

17. Dominican Republic: Progress and Innovations in Measures of Multidimensional Poverty

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INTRODUCTION

The eradication of extreme poverty in all its dimensions continues to be one of the main challenges faced by humanity, as indicated by the United Nations Development Programme (UNDP)²⁶⁹ and other important development agencies. In this sense, the reduction of poverty is one of the main goals of national policies and the international development agenda. In fact, as is known, of the 17 Sustainable Development Goals (SDGs), “end poverty” is the first objective.

The design and implementation of public policies aimed at achieving this objective, as well as for the other SDGs, with which it has a close relationship, faces important challenges. These challenges include the selection or development of appropriate methodologies for measuring poverty, as well as the corresponding availability and quality of data, with adequate levels of disaggregation.

In relation to poverty measurement methodologies, most countries, especially in the Latin American and Caribbean region, have traveled “from indicators based only on income and consumption towards multidimensional indicators of poverty—which define thresholds of deficiencies—towards multidimensional welfare indicators that allow us to measure, from the perspective of human development, progress in multiple dimensions that transcend monetary poverty” (UNDP, 2016, p.96).

Within this process, different methodological options for the measurement of multidimensional poverty have been developed, from the global level, i.e., the Multidimensional

269 UNDP, Sustainable Development Goals. <http://www.undp.org/content/undp/es/home/sustainable-development-goals/goal-1-no-poverty.html>.

Poverty Index (MPI-Global) published in the global UNDP Human Development Reports, to national and regional indexes.

In relation to the second challenge, the restriction of data significantly affects the suitability of the proposed poverty measurement methodology. In fact, in relation to the Multidimensional Poverty Index of Latin America (MPI-LA), the proponents of this methodology highlighted this aspect, noting that the index was “far from being an ideal measure of poverty, mainly due to the restrictions of data” (OPHI, 2015). These authors also remark that although “surveys of the countries in the region have improved greatly in recent decades, major progress is needed, especially in light of the Development Agenda post 2015”. This aspect had already been highlighted as a major challenge of the Millennium Development Goals (MDGs), as can be seen in the following notes, also cited by the authors of the MPI-LA.

“The closing of the gaps in the availability and quality of data, the compliance with methodological standards and disaggregation are among the greatest challenges for the monitoring of the MDGs”

(UN, 2014, P.6).

In relation to these challenges, this paper aims to analyse the progress and innovations of the Dominican Republic in multidimensional poverty measurement methodologies and in the strengthening of information systems that guarantee the availability and quality of the corresponding information. The first section analyses the main poverty indices used in the country and the second section presents the results of the main measurements obtained.

POVERTY INDEXES USED IN THE DOMINICAN REPUBLIC

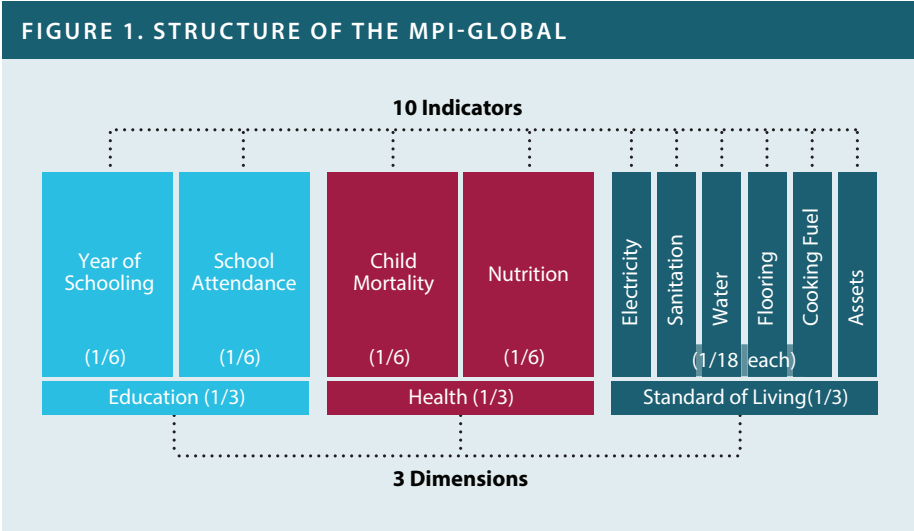
In the Dominican Republic, the official measure of poverty has been monetary poverty, which considers only household income. In this sense, households defined as poor under this methodology are those that are below the poverty line (MPI-RD, 2017). Another methodology used is the Unsatisfied Basic Needs Index (UBNI), a pioneering method in the multidimensional measurement of poverty, since it proposes six deficiencies and households are considered poor if they present at least one of them.

Another multidimensional indicator is the Quality of Life Index (QLI) which as its name says, measures the quality of life of households related to well-being, taking into account variables such as education, health, housing and basic services, among others.

The MPI-Global was developed by the Oxford Poverty and Human Development Initiative, which allows us to see the deficiencies that go beyond a person’s household’s economic income to include the fields of health, education and the standard of living.

The MPI-Global consists of three dimensions and 10 variables. Each dimension has the same weight and the indicators within the same dimension are also weighted equally.

The Dominican Republic has formed part of the global MPI that OPHI calculates every year, using the Multiple Indicator Cluster Survey (MICS) as the main source. However, the



Source: Oxford Poverty and Human Development Initiative (OPHI) 2017, Dominican Republic, Country Briefing, Multidimensional Poverty Index Data Bank. OPHI, University of Oxford.

results presented are extremely low, and cannot be considered valid for most of the countries in the Latin American region (Morillo, 2017). In this regard, the Dominican Government presented the Dominican Republic’s Multidimensional Poverty Index (MPI-DR), an innovative method to measure the multiple factors that poor people experience at the same time.

The MPI-DR consists of five dimensions and 24 indicators; each dimension has equal weight (20 percent). The indicators within each dimension also weigh the same. For this methodology, in 2015 a special household survey was created (MPI-DR, 2017). In this way, the Dominican Republic became one of the few countries that adjusted the index to its needs by measuring five dimensions.²⁷⁰

The MPI-DR, being very specific for the country, does not allow comparison with other countries in the region (Morillo, 2017). As a result, the MPI-LA was created in 2014. This is an index that seeks to include dimensions and poverty indicators relevant to the region, based on the revision of the regional tradition in the measurement of poverty, but also taking into account the data limitations imposed by household surveys available in the region (ECLAC, 2014, Santos et al).

The data used to calculate the MPI-LA comes from the National Labor Force Survey of the Central Bank of the Dominican Republic. Like the MPI-DR, it is composed of five dimensions but has only 13 indicators.

270 Source: <http://www.siuben.gob.do/ipm/>.

FIGURE 2. STRUCTURE OF MPI-DR

DIMENSIONS	INDICATORS		DIMENSIONS	INDICATORS	
	Health	Infant mortality		Housing and surroundings	Housing
	Health Insurance		Potable water		
	Disease		Sanitation		
	Nutrition		Flammable		
Education and child care	Educational achievement		Electricity		
	Educational gap		Training		
	Lack of school		Proximity to polluted sources		
	Child care		Proximity to sources of danger		
Livelihood and employment	Household livelihood	Digital gap and coexistence	Digital gap		
	Child labor		Citizens security		
	Informality		Discrimination		
			Participation		
			Documentation		

Source: Sistema Único de Beneficiarios (SIUBEN)

FIGURE 3. STRUCTURE OF THE MPI-LA

HOUSING	<ul style="list-style-type: none"> • Precarious materials • Overcrowding • Insecure housing tenure
BASIC SERVICES	<ul style="list-style-type: none"> • Lack of sources of water • Lack of improved sanitation • Lack of energy
LIVING STANDARDS	<ul style="list-style-type: none"> • Monetary resources • Lack of durable goods
EDUCATION	<ul style="list-style-type: none"> • Absence from school • Schooling gap • Insufficient school achievement
EMPLOYMENT AND SOCIAL PROTECTION	<ul style="list-style-type: none"> • Unemployment • Absence of social protection

Source: The Multidimensional Poverty Index for Latin America (MPI-LA): An application for the Dominican Republic 2005-2016

BRIEF RESEARCH ON THE HUMAN DEVELOPMENT INDEX OF THE DOMINICAN REPUBLIC

The Dominican Republic was positioned in 2016 as the fastest growing economy in Latin America and the Caribbean, leading the countries of the region for the third consecutive year, with a growth rate of around 6.6 percent of gross domestic product. The country macroeconomic stability is due to the good management of economic policy carried out in recent years, especially in terms of monetary policy; the second lowest cumulative inflation rate recorded in the last 33 years—1.7 percent, according to Central Bank data—occurred during that period. Another measure of positive monetary policy was the increase in gross national savings.

In this regard, since 2014, the Dominican Republic has been among the countries classified as having high human development, registering a value of 0.722 in its Human Development Index (HDI). This performance is driven mainly by the income dimension, indicating more the capabilities of the Dominican economy to grow and less so to redistribute.²⁷¹ For example, when the HDI is adjusted for inequality, the country reduces its advances in human development by 21 percent, with the income dimension registering the highest levels of inequality in the distribution of human development, followed by education and health. In fact, although there were reductions in global monetary poverty levels, from 40.4 percent in 2011 to 30.5 percent in 2016, in redistributive terms, the changes in the Gini coefficient were slow. Despite the reductions in this indicator (which went from 0.497 in 2004 to 0.456 in 2015), in 2016 it showed an increase to 0.4683.²⁷²

RESULTS OF POVERTY MEASUREMENT IN THE COUNTRY

Measuring the Multidimensional Poverty Index

Before knowing the results of each methodology, it is important to know how the multidimensional poverty index is calculated.

The multidimensional poverty of a household and its members is done using the methodology of Alkire and Foster. Said methodology integrates two phases: first an *identification* phase, in which the criteria to define the condition of multidimensional poverty of a household and its members are set, and a second phase of *aggregation*, in which indicators of poverty are generated (Morillo, 2017). The aggregate calculations are obtained through the following indicators:

1. Incidence rate (H): is defined as the proportion of the multidimensionally poor population.
2. Intensity of poverty (A): Indicates the proportion of indicators that cannot be accessed.

271 UNDP, *Human Development Report 2016: Human Development for All*, UNDP, New York, 2016, <http://www.undp.org/content/undp/es/home/librarypage/hdr/2016-human-development-report.html>.

272 Ministry of Economy, Planning and Development, 'Bulletin of Official Monetary Poverty Statistics in the Dominican Republic', 2016.

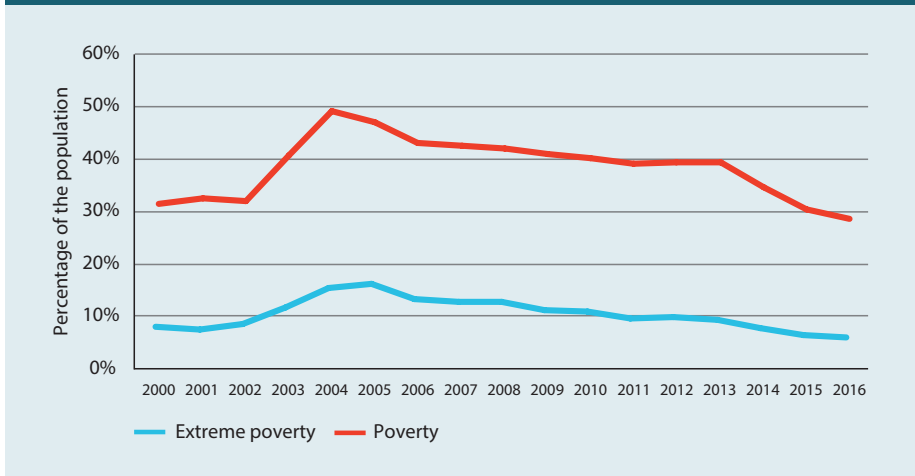
The multidimensional poverty index is equal to the product of the incidence rate (H) and the intensity of poverty (A):

$$\text{MPI} = H \times A$$

RESULTS

If we analyse the empirical evolution of Dominican Republic's poverty, we observe that it has been decreasing over time. Between 1990 and 1998, monetary poverty fell moderately. But it was not until the economic slowdown of the 2003-2004 financial crisis that a dramatic increase in poverty took place, with half of the population remaining in that condition. According to the *Report on poverty in the Dominican Republic: achieving economic growth that benefits the poor in the Dominican Republic* (2006), in 2004, 42 of every 100 Dominicans lived in poverty and 16 of every 100 lived in extreme poverty. In that same year, 20 percent of the richest families concentrated 56 percent of the national income, while the poorest 20 percent received only 4 percent. However, the data published in the *Bulletin of Official Statistics of Monetary Poverty No.3* shows that these figures are higher.

FIGURE 4. EVOLUTION OF DOMINICAN MONETARY POVERTY (2000-2016)



Prepared by the author with data from the Ministry of Economy, Planning and Development

The need to measure multidimensional poverty arises precisely because poverty is not only related to income, but there are multiple factors that affect whether a household or person is in this state.

In the MPI-Global structure a person is identified as:

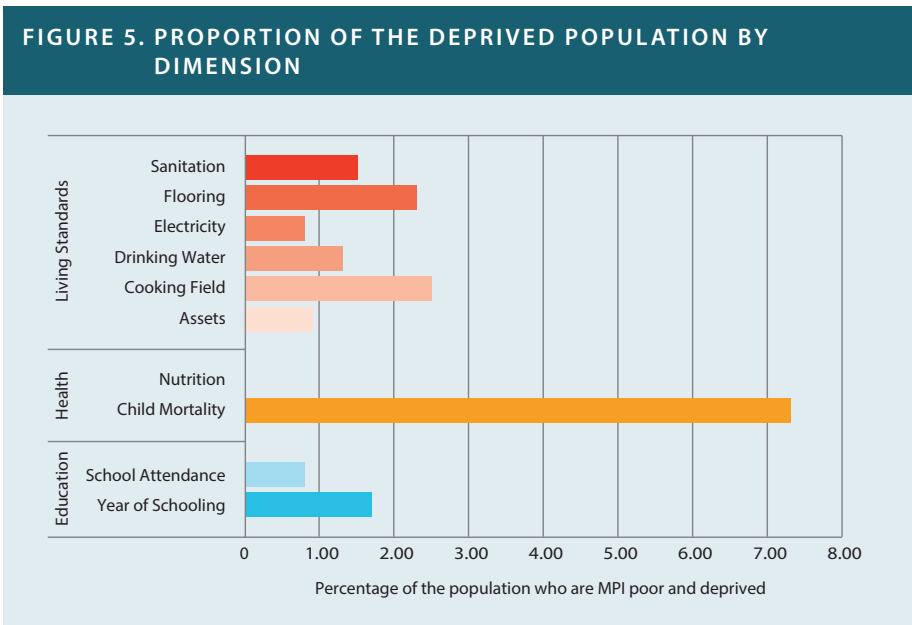
- Multidimensionally poor if they are deprived in at least one third of the weighted indicators shown in figure aa; in other words, the cut-off point for poverty (k) is 33.33%.

- Vulnerable poor if they are deprived by 20 percent—33.3 percent of the weighted indicators.
- Severely poor if they are deprived in 50 percent or more of the weighted indicators.
- Indigent they are those deprived in at least one third of the most extreme indicators.

Where k is the minimum threshold of deprivation or multidimensional poverty line.

MULTIDIMENSIONAL POVERTY INDEX (MPI=HxA)	PERCENTAGE OF POOR PEOPLE (H) (K=33.3%)	AVERAGE INTENSITY IN THE POOR (A)	POPULATION PERCENTAGE:		
			VULNERABLE (20-33.3%)	IN SEVERE POVERTY (K=50%)	INDIGENTS
0.034	8.8%	38.5%	4.1%	1.1%	1.6%

The MPI-Global uses 10 indicators to measure poverty in three dimensions: education, health and standard of living. Figure 5 shows the proportion of the population that is deprived for each indicator:



Source: Oxford Poverty and Human Development Initiative (OPHI) 2017, Dominican Republic, Country Briefing, Multidimensional Poverty Index Data Bank. OPHI, University of Oxford

It is possible to observe that the most pronounced dimension is health. However, one of the disadvantages of this methodology is that the data referring to health are relatively insufficient and overlook some group deficiencies, especially in relation to nutrition.

In the case of the MPI-DR, the results differ greatly compared to the previous ones, although, it should be noted that the estimates made for the MPI-DR are more recent (2015).

The poverty line defined in the MPI-DR was $k=33\%$. That is to say, a household has to be deprived approximately in a dimension and a half to be multidimensionally poor or the weighted sum of indicators. The results achieved under this structure were the following:

MULTIDIMENSIONAL POVERTY INDEX (MPI= $H \times A$)	INCIDENCE OF POVERTY (H) (K=33%)	INTENSITY OF POVERTY (A)
14.7%	35.6%	41.3%

Under this structure, 35.6 percent of the population are multidimensionally poor, surpassing the monetary poverty rate, which for 2015 was 30.81 percent. The dimensions that describe most of the multidimensional poverty in the Dominican Republic are health (27.1 percent), followed by housing and environment (21.6 percent), education and child care (19.0 percent), sustenance and work (17.0 percent) and, finally, digital divide and coexistence (15.2 percent) (MPI-DR, 2017).

Contrary to the MPI-Global and MPI-LA, which are methodologies aimed at international comparison, the construction of the MPI-DR seeks to respond to the realities of the Dominican Republic (MPI-DR, 2017) Therefore, it allows us to visualize the main problems of households in poverty.

At the national level, the indicator with the greatest deprivation is informal work, which indicates that 70.2 percent of the population live in a household with at least one member working in the informal sector. In addition, multidimensionally poor households have higher rates of deprivation in health insurance, educational attainment, informal work and food security.

Both at the national level and in the proportion of the multidimensionally poor, the indicator of informal work prevails. For 2015, the rate of those working in the formal sector was 47.8 percent, which indicates that more than half of the population works in the informal sector.

By geographic zones, the MPI-DR allowed us to see that rural areas have the highest number of households that are poor and are deprived of the calculated indicators (excluding discrimination, insecurity, proximity to pollution sources, educational lag, economic support), followed by urban areas and finally the metropolitan areas.

The MPI-LA, which is composed of a set of 13 variables or deprivations, grouped into five social dimensions (housing, basic services, standard of living, education, employment and social protection), with a defined poverty line of $k=25$ percent, yielded the following results for the period 2005-2016.

YEAR	MULTIDIMENSIONAL POVERTY INDEX (MPI= $H \times A$)	INCIDENCE OF POVERTY RATE (H) (K=25%)	INTENSITY OF POVERTY (A)
2005	19.0	45.0	42.2
2006	17.8	42.1	42.2
2007	15.4	37.5	41.0
2008	15.5	37.7	41.2

(Continued)

(Continued)

YEAR	MULTIDIMENSIONAL POVERTY INDEX (MPI=H×A)	INCIDENCE OF POVERTY RATE (H) (K=25%)	INTENSITY OF POVERTY (A)
2009	14.5	35.9	40.4
2010	14.3	35.4	40.2
2011	13.8	34.3	40.2
2012	13.9	34.9	39.8
2013	13.5	33.9	39.8
2014	11.5	29.2	39.3
2015	10.0	25.5	39.2
2016	8.9	23.1	38.4

The results obtained for the multidimensional incidence rate (H) show a process of decrease. In the period from 2012 to 2016, the multidimensional poverty rate fell from 34.9 percent to 23.1 percent, achieving a reduction of 11.8 percentage points. The main determinant of the decrease was the improvement in household income, followed by possession of durable goods, provision of drinking water, educational achievements and overcrowding.

One of the limitations presented by the MPI-LA is related to the fact that the health dimension has not been incorporated, nor has information regarding the nutritional status of households. In addition, the variables that make up the index have been established according to the availability of data from household surveys. In that sense, it is a measure elaborated in the framework of possibilities.

CONCLUSION

The multidimensional measurement of poverty starts from a more integral vision of the living conditions of the population, recognizing that the monetary factor is not the only variable of well-being.

The results presented by the MPI-Global are extremely low and cannot be considered valid for most of the countries in the Latin American region. This is evidenced by the great difference that exists with the results of the MPI-DR, a measure created under the Dominican reality. However, the MPI-DR does not allow comparability with other countries in the region, hence the MPI-LA. Similarly, the latter has limitations, given that it is a measure developed according to the availability of data.

The objective of this study is not to determine what is the best measure, given that, at present, it is on the table for discussion, since there is no consensus on the dimensions to be considered and their respective indicators. Also, there is no agreement on minimum thresholds. All this also refers to the fact that the same statistics are not available in all countries and, in addition, the way of life in each society varies, so that with the same methodology a person or household could be classified equally, even when living conditions are totally different. This problem makes it difficult to compare countries on the subject of multidimensional

poverty, since there are many factors that differ from country to country which influence the determination of poverty and, in turn, there are no appropriate statistics to elaborate the index to cover all countries (Cardone, 2016).

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