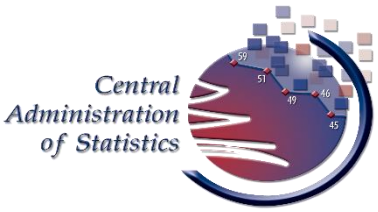

Lebanon

MULTIDIMENSIONAL POVERTY INDEX 2019

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Contents

Acknowledgement

This report was prepared by a joint team from the Lebanon Central Administration of Statistics (CAS) and the World Bank. The CAS team worked under the guidance of Dr. Maral Tutelian Guidanian (Director) and included Mayssaa Daher, Haifa Hussein, Amina Bassbouss and Ali Hamieh. The Work Bank team worked under the guidance of Johannes G. Hoogeveen (Practice Manager) and included Ganesh Seshan and Stefania Rodica Cnobloch.

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Acronyms and Abbreviations

AF	Alkire-Foster
CAS	Central Administration for Statistics
EDL	Electricité du Liban
EDZ	Electricité de Zahle
ESCWA	Economic Commission for Western Asia
HBS	Household Budget Survey
HH	Household
ICLS	International Conference of Labour Statisticians
ILO	International Labor Organization
LFHLCS	Labour Force and Household Living Conditions Survey
MENA	Middle East and North Africa
MPI	Multidimensional Poverty Index
NEET	Not in Employment, Education, or Training
OPHI	Oxford Poverty and Human Development Initiative
SDG	Sustainable Development Goals
TV	Television
UN	United Nations
UNDP	United Nations Development Programme
WB	World Bank

Executive Summary

The Lebanon Multidimensional Poverty Index (MPI) aims to complement monetary measures of poverty with non-monetary measures of deprivations. This is based on the notion that poverty is not simply about a person or household having low income but encompasses a broader set of factors such as lack of clean water or electricity, poor quality of work or limited schooling. Multidimensional poverty measures help to provide a more comprehensive portrayal of the poor in a country.

The Central Administration for Statistics (CAS) together with the World Bank has developed the first official multidimensional poverty index for Lebanon using the nationally representative Labor Force and Housing Living Conditions Survey that was carried out by CAS between 2018 and 2019 with funding from the Delegation of the European Union to Lebanon. The index is derived from 19 indicators across five dimensions which are education, health, financial security/well-being, basic infrastructure and living standards. For each indicator, a household is identified as being deprived if it falls short of a minimum standard determined for that indicator. The education dimension captures households with low schooling attainment or whose children are out of school. The health dimension identifies households without health insurance or those that are unable to afford medical services. The financial security dimension attempts to capture households that are struggling to find work, whose members are in low quality jobs, or are unable to adequately support their families. The basic infrastructure dimension depicts households that have limited access to services such as transportation, health care, sanitation, water or electricity. Finally, the living standards dimension depicts households that are residing in overcrowded dwellings, have no heating sources, possess limited assets, lack access to information or view themselves as poor or very poor. The index gives equal importance to each dimension and to each indicator within a dimension.

The 2019 MPI for Lebanon reveals that 53.1 percent of residents in Lebanon were multidimensionally poor as they were deprived in over 25 percent of the indicators (Table S1). The intensity of poverty or deprivation, which is the average share of deprivation each poor individual experiences, is 44.2 percent. The MPI, which is a product of the share of poor people and the average intensity of poverty is 0.235. In other words, the MPI-poor in Lebanon experience 23.5 percent of the deprivation that would be experienced if the entire population were deprived in all the indicators. The extreme poor, where residents are deprived in more than 50 percent of the indicators, amount to 16.2 percent of the population, with an average intensity of 59.3 percent and an MPI of 0.096.

Table S1: Incidence, Intensity and Multidimensional Poverty Index (MPI), 2019

Poverty cutoff(k)	Index		Value
k-value = 25%	MPI	Multidimensional Poverty Index	0.235
	Headcount Ratio (*H*)	Incidence of poverty or proportion of people identified as multidimensionally poor	53.1%
	Intensity (*A*)	Average proportion of weighted indicators in which the MPI-poor are deprived	44.2%

The largest contributors to national MPI poverty are deprivations in health insurance (24.8 percent), followed by school attainment (18.3 percent) and further along by low-security work (9.7 percent). When

aggregating by dimensions, the largest contributor to deprivation is the health dimension (30.2 percent), followed by employment (25.8 percent) and education (25.3 percent). The living standards and basic infrastructure dimensions contributed 13 percent and 6 percent respectively.

Across the eight governorates, *Akkar* and *Bekaa* are the poorest while the greatest intensity of poverty among the MPI-poor, is experienced in *Beirut*. In other words, while one is less likely to be MPI-poor in Beirut, those that are poor are more likely to experience greater deprivation that in other governorates. The MPI-poor are not distributed in the same manner as the population of Lebanon. Approximately, a third of Lebanon's MPI-poor live in *Mount Lebanon* where about 41 percent of the population reside. The composition of the multidimensional poverty is fairly similar across the governorates. The largest share – corresponding to the absence of health insurance - contributes anywhere from 23 percent to 27.4 percent to overall poverty.

At the district level, *Minieh-Danniyeh* and *Hermel* have the highest incidence of MPI-poverty, whereas *Keserwan* and *Batroun* have the lowest incidence. The poorest districts tend to be associated with lower net enrolment rates at secondary level and a lower share of students attending private education, higher illiteracy rates, lower reported income levels and a higher share of self-reported poor/very poor, and larger informality rates. However, the poorest districts do not always host the largest shares of the MPI-poor - *Baabda* and *Akkar* have the largest share of multidimensionally poor (10.7 and 9 percent respectively) and *Bcharre* has the lowest share (0.4 percent).

Accross age-groups, the highest incidence of multidimensional poverty occurs among 66.8 percent of children, ages 0-4 years. This is a common finding in other countries, highlighting the vulnerability of households with young children. Particular to Lebanon, the absence of health insurance contributes the largest to MPI-poverty across the age groups followed by low school attainment.

Female-headed households tend to have higher incidences of multidimensional poverty (56.7 percent) relative to male-headed households (52.6 percent). Approximately, 11.6 percent of individuals live in female-headed households while the rest (88.4 percent) reside in male-headed households.

Households whose head have higher level of educational attainment are associated with lower rates of multidimensional poverty. For instance, less than 22 percent of households are MPI-poor among heads with tertiary education compared to 78.4 for those with no schooling. Larger households are found to have higher levels of poverty, consistent with MPI findings in other countries.

The 2018-2019 data used in constructing the new MPI reflects a period that precedes a challenging phase that the country continues to confront which has implication for the dynamics of people's welfare. Looking ahead, the 2019 MPI will form a baseline against which future MPIs can be compared against as new data are generated on the evolving conditions of individuals and households in the country.

1. Introduction

Lebanon has been traditionally relying on measures of monetary poverty for its poverty monitoring. In recognition of the value in identifying deprivation in non-monetary factors, the country aspires to join the growing trend of nations developing a national multidimensional poverty index (MPI) that can complement national monetary poverty statistics. In the MENA region, about eight countries other than Lebanon have published MPI statistics.[1] Given the potential relevance as a tool for guiding and coordinating public policies and availability of a suitable dataset, the Central Administration of Statistics (CAS) has partnered with the World Bank to develop a national MPI for the country.

The 2018-2019 data used in constructing the new MPI reflects a period that precedes a challenging phase that the country continues to confront which has implication for the dynamics of people's welfare. Looking ahead, the 2019 MPI will form a benchmark against which future MPIs can be compared against as new data are generated on the evolving conditions of individuals and households in the country.

This paper is organized as follows. The methodology for computing the MPI is discussed in section 2, the issue of missing values and undefined households is addressed in Section 3, while the results are presented in Section 4.

2. Methodology

The MPI is estimated based on the Alkire-Foster (AF) method, which refers specifically to the processes of identification and aggregation of poverty. The process broadly uses the following approach:

First, a set of indicators (based on both nationally accepted definitions/relevance and data availability) are computed for each individual or household. Each indicator has a pre-determined deprivation cutoff which yields a binary variable taking the value of 1 if the individual/household is deprived in that indicator and 0, otherwise.

Second, these deprivations are aggregated for each household into a weighted deprivation score, by counting the deprivations affecting a household/individual's life. The weights reflect the relative importance of each indicator in the structure of the MPI. The deprivation score, *c*, can range from 0 (indicating that the individual / household does not experience any deprivation) to 1 (indicating that the individual / household is deprived in all the indicators).

Third, the individuals/households are identified as multidimensionally poor by comparing their deprivation score *c* to a poverty cutoff, or the *k*-value. All individuals/households with a deprivation score greater than or equal to this cutoff are defined as multidimensionally poor.

[1] The 2017 ARAB MPI report included MPIs for seven MENA countries, namely Jordan, Tunisia, Algeria, Egypt, Iraq, Morocco and Yemen. The Palestinian Central Bureau of Statistics published an MPI for 2017.

Fourth, the MPI is computed by incorporating both the multidimensional headcount ratio *H* (the proportion of population who are multidimensionally poor) and the intensity of poverty *A* (the average proportion of the weighted indicators in which the multidimensionally poor individuals are deprived, or the average deprivation score of the poor individuals). So *MPI* = *H* * *A*.

The MPI can be computed as the weighted sum of censored headcount ratios – which show the percentage of people who are identified as poor and are also deprived in a particular indicator. This enables the MPI to be further broken down by respective indicators to show the dimensions that contribute to multidimensional poverty which can be useful in identifying areas for improvement by policy makers.

UNDP & OPHI (2019) mentions the following stages as necessary in the construction of an MPI: i) data sources, ii) Choice of unit of analysis, iii) Choice of dimensions, iv) Choice of indicators in each dimension, v) Choice of deficiency threshold for each indicator, vi) Choice of weights of the indicators within each dimension and weights of the dimensions, vii) Identification and finally, viii) Aggregation. In the following sub-sections, we elaborate on each of these steps as it pertains to the construction of the multidimensional poverty measure in Lebanon.

2.1 Data sources

For consistency and comparability, a single data source is preferred when constructing the MPI instead of multiple sources that have different sampling approaches and coverage periods.[2] The primary dataset for initially constructing Lebanon's MPI is the Labor Force and Households Living Conditions Survey (LFHLCS) that was implemented by CAS across four quarters between April 2018 and March 2019, with technical assistance from the International Labor Organization (ILO). The survey of over 39,000 households aimed to be representative at national, governorate (*mouhafaza*) and district (*caza*) levels, which also allows for a spatially disaggregated analysis of multidimensional poverty. It covered all the population of Lebanon living in residential dwellings irrespective of their nationality, with the exception of persons residing in refugee camps or settlements and in non-residential units such as construction and agriculture sites, shops, stores, factories, unfinished buildings and army barracks.

The sample was selected following a stratified two-stage design, with the administrative districts (or cazas) used as strata, the *ilots* as Primary Sampling Units (or PSUs) selected in the first stage and the residential buildings – in the second stage. The sample frame for the first stage was the 2004 Census of Buildings, Dwellings and Establishments (CBDE). The allocation of the number of sample *ilots* amongst *cazas* was based on a square-root allocation with a minimum of 68 *ilots* per *caza*. Based on this allocation,

[2] Moreover, in order to apply Alkire-Foster methodology, one needs to observe the households' simultaneous deprivations in all the indicators considered, which means that using different survey sources will involve performing additional survey-to-survey imputations.

the *ilots* were selected with a probability proportional to size within each *caza*. The sample frame for the second stage was the fresh listings of the selected PSUs. The fixed number of dwellings within each PSU were then selected with equal probability.[3]

The survey collected data on a host of socio-economic variables, including education, health, employment, assets, and various aspects of living conditions. The final sample size of 39,116 households was collected with a non-response rate of 21 percent. The final weights took into account in the following order: the design weights, the non-response adjusted weights, and the calibration to mid-year population estimates (June 30st or July 1st, 2018).

2.2 Unit of analysis

The primary unit of analysis for measuring multidimensional poverty in Lebanon is the individual. This is consistent with the traditional poverty measurement based on consumption/expenditures that has been carried out by CAS. In some case, indicators are first defined at individual level and then aggregated at household level based on the assumption of 'shared resources/equal intra-household allocations' wherein it is assumed that if any member of the household is deprived of certain resources or capacities, then all the members of the household are affected by it. This means that while the unit of analysis is the individual, the value of the deprivation indicator is the same across all members of households (hence the unit of measurement is the household). It should be noted that taking the individual as the unit of analysis does not preclude the MPI from being computed at the household level.

2.3 Dimensions

The choice of dimensions to be included in a multidimensional poverty measure is determined by them being considered as socially necessary. There is no unified list of dimensions as different countries have different cultures/ideologies. Alkire (2007) identifies five selection processes researchers could use for selecting dimensions: (i) using existing data; (ii) making theory-based assumptions; (iii) utilizing dimensions generated through public consensus; (iv) engaging in deliberative participatory processes; and (v) selecting dimensions based on empirical evidence on the people's values and behaviors and the principles of law or the specific legal framework, at the international, constitutional or legal level.

The following five dimensions of interest were identified, namely:

- **Education** which, aside from its intrinsic value, is a constitutional right and allows individuals, through accumulation of knowledge and skills, to fully function and integrate in the society. It is generally accepted that deficiencies in education limit both the individual's development and his or her social integration.
- **Health** which is a necessary condition for the development of human capital.

[3] If the selected dwellings housed more than one household, all the households were interviewed.

- **Financial security** has an intrinsic value which provides a sense of security, self-worth and belonging in society. Having a stable employment is a means of accessing financial resources and consequentially, being able to support dependents (and providing for old age).
- **Basic infrastructure** access to basic infrastructure (electricity, water, sanitation) for its members, and access to transportation which in turn ensures access to various services.
- **Living standards** encompasses the value of access to shelter in terms of a physical property that provides sufficient space, adequate heating, minimum range of goods that can be purchased at market prices that are may be deemed necessary given the country's state of development, access to information and a household's self-assessment of their socio-economic status.

2.4 Choice of indicators within each dimension

Table 1 lists the dimensions along with the indicators (second column) that were identified for inclusion in the MPI. A total of 19 indicators were selected and the rationale for each is discussed further in Annex 1.1.

Table 1: Dimensions, indicators, and weights of Lebanon's MPI

Dimension (weight)	Indicator (weight)	Deprivation cutoff
Education (1/5)	School attainment (1/10)	At least one household member 18-34 years old (y.o.) did not finish secondary level
	School attendance (1/10)	At least one child, 3-17 y.o. is not currently attending school
Health (1/5)	Health insurance (1/10)	At least one household member is not covered by health insurance
	Affordability (1/10)	At least one household member who was sick/in need of regular drugs/medical services could not afford it
Financial Security (1/5)	Employment (1/25)	No household member 25-64 y.o. is working
	Youth NEET (1/25)	No household member 15-24 y.o. is either employed or a student or in training
	Low-security work (1/25)	At least one household member 15+ is either an informal worker or underemployed[†]
	Dependency (1/25)	There is less than one working adult (15+) per 3 household members[†]
	Income insecure (1/25)	A household without adults (15-64 y.o) is relying solely on social transfers and/or internal remittances (in the past 12 months)
Basic Infrastructure (1/5)	Transportation (1/25)	The household has no personal means of transportation and is located more than 10 minutes walking distance from bus/minibus/taxi
	Electricity (1/25)	The household does not have access to a generator
	Sanitation (1/25)	The household does not have access to an improved sanitation facility, or the facility is shared with other households
	Improved drinking water (1/25)	The household does not have access to safe drinking water

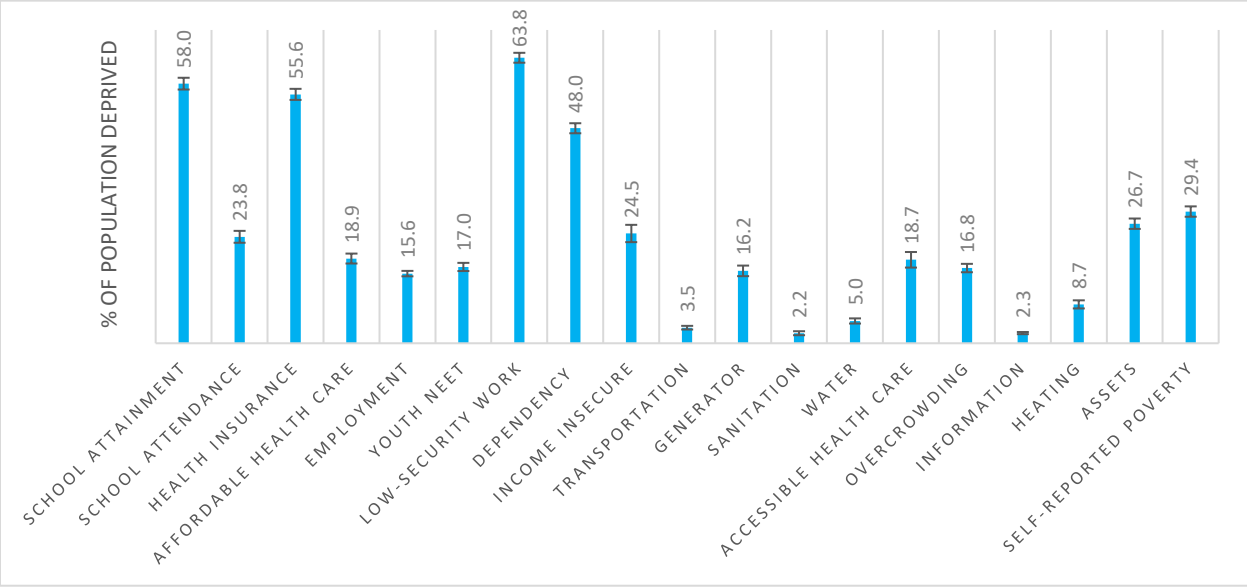
	Accessible healthcare (1/25)	The household is more than 15 minutes away from a hospital or private clinic
Living standards (1/5)	Overcrowding (1/25)	The household members reside in a dwelling with three or more people per room (include domestic help)
	Information access (1/25)	The household does not have access to fixed phone, mobile phone or Internet
	Heating (1/25)	The household does not have any source of heating
	Assets (1/25)	The household has no more than two of: TV, burner with oven, washing machine, vacuum
	Self-reported poverty (1/25)	The household classifies itself as poor or very poor

Note: † only applicable for households with at least one 15+ working. See section 3, for details of treatment of households with unidentified information.
Source: LFHLCS 2018-2019.

2.4.1 Uncensored headcount ratios of the MPI indicators

We can already observe the uncensored headcount ratio for each indicator, which is the proportion of the population who are deprived in each indicator, irrespective of their poverty status. As Figure 1 shows, the highest deprivation is found for low-security work with 63.8 percent of the applicable population deprived in this indicator, followed by school attainment (58 percent), health insurance (55.6 percent) and dependency (48 percent). Indicators which show the lowest deprivation rates include sanitation (2.2 percent), access to information (2.3 percent), access to public or private transportation (3.5 percent) and access to clean source of water (5.0 percent).

Figure 1: National uncensored headcount ratios, 2019



Source: Authors' calculation using data from LFHLCS 2018-2019
Note: The percentages refer to the population for whom a certain indicator is defined. The error bands are for 95 percent confidence intervals.

2.5 Indicator weights within each dimension and dimension weights

In order to aggregate all the selected indicators into a single index, each of the selected indicators has to be associated with certain weights. A critical element in the construction of an MPI, the choice of the weights of the dimensions (and the indicators within each dimension) is usually a "value judgement open to debate and public scrutiny" (Alkire and Foster 2011).

The global MPI and most of the national MPIs reviewed are constructed using an 'equal nested weights' approach – that is, assigning an equal weight for each dimension and the same weight for each indicator defined within each dimension. This means that all the dimensions are considered to be equally important and, within each dimension, each indicator is also seen as equally important. One advantage of using equal weights is that they are easier to communicate than using unequal weighting. However, there are some deviations from this - while almost all the countries reviewed assign equal weights across dimensions,[4] some countries assign different weights to some indicators within a dimension.[5] The second column of Table 1 shows the weights assigned to each indicator.

2.5 Identification

Identification refers to the process of categorizing people as poor. For the Lebanese context, we adopt the identification methodology named the "dual cut line" (Alkire and Foster, 2011), which uses two cutoff thresholds to identify those who are in a situation of multidimensional poverty. The first cutoff line is the indicator-specific threshold identifying an individual/household as deprived with respect to that indicator. The deprivations such identified are then weighted and summed up, and their sum is compared to a second cutoff line, *k*, that is set beforehand. The multidimensional poverty cutoff line, *k*, represents a minimum number or share of indicators that an individual/household must be deprived in to be considered as 'multidimensionally poor.'

In setting up the poverty threshold *k*, most of the countries use the cutoff of "being deprived in at least one dimension" which translates into *k=25* percent (or 0.25) if there are four (4) dimensions involved, *k=33.3* percent (or 1/3) if there are three (3) dimensions involved etc. However, some countries introduced their own considerations in setting up the poverty threshold, balancing the desire to make it more relevant with the fact that reducing the percentage of deficiencies needed to cross the threshold would imply making the measure less demanding.

[4] One exception is Palestine (2020), which has 7 dimensions including a monetary one, and this dimension is assigned 20 percent of weight, while the remaining 80 percent are distributed equally among the other 6 dimensions. Similarly, Chile's multidimensional poverty measure has five dimensions, four of them are weighted equally, and the fifth, with a much lower weight.

[5] Examples of unequal weights within dimensions include the MPIs for Pakistan (2016), Maldives (2020), Sierra Leone (2019), Rwanda (2018) and Afghanistan (2019).

For the case of Lebanon, the multidimensional poverty cutoff line is set at 25 percent, which means that a household is considered as multidimensionally poor if it is deprived in more than one dimension (or the equivalent number of indicators).[6]

2.6 Aggregation

After identifying the poor, three aggregated poverty indicators can be calculated as follows:

a) The multidimensional poverty rate or headcount rate (*H*): It represents the poverty incidence, and it is defined as the percentage of individuals / households identified as multidimensionally poor. It is worth noting that this indicator does not account for the number of deprivations of the (multidimensionally) poor.
b) The intensity of the multidimensional poverty, or the breadth of poverty (*A*): Defined as the average of weighted indicators in which poor individuals / households are deprived.
c) The censored (or adjusted) headcount rate (*M*): It combines the count rate (*H*) with the intensity of poverty (*A*), being defined as the product between the incidence of poverty (percentage of households or people in a situation of multidimensional poverty) and the average of deficiencies among households (people) that are multidimensionally poor ($M = H*A$). It can be interpreted as the total amount of deficiencies that households (people) in multidimensional poverty present, divided by the maximum number of deficiencies that the entire population can have. As such, the M is responsive to whether a household falls into a situation of poverty or if a household already identified in such a situation increases the amount of deprivations they experience. The measure is not, however, responsive to the magnitude of the deprivation, that is, if a household/person suffers a greater deprivation within an indicator (for example, ceteris paribus, a household is equally poor if it has 1 to 2 children not attending school). An advantage is that for this index, one can analyze the contribution of each dimension and indicator that makes up the multidimensional poverty measure.

For Lebanon, we will present all three measures: *H* because it can be interpreted in a similar way with the national/consumption-expenditures poverty rate that has been traditionally used by CAS to report poverty statistics, and both *A* and *M* will be reported as complementary measures.

[6] A cut of 25 percent accommodates households that are not defined in a particular indicator dimension (see section 3.2), leaving only four dimensions to be considered.

3. Treatment of missing information and households with undefined indicators

3.1 Treatment of missing information

Unlike the treatment given to the main sources of household income, the multidimensional poverty measurement methodology does not consider procedures for the imputation of missing data. All the households for whom an indicator cannot be computed due to missing information for all or part of its reference household members are considered as 'missing data' when computing the MPI. In our case, the percentage of households with missing information is 1.56 percent.

3.2 Treatment of households for which a certain indicator is not defined

From the pool of selected indicators, there are some (e.g., the education and some employment indicators) that are not defined for all the households. For example, the *School attendance* indicator is only defined for households who have at least one child 3-17 years old. For the rest of the households, we consider this indicator as undefined and redistribute the dimension's weight among the remaining indicators belonging to that dimension. In this way, a household with no children 3-17 y.o. can still be deprived in the education dimension, if for instance, at least one household member 18-34 years old (y.o.) did not finish secondary level (per the school attainment indicator). If a household has no individuals between ages 3 and 34, the weight of the education dimension is divided equally amongst the remaining four dimensions. An alternative way is to treat the households in question as not deprived in the said indicator(s), but this would imply that those particular households cannot ever be deprived in the education dimension, regardless of the values of the other indicators.

Similarly, the *Income insecure* indicator is defined for only 11.9 percent of the households. For the other 88.1 percent of households for whom this indicator is undefined, the weight of the *Financial security* dimension will be re-distributed amongst the other four indicators. The same logic applies for as many indicators are not defined for a certain household in any given dimension.

4. Lebanon's National MPI - Results

4.1 Key Results

Table 2 shows Lebanon's MPI for 2019, along with the partial indices. The incidence of poverty (*H*), or the proportion of people that are identified as multidimensionally poor is 53.1 percent with a 95 percent confidence interval of between 51.8 percent and 54.4 percent. The intensity of poverty (*A*), or the average proportion of weighted indicators in which the MPI-poor are deprived is 44.2 percent. That is, each MPI-poor person is on average, deprived in nearly half of the weighted indicators.

The MPI, which is the product of *H* and *A*, takes the value of 0.235. This implies that multidimensionally poor people in Lebanon experience 23.5 percent of the total deprivation that would be experienced if all persons were deprived in all the indicators.

Table 2: Incidence, intensity and Multidimensional Poverty Index (MPI), 2019

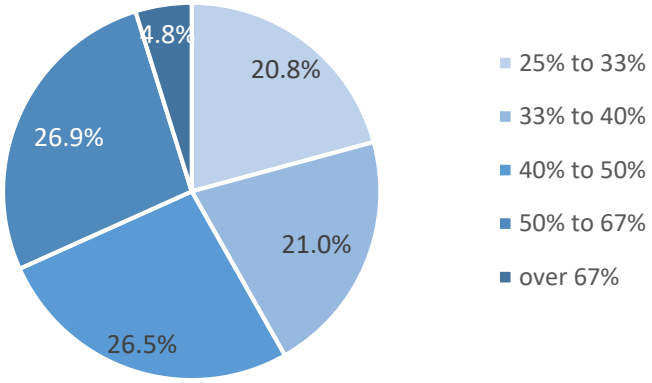
Poverty cutoff(k)	Index	Value	Confidence interval (95%)	
k-value = 25%	MPI	0.235	0.229	0.241
	Headcount Ratio (*H*)	53.1%	51.8%	54.4%
	Intensity (*A*)	44.2%	43.9%	44.6%

Source: Authors' calculation using data from LFHLCS 2018-2019

In the case of extreme poverty, define as deprivations observed in over 50 percent of the indicators, the corresponding poverty rate is 16.2 percent with an average intensity of 59.3 percent and an MPI of 0.096.

Figure 2 depicts the distribution of the intensity of poverty among the MPI-poor. Approximately 20.8 percent of all the MPI-poor in Lebanon are in the lowest intensity band (or are deprived in less than one third of their respective indicators) and 68.3 percent of the poor were deprived in under half of the indicators (50%). About 5 percent of the poor experience the highest intensity of poverty, being deprived in more than two-thirds of the indicators.

Figure 2: The distribution of the intensity of poverty among the poor

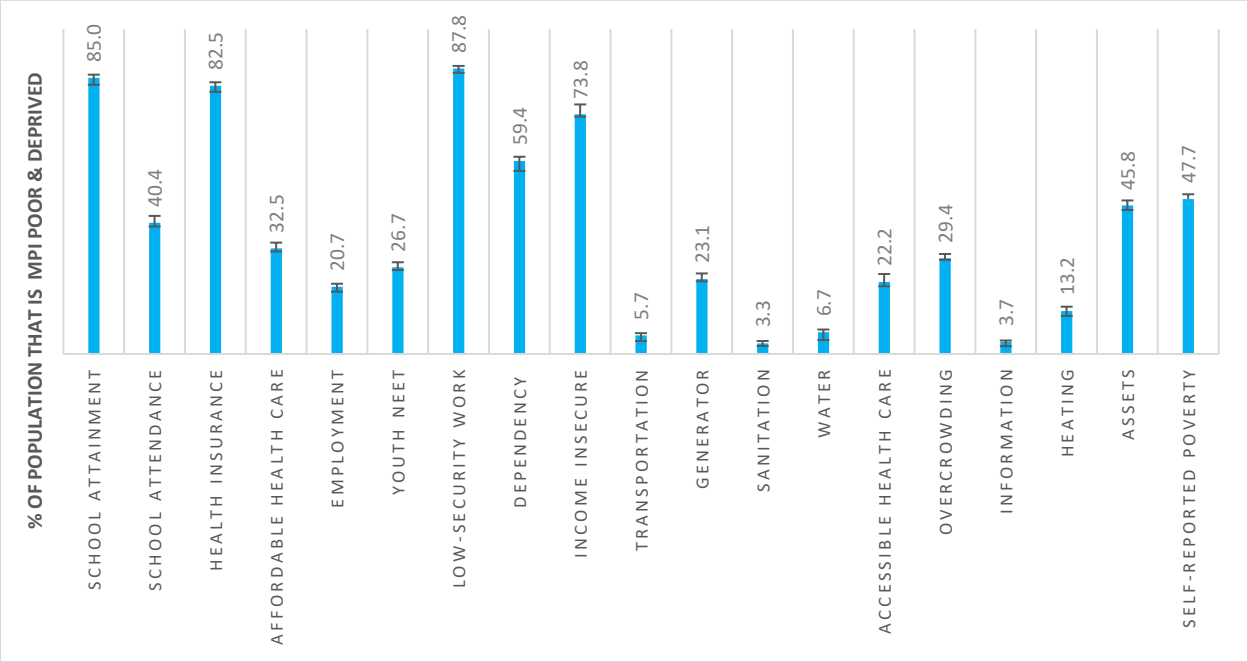


Source: Authors' calculation using data from LFHLCS 2018-2019

What are the deprivations that contribute to multidimensional poverty in Lebanon? The adjusted or censored headcount ratio of an indicator depicts the share of the population that is multidimensionally poor *and* deprived in that indicator. As seen in Figure 3, the largest deprivation is for individuals living in

households with adults employed in low-security work, either as informal workers or underemployed.[7] Almost 87.8 percent of the population that is multidimensionally poor, is deprived in this indicator. A sizeable share of MPI-poor (85 percent) reside in households having members ages 18-34 years in which at least one member in this age group did not complete secondary schooling. Another striking figure is the large share of the MPI-poor (82.5 percent) reside in households in which at least one member lacks health insurance. The MPI-poor are far less to be deprived with respect to means of transportation (5.7 percent), improved sanitation (3.3 percent) drinking water (6.7 percent), and information access (3.7 percent).

Figure 3: National censored headcount ratios, 2019

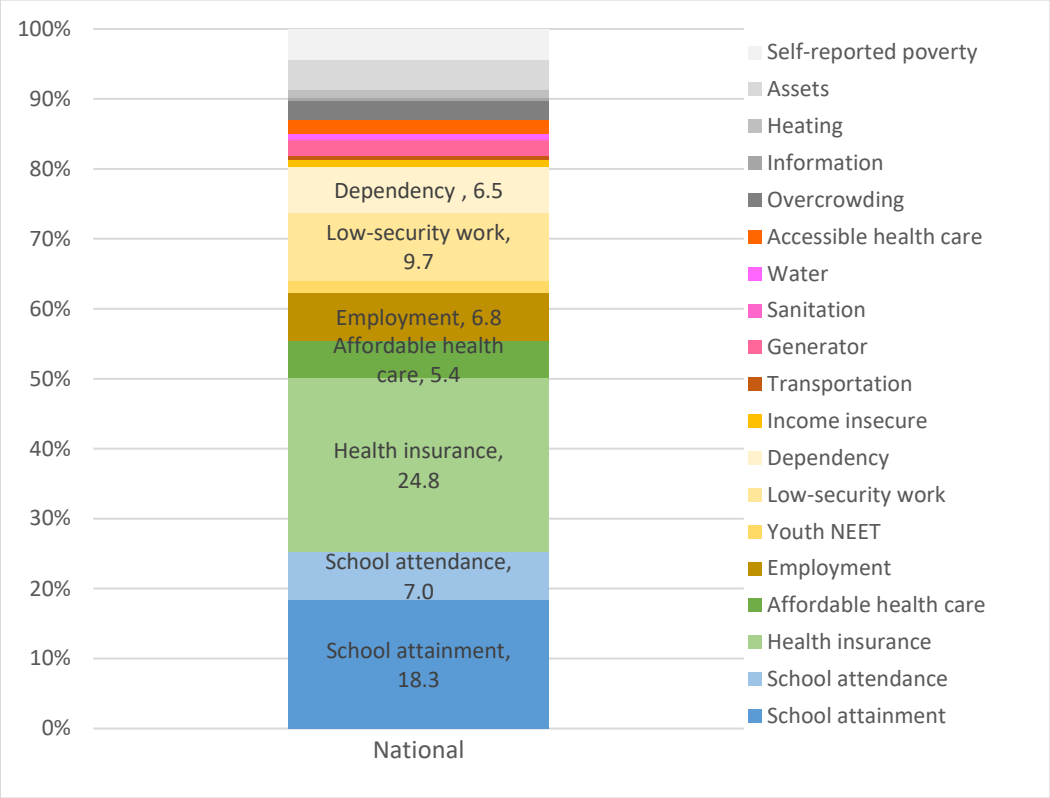


Source: Authors' calculation using data from LFHLCS 2018-2019
Note: The percentages refer to populations for which a certain indicator is defined. The error bands are for 95 percent confidence intervals.

With respect to the contribution share of each of the 19 indicators to overall multidimensional poverty (Figure 4), the largest contributors to national MPI poverty are deprivations in health insurance (24.8%), followed by school attainment (18.3%) and further along by low-security work (9.7%).[8]

[7] The definition of (time-related) underemployment covers employed individuals who, during the previous 7 days, sought to wanted to work additional hours and whose working time in all jobs was less than 40 hours during the prior 7 days; and were available to work additional hours had there been an opportunity for more work.
[8] As mentioned above, the *Income security* indicator is defined for only 11.9 percent of the households and the national censored headcount ratios are computed only amongst the population for which that indicator is defined. Hence, the low contribution share of this indicator to the overall multidimensional poverty.

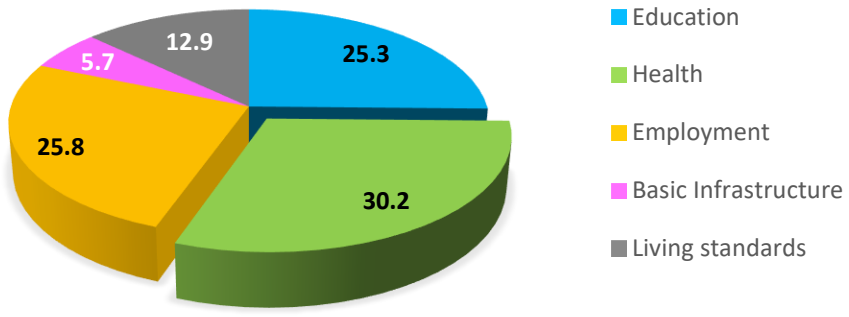
Figure 4: Contribution share of each indicator to the MPI, 2019



Source: Authors' calculation using data from LFHLCS 2018-2019

When aggregating by the five dimensions, the largest contributor to deprivation is the health dimension (30 percent), followed by financial security (26 percent) and education (25 percent). The living standards and basic infrastructure dimensions contributed 13 percent and 6 percent respectively (Figure 5).

Figure 5: Contribution share of each dimension to the MPI, 2019



Source: Authors' calculation using data from LFHLCS 2018-2019

4.2 Disaggregation by governorates and districts

Table 3 shows the governorate-level estimates for MPI, incidence of poverty and intensity of poverty. The governorates of *Akkar* and *Bekaa* has among the highest levels of MPI and incidence of poverty, while *Mount Lebanon* houses the largest share of multidimensionally poor (33.3%) though it has the lowest levels of MPI and poverty incidence. After *Akkar and Bekaa*, the governorates of *Baalbek-Hermel* and *North Lebanon* have higher levels of multidimensional poverty than the other governorates. The governorate of Beirut is notable as it has a relatively lower incidence of poverty, but the highest intensity among all regions. In other words, while one is less likely to be MPI-poor in Beirut, those that are poor are more likely to experience greater deprivation that in other governorates.

Table 3: Multidimensional poverty by governorates, 2019

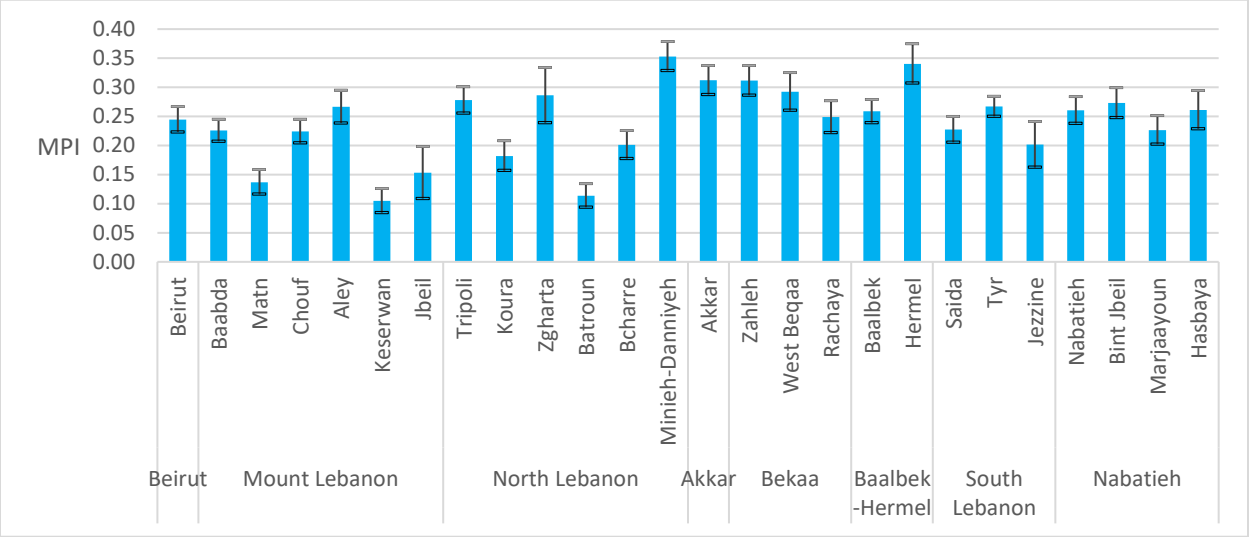
Governorates	Population share (%)	Share of MPI-poor (%)	Headcount ratio, H (%)	Intensity, A (%)	MPI		
					Value	95% CI	
Beirut	6.8	6.7	51.9	47.1	0.245	0.223	0.266
Mount Lebanon	41.4	33.3	42.7	44.5	0.190	0.179	0.201
North Lebanon	13.4	15.1	59.9	44.4	0.266	0.251	0.281
Akkar	6.9	9.0	69.6	44.8	0.312	0.287	0.337
Bekaa	6.2	7.9	67.0	44.5	0.299	0.280	0.317
Baalbek-Hermel	5.1	5.9	61.9	43.5	0.269	0.251	0.287
South Lebanon	12.2	13.2	57.6	42.3	0.244	0.229	0.258
Nabatieh	7.9	8.8	59.3	43.3	0.257	0.243	0.271

Source: Authors' calculation using data from LFS 2018-2019

At the district level, *Minieh-Danniyeh* and *Hermel* have the highest levels of MPI and incidence of poverty, whereas *Keserwan* and *Batroun* have the lowest incidence and the smallest MPI (Figure 6 and Annex Table 2.1). The poorest districts tend to be associated with lower net enrolment rates at secondary level and a lower share of students attending private education, higher illiteracy rates, lower reported income levels and a higher share of self-reported poor/very poor, and larger informality rates.[9] However, the poorest districts do not always host the largest shares of the MPI-poor: *Baabda* and *Akkar* have the largest share of multidimensionally poor (10.7 and 9 percent respectively) and *Bcharre* has the lowest share (0.4 percent) (Annex Figure 2.1).

[9] See various district-level reports produced by CAS, 2020.

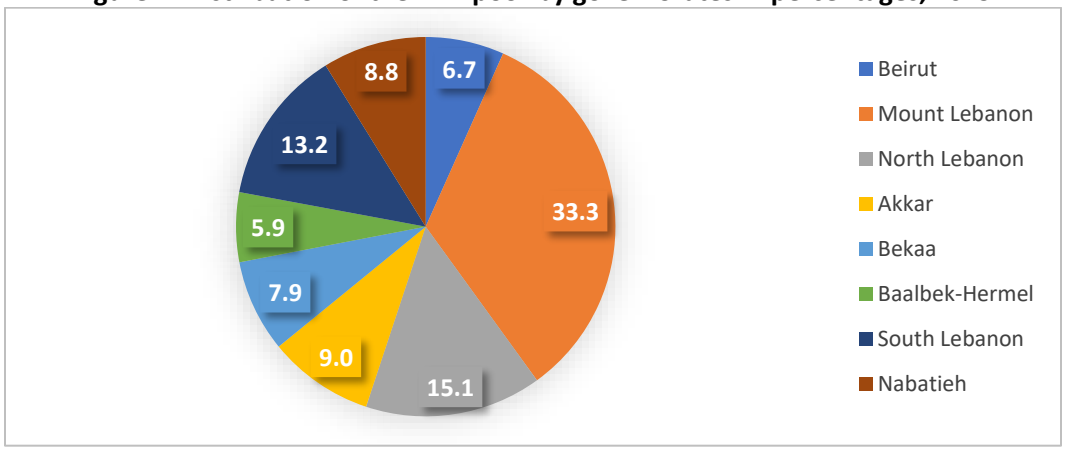
Figure 6: MPI by district, 2019



Source: Authors' calculation using data from LFS 2018-2019
Note: The error bands are for 95 percent confidence intervals.

Figure 7 shows where the MPI-poor reside across the governorates. As noted before, *Mount Lebanon* which hosts the highest share of the population (41.4 percent) also has the highest share of the MPI-poor (33.3 percent). In the remaining governorates, the share of MPI-poor tends to exceed the share of the overall population that live therein. *Baalbek-Hermel* has the lowest share of MPI-poor in the country (5.9 percent).[10]

Figure 7: Distribution of the MPI poor by governorates in percentages, 2019

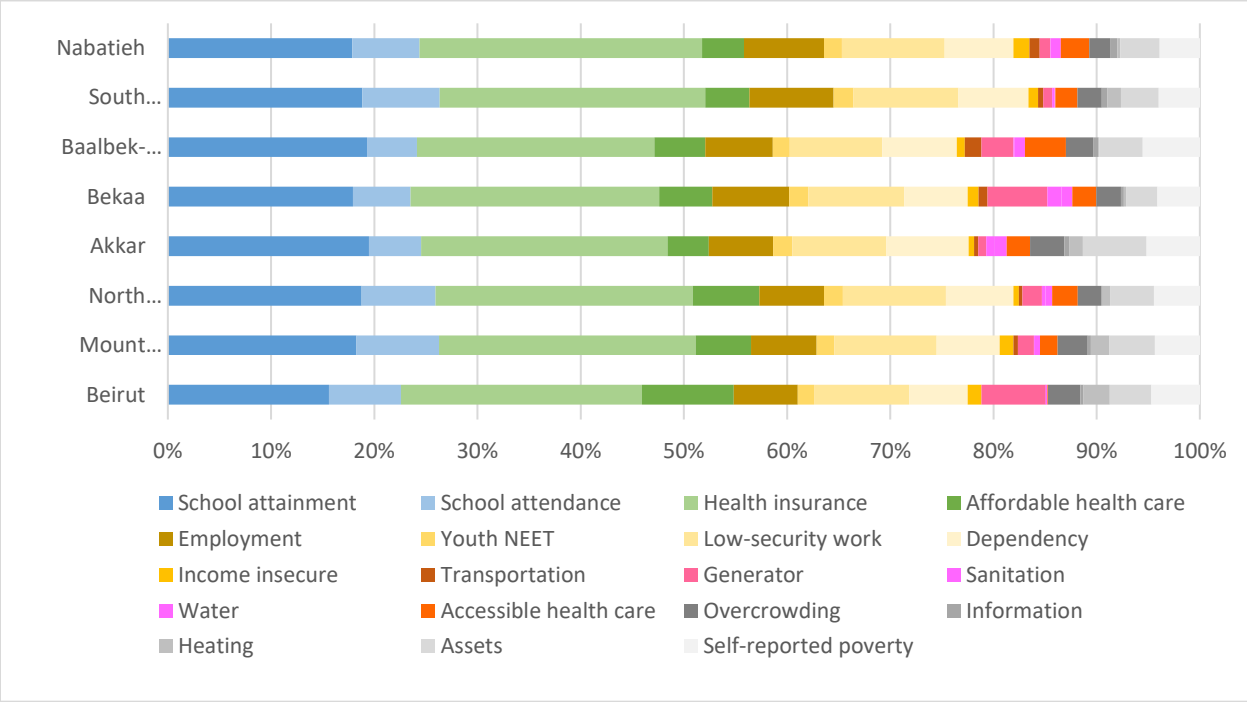


Source: Authors' calculation using data from LFHLCS 2018-2019

[10] The distribution of the extreme poor by governorates is quite similar with the highest share in Mount Lebanon (35.5 percent) to the lowest shares in Nabatieh (7.5 percent).

Figure 8 shows the contributions shares of each indicator to multidimensional poverty for each governorate, and Annex Figure 2.2 shows the same contribution shares by district. The composition of the multidimensional poverty is fairly similar across the governorates. The largest share – corresponding to the absence of health insurance - contributes anywhere from 23 percent to 27.4 percent to overall poverty. The second largest contributor, school attainment, ranges from 15.6 percent to 19.5 percent to overall poverty. At district level, the absence of health insurance has a larger range than at the governorate level (it contributes between 22.2 percent in *Hermel* to 32.5 in *Bcharre*), whereas the school attainment has a similar range as at the governorate level (it contributes between 15 percent in *Bcharre* to 20.2 percent in *Batroun*).

Figure 8: Contribution share of each indicator to governorate MPI, 2019



Source: Authors' calculation using data from LFHLCS 2018-2019

4.3 Robustness of the Multidimensional Poverty Measure

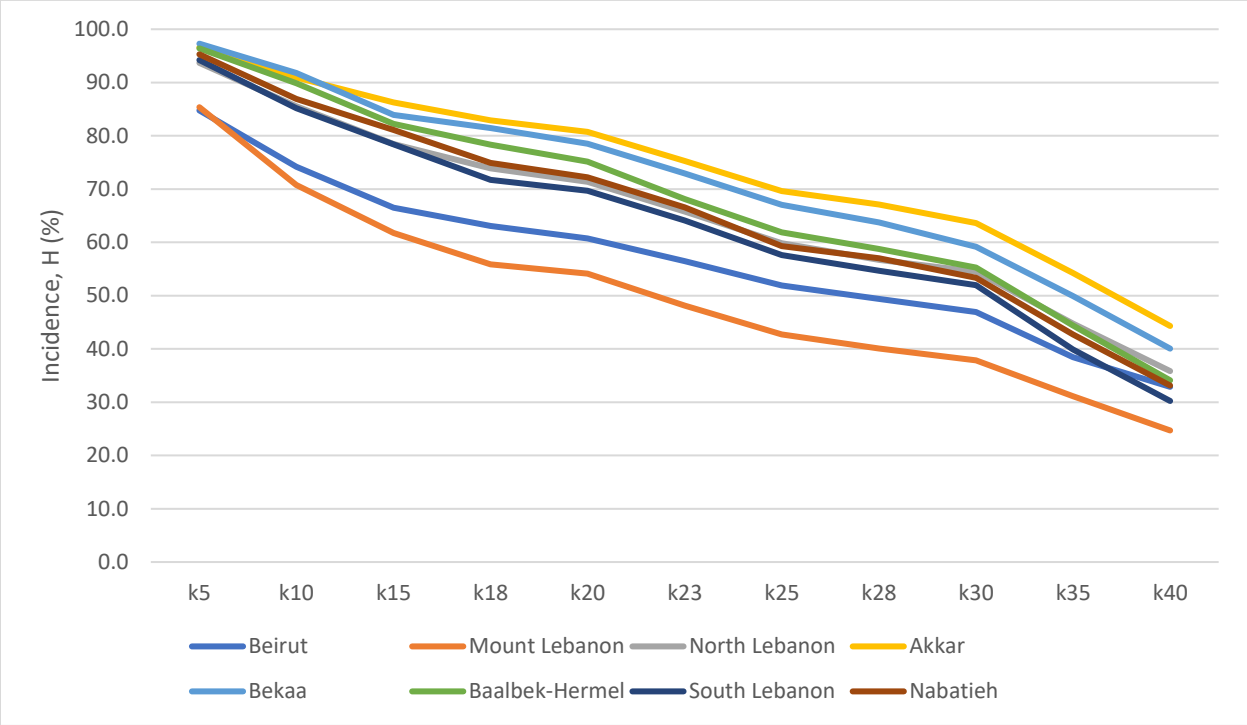
This sub-section explores the tests carried out to evaluate the sensitivity and robustness of the multidimensional poverty measure/s of interest.

Given its importance in public policy, a good MPI measure "should be robust to a range of different specifications; that is, the level of MPI by region or trends over time should not change dramatically if the specifications of the measure are altered a little." (quoted from UNDP & OPHI (2019)). For testing our measure's robustness, we consider various potential MPI structure by, placing indicators in alternate dimensions, using different indicator cutoffs, and considering different weight structures and deprivation and poverty cutoff thresholds. In the context of these various specifications, we are looking at (i) the percentage of pairwise comparisons that are the same (or pairwise comparisons); and (ii) the

preservation of the rankings of population subgroups (or rank correlations). In the absence of data from multiple years, our subsequent analysis focuses on governorates only as the population subgroups.

Figure 9 plots the governorate-level, incidence of poverty (H) for various levels of poverty cutoffs. Rankings tend to vary between governorates for different poverty cutoffs, though it holds between cutoffs of 20 and 30 percent.

Figure 9: Governorate-level incidence of poverty for different values of poverty cutoff, k



Source: Authors' calculation using data from LFHLCS 2018-2019

Table 4 presents the Pearson's correlation, and Spearman and Kendall's tau-beta rank correlations coefficients between the governorates for the incidence of multidimensional poverty (H)[11] using the selected poverty cutoff, *k=25* percent, and the alternative poverty cutoffs *k=5,10,15,…,55,60*. The results suggest that varying the poverty cutoff lines does not affect much the governorate-level rankings when the cutoff line, *k* is equal or less than 45 percent, but the rankings are visibly affected for cutoff lines exceeding 50 percent.

[11] Similar results are obtained for the M0 measure.

Table 4: Correlations among governorates for different poverty cutoffs for the incidence of multidimensional poverty (H), 2019

	Pearson	Spearman's	Kendall's Tau-b
k=5	0.8890	0.8810	0.7143
k=10	0.9496	0.9524	0.8571
k=15	0.9606	0.9762	0.9286
k=20	0.9894	0.9762	0.9286
k=30	0.9964	1.0000	1.0000
k=35	0.9784	0.9762	0.9286
k=40	0.9209	0.9524	0.8571
k=45	0.8155	0.7381	0.6429
k=50	0.5108	0.4286	0.4286
k=55	0.3068	0.4286	0.4286
k=60	0.1605	0.4048	0.3571

Source: Authors' calculation using data from LFHLCS 2018-2019

The same correlations are also examined for the incidence rate H using alternative weighting structures as indicated in Table 5. Computing the same correlation coefficients between the initial, equally weight structures (20 percent each) and each of the remaining 10 structures, yields the correlation results in the second half of Table 5. The governorate-level correlations/rankings turn out to be relatively stable at varying the dimensional weights, as the measures of concordance tend to be above 0.96 for Pearson's and Spearman's correlations, and just slightly lower (but still significant) for Kendall's Tau-b.[12]

Table 5: Alternative weighting structures and corresponding correlations for the incidence of multidimensional poverty (H), 2019

	A. Weight Structures per dimension (%)									
Dimension	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
Education	23.3	30	20	25	25	40	15	15	15	15
Health	23.3	10	15	25	15	15	40	15	15	15
Employment	23.3	30	20	25	25	15	15	40	15	15
Basic Infrastructure	15	10	15	10	10	15	15	15	40	15
Living standards	15	20	30	15	25	15	15	15	15	40
	B. Correlations									
Pearson	.996	.973	.988	.994	.986	.986	.967	.963	.989	.968
Spearman's	.976	1.000	1.000	.976	1.000	1.000	.881	.976	.976	1.000
Kendall's Tau-b	.929	1.000	1.000	.929	1.000	1.000	.714	.929	.929	1.000

Source: Authors' calculation using data from LFHLCS 2018-2019

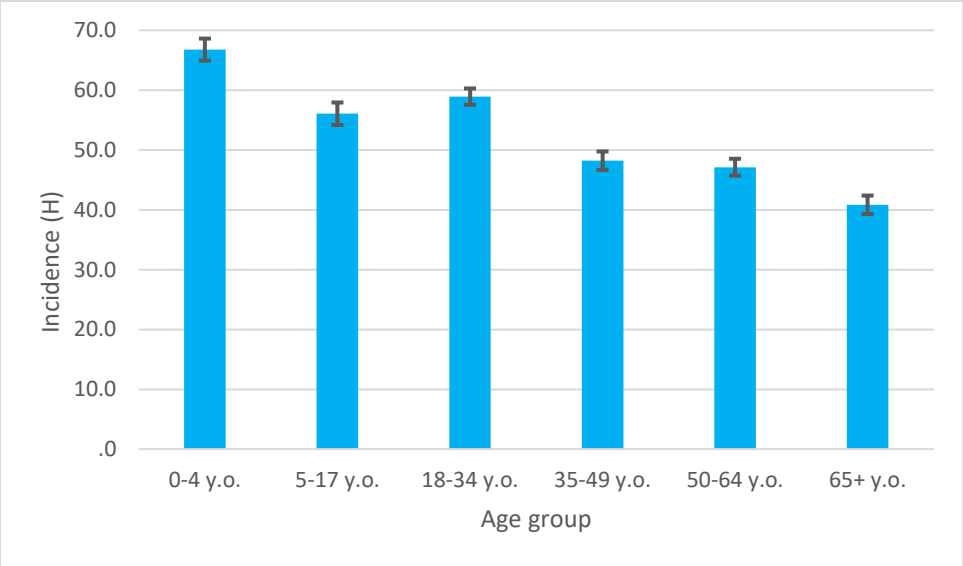
[12] The same results hold for the M0 measure.

4.4 Outcomes by household characteristics

The MPI measures can be further examined along various household characteristics encompassing age, gender of the household head, and size of the household.

With respect to age groups, there are particular indicators for which deprivation can be measured at the individual level. In cases where the indicator is only defined at the household level, it is assumed that members within the households are equally exposed/deprived. Figure 10 reveals that the incidence of MPI-poverty generally decreases with age cohorts which is consistent with findings from other countries.[13] The 2019 Global MPI report also reveals that children under the age of 18 bear the greatest burden of multidimensional poverty.

Figure 10: Incidence of multidimensional poverty by age group, 2019

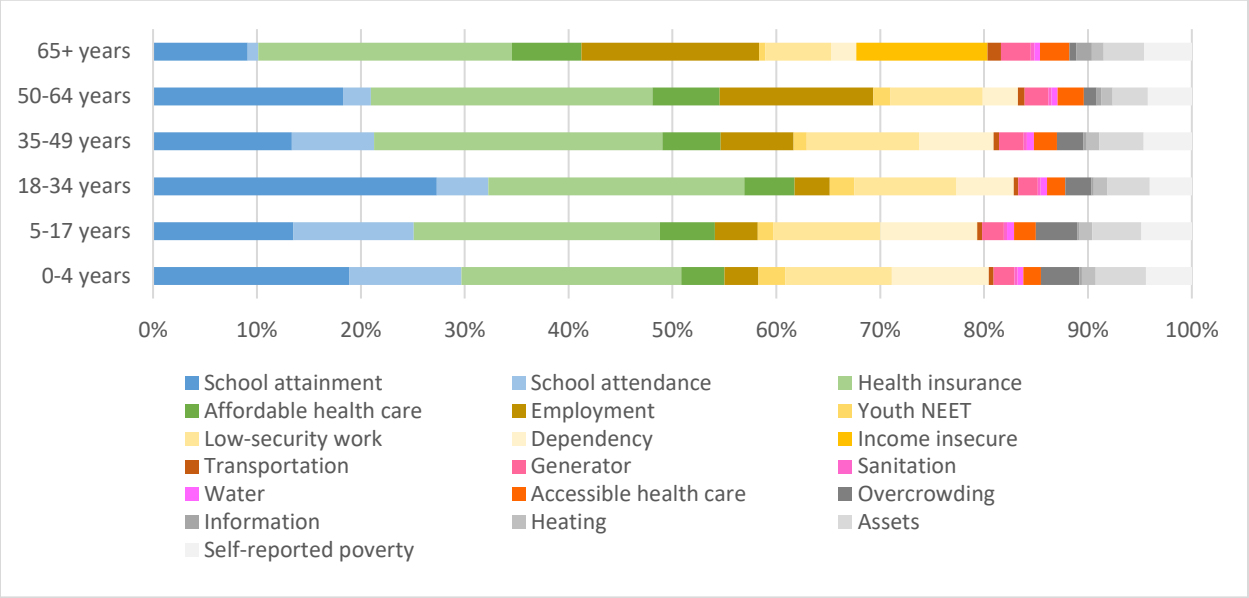


Source: Authors' calculation using data from LFHLCS 2018-2019
Note: The error bands are for 95 percent confidence intervals.

Figure 11 shows the contributions shares of each indicator to multidimensional poverty for each age group. Similar to the distribution across governorates, the absence of health insurance has the largest contribution across the age cohorts, ranging from 21.2 percent to 27.7 percent. The second largest contributor, school attainment, contributes from 15.6 percent to 19.5 percent to overall poverty.

[13] As of 2018-2019, children in Lebanon up to four years of age represent 7.9 percent of the civilian population, while the population share of the age groups 5–17, 18–34, 35–49, 50–64 and 65+ are equal to 21.6, 25.6, 17.6, 16 and 11.2 percent, respectively.

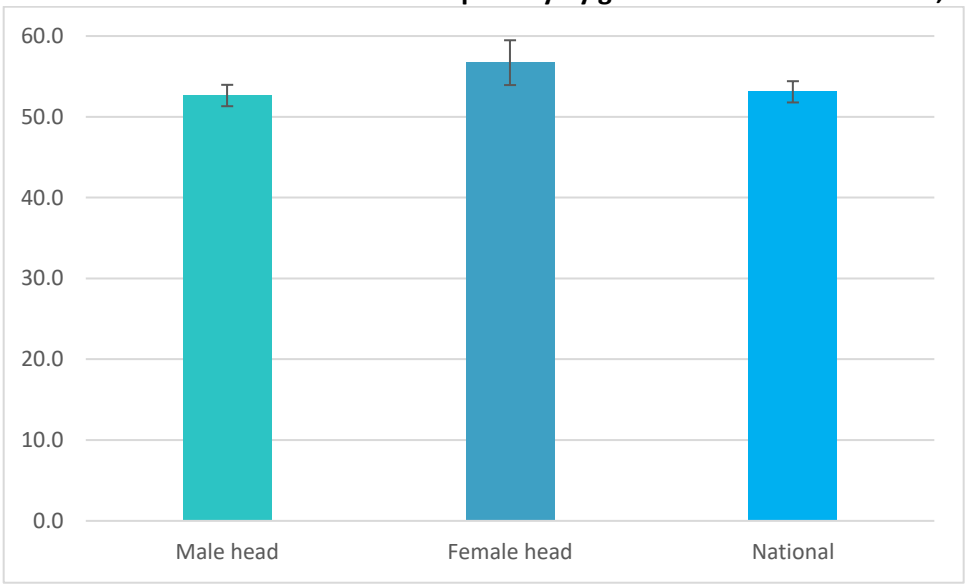
Figure 11: Contribution share of each indicator by age group to the MPI, 2019



Source: Authors' calculation using data from LFHLCS 2018-2019

The incidence of poverty is slightly higher amongst individuals living in female-headed households (Figure 12). Approximately, 11.6 percent of individuals live in female-headed households while the rest (88.4 percent) reside in male-headed households.

Figure 12: Incidence of multidimensional poverty by gender of household's head, 2019



Source: Authors' calculation using data from LFHLCS 2018-2019

As seen in Table 6, individuals living in female-headed households fare worse than their counterparts living in male-headed households in six of the indicators, do better in seven indicators while the differences in the remaining 6 indicators are not statistically significant. MPI-poor individuals living in female-headed households are particularly challenged when it comes to adult employment and elderly

households being income insecure. Poor individuals living in male-headed households by contrast, face greater deprivation relative to their counterparts with respect to having high dependency ratios and overcrowded homes.

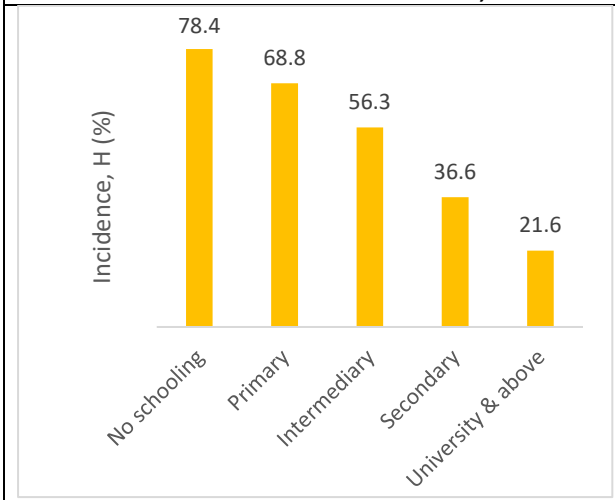
Table 6: Censored headcount ratios by gender of the household head, 2019

Indicators	% pop MPI-poor & deprived, M		
	Male-head HH	Female-head HH	Difference (percentage points)
School attainment	85.4	80.9	4.5 ***
School attendance	40.7	36.1	4.6
Health insurance	81.7	88.0	-6.2 ***
Affordable health care	31.5	38.6	-7.1 ***
Employment	17.1	48.3	-31.2 ***
Youth NEET	27.2	21.6	5.6 ***
Low-security work	87.8	88.3	-0.5
Dependency	61.6	36.0	25.6 ***
Income insecure	67.7	80.7	-13.0 ***
Transportation	5.1	9.7	-4.5 ***
Generator	22.7	25.3	-2.6
Sanitation	3.3	2.9	0.4
Water	6.9	5.0	2.0 ***
Accessible health care	22.8	18.1	4.7 ***
Overcrowding	31.5	14.4	17.2 ***
Information	3.0	8.6	-5.6 ***
Heating	13.1	13.9	-0.8
Assets	46.3	41.8	4.5 **
Self-reported poverty	47.9	46.6	1.3

Note: *** indicates significance at the 1% level, ** at the 5% level and * at the 10% level
Source: Authors' calculation using data from LFHLCS 2018-2019

Figure 13 presents the incidence of multidimensional poverty by household head's educational attainment. It is quite strikingly evident that lower education attainment of the household head is associated with larger incidence of multidimensional poverty. By contrast, larger households are associated with greater incidence of multidimensional poverty (Figure 14). Monetary poverty is usually found to increase with household size and this is also evidence among the MPI-poor, particularly amongst the population living in households with seven members or more (which constitutes 15.9 percent of the population.

Figure 13: Incidence of multidimensional poverty by household head's educational attainment, 2019



Source: Authors' calculation using data from LFHLCS 2018-2019

Figure 14: Incidence of multidimensional poverty by household size, 2019

Source: Authors' calculation using data from LFHLCS 2018-2019

Annex

1. Choice of indicators

Indicators are the building blocks of each dimension. Quoting Alkire (2013), "the definition of indicators results from the application of empirical and normative criteria, and depends on: the purpose or normative justification of the measurement, the availability of data, institutional and historical considerations, bibliographic background on the indicator, the interrelation with other indicators and the precision of data at the individual or household level". The definition of each indicator involves the definition of a minimum threshold intended to capture the minimum level above which society considers that a person can have a decent life. The selection of indicators for Lebanon was an iterative effort involving CAS and WB team with outreach to contacts in relevant ministries to further determine the existence (or not) of local guidelines.

1. Education Dimension

Two indicators are covered under the education dimension, namely school attendance and school attainment.

1. **School attendance.** Regular presence in school is associated with the development of capacities, detection of deficiencies and therefore relevant for the design and implementation and monitoring of public policy. The school attendance indicator is featured in most of the MPIs constructed globally and is also linked with Sustainable Development Goal 4.1.[14] Lebanon has relatively high rates of attendance in primary and complementary level education (include gross/net enrolment rates HBS/LFHLCS), which drop in the case of kindergarten and secondary education to 61.4 and 76.8 percent respectively. Differences exists by gender, nationality, governorate. This explains the relevance, especially in the latter educational levels, of considering an indicator of school attendance in the education dimension.

   In Lebanon, formal school begins at age 6 and is compulsory until age 15 (grade 9, complementary). However, it is often the case that completion of two years of pre-school/kindergarten is a pre-requisite for getting access to (mainly private) primary education. Given the relatively high enrollment rates at the primary level and complementary school levels, the country may aspire to have all the children attend (and complete) the secondary level through grade 12. This consideration then informs the choice of deficiency threshold for this indicator.

[14] SDG 4.1 states that "by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes."

Annex Table 1.1.1 School attendance indicator

Individual deprivation	A child 3-17 y.o. is considered deprived if s/he is not currently attending school.
Household-level deprivation	A household is deprived if at least one of its members 3-17 y.o. is individually deprived in school attendance. (Note: applicable only to households with members 3-17 y.o. only)

2. **School attainment.** More years of schooling is usually associated with greater labor market opportunities and better social integration. In Lebanon, completion of complementary school (grades 7 through 9, to be completed by age 14) is the minimum requirements for employment in the public sector. Complementary education was made mandatory by the Ministry of Education in 2003. We focus on the completion of secondary school given the stage of Lebanon's development, which aims for all the adults 18-34 y.o. to have completed secondary education. The upper bound of 34 years account for individuals who had the opportunity to seek secondary schooling post after the civil war. The related deprivation choice is therefore:
3.

Annex Table 1.1.2 School attainment indicator

Individual deprivation	An individual 18-34 y.o. has not completed secondary level schooling (grade 12).
Household-level deprivation	A household is deprived if at least one household member (18 to 34 y.o) is deprived in school attainment. (Note: applicable only to households only with members 18-34 y.o.)

2. Health Dimension

Two indicators are covered under the health dimension, namely (having) health insurance and affordable health care (of drugs and services).

1. **Health insurance.** A mix of public- and privately provided health insurance schemes exists in Lebanon. The common public health insurance includes the National Social Security Fund, Facultative Fund, Public Servants Cooperation and the Army and Internal Security Forces where the latter two caters to public sector employees and those in the armed forces. Health insurance is typically provided to an individual via his or her place of employment or purchased separately, and coverage can be extended to dependents. Individuals without health insurance may access the public health system under certain conditions but services may be limited with long wait times. The absence of health insurance coverage leaves individuals vulnerable to unforeseen and potentially large health expenses or delayed treatment that can adversely impact the finances and wellbeing of a household. Deprivation in this indicator is measured at the household level where at least one member has no health insurance irrespective of source.

Annex Table 1.2.1 Health insurance indicator

Individual deprivation	An individual is deprived if s/he does not have health insurance coverage.
Household-level deprivation	At least one household member does not benefit from any type of health insurance

2. **Affordable health care.** Households whose members were either unable to afford medical help when recently injured or ill, or cannot pay for drugs that are required regularly are in a vulnerable position.

Annex Table 1.2.2 Affordable health care indicator

Individual deprivation	An individual is deprived if s/he: (i) had an injury/sickness in the last 3 months and has not sought medical help because he/she could not afford it; or (ii) is in need of either regular medical services or drugs and cannot afford (either of) them.
Household-level deprivation	A household is considered deprived in access to health care if at least one of its members is deprived.

3. Employment Dimension

Access to a job generates income for the individual and his/her household, and also increases their independence, self-worth, social integration. The lack of jobs has consequences not only for the affected individual (loss of independence, self-confidence, mental/physical health), but also impact the well-being of all the household members.

Five indicators are covered under the employment dimension, adults not employed, namely youth not in employment or training (NEET), having a working age adult in an informal sector or underemployed, high dependency ratio and elderly households relying on transfers and internal remittances.

1. **Adult members not employed.** If adult members of a household are unable to find work, this places the entire households in a vulnerable situation. An extreme situation is when none of the individual members of the household, ages 25-64 are employed.

Annex Table 1.3.1 Employment indicator

Individual deprivation	An individual 25-64 y.o. is not employed.
Household-level deprivation	None of the household members 25-64 is employed. (Note: applicable only to households only with members 25-64 y.o.)

2. **Youth not in employment or training (NEET).** In general, the economically active population is defined as the population aged 15 -64 years of age. For youth, ages 15 to 24, they may choose to alternatively pursue an education or training to advance their human capital. The related deprivation choice is therefore:

Annex Table 1.3.2 Youth NEET indicator

Individual deprivation	An individual 15-24 y.o. is neither employed nor in training.
Household-level deprivation	None of the household members 15-24 is either employed or a student or in training. (Note: applicable only to households only with members 15-24 y.o.)

3. **Underemployment and informal work.** Informal employment[15] refers to jobs that do not provide employees with legal or social protection, thus exposing them to greater economic risks than other employed people. Further, even with a formal job, a person may be unable to work as much as he/she needs and may have to settle for shorter working hours leading to a state of underemployment. The definition of (time-related) underemployment covers all people in employment who, during the previous 7 days: (a) wanted to work additional hours; (b) whose working time in all jobs was less than 40 hours during the previous 7 days; and (c) who were available to work additional hours had there been an opportunity for more work. Either informality or underemployment is a reflection of low job quality and therefore low-security of work.

[15] Following international guidelines of the 17th ICLS, the definition of "informal employment" in the LFHLCS 2018-19 includes: (1) all employees where, in their main or secondary jobs, the employer does not pay social security contributions on the employee's behalf (if information on social security contributions is not available (i.e. the person does not know or social security schemes do not exist), the classification relies on whether or not the person is entitled to paid annual leave (or compensation in lieu of it) and paid sick leave); (2) all contributing family workers; (3) all employers, own-account workers or members of producers' cooperatives of informal sector enterprises.

Annex Table 1.3.3 Underemployment and Informal work indicator

Individual deprivation	An individual 15+ is an informal worker or underemployed
Household-level deprivation	At least one household member 15+ is either informal worker or underemployed. For households with at least one 15+ working. (Note: applicable only to households with at least one member, 15+ that is working)

4. **Dependency ratio.** Households with only one adult working member supporting more than three dependents are likely to be more vulnerable than smaller households or households with additional working adults.

Annex Table 1.3.4 Dependency ratio indicator

Individual deprivation	Not applicable
Household-level deprivation	There is less than one working adult (15+) per every three household members (all, incl. employed). (Note: applicable only to households with at least one member, 15+ that is working)

The indicator cutoff is computed based on the overall economic dependency ratio of 211%.[16]

5. **Elderly and income insecure.** Elderly households, defined as households with members of retirement age years (age 65 and above) but without working age adults (15-64) years, and are *solely* depend on social transfers and internal remittance (but not remittances from abroad) may be in an economically fragile situation.

Annex Table 1.3.5 Income insecure indicator

Individual deprivation	Not applicable
Household-level deprivation	Households with no adult members 15-64 y.o. and whose sole income source is transfers in the past 12 months. (Note: applicable only to households with at least one 65+ member and no members 15-64 y.o.)

[16] See https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_747257.pdf (pg.18). In the case of Lebanon, the lower-bound age is adjusted to 15. The formula used for the economic dependency ratio is [(Pop 0-14)+ (inactive 15+)+ (unemployed 15+)] / (employed 15+) computed at national, not household, level.

4. Basic Infrastructure Dimension

Having access to basic service are critical for supporting the well-being of individuals and households whether by having transportation to the provision of safe drinking water, improved sanitation and electricity in addition to health care. There are aspirations that are also reflected in several SDGs including Goal 3 on health and well-being which includes Target 3.8 to achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all; Goal 6 on water and sanitation that encompasses Target 6.1 on achieving universal and equitable access to safe and affording drinking water and Target 6.2 on access to adequate and equitable sanitation and hygiene; Goal 7 on energy in particular Target 7.1 on universal access to affordable, reliable and modern energy services while Goal 11 of the SDG concerns (among others, access to safe, affordable, accessible and sustainable transportation systems for all (Target 11.2).[17]

The five indicators concerning basic services are concerned with transportation, electricity, sanitation, improved drinking water and access to healthcare.

1. **Access to private or public transportation**. Having easy access to either private or public transportation is critical for households to navigate their daily lives. Absent this, a household can be considered deprived with respect to transportation.

Annex Table 1.4.1 Access to transportation indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if it has no personal means of transportation (e.g. car, motorcycle, bus or pick-up) AND lives more than 10 minutes walking from a bus/ minibus/ taxi access point.

2. **Access to electricity.** In Lebanon, the connection to the public electricity grid is almost universal but the nation universally suffers from frequent rationing and outages compelling many to resort to private (diesel-based) generators. As the LFHLCS does not collect information regarding the quality of the electricity connection, we use generator access as a proxy measure for having adequate electricity.[18]

[17] https://www.un.org/sustainabledevelopment/

[18] In 2018-19, in some localities, such as Zahleh in Bekaa and certain neighbourhoods in Beirut, the Governments or local municipalities used to offer their inhabitants – against cost - continuous access to electricity via Electricité du Liban (EDL) or Electricité de Zahle (EDZ) which did mitigate the need for a private generator. However, that is not captured in this indicator.

Annex Table 1.4.2 Access to electricity indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if it does not have access to a generator.

3. **Access to sanitation.** Similarly, the lack of access to improved sanitation facilities is also one of the measurement criteria for the SDG Indicator 11.1.1. In the case of Lebanon, the absence of a latrines/toilet or its placement outside the dwelling together with a lack of proper drainage would imply deprivation in this indicator.

Annex Table 1.4.3 Access to sanitation indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if it uses a WC outside the dwelling and shares with other households, OR there is no WC in the dwelling, OR the household does not have a drainage or uses open drainage or another source as its main drainage.

4. **Access to improved drinking water.** The availability of drinking water is among the criteria for adequate housing based on the UN Habitat II and 'access to improved drinking water sources' is further mentioned as a measurement criterion for the SDG Indicator 6.1.1.[19]

Annex Table 1.4.4 Access to improved drinking indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if the main water source for drinking or service is unprotected well or spring, tank or truck or surface water, or "other".

5. **Availability of health facilities.** Being with a reasonable distance of health facilities ensures that households can get the care they need in a timely manner. Using a threshold of 15 minutes, household located 15 minutes or longer by car away from the nearest health facilities are considered deprived.

[19] Most households in Lebanon (about 69.1 percent in 2018-2019) rely on bottled water even with available piped water due to concerns over water quality and the affordability of bottled water. For the purposes of this indicator, if a household has access to piped water, it will be considered non deprived.

Annex Table 1.4.5 Health facility availability indicator

Individual deprivation	Not applicable
Household-level deprivation	A household (HH) is considered deprived if it takes 15 minutes or more to drive to reach a hospital or private clinic.

5. Living Standards Dimension

A household living standards is affected by the quality its dwelling and amenities at its disposal and increasingly, the ability to access timely information. How the household perceives itself on the economic latter is also telling of its socio-economic situation.

The right to adequate housing is mentioned in the Habitat II agenda (UN, 1996) wherein "everyone will have adequate shelter that is healthy, safe, secure, accessible and affordable and that includes basic services, facilities and amenities, and will enjoy freedom from discrimination in housing and legal security of tenure." Further, a dwelling is not considered adequate if "it does not guarantee physical security or does not provide sufficient space, as well as protection against cold, humidity, heat, rain, wind or other risks for the health and structural hazards." Inadequate housing is captured in SDG Indicator 11.1.1 – "Proportion of urban population living in slums, informal settlements or inadequate housing" – which shows that the issue remains a challenge.

All three terms captured in this indicator (slums, informal settlements and inadequate housing) involve poor quality of basic services, structural quality/durability of the dwelling and security of tenure; while only the slums and "inadequate housing" involve overcrowding. Regarding the condition of the dwelling - expressed as low quality of building materials for roof, floor and walls, and deterioration of any of these elements - the existing LFHLCS data is only available for the main materials used for flooring for which only 4 percent of the residents of Lebanon are using lower-quality cement or "other" materials for flooring. With better data, an indicator for dwelling conditions could be considered in the future.

1. **Overcrowding.** Overcrowding can be referenced both via number of household members per living room and square meters (total built-up area) per household member. The first measure is preferred as it tends to be subject to less measurement errors. A household is considered deprived if it has three or more people per (livable) room. The threshold of three is motivated by the definition of "sufficient living area" in SDG Indicator 11.1.[20]

[20] The Arab MPI (ESCWA, 2017) adopts the same definition of overcrowding.

Annex Table 1.5.1 Overcrowding indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if it lives in a dwelling consisting of three or more people (include domestic help) per [livable] room

2. **Access to information**. The unintended lack of connectivity with the outside world is a clear sign of deprivation for a household. Given the near universal ownership of televisions in Lebanon, the focus instead is on the availability of a landline phone, a mobile phone or an internet connection.

Annex Table 1.5.2 Access to information indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if it does not have access to fixed phone, mobile phone or Internet.

3. Heating. Given seasonal variations in temperatures in Lebanon, the absences of any heating source in a dwelling can be problematic during the winter period (e.g. November through March).

Annex Table 1.5.3 Access to heating indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if it does not have access any source of heating in the past 12 months.

4. **Asset ownership**. Low asset ownership alone is indicative of a vulnerable household with limited wealth who may be unable to cope with shocks. At minimum not having at least two items of what a typical household owns such as a TV, oven, washing machine or vacuum would be strongly suggestive of an asset-poor household.

Annex Table 1.5.4 Asset indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if it has no more than two of the following (physical) assets: TV, burner with oven, washing machine, vacuum

5. **Self-reported poverty**. The 2011-12 HBS data for Lebanon showed a correspondence between how a household perceives its financial wellbeing whether in absolute or relative terms and monetary poverty. In the LFHLCS, in the absence of suitable monetary measures of poverty, households were asked to classify themselves as either wealthy, financially well-off, average, average to poor, poor and very poor. Those that consider themselves at the lower rung of the economic ladder are deserving of attention and assistance.

Annex Table 1.5.5 Self-evaluated poverty indicator

Individual deprivation	Not applicable
Household-level deprivation	A household is deprived if it classifies itself as poor or very poor.

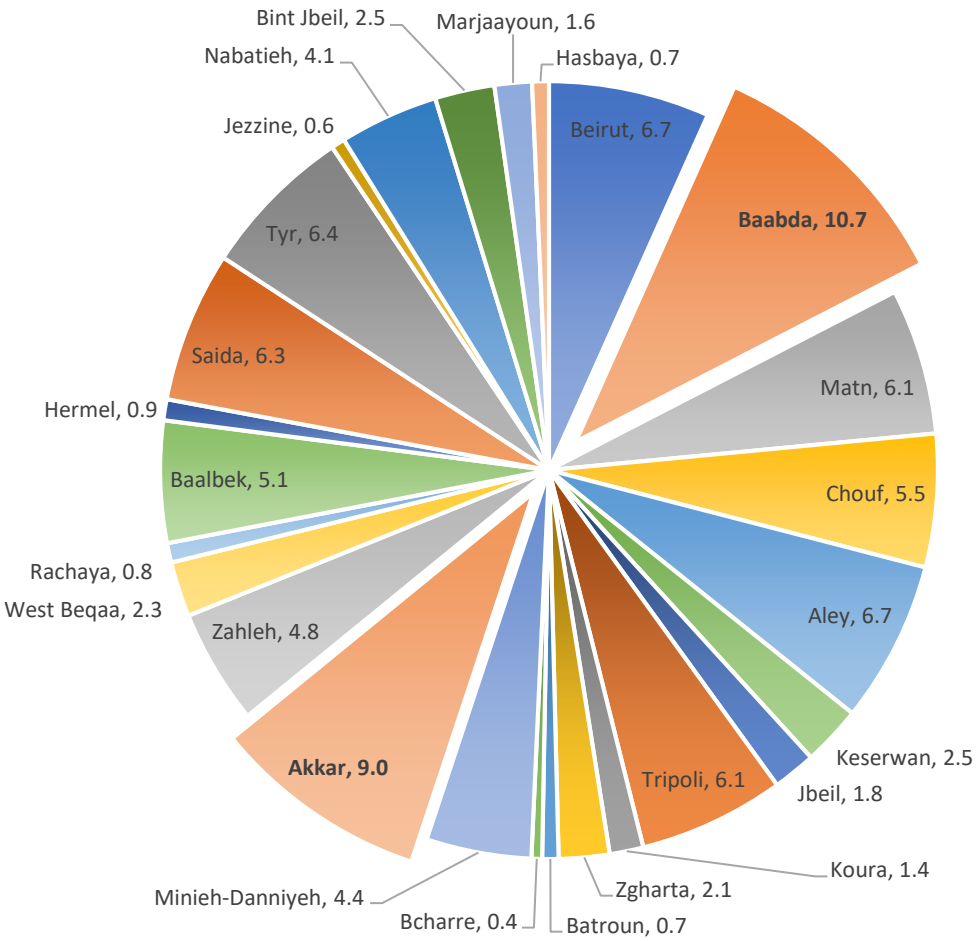
2. Additional tables and figures by district

Annex Table 2. Multidimensional poverty by districts, 2019

Governorates	Districts	Population share (%)	Share of MPI-poor (%)	Headcount ratio, H (%)	Intensity, A (%)	MPI		
						Value	95% CI	
Beirut	Beirut	6.8	6.7	51.9	47.1	0.245	0.223	0.266
Mount Lebanon	Baabda	11.4	10.7	49.8	45.3	0.226	0.207	0.245
	Matn	10.3	6.1	31.4	43.6	0.137	0.116	0.158
	Chouf	5.7	5.5	51.2	43.8	0.224	0.204	0.245
	Aley	6.2	6.7	57.6	46.3	0.267	0.238	0.295
	Keserwan	5.3	2.5	24.9	42.1	0.105	0.084	0.125
	Jbeil	2.5	1.8	38.0	40.4	0.153	0.109	0.198
North Lebanon	Tripoli	5.1	6.1	63.7	43.6	0.278	0.255	0.300
	Koura	1.8	1.4	42.4	42.9	0.182	0.157	0.207
	Zgharta	1.8	2.1	60.6	47.2	0.286	0.239	0.334
	Batroun	1.2	0.7	29.3	38.8	0.114	0.094	0.134
	Bcharre	0.5	0.4	50.8	39.6	0.201	0.177	0.225
	Minieh-Danniyeh	3.0	4.4	77.0	45.9	0.353	0.329	0.378
Akkar	Akkar	6.9	9.0	69.6	44.8	0.312	0.287	0.337
Bekaa	Zahleh	3.7	4.8	68.6	45.4	0.311	0.286	0.337
	West Beqaa	1.8	2.3	66.8	43.7	0.292	0.260	0.324
	Rachaya	0.7	0.8	59.5	41.8	0.249	0.221	0.276
Baalbek-Hermel	Baalbek	4.5	5.1	60.4	42.9	0.259	0.239	0.279
	Hermel	0.6	0.9	72.2	47.1	0.340	0.307	0.374
South Lebanon	Saida	6.2	6.3	54.2	41.9	0.227	0.205	0.250
	Tyr	5.4	6.4	62.9	42.5	0.267	0.250	0.284
	Jezzine	0.7	0.6	45.8	44.0	0.202	0.162	0.241
Nabatieh	Nabatieh	3.7	4.1	58.6	44.4	0.261	0.238	0.283
	Bint Jbeil	2.0	2.5	64.7	42.2	0.273	0.247	0.299
	Marjaayoun	1.6	1.6	53.1	42.6	0.226	0.202	0.251
	Hasbaya	0.6	0.7	61.3	42.6	0.261	0.228	0.294

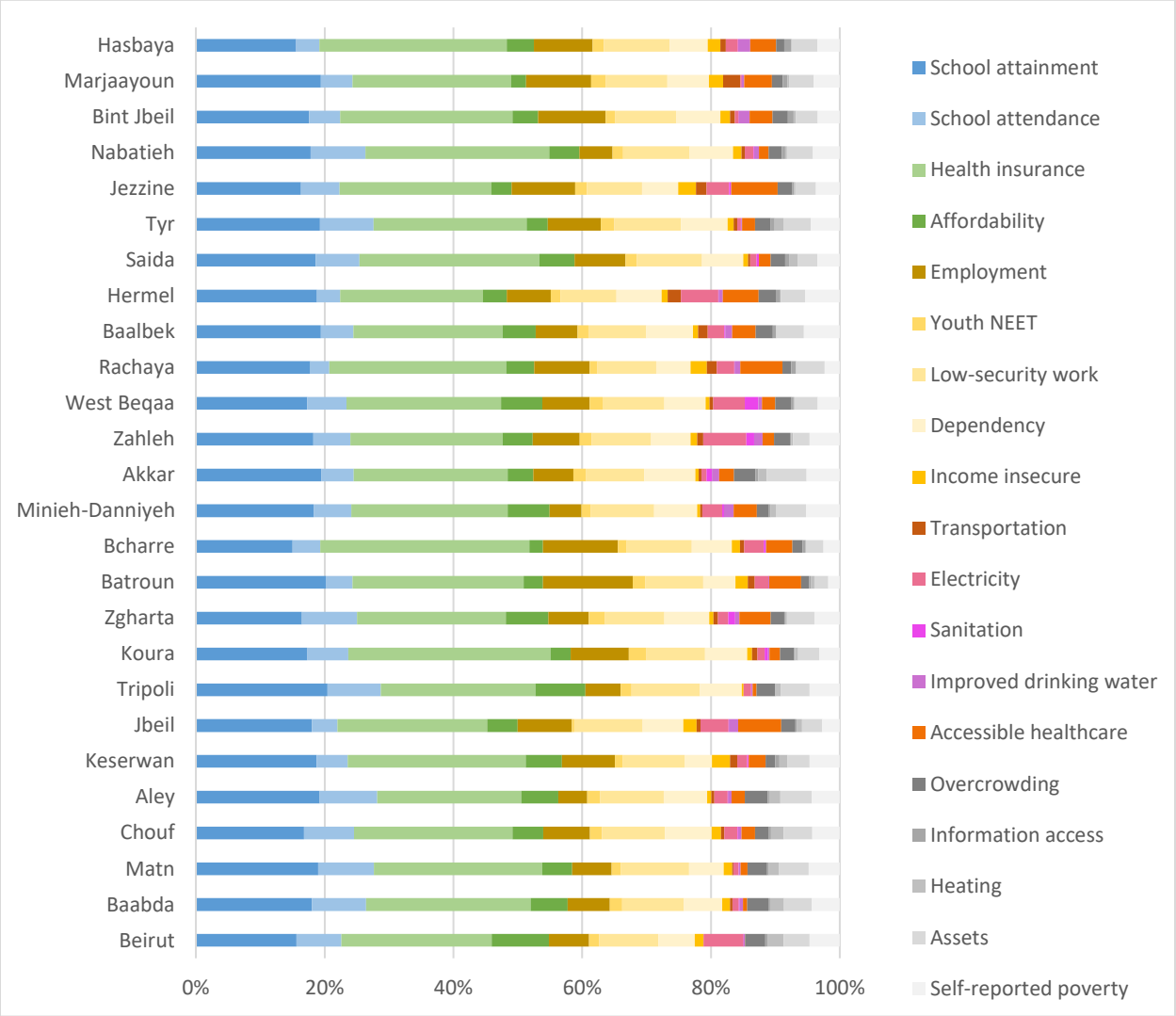
Source: Authors' calculation using data from LFHLCS 2018-2019

Annex Figure 2.1 Distribution of the MPI-poor by districts, 2019 (%)



Source: Authors' calculation using data from LFHLCS 2018-2019

Annex Figure 2.2. Contribution share of each indicator to district MPI, 2019



Source: Authors' calculation using data from LFHLCS 2018-2019

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