Gender and Multidimensional Poverty in Nicaragua: An Individual-based Approach

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Abstract

Most existing multidimensional poverty measures use the household as the unit of analysis so that the multidimensional poverty condition of the household is equated with the multidimensional poverty condition of all its members. For this reason, household-based poverty measures ignore the intra-household inequalities and are gender-insensitive. Gender equality, however, is at the center of the sustainable development, as it has been emphasized by the Goal 5 of the SDGs: "Achieve gender equality and empower all women and girls" (UN, 2015, p. 14); therefore, individual-based measures are needed in order to track the progress in achieving this goal. Consequently, in this paper, we contribute to the literature on multidimensional poverty and gender inequality by proposing an individual-based multidimensional poverty measure for Nicaragua and estimate the gender differentials in the incidence, intensity, and inequality of multidimensional poverty. Overall, we find that in Nicaragua, the gender gaps in multidimensional poverty are lower than 5%, and poverty does not seem to be feminized. However, the inequality among the multi-dimensionally poor is clearly feminized, especially among adults, and women are living in very intense poverty when compared with men. We also find that adding a dimension (employment, domestic work, and social protection) under which women face higher deprivation leads to larger estimates of the incidence, intensity, and inequality of women's poverty. In this new context, gender gaps become much more substantial, and poverty and inequality are unambiguously feminized. Finally, we find evidence that challenges the notion that female-headed households are worse off than those led by males in terms of poverty.

Keywords: multidimensional poverty measurement, intra-household inequality, gender gaps in poverty, Latin America, Nicaragua

JEL Codes: I3, I32, D1, D13, D6, D63, O5, O54

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1. INTRODUCTION

Poverty is one of the major sources of unfreedom (Sen, 2000a). It can involve not only the absence of necessities of material well-being but also the negation of possibilities of living a decent life (Anand & Sen, 1997). Consequently, the removal of poverty is a central goal of development and remains at the top of the world's development agenda, as it is reflected in the 2030 Agenda for Sustainable Development that was adopted by the United Nation General Assembly on September 25th, 2015: "End poverty in all its forms everywhere" [Goal 1 of the Sustainable Development Goals (SDGs)] (UN, 2015, p. 15).

As the Goal 1 of the SDGs indicates, the conceptual understanding of poverty has been enhanced and deepened considerably in the past decades, especially following Amartya Sen's influential work on his capability approach (Thorbecke, 2008)[1], and currently there is a widespread consensus that poverty is a multidimensional phenomenon (Atkinson, 2003; Ferreira & Lugo, 2013; Silber & Yalonetzky, 2013). Consequently, poverty analysis and its measurement should not be based solely on income, or any monetary indicator, as it is unable to capture key well-being dimensions such as life expectancy, the provision of public goods, literacy, security, freedom and so on (Bourguignon & Chakravarty, 2003; Chakravarty & Lugo, 2016; Kakwani & Silber, 2008a; Stiglitz, Sen, & Fitoussi, 2009a, 2009b; Whelan, Nolan, & Maître, 2014); as Sen (2000b) noted: "Human lives are battered and diminished in all kinds of different ways" (p. 18). As a result of this awareness, poverty research has shifted the emphasis from a unidimensional to a multidimensional approach (Chakravarty & Lugo, 2016; Duclos & Tiberti, 2016; Pogge & Wisor, 2016), which has been considered by Kakwani & Silber (2008a) as "the most important development of poverty research in recent years" (p. xv), and diverse approaches have been proposed in the literature to measure poverty in a multidimensional setting[2].

Yet, it should be mentioned that there does not seem to be a universal agreement on whether the multiple dimensions of poverty should be brought together into a single measure (Lustig, 2011); Ravallion, for instance, advocates a dashboard approach, although he also recognizes that poverty is multidimensional (Ravallion, 2011)[3]. Particularly, in this paper, we start from the premise that a composite index and a dashboard approach can be complementary: There is no reason to choose between them (Ferreira and Lugo, 2013). The latter might be particularly useful for policy purposes, while the former is helpful to take advantage of the information from the joint distribution of deprivation (Alkire and Foster,

2011b), when the target is, as in our case, to quantify the incidence of many deprivations within the same individuals (Yalonetzky, 2014).

On the other hand, most existing empirical investigations concerned about multidimensional poverty analysis have used the household as the unit of analysis (Bessell, 2015; Franco, 2017; Klasen & Lahoti, 2016; Pogge & Wisor, 2016; Rogan, 2016a), meaning that the household has been utilized to identify who is multi-dimensionally poor or non-poor. The general assumption adopted has been that all persons in the household are considered to be multi-dimensionally poor if the household is identified as such; that is, the multidimensional poverty condition of the household has been equated with the multidimensional poverty condition of all individuals in the household (Klasen & Lahoti, 2016). Yet, poverty is a characteristic of individuals, not households (Deaton, 1997); furthermore, perhaps the most relevant thing, that assumption overlooks important within-household features (Jenkins, 1991), and it ignores the intra-household inequalities that have been suggested to exist: Much of the inequalities are generated within households (Asfaw, Klasen, & Lamanna, 2010; Bradshaw, 2002, 2013; Bradshaw, Chant, & Linneker, 2017a, 2017b; Chant, 2008; Klasen & Wink, 2002; 2003; Rodríguez, 2016). Besides, inequalities between children and adults, for instance, or between different generations might be hidden when the household is used as the unit of analysis (Atkinson, Cantillon, Marlier, & Nolan, 2002), leading to an underestimation of the extent of overall poverty and inequality in the society (Deaton, 1997; Rodríguez, 2016), which in turn can lead to a biased assessment of social policies and targeting.

Additionally, within-household inequality is a significant problem, which deserves fuller research, especially because of its significance to the poverty analysis by gender (Atkinson, 2002); as Sen (2000a) observed, "inequality between women and men afflicts–and sometime prematurely ends– the lives of millions of women, and, in different ways, severely restricts the substantive freedoms that women enjoy" (p. 15). However, multidimensional poverty measures that take the household as the unit of identification of the poor are not sensitive to gender; they are gender-blind and consequently incapable of revealing gender differentials within the households (Bessell, 2015; Pogge & Wisor, 2016). By definition, households containing both a female and a male cannot contribute to a gender gap in poverty (Wiepking and Maas, 2005); therefore, a gender difference cannot be estimated, and a gender analysis cannot be performed using household-based measures.

Gender equality is also at the center of sustainable development (ECLAC, 2016), as it has been emphasized by the SDGs: "Achieve gender equality and empower all women and girls" (Goal 5 of the SDGs) (UN, 2015, p. 14). There are many intrinsic and instrumental grounds to be concerned about existing gender inequalities in different well-being-related dimensions (Klasen & Lamanna, 2009)[4]. On one hand, from a well-being and equity view, gender inequalities diminish the individuals' well-being and are a form of injustice (Klasen & Wink, 2003; Klasen, 2007, 2002); on the other hand, from an instrumental perspective, gender inequalities have an impact on economic growth and development economics (Klasen & Lamanna, 2009; Klasen, 1999, 2006). However, for the reasons stated previously, assessments of gender inequalities should not be based on household-based measures; instead, individual-based measures are needed in order to track the progress in achieving the goal 5 of the SDGs, and its targets.

Although, in principle, assessing individual-based poverty seems to be more feasible in a non-income multidimensional framework than in a monetary one (Klasen, 2007), since attainments in many non-monetary dimensions such as education and health can be ascribed to individuals and the information on these attainments are often available in the household surveys, most popular multidimensional poverty measures such as the Multidimensional Poverty Index (Global-MPI)[5] are estimated at the household level (Duclos & Tiberti, 2016). They are therefore not sensitive to the intra-household distribution of deprivation and thus are unable to measure gender differentials in deprivation and multidimensional poverty (Pogge & Wisor, 2016). In fact, in the literature on multidimensional poverty analysis, only a few papers assess individual multidimensional poverty, as well as gender differences, but the vast majority of them have focused on a specific population subgroup such as children (e.g. Roche, 2013; Rodríguez, 2016; Roelen, Gassmann, & de Neubourg, 2010, 2011), women (e.g. Alkire et al., 2013; Bastos, Casaca, Nunes, & Pereirinha, 2009; Batana, 2013), and adults (e.g. Agbodji, Batana, & Ouedraogo, 2015; Bessell, 2015; Mitra, Posarac, & Vick, 2013; Pogge & Wisor, 2016; Rogan, 2016a; Vijaya, Lahoti, & Swaminathan, 2014); that is, they have not assessed multidimensional poverty at the individual level for the whole population.

As far as we know, there are only two papers that evaluate individual-based multidimensional poverty across the entire population. The first one is the work by Klasen and Lahoti (2016), where they propose a framework to measure multidimensional poverty and inequality at the individual level and apply it for the case of India. They find that using

an individual-based measure, poverty among females is 14 percentages point larger than among males but only 2 percentage points higher applying a household-based measure. They also suggest that in India, the neglect of intra-household inequality underestimates poverty and inequality in deprivation by some 30%. The second one is the work by Franco (2017), who constructs an individual-centered multidimensional poverty index, using three age groups, children (less than 18 years old), adults (between 18 and 59 years), and elderly (60 years or older), and uses it to estimate multidimensional poverty in Chile, Colombia, Ecuador, and Peru. She finds that Chile is the country with the best performance in poverty and, overall, the elderly, as opposed to the children, is the worst-off age group. She also finds that in Chile, Colombia, Ecuador, and Peru, a household-based measure is consistently larger than and individual-based one. But, unlike the previous paper, a gender analysis is missing in Franco's work as well as an inequality analysis.

Given the lack of individual-based poverty analysis, gender inequality has often been assessed by comparing the poverty status of female-headed households against that of male-headed households[6], and the proportion of poor households headed by females has been broadly adopted as a measure of women's poverty (Bradshaw et al., 2017a, 2017b; Fukuda-Parr, 1999). However, despite the abundance of reasons why households led by a female may suffer more from deprivation and poverty, empirical evidence on the correlation between poverty and headship is ambiguous (Klasen, Lechtenfeld, & Povel, 2015), and women's multidimensional poverty seems to have nothing to do with household headship (Klasen & Lahoti, 2016).

In this paper, we open the "black box" that is the household (Jenkins, 1991, p. 457) and propose an individual-based multidimensional poverty framework in order to overcome some of the shortcomings of the existing household-based measures. Employing data from Nicaragua, we use our framework to estimate multidimensional poverty and inequality as well as the corresponding gender gaps; to do this, we apply the methodology proposed by Alkire and Foster (2011a) and the Correlation-Sensitive Poverty Index (CSPI) proposed by Rippin (2013, 2016, 2017), which is an inequality-sensitive multidimensional poverty index, as well as the absolute inequality measure proposed by Alkire and Seth (2014a). We also explore the determinants of multidimensional poverty in this country by estimating logit regressions. Nicaragua is an interesting case because it is the multidimensionally poorest country in Latin America (Santos & Villatoro, 2016), and, at the same time, in terms of the

Global Gender Gap Index 2017, it is the best-performing country in that region for the sixth year running (World Economic Forum, 2017).

To the best of our knowledge, in Latin America and the Caribbean region, this study represents the first effort to estimate gender differences in multidimensional poverty and inequality for the whole population of a country, the first one that applies the CSPI there, and one of the first attempts in the literature on multidimensional poverty. The paper is organized as follows. In the next section, we discuss data and methodological strategy, section three discusses results, section four shows an extensive robustness analysis and section five presents the main conclusions.

2. DATA AND METHODOLOGY

(a) *Data*

The dataset analyzed in this paper are drawn from the most recent available data from Nicaragua: The "National Households Survey on Measurement of Level of Life" (henceforth "2014-EMNV") (INIDE, 2015, p. 1), which was conducted by the National Institute of Development Information, with support from the World Bank, in late 2014. The survey contains information on 6,851 households and 29,443 people, and it is nationally representative (INIDE, 2015). In our analysis, we include the household members who completed a full interview (29,381 people).

The unit of identification of the multi-dimensionally poor is the individual. As methodological strategy, the population is divided into four age groups: Children (less than 6 years old), adolescents (between 6 and 17 years), adults (between 18 and 59 years), and elderly (60 years or older). To mark the boundaries of the groups, the following criteria are considered: The definition of early childhood by the National Early Childhood Policy of the National Reconciliation and Unity Government of Nicaragua: Individuals under 6 years old) (GRUN, 2011); the definition of children by the Convention on the Rights of the Child: "Every human being below the age of eighteen years" (UN, 1989, p. 2); and the legal age of retirement in Nicaragua: 60 years old, except for formal education teachers, which is 55 years[7]. Table 1 shows the sample size, by group and gender, its representation at national level, and the population share. It is worthy of note that adolescents and adults represent roughly 80% of the whole population in Nicaragua, which means that the national

achievements are highly influenced by the performance of these groups. The population share of each group is used to obtain the overall estimates.

[Please place Table 1 here]

(b) *Multidimensional poverty measures*

In this paper, we apply the counting methodology proposed by Alkire and Foster (2011a) (henceforth "AF"), an axiomatic family of multidimensional poverty measures, to estimate multidimensional poverty in Nicaragua[8]. This methodology certainly offers the advantage of being very simple and clear, when compared to other methodologies (Silber, 2011; Thorbecke, 2011)[9], it also satisfies a number of desirable properties, and explicitly takes the joint distribution of deprivations into account. Nonetheless, it should be mentioned that despite its widespread acceptance, the AF methodology has some serious drawbacks (Rippin, 2010; Silber, 2011; Duclos & Tiberti, 2016; Pogge & Wisor, 2016). For instance, it assumes indirectly that up to the multidimensional poverty line (k) the poverty dimensions are perfect substitutes while they are considered to be perfect complements from k onwards, which is hard to justify (Rippin, 2012; Silber & Yalonetzky, 2013). In addition to this, with ordinal data, the AF measure is insensitive to inequality among the poor (Rippin, 2012). Therefore, for comparison purposes, we also estimate the Correlation Sensitive Poverty Index proposed by Nicole Rippin (Rippin, 2012; 2013), which is sensitive to inequality among the poor.

The AF Methodology[10]

Let n represent the individuals and let $d \geq 2$ be the number of indicators under analysis. Let $X = [x_{ij}]$ denote the $n \times d$ achievement matrix, where $x_{ij} \geq 0$ $(x_{ij} \in \mathbb{R}_+)$ is the achievement of individual i in indicator j[11]. For each indicator j, a deprivation cutoff z_j is set. Let $z = (z_1, \dots, z_d)$ be the row vector that collects the deprivation cutoffs. Given x_{ij}, if $x_{ij} < z_j$, the i^{th} individual is identified as deprived in j. From the X matrix and the z vector, a matrix of deprivation $g^0[g_{ij}^0]$ is obtained such that $g_{ij}^0 = 1$ if $x_{ij} < z_j$, and $g_{ij}^0 = 0$ when $x_{ij} \geq z_j$, for all $j = 1, \dots, d$ and for $i = 1, \dots, n$. Let $w = (w_1, \dots, w_d)$ be the vector of weights that reveals the relative importance of each indicator $(w_j > 0 \; and \; \sum_1^d w_j = 1)$. A deprivation score of individual i (c_i) is obtained by adding their weighted deprivations up: $c_i = \sum_{j=1}^d w_j g_{ij}^0 = \sum_{j=1}^d \bar{g}_{ij}^0$. If individual i is not deprived in any indicator $c_i = 0$; conversely,

$c_i = 1$ when the individual is deprived in all indicators. The vector of deprivation scores for all individuals is $c = (c_1, \dots, c_n)$.

To identify the poor, a cutoff level for c_i is used. Let k denote "the poverty cutoff" (Alkire and Foster, 2011a, p. 478) that represents the least deprivation score an individual needs to show in order to be deemed as multi-dimensionally poor. The poverty cutoff is implemented by using the method of identification ρ_k, which identifies individual i as poor when their deprivation score is at least k. Formally, $\rho_k(x_{i.}; z) = 1$ if $c_i \geq k$, and $\rho_k(x_{i.}; z) = 0$, otherwise[12]. From the deprivation matrix $g^0[g^0_{ij}]$, a censored deprivation matrix $g^0(k)$ is constructed by multiplying each element in g^0 by the identification function $\rho_k(x_{i.}; z)$: $g^0_{ij}(k) = g^0_{ij} \times \rho_k(x_{i.}; z)$ for all i and for all j. In the censored deprivation matrix, if $\rho_k(x_{i.}; z) = 1$, which means that individual i is multi-dimensionally poor, the deprivation status of i in every indicator does not change, and the row with their deprivation information remains the same as in g^0. But, if i is not poor, meaning that $\rho_k(x_{i.}; z) = 0$, their deprivation information is censored, and a vector of zeros is assigned. Similarly, a censored deprivation score vector for all individuals is obtained from the original deprivation score vector: $c(k) = c \times \rho_k(x_{i.}; z)$; it is also possible to derive it from $g^0_{ij}(k)$. Let $c_i(k) = \sum_{j=1}^{d} w_j g^0_{ij}(k)$ be the censored deprivation score of individual i; by definition, $c_i(k) = c_i$ when $c_i \geq k$, and $c_i(k) = 0$, otherwise. Finally, $c(k) = [c_1(k), \dots, c_n(k)]$.

To solve the aggregation problem, the AF methodology proposes a family of multidimensional poverty measures M_α that is based on the FGT class of poverty measures. The first measure of this family is the adjusted headcount ratio $[M_0(X; z)]$ that is the mean of $c(k)$ and is given by:

$$M_0 = \mu\big(c(k)\big) = \frac{1}{n} \times \sum_{i=1}^{n} c_i(k)$$

The adjusted headcount ratio can also be calculated as the product of two partial indices[13]: H, the multidimensional headcount ratio or the incidence of multidimensional poverty, and A, "the average deprivation score across the poor" or the intensity of poverty (Alkire et al., 2015, p. 157). Then:

$$M_0(X; z) = \mu\big(c(k)\big) = H \times A = \frac{q}{n} \times \frac{1}{q} \sum_{i=1}^{q} c_i(k) = \frac{1}{n} \sum_{i=1}^{n} c_i(k) = \frac{1}{n} \sum_{i=1}^{n} \sum_{j=1}^{d} w_j g^0_{ij}(k)$$

We use M_0 to estimate multidimensional poverty in Nicaragua and also take advantage of two key properties of this measure: the "population subgroups decomposability" (Alkire, et al., 2015, p. 163), which allows assessing the subgroup contributions to overall poverty, and the breakdown property by indicator, which makes it possible to find out the contribution of each indicator to the overall poverty.

To evaluate inequality among the multi-dimensionally poor, which has been neglected by almost all of the literature on multidimensional poverty measurement, we employ the "separate inequality measure" (I_q) proposed by Alkire and Seth (2014a, p. 3). Let q denote the number of multi-dimensionally poor, inequality can be computed as:

$$I_q = \frac{4}{q}\sum_{i=1}^{q}[c_i(k) - A]^2$$

For the reasons stated previously, we also estimate the CSPI that takes into account the inequality among the multi-dimensionally poor and uses the union approach to identify the multi-dimensionally poor individuals (Rippin, 2013, 2016, 2017). It is computed as follows:

$$\text{CSPI} = \frac{1}{n}\sum_{i=1}^{n}\sum_{j=1}^{d}\left(w_j g_{ij}^0\right)^2$$

The CSPI can be decomposed into all three I's of poverty (incidence, intensity, and inequality) (Jenkins & Lambert, 1997); in fact, it is the only one multidimensional poverty index that can do it (Rippin, 2012). The CSPI's decomposition is as follows:

$$\text{CSPI} = \frac{q}{n}\left(\frac{\sum_{i=1}^{n} c_i}{q}\right)^2 + 2\left(\frac{\frac{1}{2q}\sum_{i=1}^{n} c_i}{\frac{1}{q}\sum_{i=1}^{n} c_i}\right) = HA^2(1 + 2GE)$$

To assess gender differences in poverty and inequality, we use "the sex/poverty ratio" presented by Mc Lanahan, Sørensen, & Watson (1989, p. 105). This is simply the ratio of the women's rate $(H, A, M_0, I_q, \text{CSPI})$ to the men's one; therefore, it is a relative measure of the status of women and men.

(c) *Dimensions, indicators and deprivation cutoffs*

The choice of dimensions and indicators reflects a normative decision in the design of any multidimensional poverty measure (Alkire et al., 2015); assuming this idea, and being conditioned by data availability, our individual-based multidimensional poverty measure comprises three equally weighted dimensions: education, health, and standard of living, which are clearly among the most significant aspects of well-being (Stiglitz et al., 2009a) and can be seen as basic or elemental capabilities (Sen, 1993, 2000a)[14]. They are also the same used by the Global-MPI (Alkire & Santos, 2014) and can be framed into the list proposed by Robeyns (2003) for gender inequality assessment. The dimensions and the indicators to be used to measure each of them, as well as the deprivation cutoffs, are shown in Table 2.

[Please place Table 2 here]

Education

Not being effectively able to achieve an educational level certainly constitutes a "capability deprivation" (Sen, 2000a, p. 87)[15]. Education has *intrinsic value*, being educated is a valuable achievement in itself, and the real opportunity to have it "can be of direct importance to a person's effective freedom" (Drèze & Sen, 2002, p. 39). It can also have a range of *instrumental* (personal and collective) roles (Robeyns, 2006). For instance, education can be crucial for finding and getting a decent job, for practicing of democracy, for enhancing disadvantaged people ability, and for decreasing of gender inequalities (Drèze & Sen, 2002). Therefore, its inclusion is widely justified[16].

For children, we assess whether they are currently attending nursery school or pre-school or primary school; if not, since in Nicaragua school attendance is not mandatory for children under the age of 6 years, we also evaluate the schooling level of the head of the household where they live, as proxy for their potential level (Klasen & Lahoti, 2016). Specifically, children are deemed to be education deprived if they are not attending school and the household head has not completed at least lower secondary school (9 years of schooling)[17]. Besides the fact that the Government of Nicaragua has a specific national policy addressed to early childhood (GRUN, 2011), the use of this information is supported by the rich and well-established literature that has pointed out the benefits of early childhood education (see, e.g., Barnett, 1995, 2002; Barnett & Ackerman, 2006; Hayes, 2008; Hägglund & Pramling Sammuelson, 2009; Heckman, 2008, 2011; Doyle, Harmon, Heckman, &

Tremblay, 2009; Cunha, Heckman, & Schennach, 2010; Nores & Barnett, 2010; Pramling Samuelsson 2011; Gertler et al., 2013; Bartik, 2014; Campbell, et al., 2014; Gamboa & Krüger, 2016)[18]. Of course, the chosen indicator does not capture the quality of early childhood education in Nicaragua, nor does it catch the level of knowledge achieved, nor skills, but it is the best option available to evaluate whether or not children "are being exposed to a learning environment" (Alkire and Santos, 2010, p. 14)[19].

For adolescents, we evaluate if they are on track to complete, at least, lower secondary school by 17 years old (9 years of schooling). In Nicaragua, the primary school entrance age is 6 years, so that adolescents are expected to complete lower secondary school by 15 years old; therefore, we provide a buffer of two years to account for delayed progression, mainly in the rural areas. For instance, a person aged 9 years will be considered as deprived in education if he or she is currently attending first grade of primary school. It is worth mentioning that in Nicaragua, only primary school (6 years of education) is mandatory, but our deprivation level is in line with the target 4.1 of the Sustainable Development Goals (SDGs), which demands, by 2030, to "ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes" (UN, 2015, p. 17).

Finally, in order to be consistent in our analysis, we consider that adults and elderly are education deprived if they have not finished at least lower secondary school[20].

Health

Health has also been identified as one of the "key" dimensions of well-being (Stiglitz, et al., 2009a, p. 14) and can be considered as a central capability (Nussbaum, 2003; Sen, 2000a; Robeyns, 2003). As education dimension, health has intrinsic and instrumental value as well (Alkire & Santos, 2014). Being healthy is not only a valuable achievement in itself, but also can help individuals to do many important things such as playing baseball, do swimming, and so on (Drèze & Sen, 2002); Health can also affect several others capabilities; for instance, being not healthy can limit an individual's capability to take part in social activities and prevent them to practice their profession (Rippin, 2016).

Due to data constraints, health has been the most challenging dimension to measure, as the health module of the 2014-EMNV is mainly aimed at collecting information about medical expenditure rather than obtaining information about direct indicators of health. For

instance, a nutrition indicator, which is one of the two indicators used by the Global-MPI[21], cannot be included in our analysis, since the necessary information to construct it is not available in the dataset. However, the survey supplies information on whether individuals have suffered from a disease (s) in the last month; hence, we take advantage of this information to construct our indicator of health functioning failure, considering suffering from a chronic disease (s) as the core of the indicator. Children and adolescents are considered to be deprived in health if they have suffered from a chronic disease or infectious disease (such as rubella, measles, chickenpox, and so on) or diarrhea or several diseases in the past month. Meanwhile, adults and elderly are identified as health deprived if they have suffered from a chronic disease or several diseases in the past month[22].

Standard of living

The inclusion of a standard of living dimension might be questionable under the capability approach framework. However, as Sen (1984) noted, "living standard can be seen as freedom (positive freedom) of particular types, related to material capabilities" (p. 86); moreover, there is empirical evidence that suggests that living standard indicators are those that contribute the most to multidimensional poverty, especially in poorer countries and rural areas (Alkire et al., 2017; Alkire & Santos, 2014; Dotter & Klasen, 2017; Espinoza-Delgado & López-Laborda, 2017).

We use eight indicators to measure this dimension: housing, people-per-bedroom, housing tenure, water, sanitation, electricity, energy, and assets. These indicators are closely linked with the functionings they facilitate (Alkire & Santos, 2014); however, it is fair to say that there are both conceptual and empirical challenges in the construction of individual deprivations for each of them (several of them are public in nature within the household) (Vijaya, et al., 2014; Klasen & Lahoti, 2016), as it is not possible to identify the ultimate beneficiary and determine with any certainty how much these indicators are used by one individual as opposed another (Klasen, 2007), so that we suppose that they are true public goods (non-rival and non-excludable) accessible equally by everyone within the household (Vijaya, et al., 2014; Klasen & Lahoti, 2016). Each individual is deemed to be deprived or non-deprived in each indicator based on the deprivation cut-offs defined in Table 2.

The first three indicators are used by the MPI-LA to measure the "housing dimension" (Santos & Villatoro, 2016, p. 8). Housing indicator assesses whether the individual is living in a dwelling with dirt floor and/or precarious roof and/or precarious wall

materials[23]; people-per-bedroom indicator is concerned about overcrowding[24]; and housing tenure security evaluates whether the individual is living in an illegally occupied house or in a ceded or borrowed house[25]. The following two indicators concern water and sanitation. They are included in the SDGs, Goal 6, "ensure availability and sustainable management of water and sanitation for all" (UN, 2015, p. 18), and are also used by the Global-MPI[26]. The sixth and seventh indicators, electricity and energy (main source of energy for cooking), are also considered by the Global-MPI and MPI-LA, and can be framed into the goal number 7 of the SDGs: "Ensure access to affordable, reliable, sustainable and modern energy for all" (UN, 2015, p. 19)[27]. Finally, the assets indicator used by the Global-MPI is also included in our measure; it covers ownership of some durable (consumer) goods (Alkire and Santos, 2014)[28]. It is worthy of note that due to data limitations, and as the Global-MPI and the MPI-LA do, we implicitly assume that "access to" water, sanitation, electricity, and some durable goods implies an effective use of them and guarantees the well-being that those bring. However, this assumption might be controversial as the individual's benefit depends on the quality, the quantity, the availability, and even, in some cases, the price of the service (Dotter & Klasen, 2017; Klasen, Lechtenfeld, Meier, & Rieckmann, 2012; Sorenson, Morssink, & Campos, 2011); likewise, having access to some assets does not ensure control over their use (Agarwal, 1994, 1997; Bradshaw, 2002, 2013; Bradshaw et al., 2017b; Brickell & Chant, 2010).

An enhanced multidimensional poverty index

In order to shed some lights on the role the institutions play in driving gender gap in multidimensional poverty in Nicaragua, in addition to the three-dimensional index, we also estimate a four-dimensional measure for adults, where gender tensions might be highest (ECLAC, 2016), and elderly, who might be the most vulnerable group (Gasparini, Alejo, Haimovich, Olivieri, & Tornarolli, 2010). Considering what is available in the survey, we add a fourth dimension to the previous index, which incorporates information on deprivation in employment (for adults) and access to social protection (for elderly)[29]. This new dimension captures important aspects of well-being that are relevant for Nicaragua, but also for Latin America and the Caribbean (Gasparini et al., 2010; Santos & Villatoro, 2016), where there might be substantial gender gaps (Robeyns, 2003)[30]. An adult is considered to be deprived in employment if he or she is unemployed, employed without a pay, a discouraged worker or hidden unemployed, an unpaid domestic worker (he or she is unemployed but not looking for a job because has to take care of his/her children and/or a relative (s) and/or has to do

domestic work)[31]. For its part, an elderly person is identified as deprived in social protection if he or she has no access to any form of income (pension, retirement income, work income, and so on).

(d) *Association between indicators*

Table 3 displays the Spearman's rank correlation coefficients between the indicators of deprivation (0-1), which have been constructed using the deprivation cut-offs shown in Table 2. For comparison purpose with the monetary approach, an income deprivation indicator (0-1), estimated by employing the official "Overall Poverty Line (OPL)" (INIDE, 2015, p. 8)[32], is also included in the Table.

It can be seen, firstly, that there is a comparatively low correlation between deprivation in education and deprivation in the other indicators. This might be due to other factors, such as self-motivation, individual abilities, expectations about the rewards from education (Eckstein & Wolpin, 1999), parent's education level (Belzil & Hansen, 2003), "family background" (Cameron & Heckman, 2001, p. 492), could have more impact on schooling achievement. Secondly, health functioning turns out to be very weakly related to the other indicators; this might be due to that chronic disease prevalence is strongly related to behavioral factors and bad luck which is less correlated with overall deprivation (Fine, Philogene, Gramling, Coups, & Sinha, 2004). Finally, it is worth noting that income is moderately correlated with all the other indicators; excluding energy and assets, it exhibits correlations below 0.40. Consequently, a multidimensional approach to poverty measurement is really justified and is quite different from an income-based analysis.

[Please place Table 3 here]

3. RESULTS

(a) *Aggregate deprivation by indicator*

We first evaluate the aggregate deprivation levels in each indicator before computing the multidimensional poverty and inequality measures. Figure 1 depicts the estimated proportion of people deprived in each of the ten indicators[33]; the proportion of the monetarily poor is also displayed as a reference level (dash lines), which has been estimated by using the official "overall poverty line" (C$ 17,011.47 Nicaraguan Córdobas, approximately equivalent to 1.80 dollars a day at the official average exchange rate in 2014) (INIDE, 2016, p. 27). On

the whole, it can be observed that, although the deprivation levels are different among the groups, the deprivation profiles are quite similar. The results also show that there are several indicators in which deprivation is larger than that of the income, confirming the necessity of shifting from the monetary approach to a broader poverty analysis, which has also been suggested by Espinoza-Delgado & López-Laborda (2017).

[Please place Figure 1 here]

In general, figure 1 reveals substantial deprivation in education. The elderly is the most deprived group in this dimension, but children and adults also exhibit quite high deprivation rates when compared, for instance, with the monetary poverty. According to our results, more than eight out of ten elderly have not completed the lower secondary school in Nicaragua, but also seven out of the eight have not even finished primary school, which reflects a long-standing structural problem and evidences the failure, over decades, of the education policy to achieve this basic level, considering that primary school has been compulsory in Nicaragua since 1893 (CIASES, 2016). In turn, almost six out of ten adults have not attained the lower secondary school, which might greatly lessen their "probability of accessing a decent job and income and being integrated into society" (Santos & Villatoro, 2016, p. 9). Children also suffer the same deprivation in education as adults; despite the existence of a national policy of early childhood education and care in Nicaragua, roughly six out of ten children are not still being exposed to a learning environment and the head of the household where they live has not achieved the lower secondary school, which means that they also run the risk of not completing, at least, this education level. Perhaps the good news on education is the fact that adolescents have a relatively low deprivation rate (28.5%): seven out of ten adolescents are on track to achieve, at least, the lower secondary school level by 17 years of age. Considering the whole population, the results indicate that roughly one out of two Nicaraguans is education deprived, evidencing the necessity of a deep reform of the education policy in Nicaragua.

Figure 1 also shows that among children, adolescents, and adults, health functioning indicator exhibits the lowest deprivation rate (below 17%); but, among elderly, it displays the second highest rate of deprivation: five out of ten elderly people claimed to suffer from a chronic disease or several diseases. This finding is not surprising, consistent with what the empirical evidence on Latin America and the Caribbean has found (e.g. Gasparini et al., 2010)[34].

Regarding the living standard indicators, the results show that all age groups face substantial deprivation in housing, people-per-bedroom, sanitation, energy, and assets when compared with the monetary poverty level; in these indicators, the deprivation rates are estimated to be over 33%. In contrast, the age groups are relatively better off in housing tenure, water, and electricity indicators, in which the estimated deprivation rates are below 23%. Overall, the elderly seem to be the best off group in the living standard dimension while the reverse seems to be the case for children.

Tables 4 and 5 provide the estimates of the proportion (h) of males and females deprived in each indicator, as well as the differences between females and males' estimates, in absolute and relative terms.

[Please place Tables 4 and 5 here]

It can be seen from Table 4 that there is no substantial gender gap in education among children and elderly, males and females in both groups are almost equally likely to be deprived in education[35]. The opposite is observed for adolescents, who show the highest gender gap in education (20%), and adults (11%), but, interestingly, women seem to be better off in education than men. The overall gender difference in education is estimated to be 8%, in relative term, and it is in favor of women (see Table 5). It can also be noted from Table 4 that there are, in relative terms, sizable gender differences in health, mainly among adolescents (39%), adults (65%), who exhibit the largest gap, and elderly (28%); here, unlike what occurs with education, women are much worse off than men, except for the case of children. Consequently, the estimated overall gap in health functioning indicator (38%) is not in favor of women (see Table 5). This is a very common finding that is often considered as a paradox (Arber & Cooper, 1999; Case & Paxson, 2005), women report to suffer more from illnesses although they live longer (see, e.g., Case & Deaton, 2003, 2005a, 2005b; Nathanson, 1975), and it is "close to universal around the world" (Case & Deaton, 2005a, p. 186). Notwithstanding this paradox, the gender differences observed "are picking up a real differential in perceived health" (Case & Deaton, 2003, p. 39).

The results from Table 4 also show that, overall, women are likely to be better off in living standard indicators than men (some exceptions are female children in people-per-bedroom, water, sanitation, electricity, and assets, and female adolescents in assets); although, in most cases, the gender differences are estimated to be smaller than 10%, in relative terms, excepting in housing tenure, for children, water, for adolescents, and in the

elderly's indicators, in which cases the gaps are estimated to be larger than 12%. Considering the whole population (see Table 5), the results indicate that the gender differentials in the living standard indicators are not higher than 10%, and men are more likely to be deprived in living standard than women. It might be argued that in some indicators the size and the direction of the gender gaps observed could be biased since, due to data limitations, we have not been able to discriminate deprivation between males and females within the households. However, to the extent those indicators are non-rival and non-excludable, they benefit everyone, and it makes no sense to further investigate who benefits more[36]. It is worthy of note that the estimated gender gaps make an overall evaluation of the deprivation that Nicaraguan females face vis-à-vis that of males and fully consider the individual horizontal inequalities.

(b) *The incidence and the intensity of multidimensional poverty*

Table 6 displays the estimates of the multidimensional headcount ratio (H), the average deprivation share across the multi-dimensionally poor (A), the estimates of the adjusted headcount ratio (M_0), as well as the calculation of the difference between females and males' estimated poverty measures, in absolute and relative terms. It is also provided the standard errors for each of the point estimates, which have been estimated using the bootstrap technique and following the Bradley Efron's work on nonparametric standard errors (Efron, 1981). The two first measures account for the incidence and the intensity of multidimensional poverty, respectively, and the latter one is the measure used to compute the individual-based multidimensional poverty index (MPI index).

[Please place Table 6 here]

We find that in Nicaragua there are statistically significant gender gaps in poverty (incidence, intensity, and MPI index), but they are estimated to be lower than 10%, in relative terms, across the age groups. That is, the estimated gaps are not substantial in size when compared to other works and realities. For instance, Rogan (2016a) found that in South Africa, the size of the gender differentials is 29% (excluding the gap in poverty intensity); Klasen and Lahoti (2016) found that in India, the size is higher than 30% (except for intensity). The highest gender gap in poverty incidence and MPI index is found among adolescents (9%) and the lowest one among children (2%). The gender gaps observed among children, adolescents, and adults are in favor of females, but the reverse is the case among elderly: elderly women seem to be slightly worse off (5%) than men. Table 6 indicates that

there is almost parity in poverty intensity, males and females are likely to suffer from the same poverty intensity, except for adults, who show a small difference (3%) that is in favor of males. Consequently, the size and the direction of the estimated gender gaps in MPI index are mostly driven by the difference observed in poverty incidence. The overall estimates suggest that in Nicaragua, the gender gaps in multidimensional poverty are lower than 5%, and poverty does not seem to be feminized: Nicaraguan women seem to be slightly better off in poverty incidence (4%)[37] and MPI index (2%) than men, but the reverse is the case for poverty intensity (2%)[38].

In order to discover what is exactly driving the observed gender gap in poverty incidence in each of the groups, we also estimate the absolute contribution of the gender difference in each of the ten indicators to the overall estimated gender gap. To do this, we first compute a "weighted" censored headcount ratio of each indicator by gender, which in each case is calculated by dividing the contribution of each indicator to the estimated MPI index by the corresponding poverty intensity. Then, we estimate the rate differences, which are the absolute contributions to the overall gender gap observed in Table 6. Figure 2 shows such contributions in the form of a bar graph for each indicator and for each group and the whole population. In this figure, a positive bar in any indicator means that females are worse off than males in that indicator, and vice versa. The last bar in the figure represents the size of the overall gap, which is computed adding up all the indicator gaps, and it is the one that appears in the second-to-last column of Table 6.

[Please place Figure 2 here]

Figure 2 makes clear that among children, the gender gap in multidimensional poverty incidence that favors females is mostly driven by the difference in health, followed by the one in education. For its part, among adolescents and adults, the overall gender gap that also favors females is mainly explained by the differential in education, which is in turn reinforced by the gaps in living standards indicators. Among the elderly, the estimated gap that is in favor of men is clearly driven by the differential in health; it should be noted that in this case, unlike what occurs with the other groups, the gap in each of the living standard indicators is larger than the gap in education. Finally, the overall gender gap, considering the whole population, is explained by the gap in education and the cumulative gaps in the living standard dimension, while the gap in health that is hurting women operates in the opposite direction. It is worthy of note that similar patterns would be found if we estimated the

absolute contributions to the overall gender gap discovered in MPI index as this measure only differs from H (the incidence) in that it takes A (the intensity) into account.

As it was discussed earlier in this paper, the MPI index (M_0 measure) is not sensitive to inequality among the multi-dimensionally poor; therefore, we also estimate the Correlation Sensitive Poverty Index (CSPI) proposed by Rippin (2013) that takes inequality into account. The CSPI adopts the union approach to solve the problem of identification of the poor, so the resulting headcount ratios might be "too high to be useful" (Rippin, 2017, p. 55), as any individual deprived in at least one indicator is considered to be multi-dimensionally poor; but it is helpful for qualitative comparison purposes with the previous findings. The estimates are shown in Table 7.

[Please place Table 7 here]

It can be seen from Table 7 that the multidimensional poverty incidence under the union approach is in all cases very large and above 85%, as could be expected. Now, little variability in poverty incidence across the groups is observed, but the reverse is the case for the intensity. Interestingly, the variability noted in the CSPI index is quite similar to the one in MPI index. The elderly turn out, again, to be the most vulnerable group in terms of multidimensional poverty (incidence, intensity, and CSPI index). Regarding the gender gaps, they do not seem to be substantial in size, although statistically significant. Overall, girls and women seem to be a little bit better off than boys and men; some exceptions are female elderly that are slightly worse off than their male counterparts and adult women in the case of CSPI index. Considering the whole population, the estimates indicate that in Nicaragua the gender gaps in multidimensional poverty are lower than 2%, and poverty does not seem to be feminized: women and men are almost equally likely to be multi-dimensionally poor. Therefore, with very few exceptions, the same conclusions that were drawn from the MPI analysis can be drawn from Table 7.

(c) *Inequality among the multi-dimensionally poor*

Inequality, one of the three "dimensions of poverty" (Jenkins & Lambert, 1997, p. 317), has been ignored by the vast majority of empirical contributions concerned about multidimensional poverty; consequently, we also contribute to close this gap by estimating absolute inequality in deprivation scores among the multi-dimensionally poor in Nicaragua,

as well as the gender differentials, using the measure proposed by Alkire and Seth (2014a), which was described in section 2 of this paper. The estimates are provided by Table 8.

[Please place Table 8 here]

Overall, the results from Table 8 suggest that in Nicaragua there is a U-shaped relationship between the inequality level and the age of the individual, which is in line with the international evidence that has shown that there is a positive relation between the Global-MPI value and the inequality among the poor (see, e.g., Alkire & Seth, 2014b). It can be seen that the largest inequality in deprivation scores is found among the elderly women and the smallest one among adult men.

Concerning gender differentials, Table 8 reveal very interesting findings. Firstly, it can be noted that for children and adults the gender differentials are much larger in relative terms than the ones in multidimensional poverty (16% vs 2%, and 30% vs 4%, respectively). Secondly, excluding the case of children, the inequality among the female multi-dimensionally poor seems to be higher than among the male ones, which means that now the direction of the observed gender gap among adolescents and adults changes and benefits males; that is, inequality among the multi-dimensionally poor people of those groups seems to be feminized. Finally, as a result of the previous findings, Table 8 reveals that the overall gender gap in inequality that is estimated to be 12%, in relative terms, is in favor of males and is mostly driven by the estimated gap among adults. Consequently, in Nicaragua, unlike what is observed for poverty incidence, inequality seems to be feminized: the multi-dimensionally poor women are living in very intense poverty when compared with the multi-dimensionally poor men.

In order to better understanding the source of the estimated inequality levels and the gender gaps, Figure 3 depicts the distribution of intensities in poor males and females. Since the absolute inequality measure used is sensitive to pockets of individuals who have large deprivation scores (Alkire & Seth, 2014b), the inequality is greater among the poor group that exhibits a larger share of people with this feature in their distribution.

[Please place Figure 3 here]

It can be seen noted from Figure 3 that the elderly exhibit a remarkably different intensity distribution; more than 30% of their multi-dimensionally poor are deprived in 70% or more of the weighted indicators. Conversely, only fewer than 15.5% of the poor among the

other groups are. This is the main reason why the largest inequality level is found among the elderly (elderly women). The observed gender gap among children that favors females is due to the fact that a larger share of poor male children is deprived in 70% or more of the weighted indicators than their female counterparts (15.3% vs 13.1%). The reverse is the case for adults (7.2% vs 12.3%), who exhibit the greatest gender gap in inequality, as it was seen. The overall estimated gender gap that favors men is explained by the fact that there is comparatively a larger share of poor women facing deprivation in 70% or more of the weighted indicators (15.2% vs 11.6%). From these findings, we can conclude that even though the gender differential in multidimensional poverty is relatively small, the gender gap in inequality can be substantially greater whether females (or males) have a pocket of poor people that are suffering from very intense poverty, and males (or females) do not; the bigger the size of the pocket, the larger the gender gap.

(d) *Gender gaps in poverty using an enhanced multidimensional poverty measure for adults an elderly*

The estimates of the enhanced multidimensional poverty measure that considers employment (for adults) and social protection (for elderly) as a fourth dimension are shown in Tables 9 and 10, respectively. We have attached equal weight to each dimension (25%) and set the second cut-off at 25%, which means that it is qualitatively the same as the one used earlier (33.3%): An individual is considered to be multi-dimensionally poor if they are deprived in at least one full dimension, so that the new findings are comparable with the previous ones.

[Please place Tables 9 and 10 here]

On the whole, Tables 9 and 10 make clear that the incorporation of dimensions under which women have relatively larger deprivation into a multidimensional poverty measure lead to sizeable gender gaps. The results show that when information on employment, domestic work, and social protection is added into the three-dimensional index (education, health, and living standard), the gender gaps rise, and multidimensional poverty becomes clearly feminized: women are more likely to be multi-dimensionally poor than men.

(e) *Determinants of the monetary and multidimensional poverty*

As a complement to the previous analysis, we explore the determinants of the monetary and multidimensional poverty in Nicaragua by estimating logit regression models in which the endogenous variable is equal to 1 if the individual is (monetarily or multi-dimensionally) poor, to 0 otherwise. Specifically, in Model 1 (M1), this variable is the probability that an individual is considered as monetarily poor, using the official poverty definition to determine who is poor or not, and in Model 2 (M2) and Model 3 (M3), it is the probability of being identified as multi-dimensionally poor, according to our three-dimensional measure (M2) and four-dimensional one (M3), respectively. In each logit regression, the following exogenous variables are taken into account: the gender of the individual (male-female), the age and its square, the area of residence (urban-rural), the region of residence (three dummy variables: Pacific, Central, and Atlantic), the size of the household and its square, the gender of the household head and their marital status (four dummy variables: Married, unmarried, divorced, and widower), and some interaction terms between the gender and the marital status of the household head, as well as between the area and the region of residence. The results of the three models are shown in Table 11.

[Please place Table 11 here]

As it can be seen from Table 11, Model 1 suggests that the gender variable is statistically non-significant, which means that overall the individual's sex as such has nothing to do with their probability of being monetarily poor. However, Model 2 and Model 3 show that gender does matter when a multidimensional definition of poverty is adopted, although the direction of the gender bias depends on the information considered in the analysis. The difference in the statistical significance of the gender variable observed between both ways of defining poverty (monetary and multidimensional) might be explained by the fact that the multidimensional approach followed in this paper is able to capture some of the intra-household inequalities that the monetary approach is incapable of doing; that is, one might suppose that it is an intra-household inequality issue. Using the three-dimensional measure (health, education, and living standard), the results (M2) show that in Nicaragua, males have more probability of being multi-dimensionally poor than females, but the opposite is the case when the multidimensional poverty measure is enhanced with information on employment and social security (M3). Notice that in M3, gender has even a much stronger effect on the probability of being multi-dimensionally poor than that of the three-dimensional case, which comes to confirm our descriptive findings.

The results from M1, M2, and M3 indicate that regardless of the approach used to identify the poor, there is, *ceteris paribus*, a U-shaped relationship between the age of the individual and the probability that they will be considered as poor. This finding is consistent with our main conclusions, but it is inconsistent with the conclusions that might be drawn from the official estimates (monetary approach) as they suggest that the lowest poverty rates are found among adults and elderly (see Table 16 in Appendix A). There seems also to be a U-shaped relationship between the household size to which the individual belongs and the probability that they will be deemed poor.

The estimates also make clear that *ceteris paribus*, the individuals from rural areas certainly have a higher probability of being poor, mainly monetarily poor, than those from urban areas, a finding that has been emphasized by the regional and global empirical evidence as well (see, for instance, Battiston, Cruces, López-Calva, Lugo, & Santos, 2013; ECLAC, 2013; Alkire & Santos, 2014; Santos & Villatoro, 2016), and that warrants special attention from policy-makers. The probability of being considered as poor seems also to be much larger among individuals living outside the capital, Managua, and it is the highest for individuals living in the Central and Atlantic rural areas, which has also been observed by Altamirano and Teixeira (2017).

As far as the gender of the household head and their marital status are concerned, as well as the corresponding interaction terms that capture the joint impact of these variables on the probability that the individual is considered to be poor, assuming the vector of the coefficients of these variables and their interaction is significantly different from zero, the three models suggest that those have a strong impact on the probability of being poor. This impact varies between the poverty approaches analyzed, and it is much more sizable when the monetary approach is adopted (M1). Although, in general, especially among policy-makers and international agency discourse, there is a belief that female-headed households are more likely to be poor than male-headed households and, as a result, females are likely to be poorer than males (Chant, 2008; Klasen et al., 2015; Bradshaw et al., 2017b), the results from Table 14 reveal that such assertion does not seem to be supported by the empirical evidence from Nicaragua, particularly when a multidimensional approach is followed.

Table 11 shows that, regardless of the approach used, individuals living in households headed by a single female or a widow seem to have, *ceteris paribus*, a lower probability of being considered as poor than those living in households headed by a single male or a widower. The probability of being multi-dimensionally poor is also lower in households led

by divorced women as well as in those headed by unmarried women; but, the reverse occurs with the probability of being monetarily poor. It should also be noted that individuals living in married woman-headed households have a larger probability of being monetarily poor than those living in married man-headed households. But when a multidimensional approach is adopted, this finding does not hold true with the three-dimensional measure.

Focusing on multidimensional poverty approach (models 2 and 3), our main concern in this work, we can conclude that in Nicaragua, overall, the households headed by women are on average better off than those headed by men, which is in line with the recent empirical evidence on Latin America, in general, and on Nicaragua, in particular. For instance, Liu, Esteve, and Trevino (2017) found that in Latin America, households headed by men are more likely to be residing in poorer conditions than those with female heads in the same circumstances; Altamirano and Teixeira (2017), using a household-based multidimensional poverty measure, found that in Nicaragua, there is a poverty dominance of male-headed households over single-mother and female-headed households. However, it is worthy of note that our finding does not imply automatically that in Nicaragua, women are less likely to be multi-dimensionally poor than men, as M3 suggests that females possess a larger probability of being multi-dimensionally poor than their male counterparts, even those living in households led by women.

4. ROBUSTNESS ANALYSIS

The design of a multidimensional poverty measure entails the choice of diverse parameters (Alkire et al., 2015), and thus we are interested in assessing how sensitive our estimates are to this selection of parameters: are the main conclusions robust to these choices? Consequently, we examine extensively the robustness of our conclusions to i) changes in multidimensional poverty line (k) and ii) in weighting structure (w). To do this, we employ the complementary cumulative distribution function (CCDF) proposed by Alkire et al., (2015) and also compute H, A, M_0, and Iq considering five alternative weighting structures. The results are shown in Appendix B. Overall, we do not find strict first-order stochastic dominance between the CCDFs for different k values; however, limiting the values of k to a more plausible range of 20% to 40%, that is, when restricted tests of dominance are conducted (Alkire and Santos, 2014), we find that in general, the men's distributions dominate those of women, and, consequently, men's multidimensional poverty headcount ratios do not seem to be lower than women's: multidimensional poverty in Nicaragua does not seem to be feminized. On the other hand, we observe that the size of the gender gaps in

poverty and inequality is quite sensitive to modifications in the weighting schemes, but some robust conclusions can be drawn as well. For instance, the robustness analysis suggests that intensity and inequality among Nicaraguan females are not really lower than among males, which means that in Nicaragua both poverty dimensions seem to be feminized: females seem to be living in very intense multidimensional poverty when compared with their male counterparts.

5. CONCLUSIONS

Household-based multidimensional poverty measures, such as the Global-MPI and the MPI-LA, ignore the intra-household inequalities and are gender-insensitive, as they equate the poverty condition of the household with the individuals' poverty condition in the household. Consequently, in this paper, we have contributed to the literature on multidimensional poverty and gender inequality by proposing an individual-based multidimensional poverty measure for Nicaragua, which can also be applied in other similar contexts, and have estimated the gender differentials in the incidence, intensity, and inequality of multidimensional poverty in this country. Overall, the results offer strong evidence in support of a more disaggregated multidimensional poverty analysis, since multidimensional poverty incidence and inequality can be very different for different groups in the society.

We have found that in Nicaragua, the multidimensional poverty incidence, which is estimated to be about 57%, still remains a huge problem, and the monetary approach seems to be incapable of revealing the extent of it. Likewise, the multidimensional poverty intensity is a large concern in this country as well: the multi-dimensionally poor people suffer, on average, from deprivation in more than 50% of the indicators considered in the analysis. However, when a three-dimensional (education, health, and living standard) index is used, the multidimensional poverty in Nicaragua does not seem to be feminized: overall, males and females are almost equally likely to be multi-dimensionally poor. The gender gaps are estimated to be lower than 5%; women are slightly better off than men in terms of the poverty incidence (4%) and the MPI index (2%), while the reverse is the case for the intensity (2%). Yet, the inequality among the multi-dimensionally poor, an issue that has also been neglected by most of the existing empirical papers, is clearly feminized, especially among adults. We have found that in Nicaragua the gender gap in inequality is 12%, and it is in favor of men; this means that the multi-dimensionally poor women are living in very intense poverty when

compared with the multi-dimensionally poor men, even though the poverty levels of both groups are quite similar.

We have found that adding a dimension under which women face higher deprivation leads to larger estimates of the incidence, intensity, and inequality of women's poverty, as Bradshaw et al. (2017a) have suspected. When a fourth dimension that considers information on employment, domestic work, and social protection, which are highly gendered (Chant, 2008; Duflo, 2012; Klasen, 2007), is included into the previous three-dimensional measure to estimate multidimensional poverty and inequality among adults and elderly, as well as the corresponding gender differences, we have found that the gender gaps in Nicaragua are much more substantial, and poverty and inequality are, in this new context, unambiguously feminized: Women are clearly more likely to be multi-dimensionally poor than men. This finding suggests that evaluations of women's relative multidimensional poverty may depend on what is measured and which dimensions of gendered poverty are included in the assessment (Bradshaw et al., 2017a).

In order to examine the determinants of multidimensional poverty in Nicaragua, we have complemented the descriptive analysis by estimating logit regressions with seven categories of explanatory variables: The gender of the individuals, their age, the individuals' area of residence, their residence region, the size of the household, the gender of the head of the household, and their marital status. We have found that the gender of the individuals has a statistically significant effect on the probability of being multi-dimensionally poor, but the direction of such effect depends on the information considered in the analysis, confirming the previous finding. Using the three-dimensional measure, males have a higher probability of being multi-dimensionally poor than females, but the opposite is the case when the multidimensional poverty measure is enhanced with information on employment, domestic work and social security. The models also suggest that both the gender of the household head and their marital status have a strong impact on the probability of being multi-dimensionally poor. Overall, in line with the recent empirical evidence on Nicaragua and Latin America (see, e.g., Altamirano & Damiano, 2017; Liu et al., 2017), we have found that in Nicaragua the households headed by women are on average better off than those headed by men, which challenges the notion that female-headed households are worse off than those led by males in terms of poverty.

It must be recognized that due to data restrictions and the unfitness of the survey to capture gendered experiences of poverty, we have only partly succeeded in individualizing

the multidimensional poverty measure and in assessing gender differentials in poverty and inequality in Nicaragua, and, consequently, our approach is not exempt from limitations. On one hand, the assumption that the living standard indicators are public goods is clearly unsatisfactory and might lead to underestimation of women's poverty and inequality, as the gender literature has suggested that the deprivation in some of them (particularly in water, energy, and assets) impacts women substantially more than men (Bradshaw et al., 2017a; Duflo, 2008a, 2008b, 2010; 2012; Sorenson, et al., 2011). On the other hand, although, with no doubt, the dimensions considered in our analysis are key well-being dimensions, both for male and for females, and they can be framed into the list proposed by Robeyns (2003) for gender inequality assessment, many of the dimensions of gendered poverty known to exist from the literature on gender inequality such as violence against women and girls, time poverty, and power poverty, mainly explored in qualitative studies, are missing in our analysis (see, e.g. Agarwal, 1994, 1997; Bessell, 2015; Bradshaw, 2002, 2013; Bradshaw et al., 2017a, 2017b; Brickell & Chant, 2010; Chant, 2008, 2016; Duflo, 2012; Deere et al., 2012; Pogge & Wisor, 2016; Robeyns, 2003). However, it is fair to say that in the absence of the relevant information and more refined data (e.g. a time use model, individual data on assets ownership, or subjective information from individuals), it is impossible to identify which individual (woman) in the household is most affected (Vijaya, et al., 2014). Therefore, we also endorse the idea that more and better individual data are needed (Bradshaw, 2017a, 2017b; Pogge & Wisor, 2016; World Bank, 2017).

NOTES

1. See, for instance, Sen, 1984; 1985; 1992; 1993; 2000a; 2008.

2. See, for instance, Alkire & Foster, 2011a; Alkire, et al., 2015; Atkinson, 2003; Bourguignon & Chakravarty, 2003; Chakravarty, Deutsch, & Silber, 2008; Deutsche & Silber, 2005; Duclos, Sahn, & Younger, 2008; Kakwani & Silber, 2008b; Klasen, 2000; Lemmi & Betti, 2006, 2013; Rippin, 2013, 2016; Tsui, 2002.

3. For more information about this discussion, see Alkire & Foster, 2011b; Lustig, 2011; and Ravallion, 2011.

4. There are considerable and persistent gender differences in many indicators of well-being across the world. They include gender differentials in control over economic resources, education, earnings, mortality, access to employment, pay, time use, safety, and power in the public and the private sphere (Klasen, 2007). As Klasen (2007) noted, "perhaps the most egregious form of gender inequality is that of gender inequality in survival in parts of the developing world, most notably South Asia and China where millions of females are "missing" as a result of these inequalities" (p.167).

5. The Global-MPI has been developed by the Oxford Poverty and Human Development Initiative (OPHI) in collaboration with the Human Development Report Office of the United Nation Development Program (UNDP) (Alkire and Santos, 2014). Since 2010, it has been included in the Human Development Reports.

6. See, e.g., Buvinić & Grupta, 1997; Drèze & Srinivasan, 1997; Chant, 1999, 2004; Rogan, 2013, 2016a, 2016b; Klasen et al., 2015; Altamirano & Teixeira, 2017.

7. According to Article 55 of the "Reglamento general de la ley de seguridad social de Nicaragua" (Decreto No. 975, 1982). We also follow the general tradition in Latin America and the Caribbean to define *older people* as those individuals aged 60 or more (Gasparini et al., 2010).

8. A systematic overview of this methodology can be found in Alkire, et al. (2015).

9. Other methodologies can be found, for instance, in Lemmi and Betti, 2006, 2013; Kakwani and Silber, 2008.

10. This section is based on the chapter 5 of the book *multidimensional poverty measurement and analysis* (Alkire et al., 2015, pgs. 144-185).

11. Each row vector $x_i = (x_{i1}, \dots, x_{id})$ gives individual i′s achievements, while each column vector $x_j = (x_{1j}, \dots, x_{nj})$ provides the distribution of achievements in indicator j across the set of individuals.

12. It is worth noting that ρ_k includes the union and intersection approaches as particular cases where $k \leq \min\{w_1, \dots, w_d\}$ and $k = 1$, respectively. The AF methodology suggests to set k somewhere between these two extremes (Alkire and Foster, 2011a).

13. M_0 can be understood as the proportion of deprivations that the multi-dimensionally poor experience, as a share of the deprivations that would be experienced if all individuals were multi-dimensionally poor and deprived in all the indicators considered (Alkire et al., 2015).

14. "Identifying a minimal combination of basic capabilities can be a good way of setting up the problem of diagnosing and measuring poverty" (Sen, 1993, p. 41). Education, health, and living standard dimensions can also be framed in the list proposed by Ingrid Robeyns for gender inequality assessment (Robeyns, 2003).

15. This dimension has also been highlighted in the capability number four ("Senses, Imagination, and Thought") of "The Central Human Capabilities" proposed by Martha Nussbaum (Nussbaum, 2003, p. 41).

16. Furthermore, the target 4.5 of the Sustainable Development Goals (SDGs) calls for eliminating "gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations" (UN, 2015, p. 17).

17. The empirical evidence in Latin America has found that there is a positive correlation between the young person's educational attainments and their parents' years of schooling: the proportion of young persons that finishes secondary school is over 60% when their parents have completed 10 or more years of schooling (Villatoro, 2007).

18. Early childhood education can enormously increase the children's "cognitive abilities", especially for disadvantaged children (Barnett, 2002, p. 1); it can shape the children's "attitudes", "habits", and "identity throughout life" (Pramling Samuelsson and Kaga, 2010, p. 57) and can even prevent some diseases such as "cardiovascular and metabolic diseases" (Campbell et al., 2014, p. 1478). Further, "adolescents who have a good start in life are less likely to be poor as adults" (Hayes, 2008, p. 8).

19. It is worth mentioning that the Global-MPI only evaluates if all children 8 years old or older are attending school (Alkire and Santos, 2014) and considers children younger than that age as non-deprived, which could lead to underestimating the dimensional deprivation rate.

20. It is worthy of note that the multidimensional poverty index proposed recently for Latin America (MPI-LA) applies the same deprivation threshold for adults only, demanding primary school completion for the elderly (Santos and Villatoro, 2016); for its part, the Global-MPI use 5 years of education as threshold for years of schooling. We apply, therefore, a more demanding dimensional cutoff, which is in line with the SDGs.

21. The second indicator used by the Global-MPI is child mortality, which assesses whether a child in the household has died. "The first identifies a person as deprived in nutrition if anyone in their household is undernourished using the weight-for-age indicator for adolescents and the Body Mass Index (BMI) for adults" (Alkire and Santos, 2014, p. 254).

22. Since our health indicator is based on a self-report assessment of having been sick, there may be reporting bias in disease (s) prevalence. To address this, we have related health deprived rate to an assets index and to income quintiles. The results suggest that there is no an obvious reporting bias in health (see Tables 12 and 13 in the Appendix A).

23. The quality of housing has instrumental and intrinsic value. It can affect directly or indirectly the health of individuals and can provide important safety elements (Shaw, 2004), and can also affect the well-being of them directly (Klasen, 2000).

24. Overcrowding is also related to the quality of housing, can affect individuals' well-being, and does not certainly contribute to a healthy environment. It can be an important factor in transmission of diseases such as tuberculosis (Elender, Bentham, & Langford, 1998), and can be a cause of infant mortality (Cage and Foster, 2002).

25. Housing tenure security is considered as a component of the right to adequate housing: "housing is not adequate if its occupants do not have a degree of tenure security which guarantees legal protection against forced evictions, harassment and other threats" (OHCHR, 2009, p. 4).

26. Additionally, water and sanitation are of considerable instrumental and intrinsic significance: "Adequate sanitation, together with good hygiene and safe water, are fundamental to good health and to social and economic development" (Mara, Lane, Scott, & Trouba, 2010, p. 1).

27. In addition, having access to electricity can help improving living conditions of individuals by allowing them to be independent from sunlight as well as by contributing to a clean environment (Santos, 2013). The main source of energy for cooking is also included for its intrinsic and instrumental significance (Klasen, 2000). Indoor air pollution has adverse effects for health and can increase the risk of many diseases and death (Duflo, Greenstone, & Hanna, 2008a, 2008b, 2016; Kaplan, 2010); it has also been considered as "a global health threat, particularly for women and young children" (Duflo, et al., 2008a, p. 7).

28. Assets indicator also has instrumental significance since the goods considered can help the individual in maintaining contact with the surrounding world, ease the work burden in and around household, and contribute to improve health (Klasen, 2000).

29. The 2014-EMNV only provides information on these topics for individuals aged 10 years or older; therefore, besides the justification stated, we focus on adults and elderly in order to be consistent with the age groups defined. Notwithstanding, it must be recognized that in Nicaragua, child labor and children engaged in domestic work is common, especially in rural areas, which could be harmful to children's health and human capital accumulation (ILO, 2017; Rosati and Rossi, 2003), and substantial gender gaps might be found, mainly in children's allocation of time and in household chores (Dammert, 2010; ILO, 2017).

30. This fourth dimension can be framed both in the Goal 8, and its targets, of the SDGs: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" (UN, 2015, p. 14), and in the target 5.4 of these Goals: "Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate" (p. 18).

31. Due to the fact that the survey does not include a time use module, we consider as non-deprived in employment those individuals that have a paid work as well as an unpaid domestic work. This assumption is likely to underestimate the women's deprivation level, and the gender gap in the dimension, as women's unequal burdens of unpaid domestic work "can often lead to exacting demands and women's relative time poverty" (Bradshaw et al., 2017b, p. 4).

32. The value of 2014 OPL is estimated at a consumption level of C$ 17,011.47 annual per capita (INIDE, 2015). Assuming a year of 365 days and based on the official average exchange rate in 2014 (C$ 25.96 per American dollar, US $) published on the World Bank's website (http://data.worldbank.org/indicator/PA.NUS.FCRF?locations=NI), the 2014 OPL is equivalent to 1.80 dollars a day.

33. The point estimates as well as its confidence intervals at 95 percent can be found in Tables 14 and 15 in the Appendix A.

34. According to Gasparini et al. (2010), in Latin America and the Caribbean region, the probability of being ill, as self-reported in the surveys, is substantially larger for elderly people than for other age groups, and the differences are particularly big in Bolivia and Nicaragua (p. 192). However, considering ours estimate and the one provided by those authors (p. 194), which is based on data from 2001-EMNV, the prevalence of diseases among Nicaraguans aged 60 years or older seems to have decreased over the first fifteen years of the XXI century.

35. This finding suggests that the education indicator constructed for children does not impute a gender differential into the data.

36. It must be nevertheless recognized that there is empirical evidence suggesting that deprivations in some living standard indicators impact females more than males (Vijaya, et al., 2014). For instance, the lack of a drinking water source in or near home increases the work burden of women and contributes to their time poverty, as they are "the primary suppliers of water to household around the globe" (Sorenson, et al., 2011, p. 1526); the use of unclean cooking fuels (indoor air pollution) affects particularly the health of women, as they are the primary cook in the household (Duflo et al, 2008a, 2008b, 2016), it also contributes to women's poverty time (Clancy, Ummar, Shakya, & Kelkar, 2007); likewise, there is also evidence about the existence of substantial gender differentials in the ownership of consumer durables, especially transport vehicles, in favor of men (Deere, Alvarado, & Twyman, 2012). However, in the absence of a time use module or individual-data on asset ownership, it is impossible to identify which female in the household is most deprived (Vijaya, et al., 2014), and there is not much more that can be done.

37. The estimated overall multidimensional poverty incidence rate reveals that in Nicaragua roughly six out of ten individuals (or 3.6 million people) are multi-dimensionally poor; this estimated incidence is, approximately, 27 percentage points higher than the monetary poverty one (see Table 17 in Appendix A). As a reference, the MPI-LA, based on 2009-EMNV survey and using the household as the unit of identification, shows that the multidimensional poverty incidence in Nicaragua exceeds 70% and is the highest in Latin America (Santos and Villatoro, 2016). Therefore, the incidence of multidimensional poverty in Nicaragua still remains a huge problem, and the monetary approach seems to be unable to reflect the extent of it.

38. The multidimensional poverty intensity ranges from 50.4% (male adults) to 59.8% (female elderly), and the overall intensity is estimated to be larger than 52.0%. That is, on average, the multi-dimensionally poor in Nicaragua are simultaneously deprived in more than five out of the ten indicators considered, which means that the intensity in Nicaragua is large (by definition, the minimum intensity value is the poverty cut-off: $k = 33.3\%$). This finding is in line with the regional and national evidence. For instance, Santos and Villatoro (2016) found that the multidimensional poverty intensity in Latin America surpasses 45% in countries with the largest poverty incidence rates such as Nicaragua; Espinoza-Delgado and López-Laborda (2017) also found that multidimensional poverty intensity in Nicaragua is larger than 40%.

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APPENDIX A

[Please place Tables 12, 13, 14, 15, 16, and 17 here]

APPENDIX B

To investigate whether our results are robust to the choice of a multidimensional poverty line, we employ the complementary cumulative distribution function (CCDF) —the complement of a cumulative distribution function (CDF)— put forward by Alkire et al., (2015). Given any value a, the CCDF provides the proportion of the individuals that has scores larger than or equal to a; in our context, it will show the proportion of the multi-dimensionally poor individuals (the multidimensional headcount ratio, H) if the second cut-off is set to a. Given two deprivation score distributions, c and c', with CCDFs $\overline{F}_c$ and $\overline{F}_{c'}$, the distribution c first-order stochastically dominates distribution c' if and only if $\overline{F}_c(a) \geq \overline{F}_{c'}(a)$ for all a and if $\overline{F}_c(a) > \overline{F}_{c'}(a)$ for some a. For strict first-order stochastic dominance condition, the second inequality must hold for all a. Therefore, if c first-order stochastically dominates c', then it has no lower H than distribution c' for all multidimensional poverty lines (k).

Figure 4 depicts the CCDFs for children, adolescents, adults, and elderly for various values of k. The figure makes clear that no matter which k one chooses, the proportion of multi-dimensionally poor individuals (H) will always be larger for elderly than for children, adolescents, and adults. That is, the elderly's deprivation score distribution first-order stochastically dominates the other ones. Note also that the distribution for children dominates that of adolescents and adults; therefore, we can conclude that in Nicaragua, children and elderly are the most vulnerable people in terms of multidimensional poverty incidence, which is robust to the choice of a multidimensional poverty line (Duclos et al., 2008). It is worth mentioning that for the case of MPI index (M_0), the conclusion also holds since H dominance implies M_0 dominance as well (second-order dominance) (Alkire et al., 2015).

[Please place Figure 4 here]

Figure 5 and 6 plot the CCDFs for men and women for different k values, considering both the whole population and the four groups. Overall, we do not find strict first-order stochastic dominance between the CCDFs since the distributions cross each other at least once. But limiting the values of k to a more plausible (or pertinent) range of 20% to 40%, that

is, conducting restricted tests of dominance (Alkire and Santos, 2014, p. 265), robust conclusions can be drawn. We find that the men's distributions dominate those of women, men's headcount ratios do not seem to be lower than women's for the restricted range of k values. It is also worthy of note that the smallest sizes of the gender gap are found among children, as was suggested in our analysis. Considering the whole population, we can suggest with some robustness that in Nicaragua, men are slightly more likely to be multi-dimensionally poor than women, which means that multidimensional poverty does not seem to be feminized.

[Please place Figures 5 and 6 here]

To test whether our findings are robust to a range of weights, we estimated H, A, M_0, and Iq by group and gender, as well as for the whole population, with five alternative weighting structures: i) giving 50% to living standard and 25% each to education and health, ii) giving 50% to education and 25% each to health and living standard, iii) giving 50% to health and 25% each to education and living standard, iv) giving 20% to living standard and 40% each to education and health to attach more weight to those dimensions that capture fully inequality within the household, and v) giving 0% to living standard and 50% each to education and health to estimate the size of the gender gap using the 100 percent individualized dimensions. The results of the robustness analysis are shown in Tables 18, 19, 20, and 21; the gender differences in absolute and relative terms are also presented in these Tables as well as the corresponding confidence intervals at 95%. Additionally, the Tables show the estimates when equal-nested weights are used in order to ease the comparison of the results; these estimates are considered as the baseline.

We find that the levels of the different measures are sensitive to changes in the weighting structures, but the ranking of the groups in terms of the poverty incidence and MPI index is fully preserved; in the other cases (intensity and inequality), the ranking is partially held since, in some cases, children, adolescents, and adults switch places. The analysis agrees again with the fact that elderly is the most vulnerable age groups in terms of poverty and inequality. The size of the gender gaps in poverty and inequality is also quite sensitive to modifications in the weighting schemes, and, in some cases, the direction of the gaps changes when is compared to the baseline. However, some robust conclusions can be drawn as well: 1) the adolescent and adult males' poverty incidence is larger than females'; 2) the poverty intensity is not greater among adult and elderly men than among women, but the reverse is the case for children; 3) considering the whole population, the multidimensional poverty

incidence is not higher among women, but the opposite is the case for the intensity; 4) the inequality among adolescent and adult females is not lower than among males, whereas the reverse occurs among children; finally, 5) the inequality among Nicaraguan females is not really lower than among males. In the remaining cases, the gap direction is ambiguous, but overall the size of the differential is quite similar to that of the baseline, respectively.

[Please place Tables 18, 19, 20, and 21 here]

TABLES

Table 1. Sample size by Group and Gender, Population, and Population Share. *Source*: Author's estimates based on 2014-EMNV

Group	Gender	Sample	Population	Pop. Share (%)
Children	Male	1,832	396,932	6.4
	Female	1,775	397,681	6.4
	Sub-total	*3,607*	*794,613*	*12.7*
Adolescents	Male	3,592	784,898	12.6
	Female	3,459	746,148	12
	Sub-total	*7,051*	*1,531,046*	*24.5*
Adults	Male	7,586	1,615,795	25.9
	Female	8,688	1,793,015	28.7
	Sub-total	*16,274*	*3,408,810*	*54.6*
Elderly	Male	1,093	243,033	3.9
	Female	1,356	263,405	4.2
	Sub-total	*2,449*	*506,438*	*8.1*
The Whole Population	Total	29,381	6,240,907	100

Table 2. Dimensions, Indicators and Deprivation Cut-offs

Dimension	Indicator	Deprivation Indicators: He / She is deprived if He / She…
Education	**Schooling achievement**	(Children) is not attending nursery school or pre-school or primary school and the head of the household has not completed lower secondary school (Adolescents) is not on track to complete lower secondary school by 17 years old (Adults) has not completed lower secondary school (Elderly) has not completed lower secondary school
Health	**Health functioning**	(Children and Adolescents) has suffered from a chronic disease or eruptive disease or diarrhea or several diseases in the past four weeks (Adults and Elderly) has suffered from a chronic disease or several diseases in the past four weeks
Standard of Living	**Housing**	is living in a house with dirt floor and/or precarious roof (waste, straw, palm and similar, other precarious material) and/or precarious wall materials (waste, cardboard, tin, cane, palm, straw, other precarious material)
	People-per-bedroom	has to share bedroom with two or more people
	Housing tenure	is living in an illegally occupied house or in a ceded or borrowed house
	Water	does not have access to an improved drinking water source (public tap or standpipe, public or private well, piped water into dwelling, piped water to yard/plot)
	Sanitation	only have access to an unimproved sanitation facility (a toilet or latrine without treatment or a toilet flushed without treatment to a river or a ravine)
	Electricity	does not have access to electricity
	Energy	is living in a household which uses wood and/or coal and/or dung as main cooking fuel
	Assets	does not have access to one of the following assets: radio, TV, telephone, bicycle, motorbike, refrigerator, and does not have access to a car or truck

Table 3. Spearman Correlation Coefficients between Deprivations, by Group. *Source*: Authors' estimates based on 2014-EMNV

Indicator	Group	Education	Health	Housing	P. Bedroom	H. Tenure	Water	Sanitation	Electricity	Energy	Assets
Income	Children	.264***	-.049***	.345***	.295***	-.009***	.283***	.292***	.314***	.432***	.397***
	Adolescents	.230***	.012***	.382***	.352***	.015***	.228***	.298***	.342***	.470***	.398***
	Adults	.290***	-.059***	.379***	.335***	.029***	.235***	.275***	.299***	.468***	.410***
	Elderly	.214***	-.025***	.423***	.397***	.040***	.137***	.275***	.394***	.450***	.450***
	The Whole Population	.233***	-.045***	.382***	.345***	.025***	.238***	.287***	.322***	.465***	.410***
Education	Children		.024***	.237***	.132***	-.041***	.213***	.197***	.213***	.352***	.264***
	Adolescents		-.003***	.190***	.151***	.062***	.191***	.176***	.275***	.261***	.240***
	Adults		.040***	.339***	.235***	.056***	.211***	.281***	.247***	.438***	.341***
	Elderly		-.020***	.261***	.184***	.044***	.134***	.232***	.158***	.367***	.286***
	The Whole Population		.084***	.255***	.159***	.028***	.178***	.217***	.222***	.347***	.281***
Health	Children			.049***	-.019***	.008***	.005***	.022***	.014***	.041***	.026***
	Adolescents			.004***	.035***	-.006***	-.017***	.012***	.010***	.029***	.030***
	Adults			-.072***	-.055***	-.041***	-.040***	-.051***	-.053***	-.060***	-.044***
	Elderly			-.092***	-.013***	-.007***	-.031***	-.045***	-.079***	-.107***	-.018***
	The Whole Population			-.050***	-.052***	-.042***	-.035***	-.032***	-.033***	-.035***	-.012***
Housing	Children				.354***	.054***	.277***	.325***	.318***	.486***	.409***
	Adolescents				.356***	.075***	.244***	.326***	.300***	.486***	.405***
	Adults				.384***	.106***	.278***	.366***	.334***	.511***	.431***
	Elderly				.383***	.088***	.293***	.406***	.386***	.512***	.498***
	The Whole Population				.378***	.094***	.273***	.356***	.329***	.504***	.428***
P. Bedroom	Children					.131***	.178***	.250***	.234***	.265***	.289***
	Adolescents					.113***	.127***	.246***	.237***	.277***	.293***
	Adults					.153***	.158***	.264***	.234***	.312***	.304***
	Elderly					.069***	.152***	.249***	.222***	.318***	.310***
	The Whole Population					.144***	.159***	.261***	.238***	.303***	.302***

*** Correlation is significant at the 0.01 level (2-tailed).

Table 3: *Continued from previous page*

Indicator	Group	Education	Health	Housing	P. Bedroom	H. Tenure	Water	Sanitation	Electricity	Energy	Assets
H. Tenure	Children						.011***	.086***	.048***	.021***	.095***
	Adolescents						.072***	.125***	.068***	.075***	.089***
	Adults						.080***	.140***	.082***	.077***	.115***
	Elderly						.056***	.130***	.040***	.076***	.112***
	The Whole Population						.070***	.131***	.073***	.071***	.106***
Water	Children							.293***	.478***	.323***	.327***
	Adolescents							.284***	.415***	.304***	.333***
	Adults							.287***	.417***	.307***	.335***
	Elderly							.261***	.381***	.293***	.291***
	The Whole Population							.288***	.425***	.310***	.332***
Sanitation	Children								.263***	.368***	.300***
	Adolescents								.243***	.377***	.313***
	Adults								.235***	.416***	.316***
	Elderly								.183***	.490***	.356***
	The Whole Population								.240***	.408***	.318***
Electricity	Children									.373***	.468***
	Adolescents									.354***	.461***
	Adults									.355***	.464***
	Elderly									.355***	.404***
	The Whole Population									.359***	.460***
Energy	Children										.483***
	Adolescents										.496***
	Adults										.512***
	Elderly										.539***
	The Whole Population										.508***

*** Correlation is significant at the 0.01 level (2-tailed).

Table 4. Proportion (h) of Males and Females Deprived in Various Indicators and Gender Differential. *Source*: Authors' estimates based on 2014-EMNV

Children						
	Male		Female		Difference between Females and Males' Estimate	
Indicator	h (%)	Bootstrap SE*	h (%)	Bootstrap SE*	Absolute	Relative
Education	56.8	1.14	56.0	1.24	-0.84***	0.99
Health	16.7	0.90	15.1	0.89	-1.64***	0.90
Housing	47.0	0.91	46.1	1.11	-0.93***	0.98
P. Bedroom	69.6	1.06	71.4	0.92	1.79***	1.03
H. Tenure	24.4	1.16	20.0	0.96	-4.40***	0.82
Water	20.0	1.04	20.7	0.82	0.73***	1.04
Sanitation	46.5	1.04	48.5	1.02	1.98***	1.04
Electricity	17.3	0.99	19.0	0.83	1.72***	1.10
Energy	60.3	0.54	58.8	0.67	-1.50***	0.98
Assets	45.4	0.94	45.9	1.02	0.48***	1.01
Adolescents						
	Male		Female		Difference between Females and Males' Estimate	
Indicator	h (%)	Bootstrap SE*	h (%)	Bootstrap SE*	Absolute	Relative
Education	31.6	0.89	25.2	0.89	-6.42***	0.80
Health	9.1	0.54	12.6	0.75	3.55***	1.39
Housing	45.4	0.78	42.1	0.82	-3.29***	0.93
P. Bedroom	62.5	0.91	60.4	0.87	-2.12***	0.97
H. Tenure	18.5	0.80	17.7	0.72	-0.77***	0.96
Water	19.9	0.76	17.0	0.72	-2.86***	0.86
Sanitation	46.6	0.86	44.2	0.89	-2.37***	0.95
Electricity	15.9	0.63	15.9	0.66	0.01**	1.00
Energy	59.1	0.45	58.0	0.47	-1.09***	0.98
Assets	41.9	0.77	42.5	0.73	0.63***	1.02

*Standard errors (SE) were estimated following the bootstrap estimate of the standard error proposed by Bradley Efron with 1,000 stratified bootstrap replications (Efron, 1981, pgs. 139-143). **The difference is statistically significant at 5%. ***The difference is not statistically significant at 1%.

Table 4: *Continued from previous page*

Adults						
	Male		Female		Difference between Females and Males' Estimate	
Indicator	h (%)	Bootstrap SE*	h (%)	Bootstrap SE*	Absolute	Relative
Education	59.4	0.61	53.1	0.63	-6.28***	0.89
Health	8.4	0.36	13.8	0.46	5.43***	1.65
Housing	40.0	0.59	38.2	0.58	-1.82***	0.95
P. Bedroom	55.5	0.68	54.1	0.61	-1.38***	0.98
H. Tenure	18.7	0.60	17.5	0.55	-1.14***	0.94
Water	16.0	0.56	14.7	0.48	-1.29***	0.92
Sanitation	43.0	0.63	39.3	0.60	-3.78***	0.91
Electricity	13.5	0.47	12.6	0.43	-0.91***	0.93
Energy	53.7	0.39	50.5	0.37	-3.20***	0.94
Assets	38.8	0.57	36.5	0.55	-2.29***	0.94
Elderly						
	Male		Female		Difference between Females and Males' Estimate	
Indicator	h (%)	Bootstrap SE*	h (%)	Bootstrap SE*	Absolute	Relative
Education	83.7	0.65	85.2	0.75	1.55***	1.02
Health	45.4	1.61	58.2	1.29	12.75***	1.28
Housing	37.4	1.37	29.1	0.94	-8.27***	0.78
P. Bedroom	42.5	1.58	36.9	1.02	-5.55***	0.87
H. Tenure	9.4	1.00	7.1	0.61	-2.33***	0.75
Water	14.0	1.17	9.4	0.74	-4.56***	0.67
Sanitation	41.1	1.63	34.5	0.93	-6.63***	0.84
Electricity	15.7	1.31	9.0	0.84	-6.73***	0.57
Energy	57.9	0.55	44.4	0.64	-13.41***	0.77
Assets	44.2	1.24	36.0	0.89	-8.25***	0.81

*Standard errors (SE) were estimated following the bootstrap estimate of the standard error proposed by Bradley Efron with 1,000 stratified bootstrap replications (Efron, 1981, pgs. 139-143). **The difference is statistically significant at 5%. ***The difference is statistically significant at 1%.

Table 5: Proportion (h) of Males and Females Deprived in Various Indicators and Gender Differential. *Source*: Authors' estimates based on 2014-EMNV

The Whole Population						
	Male		Female		Difference between Females and Males' Estimates	
Indicator	h (%)	Bootstrap SE*	h (%)	Bootstrap SE*	Absolute	Relative
Education	53.8	0.54	49.6	0.54	-4.23***	0.92
Health	12.6	0.38	17.3	0.40	4.73***	1.38
Housing	42.1	0.45	39.4	0.43	-3.63***	0.93
P. Bedroom	58.1	0.50	56.3	0.48	-2.74***	0.97
H. Tenure	18.6	0.43	17.0	0.40	-2.44***	0.91
Water	17.3	0.41	15.5	0.38	-2.55***	0.90
Sanitation	44.3	0.50	41.2	0.45	-3.96***	0.93
Electricity	14.7	0.37	13.8	0.34	-1.62***	0.94
Energy	56.3	0.27	52.8	0.26	-3.96***	0.94
Assets	40.9	0.44	39.0	0.40	-1.88***	0.95

*Standard errors (SE) were estimated following the bootstrap estimate of the standard error proposed by Bradley Efron with 1,000 stratified bootstrap replications (Efron, 1981, pgs. 139-143). **The difference is statistically significant at 5%. ***The difference is statistically significant at 1%.

Table 6. Multidimensional Poverty Measures, by Group and Gender, and Gender Differentials.
Source: Authors' estimates based on data from 2014-EMNV

The Multidimensional Headcount Ratio (H): The Incidence of Multidimensional Poverty						
	Male		Female		Difference between Females and Males' Estimate	
Subgroup	H (%)	Bootstrap SE*	H (%)	Bootstrap SE*	Absolute	Relative
Children	63.9	1.09	62.7	1.16	-1.27***	0.98
Adolescents	38.2	0.94	34.9	0.98	-3.30***	0.91
Adults	62.7	0.63	58.5	0.64	-4.21***	0.93
Elderly	91.6	0.52	94.1	0.58	2.47***	1.03
The Whole Population	58.9	0.55	56.5	0.51	-2.41***	0.96
The Average Deprivation Share among the Poor (A): The Intensity of Multidimensional Poverty						
	Male		Female		Difference between Females and Males' Estimate	
Subgroup	A	Bootstrap SE*	A	Bootstrap SE*	Absolute	Relative
Children	0.5415	0.0043	0.5394	0.0045	-0.0020***	1.00
Adolescents	0.5218	0.0029	0.5200	0.0037	-0.0018***	1.00
Adults	0.5044	0.0020	0.5211	0.0025	0.0167***	1.03
Elderly	0.5862	0.0065	0.5983	0.0044	0.0121***	1.02
The Whole Population	0.5227	0.0020	0.5339	0.0020	0.0113***	1.02
The Adjusted Multidimensional Headcount Ratio (M_0): MPI Index (H x A)						
	Male		Female		Difference between Females and Males' Estimate	
Subgroup	M_0	Bootstrap SE*	M_0	Bootstrap SE*	Absolute	Relative
Children	0.3463	0.0069	0.3378	0.0069	-0.0085***	0.98
Adolescents	0.1995	0.0054	0.1817	0.0054	-0.0179***	0.91
Adults	0.3167	0.0034	0.3051	0.0036	-0.0116***	0.96
Elderly	0.5370	0.0062	0.5631	0.0055	0.0261***	1.05
The Whole Population	0.3079	0.0025	0.3015	0.0025	-0.0064***	0.98

*Standard errors (SE) were estimated following the bootstrap estimate of the standard error proposed by Bradley Efron with 1,000 stratified bootstrap replications (Efron, 1981, pgs. 139-143). **The difference is statistically significant at 5%. ***The difference is statistically significant at 1%.

Table 7. Multidimensional Poverty Measures using the Union Approach by Group and Gender, and Gender Differentials. *Source*: Authors' estimates based on data from EMNV-2014.

The Multidimensional Headcount Ratio (H): The Incidence of Multidimensional Poverty						
	Male		Female		Difference between Females and Males' Estimate	
Subgroup	H (%)	Bootstrap SE*	H (%)	Bootstrap SE*	Absolute	Relative
Children	93.4	0.36	90.9	0.45	-2.47***	0.97
Adolescents	88.2	0.38	86.4	0.40	-1.88***	0.98
Adults	86.6	0.33	85.3	0.32	-1.31***	0.98
Elderly	94.6	0.43	95.9	0.54	1.24***	1.01
The Whole Population	88.6	0.24	87.2	0.24	-1.33***	0.99
The Aggregate Deprivation Count Ratio: The Intensity of Multidimensional Poverty						
	Male		Female		Difference between Females and Males' Estimate	
Subgroup	Intensity	Bootstrap SE*	Intensity	Bootstrap SE*	Absolute	Relative
Children	0.4100	0.0058	0.4081	0.0055	-0.0018***	1.00
Adolescents	0.3001	0.0044	0.2899	0.0045	-0.0102***	0.97
Adults	0.3955	0.0028	0.3902	0.0031	-0.0053***	0.99
Elderly	0.5706	0.0063	0.5884	0.0048	0.0178***	1.03
The Whole Population	0.3878	0.0026	0.3874	0.0027	-0.0004***	1.00
The Correlation Sensitive Poverty Index (CSPI)						
	Male		Female		Difference between Females and Males' Estimate	
Subgroup	CSPI	Bootstrap SE*	CSPI	Bootstrap SE*	Absolute	Relative
Children	0.2099	0.0053	0.2019	0.0026	-0.0081***	0.96
Adolescents	0.1218	0.0051	0.1126	0.0080	-0.0092***	0.92
Adults	0.1732	0.0032	0.1748	0.0062	0.0016***	1.01
Elderly	0.3482	0.0079	0.3706	0.0060	0.0225***	1.06
The Whole Population	0.1786	0.0016	0.1798	0.0018	0.0012***	1.01

*Standard errors (SE) were estimated following the bootstrap estimate of the standard error proposed by Bradley Efron with 1,000 stratified bootstrap replications (Efron, 1981, pgs. 139-143). **The difference is statistically significant at 5%. ***The difference is statistically significant at 1%.

Table 8. Inequality Among the Multidimensionally Poor (Iq) by Group and Gender, and Gender Differentials. *Sources*: Authors' estimates based on data from EMNV-2014

	Male		Female		Difference between Females and Males' Estimate	
Subgroup	Iq	Bootstrap SE*	Iq	Bootstrap SE*	Absolute	Relative
Children	0.1015	0.0051	0.0854	0.0056	-0.0162***	0.84
Adolescents	0.0671	0.0037	0.0714	0.0052	0.0043***	1.06
Adults	0.0615	0.0024	0.0802	0.0030	0.0187***	1.30
Elderly	0.1416	0.0053	0.1443	0.0038	0.0027***	1.02
The Whole Population	0.0811	0.0025	0.0911	0.0023	0.0100***	1.12

*Standard errors (SE) were estimated following the bootstrap estimate of the standard error proposed by Bradley Efron with 1,000 stratified bootstrap replications (Efron, 1981, pgs. 139-143). **The difference is statistically significant at 5%. ***The difference is statistically significant at 1%.

Table 9. Multidimensional Poverty Measures among Adults, considering Employment as fourth dimension, and Gender Differences. *Source*: Authors' estimates based on data from EMNV-2014.

Measure	Male	Bootstrap SE*	Female	Bootstrap SE*	Difference between Females and Males' Estimate	
					Absolute	Relative
Incidence	69.7	0.57	74.4	0.50	4.74***	1.07
Intensity	0.4031	0.0021	0.4787	0.0026	0.0756***	1.19
MPI index	0.2810	0.0026	0.3561	0.0031	0.0751***	1.27
Inequality	0.0617	0.0019	0.1262	0.0024	0.0644***	2.04

*Standard errors (SE) were estimated following the bootstrap estimate of the standard error proposed by Bradley Efron with 1,000 stratified bootstrap replications (Efron, 1981, pgs. 139-143). **The difference is statistically significant at 5%. ***The difference is statistically significant at 1%.

Table 10. Multidimensional Poverty Measures among Elderly, considering Social Protection as fourth dimension, and Gender Differences. *Source*: Authors' estimates based on data from EMNV-2014.

Measure	Male	Bootstrap SE*	Female	Bootstrap SE*	Difference between Females and Males' Estimate	
					Absolute	Relative
Incidence	92.1	0.49	95.3	0.55	3.15***	1.03
Intensity	0.4894	0.0061	0.5435	0.0047	0.0540***	1.11
MPI index	0.4508	0.0061	0.5181	0.0053	0.0672***	1.15
Inequality	0.1426	0.0082	0.1685	0.0052	0.0259***	1.18

*Standard errors (SE) were estimated following the bootstrap estimate of the standard error proposed by Bradley Efron with 1,000 stratified bootstrap replications (Efron, 1981, pgs. 139-143). **The difference is statistically significant at 5%. ***The difference is statistically significant at 1%.

Table 11. Results of the logit regressions. *Source*: Authors' estimates based on 2014-EMNV

Poverty	M1		M2		M3	
Explanatory variables	Coef.	Robust SE	Coef.	Robust SE	Coef.	Robust SE
Gender (base: Male)						
Female	-0.02104	0.04589	-0.13646***	0.03741	0.34895***	0.04741
Age	-0.01260**	0.00364	-0.02121***	0.00415	-0.02925*	0.01206
Square of Age	0.00013*	0.00005	0.00106***	0.00007	0.00087***	0.00015
Area of Residence (base: Urban)						
Rural	0.79613***	0.10677	0.61329***	0.09229	0.49699***	0.12350
Region of Residence (base: the capital, Managua)						
Pacific	0.14247*	0.06686	0.18705***	0.04722	0.16375**	0.05779
Central	0.84686***	0.06469	0.29782***	0.04688	0.24381***	0.05735
Atlantic	0.60742***	0.06968	0.31779***	0.05355	0.24393***	0.06920
Household size	0.75938***	0.03061	0.12975***	0.02215	0.13132***	0.02851
Square of the household size	-0.03180***	0.00182	-0.00498***	0.00143	-0.00557**	0.00199
Gender of the Household Head (base: Female)						
Male	3.17592***	0.50734	1.28017***	0.32907	0.99026*	0.40683
Marital Status of the Household Head (base: Single)						
Married	2.75174***	0.39117	0.77535**	0.25085	0.94917**	0.30152
Unmarried	3.04974***	0.37789	1.29285***	0.24339	1.23299***	0.29455
Divorced	2.84163***	0.37203	1.15441***	0.23811	0.94956**	0.28720
Widower	2.57362***	0.37695	1.10266***	0.24215	0.93514**	0.29126
Interaction: Married (Male-Headed Household)	-3.31831***	0.52624	-1.13640**	0.34276	-1.01594*	0.42226
Interaction: Unmarried (Male-Headed Household)	-3.18562***	0.51686	-1.25835***	0.33779	-0.88602*	0.41930
Interaction: Divorced (Male-Headed Household)	-3.59774***	0.53874	-1.04854**	0.35585	-0.69611	0.43188
Interaction: Widower (Male-Headed Household)	-2.85718***	0.55390	-1.11215**	0.37675	-0.49076	0.44835
Interaction Rural (Pacific)	0.50926***	0.13344	0.17892	0.11456	0.60512***	0.16725
Interaction: Rural (Central)	0.61077***	0.13303	0.97421***	0.12148	1.57465***	0.19950
Interaction: Rural (Atlantic)	1.06708***	0.12874	0.52699***	0.11689	1.20103***	0.17684
Constant	-7.86459***	0.39287	-2.38305***	0.25135	-1.52136***	0.36540
Number of obs.	29381		29381		18723	
Wald chi2(21)	2818.06		2263.49		1226.38	
Prob. > chi2	0.00000		0.00000		0.00000	
Pseudo R2	0.2396		0.1584		0.1519	
Log pseudolikelihood	-2881854.40		-3579153.90		-1869089.80	

$p < 0.05$*, $p < 0.01$**, $p < 0.001$***.

Table 12. Relation between Health Deprived Rate (%) and Assets Index, by group. *Source*: Authors' estimates based on 2014-EMNV

		Scores of Assets Index						
	Group	**0**	**1**	**2**	**3**	**4**	**5**	**6**
Health Deprived Rate	**Children**	63.87	20.33	8.55	4.70	2.35	0.19	0.00
	Adolescents	61.02	22.94	9.49	4.26	1.75	0.54	0.00
	Adults	44.75	28.22	15.05	7.05	4.17	0.69	0.06
	Elderly	48.57	26.92	12.53	6.99	4.60	0.32	0.07

A score of 0 signifies that individual does not have access to any of the following six items: microwave, motorcycle, car, refrigerator, freezer or washing machine; a score of 1 means that the individual has access to one of the six items; and so on.

Table 13. Relation between Health Deprived Rate (%) and Income Quintile (Q), by Group. *Source*: Authors' estimates based on 2014-EMNV

Group	**Poorest Q**	**Q 2**	**Q 3**	**Q 4**	**Richest Q**
Children	13.43	13.79	17.44	19.32	16.84
Adolescents	10.72	10.89	9.65	11.64	11.51
Adults	7.79	9.31	10.37	14.03	13.79
Elderly	51.17	52.11	50.30	50.02	55.31

Correlation Coefficients of Spearman

	Children	**Adolescents**	**Adults**	**Elderly**
Health Functioning - Income Quintile	-.140***	-.139***	.100***	.276***

***Correlation is significant at the 0.01 level (2-tailed).

Table 14. Proportion of Individuals Deprived in Various Indicators (h %), by Group. *Source*: Authors' estimates based on 2014-EMNV

	Children			Adolescents		
Indicator	h	Confidence Interval at 95%*		h	Confidence Interval at 95%*	
		Lower bound	Upper bound		Lower bound	Upper bound
Education	56.4	54.7	58.0	28.5	27.2	29.8
Health	15.9	14.6	17.2	10.8	10.0	11.7
Housing	46.5	45.2	48.0	43.8	42.6	45.0
P. Bedroom	70.5	69.1	71.8	61.5	60.2	62.7
H. Tenure	22.2	20.8	23.6	18.1	17.0	19.2
Water	20.3	19.1	21.6	18.5	17.5	19.6
Sanitation	47.5	46.0	49.0	45.4	44.2	46.5
Electricity	18.2	17.0	19.4	15.8	15.0	16.7
Energy	59.5	58.6	60.3	58.5	57.9	59.2
Assets	45.7	44.3	47.0	42.2	41.1	43.2
	Adults			Elderly		
Indicator	h	Confidence Interval at 95%*		h	Confidence Interval at 95%*	
		Lower bound	Upper bound		Lower bound	Upper bound
Education	56.1	55.2	57.0	84.5	83.5	85.4
Health	11.3	10.7	11.8	52.1	50.2	53.9
Housing	39.1	38.3	39.9	33.1	31.5	34.7
P. Bedroom	54.8	53.8	55.6	39.5	37.7	41.3
H. Tenure	18.0	17.2	18.7	8.2	7.1	9.3
Water	15.3	14.5	16.0	11.6	10.3	12.9
Sanitation	41.0	40.2	41.9	37.6	35.9	39.3
Electricity	13.0	12.4	13.7	12.2	10.7	13.7
Energy	52.0	51.5	52.6	50.9	50.0	51.7
Assets	37.6	36.8	38.4	40.0	38.4	41.5

*Confidence intervals were computed using the bootstrap percentile method with 1,000 stratified bootstrap replications (Efron, 1981, p. 145).

Table 15. Proportion of Individuals Deprived in Various Indicators (h %). *Source*: Authors' estimates based on EMNV-2014

	The Whole Population		
Indicator	h	Confidence Interval at 95 percent	
		Lower bound	Upper bound
Education	51.7	50.9	52.4
Health	15.1	14.5	15.6
Housing	40.7	40.1	41.3
P. Bedroom	57.2	56.5	57.8
H. Tenure	17.8	17.2	18.4
Water	16.4	15.9	16.9
Sanitation	42.7	42.0	43.3
Electricity	14.3	13.8	14.8
Energy	54.5	54.1	54.9
Assets	39.9	39.4	40.5

*Confidence intervals were computed using the bootstrap percentile method with 1,000 stratified bootstrap replications (Efron, 1981, p. 145).

Table 16. The Incidence of Monetary Poverty (H %). *Source*: Authors' estimates based on data from 2014-EMNV

Group	H	Confidence Interval at 95%*	
		Lower bound	Upper bound
Children	35.3	33.7	37.0
Adolescents	34.4	33.1	35.6
Adults	27.0	26.1	27.8
Elderly	23.5	21.9	25.1
Total	29.6	28.9	30.2

*Confidence intervals were computed using the bootstrap percentile method with 1,000 stratified bootstrap replications (Efron, 1981, p. 145).

Table 17. The Incidence of Monetary Poverty (H %) by Gender. *Source*: Authors' estimates based on data from 2014-EMNV

Group	Male			Female			Difference between Females and Males' estimates	
	H	Confidence Interval at 95%*		H	Confidence Interval at 95%*			
		Lower bound	Upper bound		Lower bound	Upper bound	Absolute	Relative
Children	35.3	33.0	37.6	35.4	33.2	37.5	0.09*	1.00
Adolescents	35.0	33.2	36.7	33.7	31.9	35.4	-1.30***	0.96
Adults	27.6	26.3	28.8	26.4	25.1	27.5	-1.27***	0.95
Elderly	27.0	24.0	29.6	20.3	18.7	21.9	-6.61***	0.75
Total	30.5	29.5	31.4	28.7	27.8	29.6	-1.75***	0.94

*Confidence intervals were computed using the bootstrap percentile method with 1,000 stratified bootstrap replications (Efron, 1981, p. 145). *, **, ***The difference is statistically significant at 10%, 5%, and 1% respectively.

Table 18. The Multidimensional Poverty Incidence (H %), using six alternate Weighting Structures. *Source*: Authors' estimates based on 2014-EMNV

Weighting Structure	Children			Male Children			Female Children			Gender Differences	
	Lb	**H**	Ub	Lb	**H**	Ub	Lb	**H**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	61.7	**63.3**	64.9	61.8	**63.9**	66.1	60.4	**62.7**	64.9	-1.27***	0.98
Education (25%) Health (25%) Living Standard (50%)	55.4	**56.8**	58.1	54.2	**56.2**	58.1	55.4	**57.4**	59.4	1.21***	1.02
Education (50%) Health (25%) Living Standard (25%)	58.2	**59.7**	61.2	57.8	**60.0**	62.1	57.2	**59.4**	61.5	-0.60***	0.99
Education (25%) Health (50%) Living Standard (25%)	47.7	**49.4**	50.9	46.7	**48.8**	50.8	47.5	**49.9**	52.3	1.03***	1.02
Education (40%) Health (40%) Living Standard (20%)	61.3	**62.9**	64.5	61.5	**63.5**	65.6	60.1	**62.4**	64.6	-1.15***	0.98
Education (50%) Health (50%) Living Standard (0%)	61.4	**62.9**	64.5	61.3	**63.5**	65.8	60.1	**62.4**	64.7	-1.18***	0.98
Weighting Structure	Adolescents			Male Adolescents			Female Adolescents			Gender Differences	
	Lb	**H**	Ub	Lb	**H**	Ub	Lb	**H**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	35.2	**36.6**	37.9	36.4	**38.2**	40.0	33.0	**34.9**	36.8	-3.30***	0.91
Education (25%) Health (25%) Living Standard (50%)	35.7	**37.0**	38.3	36.4	**38.2**	39.9	33.8	**35.6**	37.4	-2.68***	0.93
Education (50%) Health (25%) Living Standard (25%)	31.6	**32.8**	34.2	33.3	**35.0**	36.9	28.7	**30.6**	32.5	-4.39***	0.87
Education (25%) Health (50%) Living Standard (25%)	29.1	**30.3**	31.6	28.9	**30.7**	32.6	28.0	**30.0**	31.9	-0.71***	0.98
Education (40%) Health (40%) Living Standard (20%)	35.0	**36.3**	37.6	35.9	**37.8**	39.7	32.7	**34.7**	36.7	-3.06***	0.92
Education (50%) Health (50%) Living Standard (0%)	34.9	**36.3**	37.6	36.0	**37.8**	39.7	32.6	**34.7**	36.7	-3.12***	0.92
Weighting Structure	Adults			Male Adults			Female Adults			Gender Differences	
	Lb	**H**	Ub	Lb	**H**	Ub	Lb	**H**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	59.7	**60.5**	61.4	61.5	**62.7**	63.9	57.3	**58.5**	59.7	-4.21***	0.93
Education (25%) Health (25%) Living Standard (50%)	48.8	**49.7**	50.4	50.8	**51.8**	52.8	46.6	**47.7**	48.8	-4.02***	0.92
Education (50%) Health (25%) Living Standard (25%)	55.9	**56.8**	57.6	58.6	**59.9**	61.0	52.9	**54.1**	55.2	-5.79***	0.90
Education (25%) Health (50%) Living Standard (25%)	44.5	**45.4**	46.2	44.6	**45.8**	47.0	43.8	**45.0**	46.1	-0.87***	0.98
Education (40%) Health (40%) Living Standard (20%)	59.5	**60.4**	61.3	61.3	**62.7**	63.8	57.1	**58.4**	59.6	-4.26***	0.93
Education (50%) Health (50%) Living Standard (0%)	59.6	**60.5**	61.3	61.4	**62.7**	63.9	57.2	**58.5**	59.7	-4.19***	0.93
Weighting Structure	Elderly			Male Elderly			Female Elderly			Gender Differences	
	Lb	**H**	Ub	Lb	**H**	Ub	Lb	**H**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	92.2	**92.9**	93.7	90.6	**91.6**	92.6	93.0	**94.1**	95.3	2.52***	1.03
Education (25%) Health (25%) Living Standard (50%)	71.6	**72.7**	73.9	71.8	**73.2**	74.6	70.6	**72.3**	74.2	-0.86***	0.99
Education (50%) Health (25%) Living Standard (25%)	84.0	**84.9**	85.9	83.0	**84.3**	85.5	83.8	**85.4**	86.7	1.12***	1.01
Education (25%) Health (50%) Living Standard (25%)	72.5	**73.8**	75.1	70.7	**72.7**	74.4	72.8	**74.7**	76.6	2.07***	1.03
Education (40%) Health (40%) Living Standard (20%)	92.2	**92.9**	93.7	90.7	**91.6**	92.5	93.0	**94.2**	95.4	2.55***	1.03
Education (50%) Health (50%) Living Standard (0%)	92.1	**92.9**	93.7	90.7	**91.6**	92.5	93.1	**94.2**	95.4	2.57***	1.03
Weighting Structure	The Whole Population			Male			Female			Gender Differences	
	Lb	**H**	Ub	Lb	**H**	Ub	Lb	**H**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	57.0	**57.6**	58.3	57.8	**58.9**	60.0	55.5	**56.5**	57.5	-2.41***	0.96
Education (25%) Health (25%) Living Standard (50%)	48.7	**49.3**	50.0	49.8	**50.6**	51.5	47.2	**48.1**	49.1	-2.47***	0.95
Education (50%) Health (25%) Living Standard (25%)	52.8	**53.6**	54.2	54.5	**55.5**	56.5	51.0	**51.8**	52.8	-3.63***	0.93
Education (25%) Health (50%) Living Standard (25%)	43.8	**44.5**	45.2	43.5	**44.5**	45.5	43.6	**44.5**	45.7	0.07***	1.00
Education (40%) Health (40%) Living Standard (20%)	56.7	**57.5**	58.2	57.7	**58.7**	59.7	55.2	**56.3**	57.4	-2.36***	0.96
Education (50%) Health (50%) Living Standard (0%)	56.7	**57.5**	58.2	57.5	**58.6**	59.7	55.2	**56.3**	57.3	-2.32***	0.96

Lb: Lower bound; Ub: Upper bound. Confidence intervals at 95% were computed using the bootstrap percentile method with 1,000 stratified bootstrap replications (Efron, 1981, p. 145). *, **, ***The difference is statistically significant at 10%, 5%, and 1% respectively.

Table 19. The Multidimensional Poverty Intensity (A), using six alternate Weighting Structures. *Source*: Authors' estimates based on 2014-EMNV

Weighting Structure	Children			Male Children			Female Children			Gender Differences	
	Lb	**A**	Ub	Lb	**A**	Ub	Lb	**A**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.5343	**0.5406**	0.5470	0.5327	**0.5415**	0.5497	0.5312	**0.5394**	0.5487	-0.0020***	1.00
Education (25%) Health (25%) Living Standard (50%)	0.5525	**0.5589**	0.5659	0.5531	**0.5632**	0.5719	0.5452	**0.5548**	0.5638	-0.0084***	0.99
Education (50%) Health (25%) Living Standard (25%)	0.6440	**0.6494**	0.6554	0.6440	**0.6522**	0.6605	0.6386	**0.6467**	0.6549	-0.0055***	0.99
Education (25%) Health (50%) Living Standard (25%)	0.5097	**0.5194**	0.5294	0.5165	**0.5285**	0.5404	0.4975	**0.5104**	0.5236	-0.0181***	0.97
Education (40%) Health (40%) Living Standard (20%)	0.5483	**0.5549**	0.5617	0.5488	**0.5579**	0.5671	0.5437	**0.5522**	0.5612	-0.0057***	0.99
Education (50%) Health (50%) Living Standard (0%)	0.5673	**0.5748**	0.5828	0.5695	**0.5799**	0.5904	0.5590	**0.5697**	0.5817	-0.0102***	0.98
Weighting Structure	Adolescents			Male Adolescents			Female Adolescents			Gender Differences	
	Lb	**A**	Ub	Lb	**A**	Ub	Lb	**A**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.5163	**0.5208**	0.5256	0.5159	**0.5218**	0.5274	0.5128	**0.5200**	0.5278	-0.0018***	1.00
Education (25%) Health (25%) Living Standard (50%)	0.5236	**0.5294**	0.5351	0.5265	**0.5340**	0.5421	0.5160	**0.5241**	0.5329	-0.0099***	0.98
Education (50%) Health (25%) Living Standard (25%)	0.6146	**0.6205**	0.6264	0.6203	**0.6279**	0.6351	0.6021	**0.6120**	0.6221	-0.0158***	0.97
Education (25%) Health (50%) Living Standard (25%)	0.4941	**0.5016**	0.5098	0.4828	**0.4915**	0.5013	0.5008	**0.5127**	0.5245	0.0212***	1.04
Education (40%) Health (40%) Living Standard (20%)	0.5257	**0.5304**	0.5354	0.5240	**0.5298**	0.5358	0.5231	**0.5310**	0.5396	0.0012***	1.00
Education (50%) Health (50%) Living Standard (0%)	0.5364	**0.5421**	0.5478	0.5327	**0.5391**	0.5459	0.5361	**0.5455**	0.5562	0.0064***	1.01
Weighting Structure	Adults			Male Adults			Female Adults			Gender Differences	
	Lb	**A**	Ub	Lb	**A**	Ub	Lb	**A**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.5098	**0.5128**	0.5158	0.5005	**0.5044**	0.5082	0.5163	**0.5211**	0.5258	0.0167***	1.03
Education (25%) Health (25%) Living Standard (50%)	0.5373	**0.5407**	0.5440	0.5290	**0.5337**	0.5386	0.5420	**0.5473**	0.5523	0.0137***	1.03
Education (50%) Health (25%) Living Standard (25%)	0.6370	**0.6395**	0.6420	0.6291	**0.6321**	0.6352	0.6431	**0.6470**	0.6510	0.0149***	1.02
Education (25%) Health (50%) Living Standard (25%)	0.4749	**0.4799**	0.4850	0.4522	**0.4584**	0.4648	0.4919	**0.4998**	0.5074	0.0414***	1.09
Education (40%) Health (40%) Living Standard (20%)	0.5275	**0.5309**	0.5342	0.5153	**0.5193**	0.5236	0.5368	**0.5421**	0.5474	0.0228***	1.04
Education (50%) Health (50%) Living Standard (0%)	0.5531	**0.5574**	0.5615	0.5364	**0.5411**	0.5460	0.5669	**0.5732**	0.5795	0.0321***	1.06
Weighting Structure	Elderly			Male Elderly			Female Elderly			Gender Differences	
	Lb	**A**	Ub	Lb	**A**	Ub	Lb	**A**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.5849	**0.5924**	0.5997	0.5734	**0.5862**	0.5984	0.5896	**0.5983**	0.6069	0.0121***	1.02
Education (25%) Health (25%) Living Standard (50%)	0.5837	**0.5909**	0.5983	0.5784	**0.5909**	0.6037	0.5834	**0.5907**	0.5985	-0.0001	1.00
Education (50%) Health (25%) Living Standard (25%)	0.7041	**0.7105**	0.7165	0.6937	**0.7034**	0.7128	0.7106	**0.7172**	0.7241	0.0139***	1.02
Education (25%) Health (50%) Living Standard (25%)	0.6527	**0.6642**	0.6748	0.6167	**0.6374**	0.6555	0.6759	**0.6877**	0.7001	0.0502***	1.08
Education (40%) Health (40%) Living Standard (20%)	0.6407	**0.6495**	0.6575	0.6206	**0.6340**	0.6479	0.6529	**0.6633**	0.6727	0.0293***	1.05
Education (50%) Health (50%) Living Standard (0%)	0.7244	**0.7347**	0.7444	0.6884	**0.7052**	0.7220	0.7494	**0.7616**	0.7744	0.0565***	1.08
Weighting Structure	The Whole Population			Male			Female			Gender Differences	
	Lb	**A**	Ub	Lb	**A**	Ub	Lb	**A**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.5258	**0.5285**	0.5312	0.5190	**0.5227**	0.5266	0.5301	**0.5339**	0.5380	0.0113***	1.02
Education (25%) Health (25%) Living Standard (50%)	0.5443	**0.5473**	0.5506	0.5405	**0.5448**	0.5494	0.5453	**0.5498**	0.5544	0.0050***	1.01
Education (50%) Health (25%) Living Standard (25%)	0.6447	**0.6472**	0.6498	0.6395	**0.6429**	0.6463	0.6478	**0.6518**	0.6556	0.0089***	1.01
Education (25%) Health (50%) Living Standard (25%)	0.5097	**0.5141**	0.5186	0.4914	**0.4978**	0.5049	0.5232	**0.5295**	0.5359	0.0318***	1.06
Education (40%) Health (40%) Living Standard (20%)	0.5466	**0.5497**	0.5529	0.5365	**0.5406**	0.5452	0.5545	**0.5587**	0.5633	0.0181***	1.03
Education (50%) Health (50%) Living Standard (0%)	0.5768	**0.5807**	0.5843	0.5615	**0.5666**	0.5716	0.5893	**0.5947**	0.6003	0.0280***	1.05

Lb: Lower bound; Ub: Upper bound. Confidence intervals at 95% were computed using the bootstrap percentile method with 1,000 stratified bootstrap replications (Efron, 1981, p. 145). *, **, ***The difference is statistically significant at 10%, 5%, and 1% respectively.

Table 20. The Adjusted Headcount Ratio (M_0), the MPI index, using six alternate Weighting Structures. *Source*: Authors' estimates based on 2014-EMNV

Weighting Structure	Children			Male Children			Female Children			Gender Differences	
	Lb	M_0	Ub	Lb	M_0	Ub	Lb	M_0	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.3318	**0.3419**	0.3512	0.3324	**0.3463**	0.3599	0.3241	**0.3378**	0.3514	-0.0085***	0.98
Education (25%) Health (25%) Living Standard (50%)	0.3091	**0.3175**	0.3259	0.3043	**0.3166**	0.3291	0.3065	**0.3184**	0.3297	0.0018***	1.01
Education (50%) Health (25%) Living Standard (25%)	0.3755	**0.3877**	0.3996	0.3749	**0.3907**	0.4066	0.3683	**0.3843**	0.3995	-0.0064***	0.98
Education (25%) Health (50%) Living Standard (25%)	0.2469	**0.2566**	0.2663	0.2448	**0.2583**	0.2714	0.2403	**0.2549**	0.2687	-0.0034***	0.99
Education (40%) Health (40%) Living Standard (20%)	0.3394	**0.3493**	0.3594	0.3402	**0.3538**	0.3679	0.3303	**0.3445**	0.3585	-0.0094***	0.97
Education (50%) Health (50%) Living Standard (0%)	0.3509	**0.3614**	0.3722	0.3519	**0.3673**	0.3822	0.3404	**0.3556**	0.3700	-0.0117***	0.97
Weighting Structure	Adolescents			Male Adolescents			Female Adolescents			Gender Differences	
	Lb	M_0	Ub	Lb	M_0	Ub	Lb	M_0	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.1832	**0.1907**	0.1984	0.1888	**0.1995**	0.2109	0.1708	**0.1817**	0.1921	-0.0179***	0.91
Education (25%) Health (25%) Living Standard (50%)	0.1890	**0.1958**	0.2022	0.1947	**0.2044**	0.2141	0.1762	**0.1867**	0.1962	-0.0177***	0.91
Education (50%) Health (25%) Living Standard (25%)	0.1957	**0.2042**	0.2125	0.2083	**0.2198**	0.2315	0.1749	**0.1874**	0.2000	-0.0324***	0.85
Education (25%) Health (50%) Living Standard (25%)	0.1448	**0.1521**	0.1592	0.1411	**0.1506**	0.1598	0.1429	**0.1537**	0.1650	0.0031***	1.02
Education (40%) Health (40%) Living Standard (20%)	0.1846	**0.1925**	0.1996	0.1889	**0.2002**	0.2103	0.1734	**0.1841**	0.1947	-0.0160***	0.92
Education (50%) Health (50%) Living Standard (0%)	0.1886	**0.1964**	0.2042	0.1933	**0.2040**	0.2153	0.1786	**0.1894**	0.2008	-0.0146***	0.93
Weighting Structure	Adults			Male Adults			Female Adults			Gender Differences	
	Lb	M_0	Ub	Lb	M_0	Ub	Lb	M_0	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.3060	**0.3105**	0.3153	0.3100	**0.3167**	0.3231	0.2985	**0.3051**	0.3123	-0.0116***	0.96
Education (25%) Health (25%) Living Standard (50%)	0.2640	**0.2683**	0.2725	0.2708	**0.2764**	0.2824	0.2549	**0.2613**	0.2678	-0.0151***	0.95
Education (50%) Health (25%) Living Standard (25%)	0.3571	**0.3630**	0.3689	0.3702	**0.3783**	0.3861	0.3418	**0.3498**	0.3583	-0.0285***	0.92
Education (25%) Health (50%) Living Standard (25%)	0.2129	**0.2177**	0.2223	0.2039	**0.2102**	0.2164	0.2171	**0.2245**	0.2316	0.0144***	1.07
Education (40%) Health (40%) Living Standard (20%)	0.3159	**0.3206**	0.3258	0.3187	**0.3254**	0.3322	0.3095	**0.3168**	0.3247	-0.0087***	0.97
Education (50%) Health (50%) Living Standard (0%)	0.3312	**0.3369**	0.3423	0.3320	**0.3391**	0.3465	0.3260	**0.3347**	0.3428	-0.0044***	0.99
Weighting Structure	Elderly			Male Elderly			Female Elderly			Gender Differences	
	Lb	M_0	Ub	Lb	M_0	Ub	Lb	M_0	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.5422	**0.5510**	0.5596	0.5246	**0.5370**	0.5492	0.5522	**0.5631**	0.5744	0.0261***	1.05
Education (25%) Health (25%) Living Standard (50%)	0.4802	**0.4872**	0.4945	0.4757	**0.4865**	0.4971	0.4779	**0.4875**	0.4963	0.0009***	1.00
Education (50%) Health (25%) Living Standard (25%)	0.6178	**0.6256**	0.6335	0.6035	**0.6140**	0.6247	0.6260	**0.6361**	0.6464	0.0221***	1.04
Education (25%) Health (50%) Living Standard (25%)	0.5336	**0.5446**	0.5550	0.5017	**0.5188**	0.5356	0.5556	**0.5686**	0.5829	0.0498***	1.10
Education (40%) Health (40%) Living Standard (20%)	0.5952	**0.6044**	0.6140	0.5685	**0.5823**	0.5953	0.6128	**0.6254**	0.6382	0.0431***	1.07
Education (50%) Health (50%) Living Standard (0%)	0.6718	**0.6829**	0.6947	0.6287	**0.6457**	0.6637	0.7011	**0.7167**	0.7331	0.0710***	1.11
Weighting Structure	The Whole Population			Male			Female			Gender Differences	
	Lb	M_0	Ub	Lb	M_0	Ub	Lb	M_0	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.3013	**0.3046**	0.3084	0.3031	**0.3079**	0.3127	0.2965	**0.3015**	0.3066	-0.0064***	0.98
Education (25%) Health (25%) Living Standard (50%)	0.3414	**0.3440**	0.3464	0.3455	**0.3489**	0.3522	0.3359	**0.3393**	0.3427	-0.0096***	0.97
Education (50%) Health (25%) Living Standard (25%)	0.3813	**0.3846**	0.3880	0.3872	**0.3921**	0.3970	0.3727	**0.3775**	0.3820	-0.0147***	0.96
Education (25%) Health (50%) Living Standard (25%)	0.2902	**0.2930**	0.2961	0.2851	**0.2892**	0.2932	0.2931	**0.2969**	0.3007	0.0077***	1.03
Education (40%) Health (40%) Living Standard (20%)	0.3344	**0.3378**	0.3411	0.3346	**0.3390**	0.3432	0.3320	**0.3365**	0.3414	-0.0024***	0.99
Education (50%) Health (50%) Living Standard (0%)	0.3298	**0.3337**	0.3379	0.3275	**0.3325**	0.3378	0.3295	**0.3348**	0.3408	0.0023***	1.01

Lb: Lower bound; Ub: Upper bound. Confidence intervals at 95% were computed using the bootstrap percentile method with 1,000 stratified bootstrap replications (Efron, 1981, p. 145). *, **, ***The difference is statistically significant at 10%, 5%, and 1% respectively.

Table 21. The Inequality among the Multi-dimensionally Poor (Iq), using six alternate Weighting Structures. *Source*: Authors' estimates based on 2014-EMNV

Weighting Structure	Children			Male Children			Female Children			Gender Differences	
	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.0860	**0.0934**	0.1014	0.0914	**0.1015**	0.1109	0.0744	**0.0854**	0.0970	-0.0162***	0.84
Education (25%) Health (25%) Living Standard (50%)	0.0741	**0.0801**	0.0861	0.0786	**0.0867**	0.0950	0.0654	**0.0733**	0.0813	-0.0134***	0.85
Education (50%) Health (25%) Living Standard (25%)	0.0629	**0.0680**	0.0731	0.0654	**0.0720**	0.0789	0.0568	**0.0639**	0.0713	-0.0081***	0.89
Education (25%) Health (50%) Living Standard (25%)	0.1327	**0.1439**	0.1543	0.1377	**0.1535**	0.1680	0.1170	**0.1334**	0.1506	-0.0201***	0.87
Education (40%) Health (40%) Living Standard (20%)	0.0877	**0.0962**	0.1046	0.0916	**0.1037**	0.1146	0.0763	**0.0878**	0.0997	-0.0159***	0.85
Education (50%) Health (50%) Living Standard (0%)	0.1163	**0.1270**	0.1371	0.1190	**0.1333**	0.1479	0.1042	**0.1205**	0.1370	-0.0129***	0.90
Weighting Structure	Adolescents			Male Adolescents			Female Adolescents			Gender Differences	
	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.0633	**0.0691**	0.0753	0.0598	**0.0671**	0.0748	0.0613	**0.0714**	0.0815	0.0043***	1.06
Education (25%) Health (25%) Living Standard (50%)	0.0631	**0.0680**	0.0731	0.0619	**0.0682**	0.0752	0.0594	**0.0672**	0.0758	-0.0010***	0.99
Education (50%) Health (25%) Living Standard (25%)	0.0645	**0.0695**	0.0744	0.0539	**0.0600**	0.0657	0.0722	**0.0805**	0.0894	0.0205***	1.34
Education (25%) Health (50%) Living Standard (25%)	0.0889	**0.0977**	0.1072	0.0817	**0.0923**	0.1038	0.0896	**0.1024**	0.1161	0.0101***	1.11
Education (40%) Health (40%) Living Standard (20%)	0.0552	**0.0622**	0.0695	0.0505	**0.0584**	0.0664	0.0551	**0.0668**	0.0787	0.0084***	1.14
Education (50%) Health (50%) Living Standard (0%)	0.0673	**0.0772**	0.0878	0.0605	**0.0719**	0.0840	0.0673	**0.0830**	0.1004	0.0111***	1.16
Weighting Structure	Adults			Male Adults			Female Adults			Gender Differences	
	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.0676	**0.0714**	0.0754	0.0569	**0.0615**	0.0664	0.0746	**0.0802**	0.0863	0.0187***	1.30
Education (25%) Health (25%) Living Standard (50%)	0.0551	**0.0579**	0.0611	0.0510	**0.0546**	0.0582	0.0563	**0.0608**	0.0655	0.0062***	1.11
Education (50%) Health (25%) Living Standard (25%)	0.0399	**0.0420**	0.0441	0.0330	**0.0355**	0.0384	0.0447	**0.0482**	0.0517	0.0127***	1.36
Education (25%) Health (50%) Living Standard (25%)	0.1022	**0.1087**	0.1155	0.0793	**0.0881**	0.0968	0.1147	**0.1237**	0.1324	0.0356***	1.40
Education (40%) Health (40%) Living Standard (20%)	0.0677	**0.0721**	0.0768	0.0513	**0.0568**	0.0621	0.0793	**0.0857**	0.0923	0.0289***	1.51
Education (50%) Health (50%) Living Standard (0%)	0.0957	**0.1017**	0.1078	0.0679	**0.0753**	0.0828	0.1161	**0.1249**	0.1351	0.0497***	1.66
Weighting Structure	Elderly			Male Elderly			Female Elderly			Gender Differences	
	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.1372	**0.1431**	0.1490	0.1318	**0.1416**	0.1521	0.1369	**0.1443**	0.1519	0.0027***	1.02
Education (25%) Health (25%) Living Standard (50%)	0.0751	**0.0810**	0.0866	0.0774	**0.0860**	0.0949	0.0691	**0.0766**	0.0838	-0.0094***	0.89
Education (50%) Health (25%) Living Standard (25%)	0.0731	**0.0763**	0.0795	0.0733	**0.0784**	0.0836	0.0696	**0.0741**	0.0779	-0.0043***	0.95
Education (25%) Health (50%) Living Standard (25%)	0.1681	**0.1725**	0.1766	0.1845	**0.1905**	0.1970	0.1461	**0.1514**	0.1567	-0.0391***	0.79
Education (40%) Health (40%) Living Standard (20%)	0.1670	**0.1714**	0.1756	0.1595	**0.1680**	0.1760	0.1680	**0.1729**	0.1780	0.0048***	1.03
Education (50%) Health (50%) Living Standard (0%)	0.2475	**0.2490**	0.2499	0.2345	**0.2416**	0.2471	0.2476	**0.2493**	0.2500	0.0077***	1.03
Weighting Structure	The Whole Population			Male			Female			Gender Differences	
	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Lb	**Iq**	Ub	Absolute	Relative
Education (33.3%) Health (33.3%) Living Standard (33.3%)	0.0832	**0.0864**	0.0897	0.0761	**0.0811**	0.0859	0.0868	**0.0911**	0.0958	0.0100***	1.12
Education (25%) Health (25%) Living Standard (50%)	0.0646	**0.0671**	0.0699	0.0636	**0.0672**	0.0709	0.0635	**0.0670**	0.0705	-0.0002*	1.00
Education (50%) Health (25%) Living Standard (25%)	0.0546	**0.0569**	0.0591	0.0493	**0.0521**	0.0552	0.0583	**0.0617**	0.0649	0.0096***	1.18
Education (25%) Health (50%) Living Standard (25%)	0.1305	**0.1353**	0.1403	0.1175	**0.1257**	0.1336	0.1358	**0.1419**	0.1482	0.0162***	1.13
Education (40%) Health (40%) Living Standard (20%)	0.0891	**0.0932**	0.0972	0.0777	**0.0832**	0.0890	0.0970	**0.1024**	0.1075	0.0192***	1.23
Education (50%) Health (50%) Living Standard (0%)	0.1300	**0.1353**	0.1406	0.1081	**0.1154**	0.1232	0.1462	**0.1533**	0.1609	0.0379***	1.33

Lb: Lower bound; Ub: Upper bound. Confidence intervals at 95% were computed using the bootstrap percentile method with 1,000 stratified bootstrap replications (Efron, 1981, p. 145). *, **, ***The difference is statistically significant at 10%, 5%, and 1% respectively.

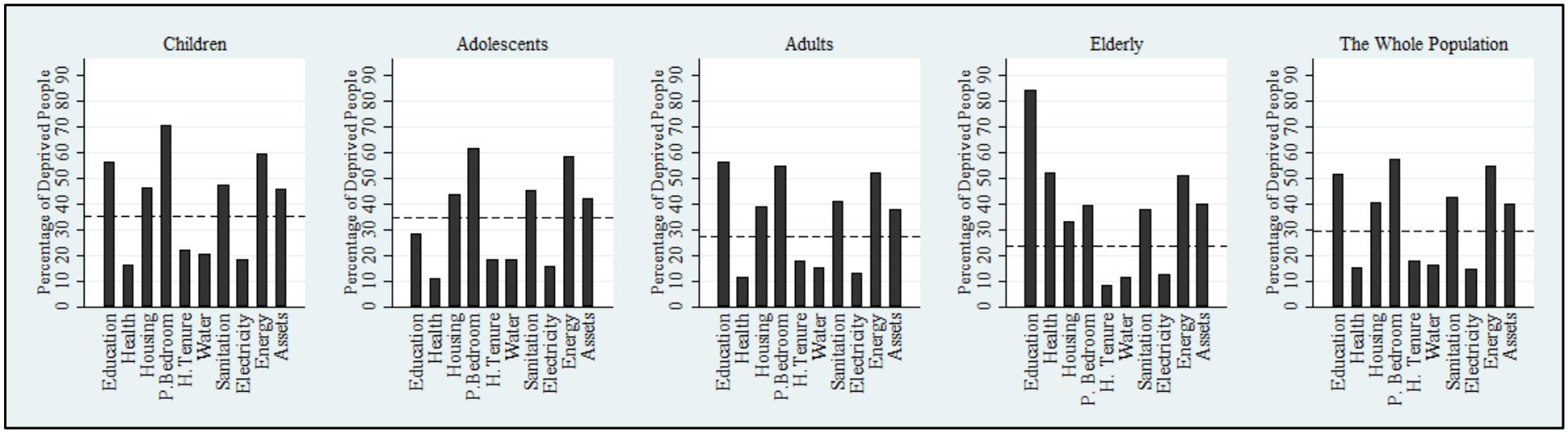

Figure 1. Percentage of People Deprived in each Indicator. Source: Authors' estimates based on data from 2014-EMNV. *The dash line represents the proportion of the monetary poor estimated by using the official "Overall Poverty Line" (OPL) (INIDE, 2015, p. 8), which is equivalent to 1.80 dollars a day at the official average market exchange rate in 2014.

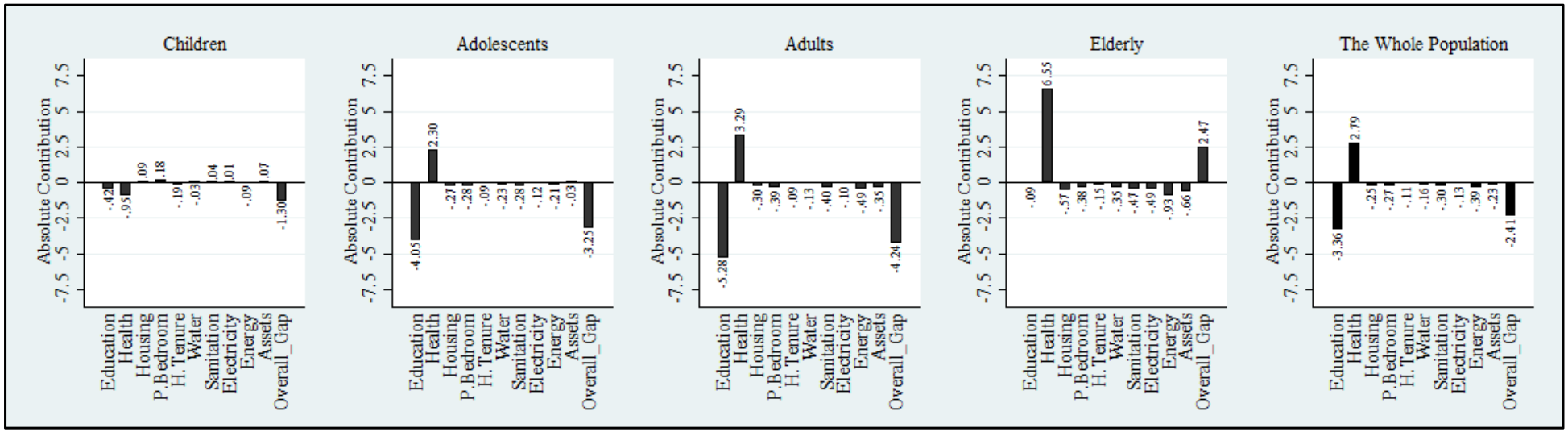

Figure 2. Absolute Contribution of the Gender Gap in each Indicator to the Overall Gap. *Source*: Authors' estimates based on 2014-EMNV. Note: A positive bar in any indicator means that females are worse off than males in that indicator, and vice versa. The Overall_Gap is obtained adding up all indicator gaps.

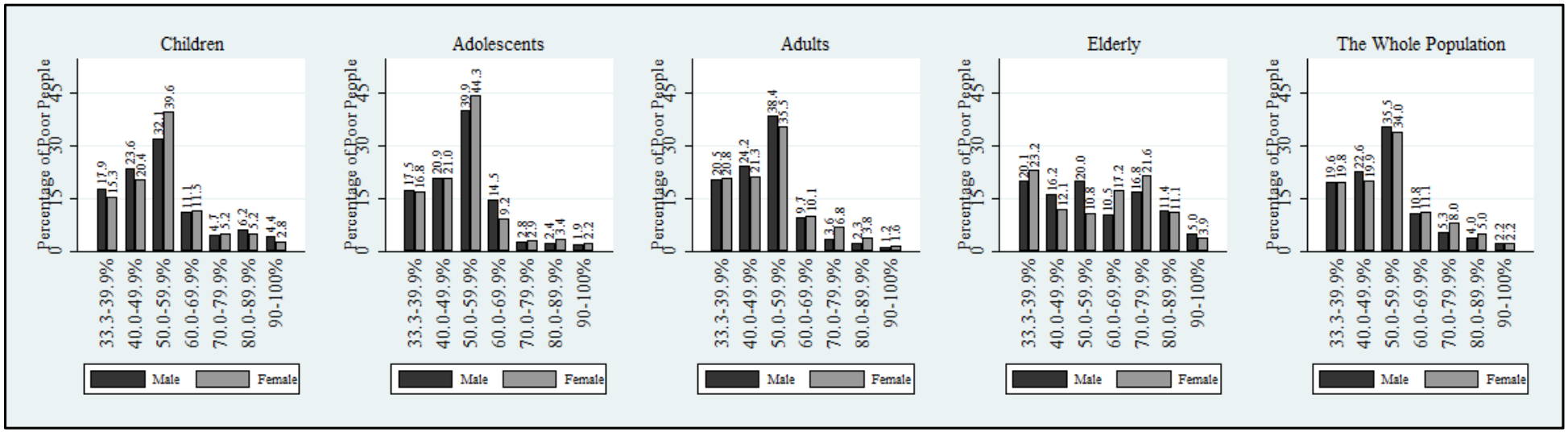

Figure 3. Distributions of Intensities in Poor Males and Females, by Group. *Source*: Authors' estimates based on 2014-EMNV.

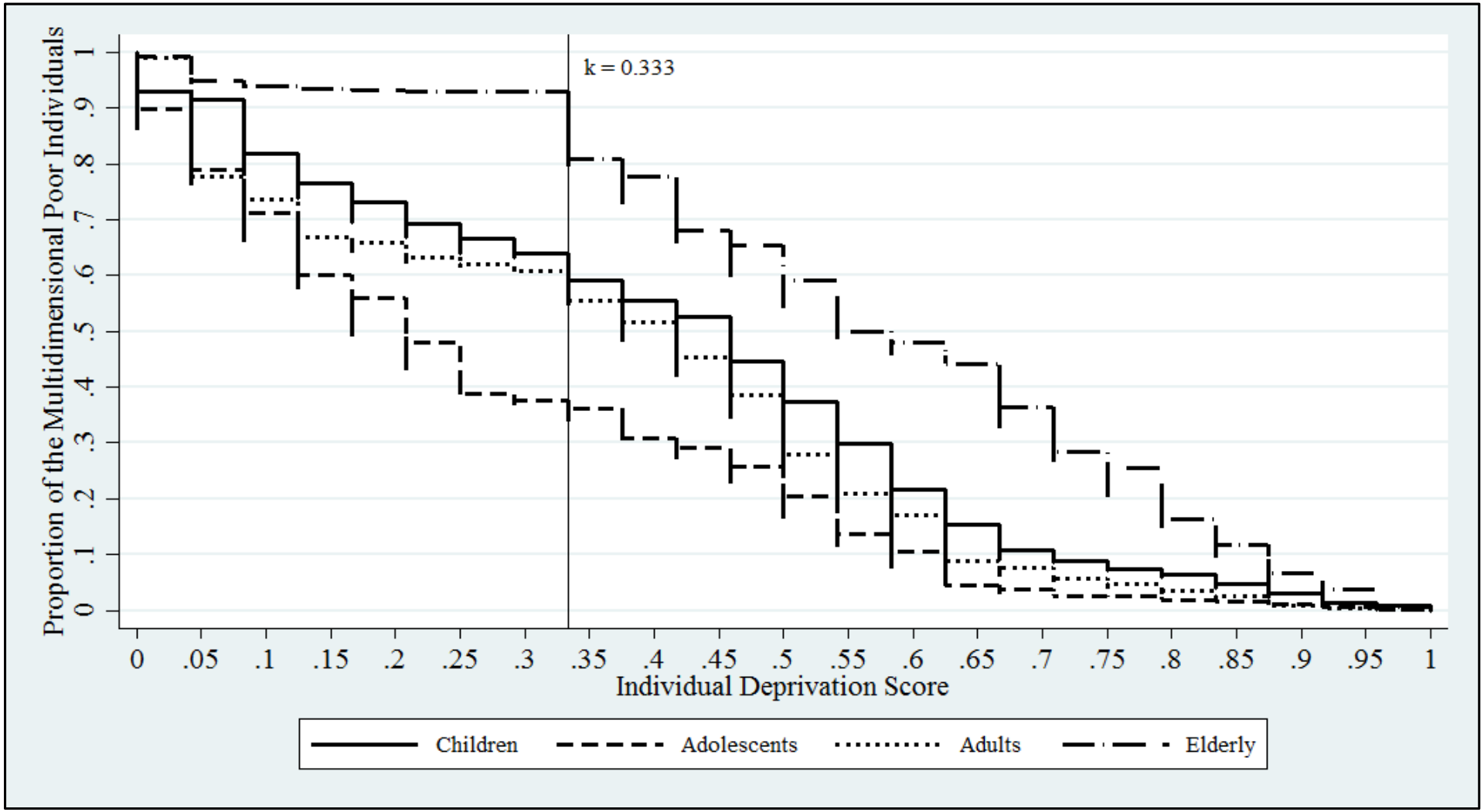

Figure 4. Complementary Cumulative Distribution Function (CCDF), by Group. *Source*: Authors' estimates based on 2014-EMNV.

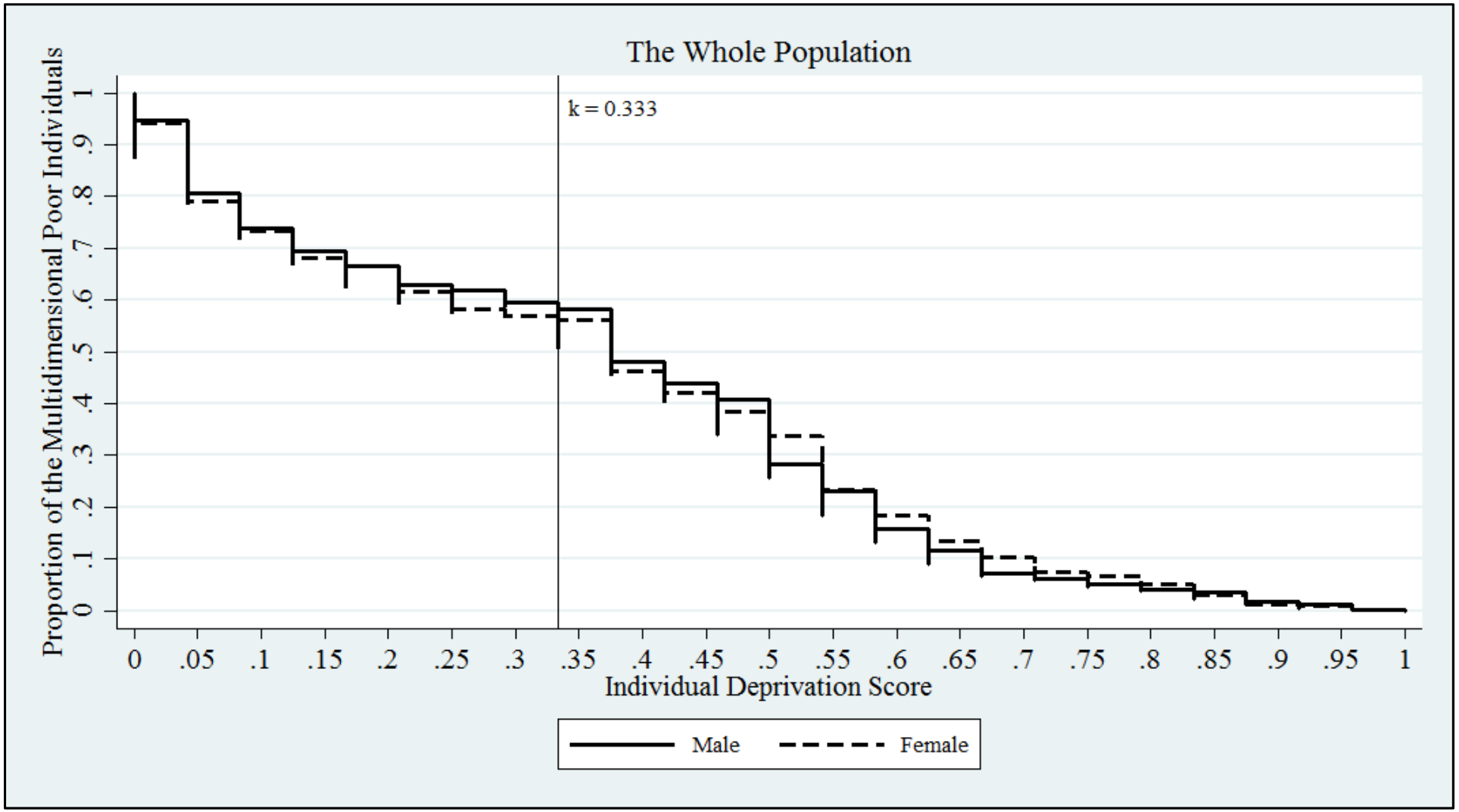

Figure 5. Complementary Cumulative Distribution Function (CCDF), by Gender. *Source*: Authors' estimates based on 2014-EMNV.

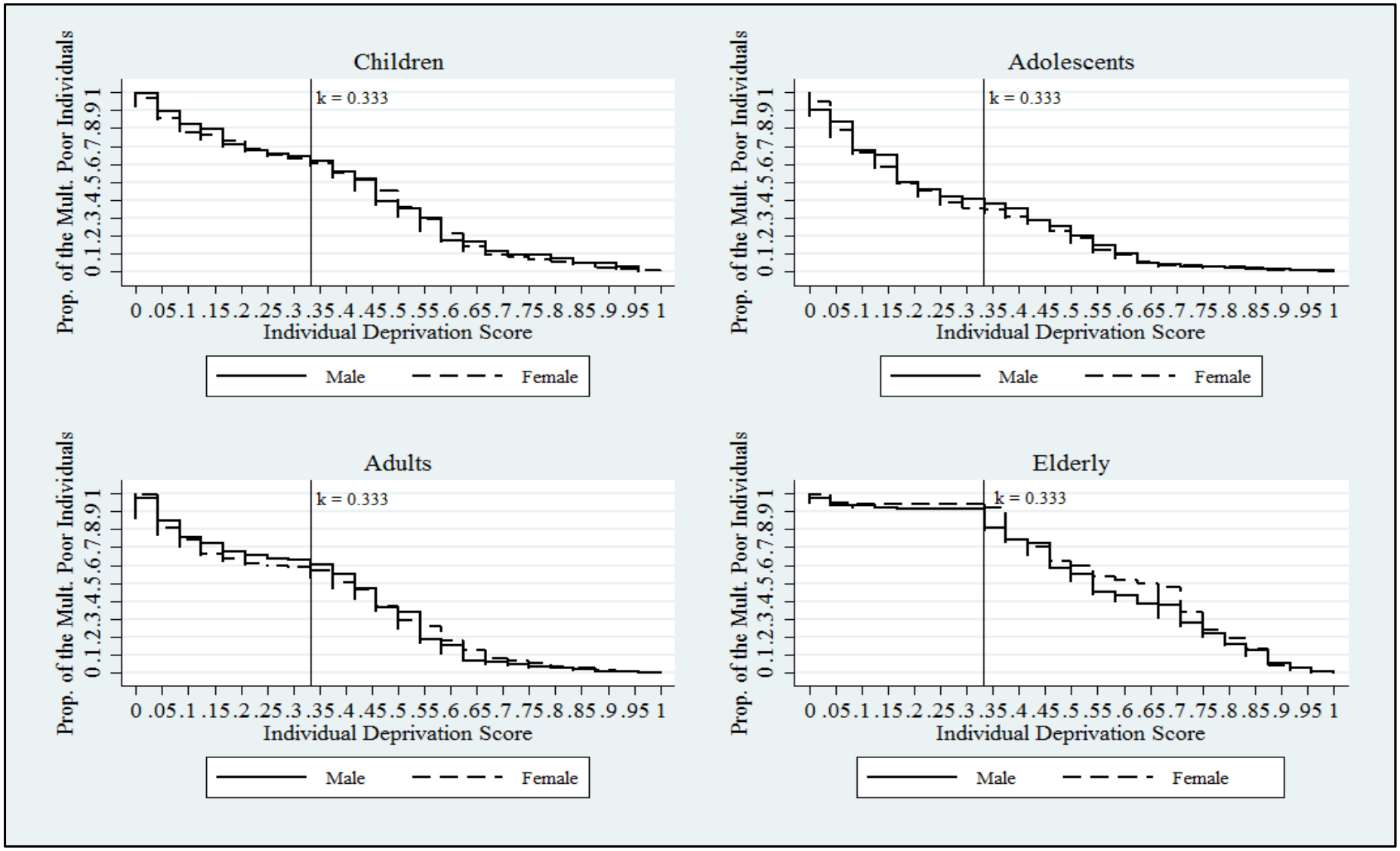

Figure 6. Complementary Cumulative Distribution Function (CCDF), by Group and Gender. *Source*: Authors' estimates based on 2014-EMNV.