 compared to 4.3 percent during 2000-2010. Nevertheless, we cannot draw the same firm conclusion about growth being pro-poor for the 2000-2005 period. The lowest quintile—that is, the poorest 10 percent of the population—benefitted less than the rest of the population during this period, while those in the 20-40th quintiles and the richest 10 percent enjoyed large increases in consumption between 2000-05.

Figure 3: Growth Incidence Curves



b) Growth Incidence Curve, 2010-2015

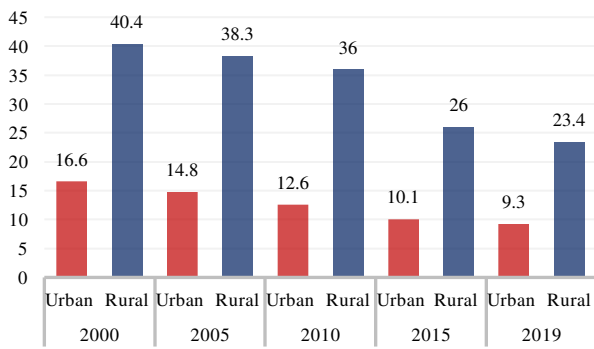


Source: Calculations using EBCNV 2000, EBCNV 2005, EBCNV 2015.

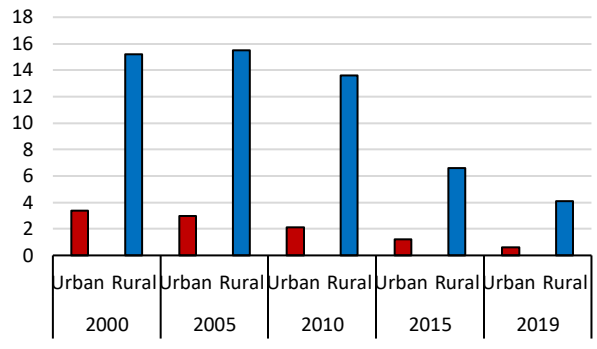
Although poverty remains large in rural areas, poverty rate gaps between rural and urban areas have narrowed since 2010. In 2010, around 36 percent of the rural population lived in poverty, and 13.6 percent lived in extreme poverty. Poverty and extreme poverty rates in rural areas decreased to 23.4 and 4.1 percent in 2019. While rural poverty remains a significant problem, gaps between rural and urban areas have been closing throughout the last decade. Differences in rural and urban poverty rates between 2010 and 2019 decreased from 23.5 to 14.1 percentage points, while differences in extreme poverty rates closed from 11.5 to 3.5 percentage points.

Figure 4: Poverty rates using the upper and extreme poverty line, Urban/Rural

a) Poverty rates using the upper poverty line, Urban/Rural, between 2000-2019



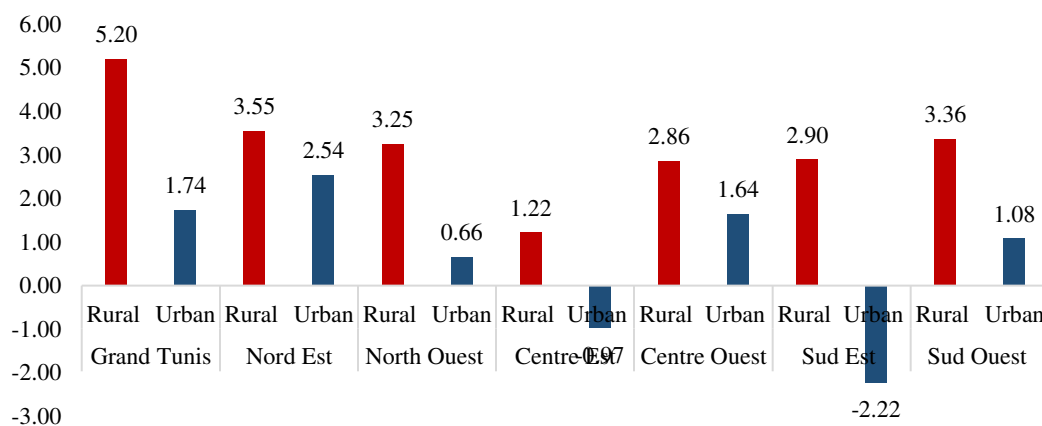
b) Poverty rates using extreme poverty line, Urban/Rural between 2000-2019



Source: Calculations using EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015, EBCNV 2019

Across geographic regions, rural areas had a higher rate of consumption growth than urban areas, contributing significantly to poverty reduction between 2010 and 2015. Figure 5 shows the growth rate in average consumption between 2010 and 2015 by location and across regions. Across rural areas, the biggest gains in average consumption have been in Grand Tunis, followed by the North-East and South-West. In Eastern regions, the growth rate in average consumption is positive in rural areas at 1.22 percent in the Center-East and 2.90 percent in South East, in comparison to a contraction of growth in urban areas of -0.97 percent in the Center-East and -2.22 percent in South East.

Figure 5: Average consumption growth, 2010-2015, by location and region



Source: Calculations using EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015

Some other factors also help explain the massive poverty reduction in Tunisia between 2010 and 2015. Specifically, the decline in poverty in this period correspond with, for instance, the significant scale-up of cash transfer programs for needy families, or *Programme National d'Aide aux Familles Nécessiteuses* (PNAFN); the annual budget for cash transfers increased from 100 to 315 million dinars from 2010 to 2014, and cash transfers reached 130,000 households in 2010 compared to 220,000 in 2014 (MAS Indicateurs Sociaux, 2020). Another potential reason could be the massive public sector hiring in the aftermath of the revolution between 2011 and 2013. It is also possible that regularization of temporary workers and significant increases in their wages also helped reduce poverty, but data availability is insufficient to prove this. It is important to highlight the difficulty of pinpointing the factors that have reduced poverty in Tunisia since we do not have population income data but only consumption data.

Vulnerability continues to be high as many of the non-poor remain at risk of falling into poverty

While poverty declined in Tunisia between 2000 and 2015, many that escaped poverty remain vulnerable to falling back into it. We use the methodology in Atamanov and Lopez-Acevedo (2018) to examine vulnerability in Tunisia between 2000 and 2015. Using this methodology,⁴ the poverty and vulnerability lines in 2015 defined below are 2.7 dinars per day and 6.1 dinars per day, respectively, which

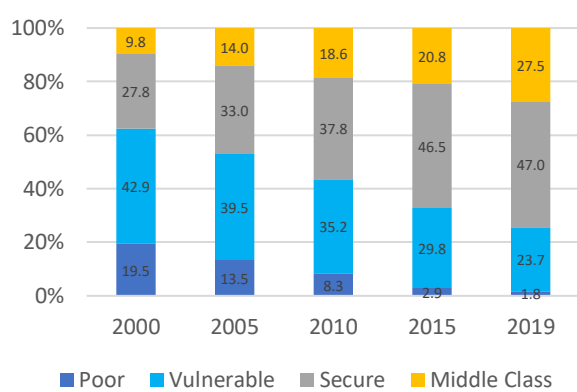
⁴ The population with consumption per capita below US\$3.4 2011 PPP per day per capita is defined as poor. The population with consumption per capita between US\$3.4-US\$7.7 2011 PPP per day can be defined as vulnerable. The population with consumption per capita between US\$7.7-US\$15.8 2011 PPP per day can be defined as secure. And the population with consumption above US\$15.8 2011 PPP per day belongs to the middle class.

translates into 986 dinars per year and 2,227 dinars per year. Note that the official extreme and upper poverty lines stood at 1,035 dinars per year and 1,706 dinars per year in 2015 respectively.

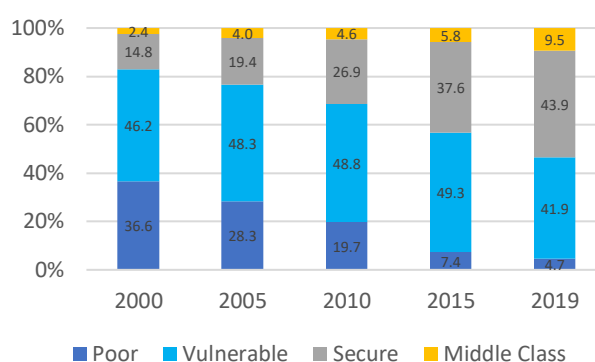
A considerable share of the rural population remains vulnerable to falling back into poverty. Only 1.8 percent of the population was considered poor in 2019 but 24 percent remains vulnerable to falling back into poverty (Figure 6a). Despite the population moving out of poverty and vulnerability into more secure subgroups, geographical disparities are important as 42 percent of rural residents were vulnerable in 2019 compared to 15 percent of urban residents. In fact, the share of rural residents that are vulnerable did not decline much over time between 2000 and 2019 (Figure 6b).

Figure 6: Overview of Vulnerability in Tunisia

a) Population shares, by groups, 2000-2019



b) Rural population shares, by groups, 2000-2019



Source: Calculations using EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015

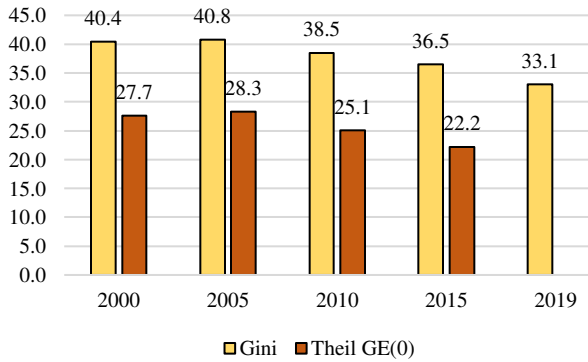
Spatial disparities persist among regions

Relative inequality—measured in terms of Gini and Theil indexes⁵—also declined modestly between 2005 and 2010, but declined more significantly between the 2010-2015 and 2015-2019 periods. Thorough examination of inequality trends in Tunisia shows slight improvement, particularly from 2005 onwards. The Gini index fell from 0.4 in 2000 to 0.37 in 2015, and further to 0.33 in 2019 (Figure 7a). Considerable disparities exist in both urban and rural areas. Urban areas registered a higher Gini coefficient of 0.35 while those in rural areas stood at 0.32 in 2015, while the gap between urban and rural Gini coefficients narrowed between 2015 and 2019 from 3.1 to 1.5 percentage points.

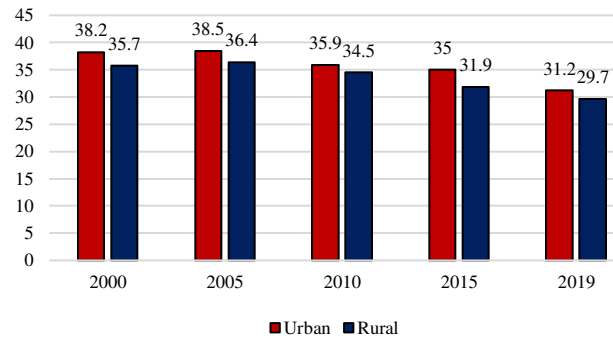
⁵ The Gini and Theil indexes are a measure of inequality of the income distribution. They are expressed as ratios with values between 0 and 1, where 0 corresponds to perfect income equality and 1 corresponds to perfect income inequality.

Figure 7: Trends in Inequality, by year and location

a) Gini and Theil Index (as percentage), between 2000-2019



b) Gini, by Rural/Urban (as percentage), 2000-2019

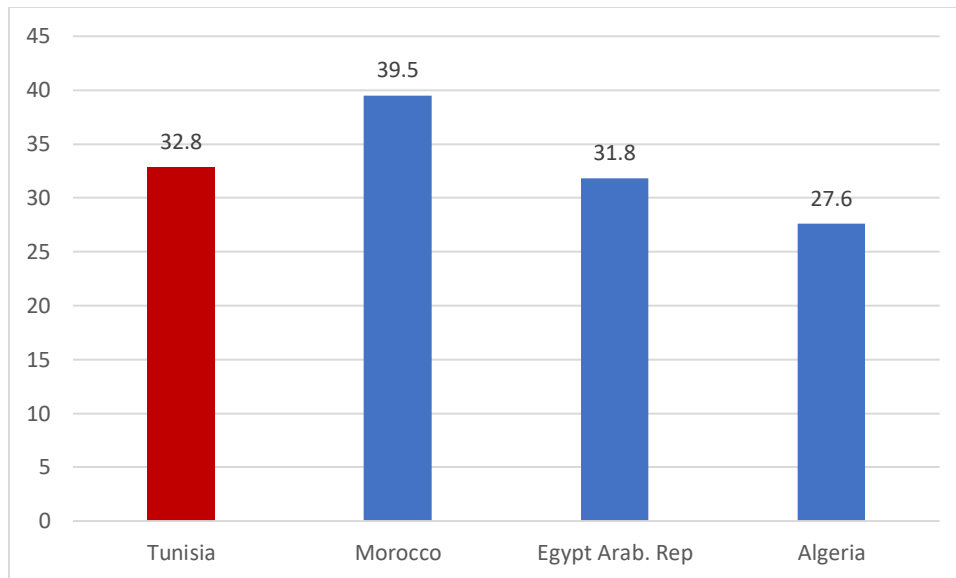


Source: Calculations using EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015

Note: Theil Index for 2019 has not been calculated.

Inequality, measured by the Gini index, in Tunisia remains comparable to other countries in the region. According to the latest estimates from the World Bank, Gini is estimated to be 32.8 in Tunisia in 2015. This is lower than other countries such as Morocco where latest data suggest estimates Gini to be as high as 39.5 in 2013, but higher than other countries such as Egypt and Algeria (Figure 8).

Figure 8: Comparison of Gini index, by country



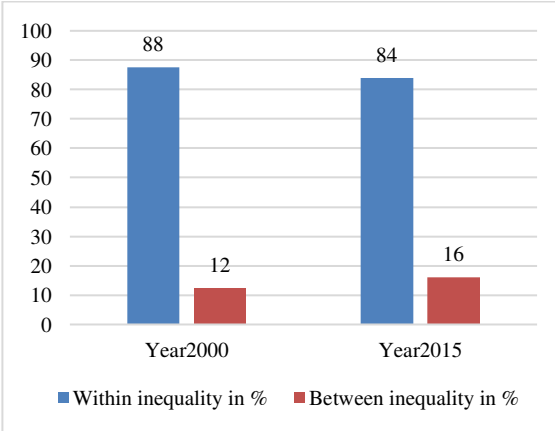
Source: World Development Indicators

Note: Data reported for latest years available for countries: Tunisia (Year 2015), Morocco (Year 2013), Egypt (Year 2017), and Algeria (2011). Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

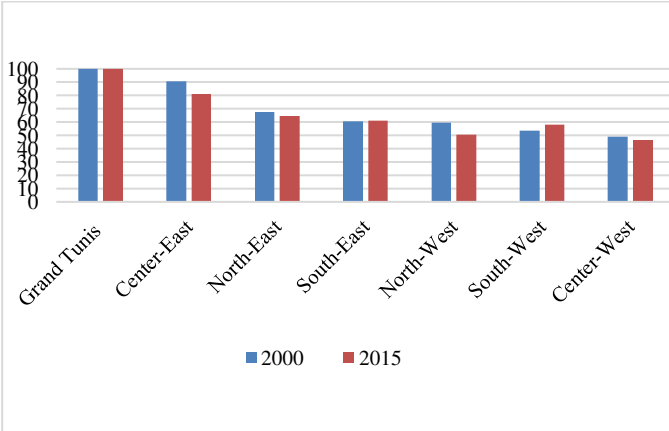
Reduction in inequality is associated with improvements *within* rather than *across* regions, and convergence among regions has disappointed. As shown in Figure 9a and 9b, convergence in standards of living among the regions is low as average consumption did not improve relative to the richest Grand Tunis region between 2000 and 2015. The level of consumption in the poorest Center-West region of the country was 46 percent that of Greater Tunis in 2015, compared with 49 percent in 2000. The contribution of inequalities across regions to total inequality increased significantly between 2000 and 2015.

Figure 9: Decomposition of Inequality

a) Contribution of within and across region inequality to overall inequality (2000 vs 2015)



b) Convergence in standard of living between the regions appears to be weak (2000 vs 2015)

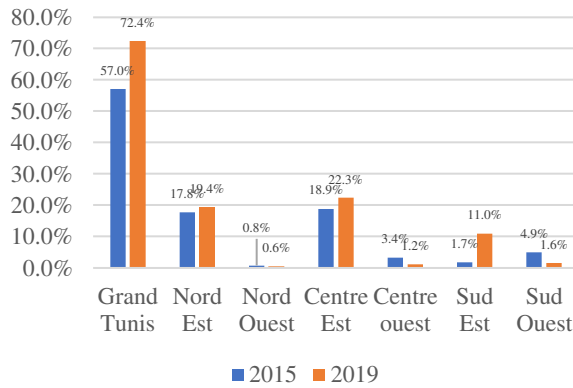


Source: Calculations using EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015

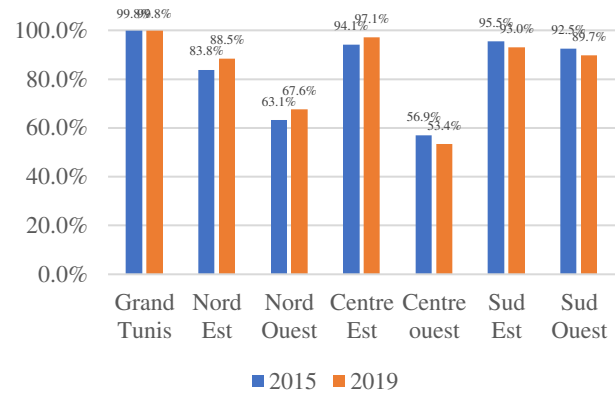
Access to basic services, such as sanitation and education, improved slightly across geographic regions in Tunisia between 2015 and 2019, but significant disparities among regions persist. Households in richer regions such as Grand Tunis have greater access to natural gas and drinking water facilities, in comparison to the lagging North West and Center-West. For example, 72 percent of households have access to natural gas in Grand Tunis in 2019 compared to merely 0.6 percent in the North West and 1.2 percent in the Center West regions (Figure 10a). Similarly, almost 100 percent of Grand Tunis households have access to drinking water facilities compared to only 68 percent in the North West and 53 percent in the Center-West regions (Figure 10b). Not surprisingly, these disparities are also prevalent in access to sanitation network connection across regions. However, access to all these services improved slightly nationally between 2015 and 2019.

Figure 10: Access to services at household level

a) Natural Gas (STEG)

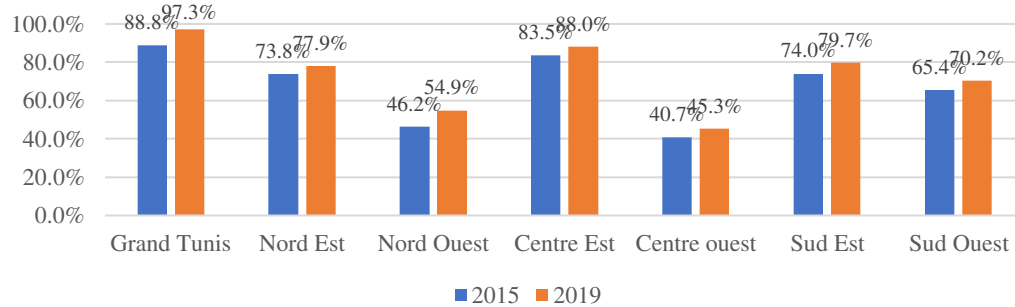


b) Drinking water central system (SONEDE)



Source: Calculations using EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015

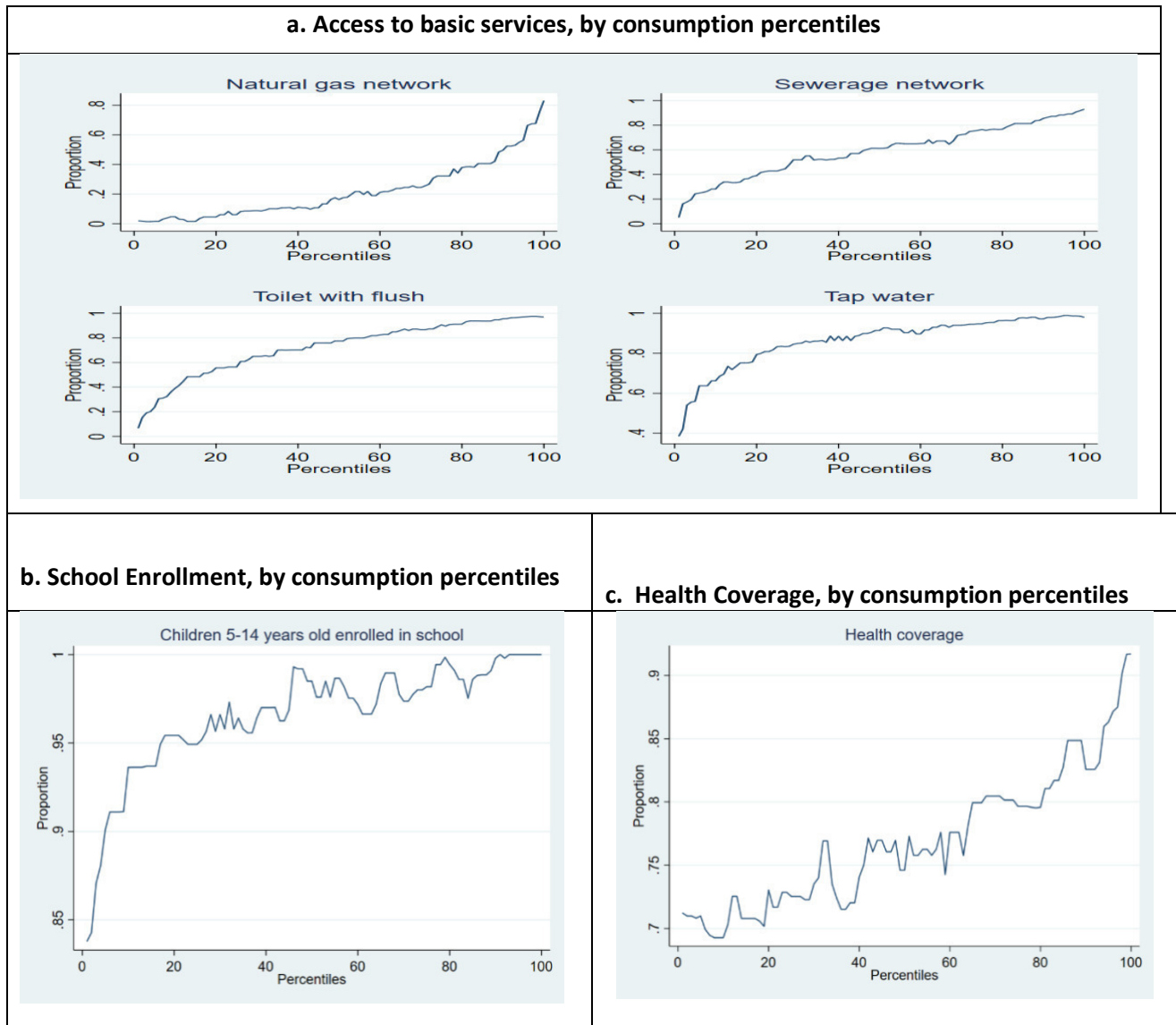
c) Sanitation network connection



The poorest Tunisian households continue to suffer from inequitable access to basic services. While access to basic services improved over time, access to water, sanitation, gas, and health insurance was still strongly determined by the standard of living in 2015 (Figure 11). Children living in the poorest households were less likely to attend school. This kind of deprivation decreases human capital accumulation of the youngest and reduces the possibilities of poor households to seize future economic opportunities (Figure 10).

Measuring services quality in Tunisia is difficult due to data limitations, but changes in some indicators, such as the Human Capital Index (HCI), suggest that basic services quality has decreased. In fact, in the last decade, all Maghreb countries have made progress on the HCI, but Tunisia has seen a slight decrease because of deterioration in education quality. Between 2012 and 2017, the HCI value for Tunisia decreased from 0.52 to 0.51. In 2017, Tunisia's HCI was lower than the average for its region. Children in Tunisia can expect to complete 10.2 years of preprimary, primary, and secondary school by age 18. However, when adjusting by the quality of learning, this is only equivalent to 6.3 years—resulting in a learning gap of 3.9 years.

Figure 11: Access to services, by consumption percentiles



3. A Profile of Poverty in Tunisia: Who Are the Poor?

Poverty profiles have not changed between 2000-2019 and poverty remains concentrated in certain groups.

The profile of the poor in Tunisia has not changed significantly between 2000 and 2019. In pre-revolution Tunisia, poverty status was positively correlated with factors such as household size, location, age, and level of educational attainment of the household head. In addition, workers living in poor households were often employed in low-quality jobs and in low-productivity sectors (World Bank, 2015). These profiles have remained unchanged in the post-revolution period. Households with higher poverty incidence rates continue to likely be headed by younger men without education, who live in rural areas,

and seeking work or working in agriculture or the construction sector. The poor are also likely to concentrate in larger families (see Annex A for the profile for both years 2015 and 2019).

Significant geographical disparity in welfare can be observed across Tunisia’s regions (Table 1). The Grand Tunis region, historically with the lowest levels of poverty, made the most rapid gains in poverty reduction since 2000. In contrast, the North and Center-West regions of the country, historically among the poorest, had the slowest pace of poverty reduction and continue to have the highest poverty rates. For example, the poverty rate of 30.8 percent in the historically poorest Center-West region was six times higher than the 5.3 percent in Tunis, and twice the 15.2 percent national rate in 2015. Overall, although all regions made poverty reduction progress, their relative positions have remained mostly unchanged.

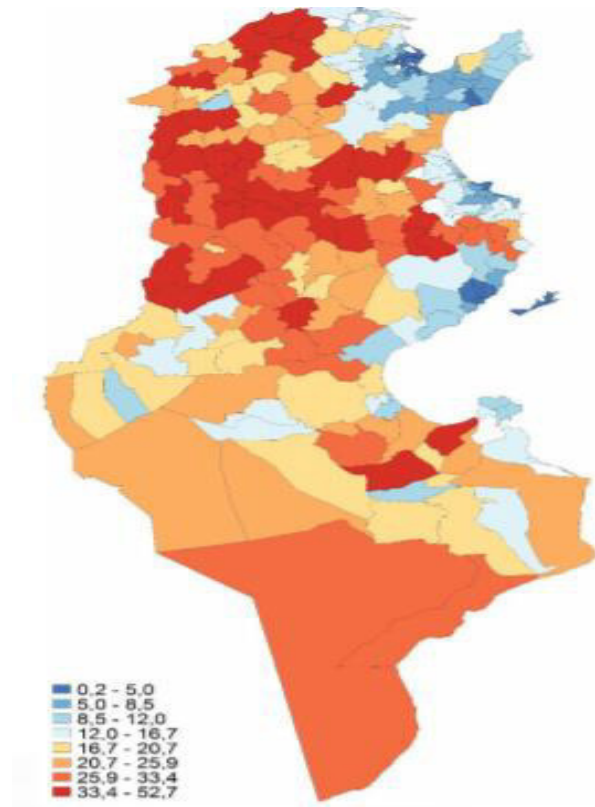
Table 1: Poverty trends by region (2000-2019)

	<i>Poverty Headcount Rate</i>					Relative change in %	Annualized change over 2000/19, %
	2000	2005	2010	2015	2019*		
	(1)	(2)	(3)	(4)	(5)	$[(4)-(1)]/(1)$	
Grand Tunis	13.7	12.3	11.1	5.3	5.0	-61	-5.4
Nord Est	23.9	21.8	15.2	11.6	12.6	-51	-3.4
Nord Ouest	32.9	29.6	36.2	28.4	22.0	-14	-2.1
Centre Est	14.3	12.5	11.6	11.5	9.6	-20	-2.1
Centre Ouest	44.1	49.7	42.3	30.8	36.9	-30	-0.9
Sud Est	32.9	24.5	20.7	18.6	21.3	-43	-2.3
Sud Ouest	38.3	32.3	25.9	17.6	17.1	-54	-4.3
Total	25.4	23.1	20.5	15.2	13.8	-40	-3.3

* Imputed values using EBCNV 2015 and household data collected by INS in 2019

Several pockets of poverty exist even within relatively prosperous areas (Figure 12), and Tunisia’s poverty map for 2015 shows wide heterogeneity in poverty rates within governorates. The three delegations with the highest poverty rates in Tunisia are all situated in central Tunisia. Hassi Ferid (53.5% of the population lives under the poverty line), Djedeliane (53.1%) and El Ayoun (50.1%) are the poorest Delegations in Center-West regions. Despite having an overall lower rate of poverty, some pockets of poverty also exist in certain rural areas in the North-East region, especially in the Governorate of Bizerte where the incidence of the highest poverty is observed in the delegation of Sedjnane (39.9%), followed by Djoumine (36.6%) and Ghezala (34%).

Figure (12): Poverty Map, 2015



Source: Source: National Office of Statistics of Tunisia⁶

In both 2015 and 2019, poverty concentrate among households with heads having no educational degree. Households headed by individuals with no education constitute nearly 22 percent of the population, and their relative contribution to the overall poor was nearly 35 percent in 2015. The 2019, trends are similar as households with higher incidence of structural or chronic poverty are uneducated.

Poverty status is strongly conditioned by the sector of employment of the household head for 2015 and 2019. Tunisians face a significantly higher risk of poverty if the head of the household works in agricultural or construction, both of which are characterized as low-wage, low-productivity sectors. This remained unchanged from 2015 to 2019, with chronic or structural poverty still concentrated in households headed by individuals working in agriculture and construction. On average, in the Delegations with the highest levels of socioeconomic vulnerabilities, around 32 percent of people work in agricultural activities, while in the less vulnerable areas, agricultural employment represented only 1.6 percent in 2015.

Poverty also concentrates in larger families. The highest rates are recorded in families of six or more people in 2015. This also suggests that the child poverty rate would be much higher than the national average, with consequences for children's future chances of seizing economic opportunities and human capital accumulation.

⁶ <http://ins.tn/en/publication/tunisia-poverty-map-septembre-2020>

4. COVID-19 Repercussions

The ongoing COVID-19 pandemic is reversing welfare gains in Tunisia and deepening disparities. Tunisia had its first confirmed case of COVID-19 on March 2nd, 2020, with the victim being a 40-year-old Tunisian man. Since that time, according to official estimates, the country has recorded 90,213 total COVID cases and 2,935 deaths. While spread of the disease slowing during summer, cases again started to spike in October. Rapid spread of COVID-19 in Tunisia and consequent containment measures are likely to increase poverty and inequality through four channels: reduced labor income, non-labor income, and consumption, as well as service disruption (World Bank, 2020). The Tunisian economy risks reversal of recent poverty reduction trends, with more people falling below the poverty line and an increase in the degree of poverty for the already poor (Global Economic Monitor, 2020).

Recent phone surveys provide further evidence of disproportionate negative COVID-19 effects on poor and vulnerable Tunisians. To monitor the socio-economic impact of COVID-19 on households, phone surveys with a panel of 1,369 Tunisian households were conducted in two rounds—between April 29th and May 8th and between May 15th and May 21st. The first round revealed that almost COVID-19 had affected two-thirds of households interviewed, either through rising food prices or through loss of employment. One-third of respondents feared not being able to afford food in the month prior to the survey. This concern was more evident for rural and poorer households. In addition, households seemed to have altered their eating patterns; poorer households were especially likely to have reduced food quantities consumed or started consuming foods that they do not normally like. To cope with rising food prices or make up for employment loss, more than 25 percent of households interviewed drew on their savings, 25 percent received help or borrowed money from relatives, and 15 percent deferred payment obligations. Most of those employed prior to COVID-19 reported loss of job as well as lower income. Indeed, only one-third of respondents who worked before confinement were able to continue their work. Among those who were out of work during the survey period, only 40 percent received all or part of their salary. Family-owned businesses also suffered significant challenges during the crisis.

During the second survey round, some households reported progress as the economy partially responded to food shortage challenges. Less than 40 percent of respondents said they had difficulty buying flour and semolina in the second round compared to 65 percent in the first round. In terms of educational outcomes, 61 percent of households with children said that their children did not participate in any learning activity during the week preceding the interview. Only 26 percent of households reported that their child or some other member of the household was in contact with teaching staff during the week preceding the interview. However, this proportion varied from 12 percent for the poorest quintile to 53 percent for the wealthiest. In terms of employment, 41 percent of second survey round respondents who were employed before confinement were not yet working—a 26 percentage point reduction relative to the pre-crisis period. Family businesses continued to be severely impacted by the crisis, with more than half of them having suffered either a drop or an interruption in income during the two weeks preceding the interview. Most of them (around 90 percent) said they had suffered as a result of the crisis either directly—because of company closure, for instance—or indirectly due to having no customers or due to poor transport of goods and raw materials.

Many international aid organizations and others operating in Tunisia have also conducted studies to evaluate COVID-19 poverty and welfare effects, with results all pointing to increasing poverty in Tunisia:

- **A UNDP study simulates a post-COVID scenario to estimate that household demand (except for food and hygiene goods) is only 40 percent compared to the baseline, pre-COVID scenario.** The scenario includes a decline in both supply and household demand for various basic goods. The study estimates that the poverty rate will rise to 19.2 percent from the current 15.2 percent, pulling an additional 475,000 Tunisians below the income poverty line. The estimated economic recession, with estimated growth contraction of 4.4 percent for 2020, will elevate multidimensional poverty (estimated using monetary approach) from 13.2 to 15.6 percent.
- **A UNICEF study showed that the confinement decree in Tunisia between the end of March and end of April 2020 led to a loss of 7 percent of household income.** UNICEF estimates that poverty increased over the period from 14 to 18.5 percent, creating nearly half a million new poor. Under these outcomes, poverty among children under age 18 would increase from 19 to 25 percent, representing an increase of nearly 900,000 poor children. The same study concludes that Government mitigation measures did not significantly counter the increase in poverty. Moreover, the study found that providing a universal allowance of 1 dinar per day (US\$0.37) for each child not covered by social security would reduce child poverty 5 percentage points.
- **Kokas et al. (2020) estimated that poverty will increase in Tunisia by 7.3 percentage to 11.9 percentage points.** The authors combined labor and price shocks to simulate the impact of COVID-19 on household welfare, looking at two scenarios: (i) *an optimistic scenario*, which uses recent World Bank estimates of 8.8 percent real GDP contraction at constant factor prices, and (ii) *a pessimistic scenario* with growth contracting 11.9 percent (the same growth as the first half of 2020). It draws on household phone surveys during COVID-19 by the National Institute of Statistics, in collaboration with the World Bank, as well as Tunisia's 2015 household budget survey. Their findings imply a more than 50 percent increase in poverty in the first scenario and an almost doubling of the poverty rate in the second—reversing the trend of declining poverty over the past decade. Additionally, more Tunisians are expected to lose income and become vulnerable to falling into poverty. The poverty gap (the ratio by which the mean income of the poor falls below the poverty line) would increase from 3.2 percent to 4.4 percent under the optimistic scenario and to 5 percent under the pessimistic scenario (Table 2).

Table 2: Projected impacts on Poverty and Inequality

	Pre-COVID19	Post-COVID19 Scenario 1	Difference Scenario 1	Post-COVID19 Scenario 2	Difference Scenario 2
Extreme poverty rate	2.9%	7.4%	4.5	11.8%	8.9
Extreme poverty gap	0.5%	0.8%	0.2	0.9%	0.3
Poverty rate	13.7%	20.9%	7.3	25.6%	11.9
Poverty gap	3.2%	4.4%	1.2	5.0%	1.8
Gini coefficient	37.2	39.4	2.2	41.4	4.2

Source: Author's calculations based on EBCNV 2015

Households with per capita consumption in the poorest 20 percent of the population—concentrated in Tunisia's Center-West and South-East regions—suffer the most. The most vulnerable individuals are likely to be women living in large households, without access to health care, and employed informally. In Tunisia, 53 percent of individuals who have fallen into poverty as a result of the pandemic, and 47 percent of the most vulnerable group, are likely to be employed informally.

The findings from these studies show that it is extremely important to ensure that economic growth initiatives going forward be inclusive and benefit the poor. It will be important to foster jobs as well as alternative livelihood opportunities in lagging regions. The additional shock introduced by COVID-19 is expected to increase Tunisia's poverty rate and inequality. This bunching of the population just above the poverty line means that many Tunisian households could fall back into poverty due to environmental or economic shocks. Thus, mechanisms to protect this large, vulnerable group should be a top priority.

5. Conclusions

The main objective of this paper is to profile poverty in Tunisia and to analyze poverty trends over the last two decades. Our aim is to better understand the current Tunisian socio-economic context and the growing discontent of the Tunisian population.

Importantly, our objective is not to propose specific policy interventions. This would require sectoral studies and richer data covering all dimensions of well-being. The profile presented in this paper only helps identify and shed light on the main challenges facing Tunisia in the fight against poverty.

We offer several main conclusions from our analysis:

Although Tunisia has significantly reduced poverty, the profile of the poor has not changed much. Poverty remains essentially rural and concentrated in the west of the country. Regional gaps in living standards have widened. The persistence of gaps between groups increases the perception of poverty and fuels the feeling of frustration even though poverty rates remain low compared to other MENA countries.

The share of the vulnerable Tunisian population at risk of falling into poverty remains quite large, even though it has continued to decline over the past two decades. Vulnerability creates a sense of insecurity and increases manifestations of discontent. It is difficult to speculate on the role of vulnerability in the

subjective perception of poverty, but our analysis suggests that it is important to study the profile of vulnerable populations and their aspirations and expectations in greater depth.

Non-monetary dimensions of well-being, such as access to basic services, are unevenly distributed across regions and population groups. These disparities influence individual perceptions of living conditions. Improving access to water and sanitation services and the spatial standardization of living conditions is one of the urgent challenges facing the country.

COVID-19 has had a strong influence on reversing Tunisia's poverty reduction achievements. The pandemic has set the country back to 2005. Tunisia is thus faced with the obligation to respond to the needs of its new poor—mainly groups of workers who have lost their jobs, and whose profile differs significantly from the structural poor—and the Government needs to continue efforts to meet the aspirations of the poorest.

Annex

Table 1A: Poverty Profiles, 2015

Age of HH Head	Pov rate	Pop share	Relative contribution
less than 34 years	16.3	5.5	5.9
35-54 years	18	50.5	59.9
55-64 years	11	24.6	17.9
65 & above	12.7	19.4	16.2
Education of HH Head	Pov rate	Pop share	Relative contribution
No education	23.4	22.4	34.6
Primary	19	38.5	48.3
Secondary	8.4	28.4	15.7
University	1.9	10.7	1.3
Gender of HH head	Pov rate	Pop share	Relative contribution
Male	15.5	88.6	90.7
Female	12.3	11.3	9.2
Head sector	Headcount	Pop share	Relative contribution
Agriculture	24.4	14	22.6
Manufacturing	10.1	12.3	8.2
Mining & energy	12.4	2.4	2
Construction	27.5	16.9	30.7
Commerce	12.3	12.3	9.9
IT & transport	7.8	7	3.6
Oth, Srv	8.7	3.6	2.1
Finance & insura	1	0.8	0.1
Real estate & oth	12.2	4.1	3.3
Pub, admin, & ed	8.2	19.2	10.3
Other	14.8	7.3	7.2
Occupation	Headcount	Pop share	Relative contribution
Executive & self-employed	3.3	13.6	3
Employee	13.1	14	12.1
Craft & small business	7.7	6.1	3.1
Non-agriculture worker	21.8	23.1	33.2
Agriculture worker & farmers	24.4	9.3	14.9
other non-active	21.9	19.4	28.1
retired	5.8	14.5	5.5
Marital Status of HH Head	Pov rate	Pop share	Relativecontri
Unmarried	12.3909	2.6	2.1268
Married	15.5809	87.314	89.8105
Widowed	12.4228	8.8232	7.236
Divorced	9.2793	1.2341	0.756
Health Coverage of HH Head	Pov rate	Pop share	Relativecontri
SS funds	9.6	68	43.2
Through tutor	14.8	4.3	4.2
Free health card	32.5	5.1	11
Subsidized health card	35	12.8	29.6
No	18.6	9.7	11.9

Table 2a. Structural poverty incidence over household groups

Variable	Non-poor, percent	Nonstructural poor, percent	Structural poor, percent
Household's head age group			
29 and younger	0.4	0.9	2.0
30 - 39	8.1	11.1	11.2
40 - 49	21.8	28.0	49.4
50 - 59	30.9	29.2	21.7
60 - 69	24.9	16.7	7.5
70 - 79	8.8	8.7	3.7
80 - 89	4.6	5.0	4.1
90 and older	0.5	0.4	0.4
Household's head gender			
masculin	86.6	88.76	95.2
feminin	13.4	11.24	4.8
Household's head education level			
neant	19.3	29.1	37.4
niveau primaire	37.5	49.0	49.1
niveau secondaire	31.1	19.7	13.4
niveau superieur	12.1	2.2	0.2
Household's head labour status			
occupe	61.7	66.8	68.3
chomeur	0.5	1.4	4.5
non-actif	37.8	31.8	27.2
Household's head sector of employment			
Agriculture	12.4	23.8	38.3
Industrie	17.3	12.0	6.3
Construction	11.8	22.5	33.2
Services	48.7	31.2	19.1
Other	9.9	10.5	3.1
Household's head marital status			
celibataire	1.9	1.3	0.3
marie	85.5	88.4	94.9
veuf	11.4	9.1	4.4
divorce	1.2	1.2	0.4
Living area			
Metropolitain	44.3	17.5	8.8
Communal	29.3	31.1	18.0
Non-communal	26.4	51.4	73.2

Source:
Forthcoming
(2020)

Note: The shares

are computed such that we have the distribution by variables inside each category (never poor, non-structurally/sometimes poor, and structurally/always poor).

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