

Alleviating Poverty in Spain: Evidences from the Minimum Income Scheme

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Abstract

This paper examines the role of the Minimum Income Scheme approved in May 2020 in Spain as a national last resort scheme to reduce extreme poverty. It is concluded that the MIS alleviates extreme poverty and reduces its intensity, but there is room for improvement. In line with the results, this paper first introduces an alternative poverty notion following the international standard of poverty to boost its coverage and impact. Second, it presents adjustments in the MIS design to improve its effectiveness in reducing poverty and its efficiency in spending public funding.

Resumen

Este trabajo estudia el papel de Ingreso Mínimo Vital (IMV) aprobado en mayo de 2020 en España como sistema de último recurso para reducir la pobreza extrema. Se concluye que el IMV alivia en gran parte la pobreza extrema y reduce su intensidad, pero hay margen de mejora. Este trabajo plantea, en primer lugar, una redefinición de las cantidades otorgadas siguiendo el estándar internacional de pobreza con el objetivo de maximizar su cobertura e impacto. En segundo lugar, presenta ajustes en el diseño del SMI para mejorar su eficacia en la reducción de la pobreza y su eficiencia en el gasto de los fondos públicos.

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Información del proyecto

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Master Thesis**Alleviating Poverty in Spain: Evidences from the Minimum
Income Scheme****Anabel Berjón Sánchez**

Master of Public Policy, Class of 2021

Hertie School

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Keywords: Minimum Income Scheme, poverty

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Executive Summary

Despite maintaining the downward trend for the fifth consecutive year, in 2019, 25.3% of the Spanish population was at risk of poverty or social exclusion. This figure confirms that Spain fails to the commitment adopted in the EU 2020 Strategy, which specified a reduction of 1.5 million people at risk of poverty or social exclusion of the 2008 data, that is, 2.5 million fewer people of the 11,870,000 registered in 2019. Even without considering the enormous economic and social consequences of the Covid- 19 pandemic, Spain was far from complying with it. In the light of one of the worst European poverty scenarios, the country approved in May 2020 a national Minimum Income Scheme (MIS), the so-called Ingreso Mínimo Vital, to reduce poverty by ensuring a minimum standard of living for households when they lack other financial resources. It represents the first national institutional step forwards in the fight against poverty, and therefore it has been welcome by large sectors of the public opinion.

This paper aims to analyze the MIS design on achieving its main goal in alleviating poverty by studying its impact, effectiveness, and efficiency. For this, the paper answers two questions: first, whether the MIS guarantees a decent minimum income level, and second, whether the MIS design mechanism properly assigns the aid or whether the same amount distributed differently would be more appropriate. This paper uses the data from the Living Condition Survey, specifically a longitudinal dataset from 2016 to 2019, which is the latest available and includes the yearly household and individual total disposable income. With this data, I am able to simulate the MIS impact as if it would have been implemented before, assuming that the poverty trends will follow the same pattern from previous years.

For the first question, the paper uses one of the two most common relative standard poverty lines in the OECD and the EU, 40% of the national median income, to compare it with the six poverty lines set by the Spanish legislation, which vary depending on the household size and composition. The results show that the MIS will positively impact poverty intensity in Spain by reducing all poverty thresholds to almost 30% of the national median income. In the cases of single-parents households, the poverty gap is totally eradicated. To draw a regional analysis of the MIS impact, I use the different median income poverty lines from the Spanish Autonomous Communities. The results reveal that the MIS will effectively reduce poverty in regions with lower median incomes than the national one. Based on the results, I recommend first setting the poverty household threshold closer to the 40% of the median equivalent income; second, the adoption of the OECD criterion in the increment scale; third, to preserve the specific protection to single parents; and fourth, to coordinate with the Autonomous Communities the coverage of all those households that are not fully secure with the MIS.

The second part of the paper focuses on analyzing poverty transition groups- remained poor, exited poverty, entered poverty, and remained non-poor- and its determinants in Spain from 2016 to 2019. This analysis identifies that the MIS accurately covers half of the poor Spanish population every year, but when considering past year poverty incomes to determine the current poverty status of a person and thus the program eligibility, the MIS will leave without coverage half of the poor population every year. Also, when looking into transition probabilities, the results suggest that the poverty status depends on the previous period's poverty status, confirming the right direction of the MIS design. Other poverty determinants, like unemployment, lower education levels, or widowhood, also cause a higher probability of becoming poor. Therefore, I recommend first, using an affidavit of the last three months' net income instead of requesting the corresponding last year's Income Tax Statement to determine the household's poverty status in the present; second encompassing the program eligibility to the household's present economic status by granting the MIS as soon as the application is approved; and last, the MIS should be accompanied by other policies enhancing higher education and other labor market and social policies.

I. Introduction

Inequality has been on the rise across the globe for several decades. Although some countries have reduced the number of people living in extreme poverty, significant economic gaps persist and continue growing as the very rich amass unprecedented wealth levels. The global top 1% earners have captured twice as much of that growth as the 50% poorest individuals. Moreover, the outbreak of the Covid-19 Pandemic is causing deep recessions in the world economy, affecting unemployment, loss of wage income, and collapses in business revenues, thus exacerbating many existing social inequalities the world over.

According to the EU Statistics on Income and Living Conditions (EU-SILC)¹, a database that collects statistics comparing income distribution and social exclusion within Europe, in 2019 in Spain, 11,870,000 people, representing 25.9% of the population, lived under poverty (income below 60% of the median). The AROPE rate² has ranked the country in the 7th position out of the 28 EU countries, with 4.3 percentage points higher than the European average. Moreover, the country has especially alarming poverty rates among minors³. Spain's child poverty rate is the second-highest in the entire EU, after Romania and Bulgaria, with 27.4% of those under 18 at risk of relative poverty (UNICEF, 2020).

Within the framework of the Europe 2020 strategy, Spain committed to reducing between 1,400,000 and 1,500,000 (in the period 2009-2019) the number of people at risk of poverty and social exclusion according to the AROPE indicator.⁴ Far from having improved, the conditions have worsened in most of the AROPE indicators -risks of poverty, severely materially deprived low work intensity- have increased, mainly the poverty gap⁵ and the severe poverty rate, although both were reduced in 2019 (EAPN, 2020).

So far, it is impossible to know the consequences of the Covid-19 crisis in poverty and vulnerability rates. However, its immediacy, speed, and toughness make all the worst forecast to agree that the poverty rates will increase significantly more than in the past years. The Spanish National Central Bank announced that for 2021 the public deficit would skyrocket to 7.7% while the public debt would be around 117.⁶ Furthermore, the European Semester Country Report of the European Union⁷ highlights the persistence of some critical problems in the labor market. Mainly, long-term unemployment, youth unemployment, and temporary employment contracts are the most significant task in Spain.

To tackle the described challenges, Spain offers several social aids, including the so-called child benefit paid. However, the European Commission (2019) and the OECD (2019) have demonstrated how the existing aids are ineffective in reducing poverty, specifically among minors, placing Spain among the EU countries with the least redistributive capacity through

¹ See [link](#) for more information.

² At risk of poverty or social exclusion, abbreviated as AROPE, corresponds to the sum of persons who are either at risk of poverty, or severely materially deprived or living in a household with a very low work intensity. See [link](#) for more information.

³ The child population, defined as those under 18 years of age in the Spanish MIS legislation.

⁴ See [link](#) for more information.

⁵ The poverty gap can be defined as the amount of money a poor person needs to stop being poor, that is, the difference between their income and the poverty line.

⁶ Last updated in March 2021 by the Spanish Central Bank. See [link](#) for more information.

⁷ See [link](#) for more information.

social transfers. According to the Independent Authority for Fiscal Responsibility, the regional minimum income schemes, which are the only non-categorical instrument that offers protection against poverty, have not been effective on this task either, appointing to bureaucracy and administration overlap as the leading causes (AIREF, 2019).

In light of the increasingly critical and urgent situation, a National Minimum Income Scheme (MIS), the so-called *Ingreso Mínimo Vital*⁸, was approved in the Spanish Parliament in May 2020 to overcome the weak and fragmented social aid scheme. The program plans to cover 850.000 families living at risk of poverty and social exclusion with an annual cost of 3.000 million euros. It has represented the real first national institutional step forwards in the fight against poverty, and therefore it has been welcome by large sectors of the public opinion.

The law has set a poverty line depending on the coexistence units' size and composition characteristics to overcome the poverty gap, which can be defined as the amount of money a poor person needs to stop being poor, that is, the difference between their income and the poverty line. With the poverty line set for each household type, the MIS determines the program's eligibility criteria by evaluating if the household income and heritage are above or below the poverty line set to that household type. If their household income and heritage are below the poverty line, they are classified as eligible for the program. The yearly household income will determine the quantity granted for each household. In this sense, the MIS legislation uses the previous year's income records⁹ to establish the quantity granted for the current year (Art.18.2 BOE). Moreover, if the household economic circumstances change during the current year, it will not be until the first day of the following year where the quantity is adjusted (Art 13.3 BOE).

This paper aims to assess the MIS's design in reducing extreme poverty in Spain, recognizing that its implementation symbolizes a before and after in the national protection of the most vulnerable. Thus, the first question tackled in the paper is whether the Spanish MIS achieves its goal of guaranteeing a decent minimum standard of living for its citizens to analyze the MIS impact. The second question to be assessed is whether the MIS design mechanism properly assigns the aid or whether the same amount distributed differently would reduce poverty. The paper's first question offers theoretical impacts considering its coverage, while the second questions suggest hypothetical predictions considering past year's poverty trends.

Considering that the policy was introduced less than a year ago and thus, there is not any published data that make it possible to evaluate the policy procedures and long-term effects, I use the latest available longitudinal data of the Living Condition Survey (LCS), which span from 2016 to 2019, to anticipate the impact that the arrival of the MIS may have in Spain. This data includes yearly household and individual information, including yearly disposable income, thus making it possible to produce a simulation of the MIS implementation in previous years to its original application. By using previous year data through the paper, I assume that past poverty trends will continue in 2020. Albeit the critical situation with the Covid-19 crisis, the 2019 data would, if any, underestimate the effects of the MIS implementation, as the poverty trends may

⁸ See [link](#) for more information.

⁹ This is evaluated by looking at the corresponding Income Tax Statement.

have increased but not attenuated because of the exceptional circumstances caused by the global crisis.

To address the first question, if the MIS ensures a sufficient amount of aid, I will explore the MIS poverty notion and compare it with other poverty definitions found in the literature. This will allow identifying if the MIS's coverage is enough to overcome the poverty gap on a theoretical basis. In this sense, the study considers one relative poverty line commonly found in the literature to evaluate poverty in the OECD countries, 40% of the median income. I will first draw a national analysis and then a regional analysis, considering that the national median income is different from the regionals, and hence the MIS coverage might differ among them. On the one hand, I will use the 2019 Spanish median income, considering that the MIS is a national scheme applicable to the whole territory, and compare it with the MIS poverty lines. On the other hand, I will use the different region's 2019 median income instead of the 2019 national median income and compare it with the MIS poverty threshold to determine whether the MIS is sufficient to diminish poverty in each Spanish Autonomous Communities and indicate regional complementary regional policies to overcome the poverty gap left, if any, after the MIS application.

To evaluate the second question, the MIS design and its potential misallocations, I will analyze the poverty transitions and its determinants in Spain from 2016 to 2019, as if the MIS would have been established before. The analysis will permit to predict the MIS design effectiveness and efficiency when considering the previous year's income record to determine the current household economic status and, thus, be eligible for the MIS. Effectiveness is the capability to produce the desired result; therefore, I assess whether the MIS is allocated properly with the mechanism established in the legislation to achieve its primary objective, eradicating poverty. Considering the MIS legislative mechanism, I will specifically determine the MIS effectiveness in reducing poverty by exploring the poverty trends from 2016 to 2019 to suggest a hypothetical prediction of the share of people that will be left out of the program when they are poor, their individual and household characteristics and the probability and causes that this occurs in the subsequent years. Efficiency is the capability to accomplish something with the least waste of time and resources; hence I evaluate if the MIS distribution is performed at the right time and to the right people. In particular, I will study the MIS efficiency by exploring the poverty trends from 2016 to 2019 to suggest a theoretical expectation of the share of people who will receive the aid when they are not poor, their individual and households' characteristics, and the probability that this happens in the following years, determining whether the benefit could be distributed differently. Overall, the MIS design will be effective if it is successful in eradicating or reducing poverty. Furthermore, it will be efficient if all not poor people are left out of the program at the moment when they are not poor, and all poor people are in the program when they are poor. It is essential to address these questions to solve the MIS potential misallocations and make the best use of public funding.

The paper proceeds by presenting institutional details in Section II and data in Section III. Section IV assesses the policy impact on poverty reduction. Section V presents and describes the empirical results of the MIS design analysis and its potential allocations. Finally, Section VI concludes with a summary and policy recommendations for policymakers.

II. The Minimum Income Scheme in Spain

On June 1 of last year, the Spanish government approved the first Minimum Income Scheme. Configured as part of the country's Social Security, the benefit aims to overcome the absence of a national redistributive policy, guaranteeing minimum income level to those suffering from economic vulnerability, i.e., people with low or very low incomes¹⁰. The new protective system operates to allow the transition from a situation of exclusion to participation in society, planning incentives for employment. Moreover, the MIS is also compatible with other social benefits granted by the autonomous communities, like social wages, minimum insertion income, or housing aids.

The MIS establishes as beneficiaries households' units composed of one-person households, households without minors, and households with minors at risk of poverty or social exclusion. The total aid transferred will depend on the size and composition of the household units, which must comply with the following eligibility requisites:

1. The first requirement concerns age, as applicants must be between 23 and 65 years old or 18 if minors are in charge.
2. The second requirement establishes that applicants must have Spanish residency for at least one year.
3. Applicants must have lived independently for at least one year in the case of families and three years in the case of single people.
4. In the case of living units, they must be formed at least one year before the application.
5. As the MIS is compatible with work income and is accompanied by an employment incentive mechanism¹¹, applicants capable of work must be registered as job seekers.
6. All applicants must be in a situation of economic vulnerability. Any person with an income lower than 10€ of the threshold established by the MIS (table 1) and a lower heritage than the maximum establishes might be a beneficiary (table 2).¹²
7. Last, applicants must have requested the pensions and public benefits in force determined by regulation, to which they may be entitled.

Apart from these last requirements, the MIS also considers exceptions for vulnerable groups like victims of trafficking, sexual exploitation, or gender violence, which will prove this condition through report issues by social services.

Coverage:

The MIS assigns a monthly aid depending on the previous year income and distinguishes six types of households, depending on the size and composition, described in table 1¹³: for a single adult, the guaranteed income is 462€, and it will increase 139€ for each additional member

¹⁰ Note that the Minimum Income Scheme is not a Minimum Wage Salary.

¹¹ Even though this requirement is part of the enacted law which establishes the MIS, it does not yet apply.

¹² As explained later, this paper uses the yearly total disposable income of the households to evaluate the program's eligibility and not the household's individual's heritage because of data availability.

¹³ Note that as mentioned earlier, other social aids and benefits are excluded from these quantities. Also, the aid is expected to rise by 1.8 percentage points in 2021.

to the household unit, either adult or minor, to a maximum of 1,015€. The quantity increases by 100€ when considering single parents. The final amount granted will be calculated as the difference between the monthly income that a person or the living unit obtains in the last year and the MIS guaranteed income. Moreover, the law considers the possibility of increasing or decreasing the amount received when the income situation changes. However, as Article 13.3 explicitly says, "the amount of the benefit will be updated with effect from January 1 of each year, taking as reference the computable annual income of the previous year".

For example, a household with three people, two adults, and one minor should receive 738€. If their monthly income of 2019 were 500€, the monthly benefit for 2020 would be 238€ (738€-500€) independently of the household income in 2020. It might be the case that their situation changed during 2020 because of the Covid-19 crisis, as it probably happened which most vulnerable groups, but their guaranteed quantity adjustment has not been perceived until January 2021.

Table 1: Monthly guarantee amount for 2020

Household Type	Composition	Guaranteed rent €/month
Type 1	1 Adult	462€
Type 2	2 Adult	600€
Type 3	2 Adults and 1 minor	738€
	3 Adults	
Type 4	2 Adults and 2 minors	877€
	3 Adults and 1 minor	
	4 Adults	
Type 5	2 Adults and 3 minors or more minors	1,015€
	3 Adults and 2 minors or more minors	
	4 Adults and 1 minor	
Type 6	1 Adult with 1 minor	700€
	1 Adult with 2 minors	838€
	1 Adult with 3 minors or more	977€

Economic Vulnerability:

- The individual applicant's economic capacity or the living unit is considered, computing all its members' resources.
 - This requirement is met when the average monthly income and computable annual income of the previous year is less than 10€ than the monthly amount guaranteed by the MIS that corresponds according to the number of members of the coexistence unit.
 - Social wages, minimum insertion income, and similar social assistance grants granted by the autonomous communities do not count as income.
- They are not considered in the situation of economic vulnerability all those:
 - Individuals who are owners of an estate, without including the usual place of residence, calculated with an amount equal to or greater than three times the

corresponding amount of guaranteed income (Table 1). In 2020 this was equivalent to 16,614€.

- Households that are owners of an estate, without including the usual residence, valued at an amount equal to or greater than that indicated in this table, depending on the household unit's size and configuration.
- Individuals or household members of a legal administrator commercial company have not ceased its activity without including the usual residence.

Table 2: Heritage limit according to the Household Type

Household Type	Composition	Maximum Net Heritage €/ Year
Type 1	1 Adult	16,614.00€
Type 2	2 Adult	23,259.60€
Type 3	2 Adults and 1 minor	29,905.20€
	3 Adults	
Type 4	2 Adults and 2 minors	36,550.80€
	3 Adults and 1 minor	
	4 Adults	
Type 5	2 Adults and 3 minors or more minors	43,196.40€
	3 Adults and 2 minors or more minors	
	4 Adults and 1 minor	
Type 6	1 Adult with 1 minor	23,259.60€
	1 Adult with 2 minors	29,905.20€
	1 Adult with 3 minors or more	36,550.80€

III. Data Description

The LCS is an annual statistic harmonized at the European level performed by each country which collects microdata on income, poverty, social exclusion, and living conditions¹⁴. For this study, I will be using the latest available longitudinal dataset from 2016 to 2019, which indicates individual and household level changes over time observed periodically over four years. This dataset sample is made up of four-panel subsamples so that each year one of them is replaced by a new subsample, making it a rotating panel.

The sample contains basic and detailed information of 28,092 subjects with 68,164 person-year observations belonging to 10,748 households. It includes basic individual information on gender, age, activity status, and household role, among others. It also incorporates more detailed data about the individuals aged 16 to 86 in the households, like educational level, labor status, type of contract if employed, number of working hours, health status, and marital status. Other household detailed data contains geographical location, social exclusion data, residence characteristics, and household expenses. Moreover, there is information about the household and individual incomes, like benefits, retirement pension,

¹⁴ In Spain, it is prepared by the National Institute of Statistics.

loans, revenues, transfers of relatives and private institutions, and other social aids and household expenses like rent payment and mortgage. All information is presented yearly, and it includes a weighting factor that enables the sample to give population figures.

In this regard, the database does not include all the information needed to determine whether a household complies with the MIS requirement to be a beneficiary as the LCS does not include information on the household's member's heritage. This paper uses the yearly household income as the main variable to determine the program eligibility, and the analysis assumes that every household that is below the poverty line would have complied with the rest of the requirements and that everybody else fails to comply with one or more remaining requirement or would not have requested it. Nevertheless, to formulate an insightful analysis of the MIS impact, it would be critical to have full information on the referred conditions. The LCS computes the net household income with the yearly income prior to the survey year, which comes from the gross income, a total of the individuals' income minus social contributions and taxes. In this case, the total disposable income includes income received by the private pension schemes; however, this is not a problem as the MIS is also compatible with other social benefits.

As previously described, the MIS ponders the household type, size, and composition, to classify household eligibility into the program; if the total household disposable income¹⁵ is below the poverty threshold set by the government and described in table 1,¹⁶ the household is eligible for social aid, and thus I have classified it as poor. The opposite happens when the household does not cross the poverty threshold set by the legislation. Finally, I have restricted the sample considering the rest of the eligibility requirements ending with a total of 63,588 person-years observations that correspond to 26,397 subjects aged 16-86 and divided among 9,524 households from 2016 to 2019¹⁷.

It is important to highlight that even though the MIS establishes households' units as beneficiaries of the social aid instead of individuals, the second part of the study has been carried out with individual characteristics accounting for their household characteristics to explore more heterogeneity among poverty determinants. These explanatory variables of poverty belong to poverty determinants commonly found in the literature (Andriopoulou & Tsakoglou, 2011) when analyzing poverty. They include age group, gender, education attainment level, labor status, health status, marital status, MIS household type, region, and urbanization level.

IV. Assessing the impact of MIS on Poverty Reduction

This section of the paper aims to analyze the Spanish poverty definition to examine the MIS's theoretical coverage of the poor population's definition, i.e., I analyze the poverty threshold that the Spanish government establishes to classify someone as eligible for the program. For this, I will first explore various international and regional poverty definitions and

¹⁵Note that the household income has been modified computing negative incomes as 0.

¹⁶ Art.8.2 of the BOE establishes that to be eligible for the program, the household's income must be at least 10€ less of the monthly income indicated in table 1. This fact has been considered in the calculation, reducing the total amount of the yearly poverty thresholds by 120€ for each household type.

¹⁷ The sample excludes all households where all individuals aged 18-23 and there are no minors in charge and households where all members age 65 or older and are receiving a retirement pension.

approaches to choose the most suitable parameters to relate to the Spanish legislated poverty definition. Second, I will compare the government's poverty thresholds with the extreme poverty line most commonly used among EU and OECD countries. Assessing if the poverty line established in Spain's legislation differs from those commonly found in the literature is crucial for understanding the policy's potential. Third, I will compare the MIS poverty lines to the regional ones to determine whether the MIS is sufficient to reduce poverty in each Spanish Autonomous Communities and identify the possibilities that the regional governments have to complete the national scheme. In order to approach this part of the paper, I will follow the same conceptual framework used by (Gorjón, 2017) when assessing the impact of the Basque Country MIS.

i. Poverty and Measurement

During the last century, several discussions have been held around the definition of poverty (Villar, 2017). Overall, most scholars agree that poverty refers to the inability to access those goods and services that ensure humans' well-being and dignity. The difficulty then comes when trying to measure poverty, as definitions offer vague elements and imprecise indicators to measure and classify someone as poor. This lack of accuracy has made the general assumption that scarcity and, more precisely, insufficient income are the determining factors of poverty. Hence, setting a poverty line will determine who is poor and who is not.

In 1990, the World Bank decided to establish a daily per capita International Poverty Line as an absolute global minimum, currently set at \$1.90 of 2011 Purchasing Power Parity. After recognizing the ineffectiveness of a global poverty absolute approach, in 2017, the World Bank adopted several recommendations done by the Poverty Commissions led by Sir Anthony Atkinson (World Bank, 2017). Among other changes, it established two complementary global poverty lines, \$3.20 for lower-income countries and \$5.50 for upper-middle-income countries. Finally, in 2018, the World Bank introduced the societal poverty measure, a multidimensional poverty measure (World Bank, 2018). It keeps \$1.90 as the IPL line but broadens the measure by containing information on education and utility access, thus acknowledging the importance of a relative poverty approach for assessing poverty in different parts of the world (Jolliffe & Prydz, 2016).

Considering the international recognition of the relative approach to define poverty, this paper will use the most common standard poverty lines in the OECD and the European Union based on economic distance (Villar, 2017). Specifically, they are taken as reference from the median equivalent income: the person's equivalent income in the central position if we order from poorest to richest the whole Spanish society. The first poverty line is set at 60% of the median equivalent income, often referred to as the "risk of poverty." The second line, which I will define as "extreme poverty," is set at 40% of the median equivalent income. Since 2010, the EU has also been using the AROPE index, a multidimensional poverty measurement that includes income characteristics, material deprivation, and work intensity. However, since the Spanish government establishes six poverty lines based on household size and composition (table 1), I will use the OECD and EU single-based poverty approach (the distance from the national median income) when evaluating the Spanish poverty designation without considering other household characteristics.

Poverty and income are calculated with consumption units and not "per capita," as people intuitively tend to think. Moreover, to assess the income of different types of households (size and composition), the concept of equivalent household income is frequently used, which standardizes household incomes assigning weights to each household's needs depending on their size and ages of its members. In this case, I will use the OECD -modified equivalence scale (OECD, 2013), which accounts for economies of scale in consumption and assigns a value of 1 to the household heads and adds 0.5 to each additional adult member and 0.3 to each minor younger than 14 years old.

Once the equivalence scale for each household is obtained, the equivalized household income can be calculated by dividing the household's total disposable income¹⁸ by its equivalent size. The equivalent income is then assigned to each household member, which will be the same equivalent income for each household member regardless of the individual income contribution to the total household income. In other words, if an individual in a household is in a situation of poverty, all individuals in that family unit and the household itself are in a situation of poverty.

After calculating the equivalent population income, it is possible to estimate the income distribution, i.e., the median. Table 3 presents the median equivalent income and the two poverty lines for 2019. According to the LCS, in 2019, the median income per consumption unit in Spain was 15,015€ annually (1,251.25€ monthly). Hence, they are in relative poverty (threshold 60% of the median equivalent income), all those living under 9,009 equivalent euros annually (750.75€ monthly) and in severe poverty (threshold of 40% of the median equivalent income) all those living under 6,006 equivalent euros annually (500€ monthly). By using the data from 2019, I assume that the median income follows similar trends to the median income in 2020 when the MIS is established. Also, in this paper, the poverty line of 60% of the median will not be used as the MIS targets those in extreme circumstances generally included in severe poverty and not in relative poverty; therefore, I will use the poverty line of 40%.

Table 3: Equivalent median income and poverty lines in Spain, 2019.

	Annually	Monthly
Median Equivalent Income	15,015€	1,251.25€
Risk of poverty	9,009€	750.75€
Extreme poverty	6,006€	500€

Source: LCV, own estimates

Furthermore, when contemplating the standard poverty line in the EU and the OECD, I am referring to the individualized disposable income. All the individuals with an individualized disposable income lower than 500€ will be in extreme poverty, which is the poverty threshold for those in severe poverty, as previously mentioned. In contrast, when considering the Spanish poverty line, I use each household's total disposable income as specified in the legislation. So, an individual is poor if it is below the poverty threshold specified in table 1. By comparing the two poverty lines, I will address if the MIS poverty lines are sufficient to lessen Spanish poverty. I

¹⁸ The LCS indicates that: The final net disposable income is the total income received by the household during the specified reference period, in this case 2019, after deducting income tax, wealth taxes and social security contributions and including transfers received. Non-monetary components are exempt.

will first compare the national median equivalent income defined by the extreme poverty line with the poverty line set by the government, and then, I will use the regional median income to explore the impact of the MIS in the Spanish Autonomous Communities.

ii. Comparing MIS and Standard Extreme Poverty Line

After spotting the most common way of allocating poverty, 60% of the median income and 40% of the median income, this section of the paper aims to offer some light on the Spanish MIS design as a policy conceived to alleviate extreme poverty. By comparing the standard with the national poverty line set in the MIS legislation, I will test if someone is classified as poor and included in the program, but the quantity received is not enough to get them out of poverty, making the MIS ineffective.

In this sense, the theoretical differences between the MIS poverty line and the standard poverty line are evident. Both Spain and the OECD account for additional members in the family. However, the Spanish legislation sets the poverty line on a fixed size and composition while the OECD accounts for any household type adapting the amount for each additional member, either adult or minor:

- While the OECD differs between adult and minor, assigning 0.5 to each additional adult member and 0.3 to those younger than 14 years old, Spain increments scale does not distinguish between adults and minors. It assigns 1 to the first household and adds 0.3 to each additional member. The case for single parents is exceptional, as it adds 0.22 to the total amount.
- The Spanish poverty line limits the household's size to 5 members or 4 members if it is a single parent, hence the scale of increments for calculation blocks.

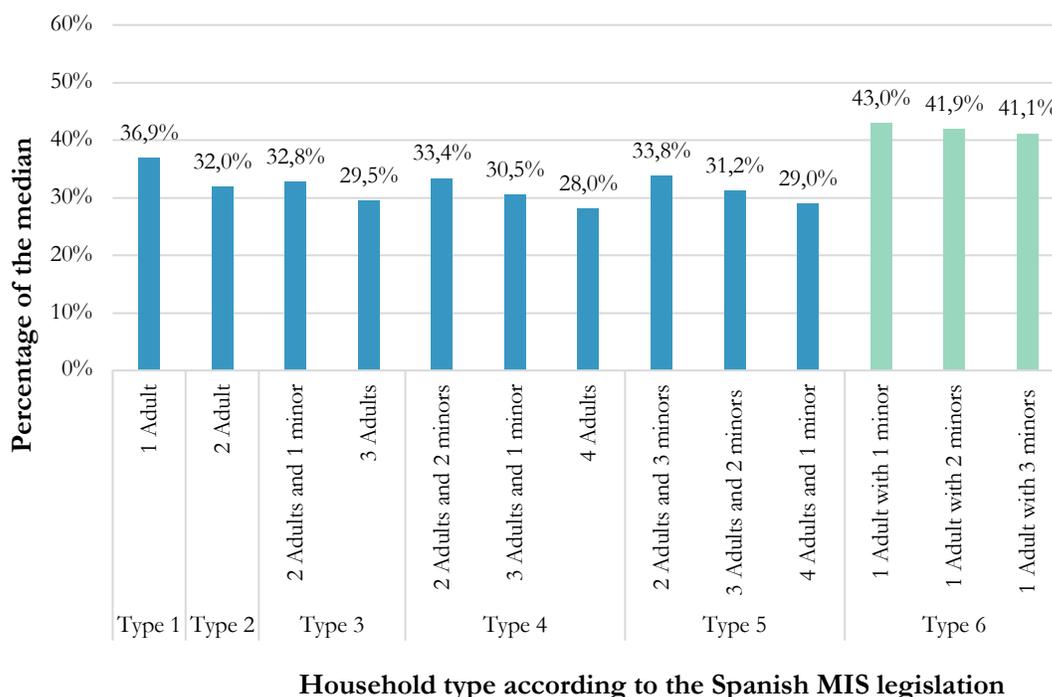
To analyze both poverty limits, it is necessary to calculate the individualized equivalent income scale of the six poverty lines set by the Spanish legislation in Table 1 by using the OECD modified scale. For this analysis, I am accounting for the distinction that the OECD uses between adults and minors in the increment of scale without considering the minors' age. Thus, I have applied the increment of 0.3 whenever referring to minors overlooking if they are older than 14 years old.

After estimating the MIS equivalent poverty line, I can calculate the ratio between the individualized Spanish poverty line and the median income in 2019 per household type (1,251.25€/monthly). Figure 1 shows the ratio of the household types that Spain sets for the MIS, making it possible to compare the amount that the MIS grants and the extreme poverty line according to the international standard. The height of each of the bars shows the percentage of the median at which the MIS grants each household type. For example, a household of Type 4, composed of two adults and two minors, has an equivalent poverty line of 417.61€ (877€/2.1), representing 33.38% of the median (417.61€/1,251.25€). All the bars that exceed 40% correspond to households where their aid is enough to escape poverty. When the granted amount of MIS is enough to get out of extreme poverty, the bar is green; otherwise, it is blue.

Figure 1 indicates that hardly any of the household types trespass 40% of the median. While the bigger households face the lowest percentage and hence, they are further from the 40% of the median, three household types slightly exceed 40%, all type 6 households (single

parents). This figure demonstrates that the MIS poverty line is set extremely low as it barely covers the standard extreme poverty line in the literature in any household type. The poverty gap is achieved for single parents' households in which the legislation added an increment of 0.22. For the rest, the distance of the extreme poverty line increases as the households enlarge; thus, the MIS design protects certain types of household units from poverty more than others. In this asymmetry, the households that benefit the least from the aid are those with more people, and apart from single parents' households, the remaining exemplified types are far from overcoming the poverty gap.

Figure 1: Equivalent poverty of the line as a percentage of the 2019 Spanish median income (1251.25 €)



Source: Own elaboration based on Spanish Living Condition Survey

Furthermore, to give a complete picture of the MIS theoretical coverage to assess its impact on the Spanish society, it is important to highlight one dimension of poverty, poverty intensity, which reflects the distance of poor people from the threshold. In other words, how close or far are poor people from ceasing to be poor. In this sense, the MIS would significantly reduce the intensity of poverty of households that received 100% of the benefit. Although the MIS does not remove certain household types from extreme poverty, it brings them very close to the thresholds, especially the smallest households, therefore overcoming most of the poverty intensity.

Table 4 presents the quantities in real euros that the Spanish government should grant to achieve the MIS goal of getting out of poverty people living in extreme poverty. The analysis presents the same household examples as in Figure 1, and it compares the MIS's poverty thresholds with the extreme poverty line.

The table proves what was noticed in the previous analysis; as the green line indicates, the MIS allows type 6 households (single parents) to get out of extreme poverty and even receive a few amount of extra benefits. However, the larger the household units, the more significant the poverty gap, increasing impressively to over 300€. Even though households composed of four adults and one minor might not be common in the Spanish population, these few cases will still have to make almost 400€ each month to get out of poverty. These differences are drastically high, confirming that the government stills need to improve its design to make it effective. For small household cases, the difference is not as significant. The largest difference to overcome would be 185€.

Table 4: Guarantee amount for the year 2020, extreme poverty threshold, and difference by household type

Household Type	Composition	Guaranteed rent €/month	Extreme Poverty Threshold	Difference
Type 1	1 Adult	462 €	500 €	-38 €
Type 2	2 Adult	600 €	750 €	-150 €
Type 3	2 Adults and 1 minor	738 €	900 €	-162 €
	3 Adults		1,000 €	-262 €
Type 4	2 Adults and 2 minors	877 €	1,050 €	-173 €
	3 Adults and 1 minor		1,150 €	-273 €
	4 Adults		1,250 €	-373 €
Type 5	2 Adults and 3 minors	1,015 €	1,200 €	-185 €
	3 Adults and 2 minors		1,300 €	-285 €
	4 Adults and 1 minor		1,400 €	-385 €
Type 6	1 Adult with 1 minor	700	650 €	50 €
	1 Adult with 2 minors	838	800 €	38 €
	1 Adult with 3 minors	977	950 €	27 €

Source: Own elaboration based on Spanish Living Condition Survey

In a nutshell, the government's poverty line for the MIS does not achieve its primary objective: to take all household types out of poverty. Nevertheless, it significantly reduces poverty intensity by bringing most of the households' types to 30% of the median. Given the extreme poverty definitions commonly used in the literature, those eligible to benefit from the MIS do not receive sufficient payment to get out of poverty, except single-parent households where the MIS trespass the extreme poverty line. As mentioned earlier, this analysis was drawn on a national level by using the national monthly median income for 2019. The next section introduces a geographical analysis of the MIS coverage in Spain.

iii. Geographical Analysis of the MIS Impact

The MIS is conceived as a national policy that does not exempt regional governments from executing similar programs. In this regard, the last section's conclusions were drawn by applying the equivalent national median income, so in this case, I will use the regional equivalent median of 2019. This section aims to explore the coverage of the MIS poverty lines in the Autonomous Communities of Spain by using the regional median, which will allow me to examine the MIS asymmetric impact geographically.

In 2008, the Green Paper on Territorial Cohesion (Commission of the European Communities) already urged the European countries to achieve more balanced and harmonious development within their territories. Almost 13 years later, the Spanish territory suffers from significant life differences according to the people's living places. It is possible to find poverty rates that multiply by three and four depending on the region. Considering that the relative poverty rate (people living below the 60% of the median income) in Spain was 20,7%, Southern regions have up to 11 percentage points (pp) of poverty rates than the national average rates while the northern regions have up to 25 pp less of poverty rates than the southern regions¹⁹. In this regard, the Spanish poverty rates of the northern regions could be equivalent to the European average rates contrary to the southern region's poverty rates.

To delve into these enormous poverty rate differences, it is important to look at the regional median income. Figure 2 shows the Autonomous Communities' median income in Spain for 2019; all those in blue have higher median income than the national median income (1,251.25€/monthly in 2019), while all those in green have lower median incomes. Spain's division into two halves is evident. Most of all northern regions have higher median income rates than the national median income. País Vasco and Navarra have the highest median income in Spain in 2019, with 1751,66€/monthly and 1653,08€/monthly respectively, while Aragón, Cataluña, Madrid, and La Rioja also concentrate considerable high median incomes. Southern Autonomous Communities have lower median income rates than the median national income. Extremadura and Andalucía have the lowest median income rates in Spain, with 906,83€/monthly and 971,91€/monthly respectively, while Ceuta, Islas Canarias, Murcia, Castilla-La Mancha, Valencia, and Galicia median income are also below the national income rate.

Annex I shows the results for each Autonomous Communities. As with the national analysis, I have calculated the ratio for each Autonomous Community between the individualized poverty line set by the MIS and the regional median income in 2019 per household type. On the one hand, the analysis proves that the poverty lines of the Autonomous Communities with lower median income than the national income, especially southern regions, trespasses 40% of the median in several households. It is possible to observe that type 6 households (single parents) reach 40% of the regional median in all communities with a lower median than the national median: Extremadura, Andalucía, Murcia, Canarias, Ceuta, Valencia, and Castilla-La Mancha. Nevertheless, other household compositions also reach this point. This is the case for type 1 households (single adults) where the bar trespasses the extreme poverty threshold not just in Andalucía, Islas Canarias, and Extremadura, the three most impoverished regions, but in Castilla-la-Mancha, Murcia, and Ceuta. Another significant appreciation is that for those households with more minors in type 3, 4, and 5, extreme poverty could be alleviated in Andalusia, Extremadura, Murcia, and Ceuta. This means that the MIS is extraordinarily efficient in taking out of poverty certain households in the poorest regions in Spain. Also, the MIS success in bringing the rest of the households' type closer to the poverty threshold that does not trespass the 40%, thus reducing poverty intensity in the poorest regions. Overall, the MIS institutional designs confirm to be effective in poorer regions.

¹⁹ See [link](#) for interactive map.

Figure 2: Autonomous Communities Median Income in Spain, 2019



Source: Own elaboration based on Spanish Living Condition Survey. [Access interactive map](#)

On the other hand, for the Autonomous Communities with medians income above the national median income, the MIS poverty line hardly reaches 40% in any of the cases. For the regions with the highest median income, País Vasco, Navarra, Aragón, Cataluña, Madrid, and La Rioja, any of the poverty lines reach the extreme poverty thresholds. Even most household types barely trespass the 30% of the median, excluding type 1 (single adults) and type 6 households (single parents), making the MIS poverty line design insufficient to cover the vulnerable population. However, indeed, the poverty intensity is largely reduced.

Overall, this section evident that the MIS will have an asymmetric regional impact in Spain. For the poorest regions, those Autonomous Communities whose median incomes are below the national median, the MIS demonstrates to be efficient in getting out of poverty most of the household's types, especially those where minors are present. For those Autonomous communities with median incomes above the national median, the MIS reveals inefficient results, as it leaves all household types below the extreme poverty line, with specific exceptions of households type 1 and 6. In this regard, when drawing geographical conclusions, it is essential to mention that even though Spain has made some significant progress in developing regionals MIS, in the absence of a coordination mechanism, the differences between them persist, including their grating amounts and rates of coverage (AIREF, 2019). Thus, after implementing national protection, the autonomous communities should dedicate themselves to complement those quantities where the MIS is inefficient. The regional governments should also take the opportunities to better coordinate within the central government to design, manage, and finance control programs to fight against extreme poverty.

V. Design of the MIS and potential misallocations

This section goes beyond the poverty criteria analysis focusing on other MIS design aspects to identify potential misallocations which could affect the MIS efficiency and effectiveness. In this sense, the MIS uses the previous year's household income to establish the benefit granted in the current year (Art.18.2 BOE). Also, the legislation specifies that if the household economic circumstances change during the current year for the better or worse, the quantity will be adjusted, but it will not be until the first day of the following year when the new change comes into force (Art.13.3 BOE). These two facts leave without consideration the present household context and the expanded literature on poverty dynamics that evidence that poverty is not a static state but develops over time. Therefore, unlike the previous section, the analysis here focuses only on the MIS design and not on the poverty terminology.

For this, the first part of this section introduces the importance of the time dimension in the policies dealing with poverty reduction while arguing whether poverty status is a consequence of being already poor or whether other poverty determinants play a role. This will also allow me to justify the subsequent analysis. Second, I present the method and research strategy to evaluate the MIS effectiveness and efficiency. Third I present the descriptive results where I introduce the four possible poverty transitions of Spain of every period from 2016 to 2019, which are, remained poor, exited poverty, entered poverty, and remained non-poor, and I describe the individual and household characteristics of the individuals belonging to these four groups. Last, I show the poverty transition probabilities results to evaluate the possible causes of poverty which the legislation should consider for the MIS improvement. Note that even though the reference unit in the Spanish legislation is households, I will use individuals as the unit of measurement to study more heterogeneous effects, which could also create measurement errors when attributing the household income status to each individual in it. However, the data section indicated that the household income is composed of the sum of the individual's income; therefore, I assume that if a household is poor, its individuals will be poor, and the measurement error will be minor.

i. Poverty Transition and its Determinants

Though it is meaningful to know people's social or economic status at a certain point in time, information on the flows in and out of the state and the stay duration are also essential to develop comprehensive policies. In this sense, it was not until the early 1980s with the work of Bane and Ellwood (1986), who presented spell durations and exit probabilities in the analysis of poverty, that scholars focused on two critical elements to developing a more accurate understanding of poverty, duration or poverty and determinants of poverty.

On the one hand, several studies (among others, (Jenkins, Devicienti F, & Rigg , 2001), (Cantó, 2003), (Mood & Jonsson, 2012) have proved the importance of the length of the poverty spells demonstrating that in most cases, the experience of poverty in one year increases the risk of poverty the following year. Heckman (1981) calls this state dependence, which suggests that the experience of poverty in one year per se raises the risk of being poor in the next year. On the other hand, apart from the fact that duration is an essential determinant of poverty exit or re-entry, there are other poverty determinants, including socioeconomic characteristics, demographic events, and observed and unobserved heterogeneity among individuals, that play a

significant role in these transition dynamics and thus are essential to be analyzed. (Andriopoulou & Tsakoglou, 2011) (Gábos, Branyiczki, Lange, & Tóth, 2015).

It is possible to argue that poverty duration might be caused by the determinant of poverty and not by state dependence because of the observed and unobserved characteristics that an individual might have. If this was the case, the relationship between poverty spell and exit probability is spurious and merely a result of certain common characteristics among individuals (Andriopoulou & Tsakoglou, 2011) (Vaalavuo, 2015). However, considerable recent evidence suggests that both state dependence and individual heterogeneity are related to the probability of experiencing poverty. For example, Biewen (2006) finds that 6% of the population in Germany has unobserved characteristics that lead to low poverty exit and high re-entry rates. When studying the persistence of social exclusion in Spain, Poggi (2007) also suggests that both individual heterogeneity and true state dependence are related to the probability of experiencing social exclusion. Andriopoulou and Tsakoglou (2011) found that in 14 European countries, mobility into and out of poverty is caused by the duration of past and current poverty spells and its determinants. Last, Arranz and Cantó (2011) show in their finding for Spain that the probability of poverty entries and exits is influenced by individuals and households' characteristics and the duration of poverty.

In this regard, while the conceptualization of a welfare receipt might be well justified to protect the most vulnerable population, the institutional efforts might be spoiled if a proper design is not formed. Based on the theory explained, I argue that studying poverty transitions and their probabilities is essential to have a comprehensive picture of Spain's poverty phenomenon aim to reduce poverty and properly allocate resources. Moreover, having a better understanding of the time dimension in poverty status will enable understanding the determinants for falling into poverty, which allows for more successful policies.

ii. Description of method and research strategy

To evaluate the MIS efficiency and effectiveness when considering one past and static economic status (past year income) to make households eligible for the program, I will first show the transition to poverty in Spain descriptively from 2016 to 2019. The analysis is done with the yearly variation of individuals aged 16 to 86 in three intervals, 2016-2017, 2017-2018, and 2018-2019, each composed of two periods, $t-1$ and t . I will examine the number of individuals who remained poor, exited poverty, entered poverty, and remained non-poor. Then I will present a descriptive analysis of the individuals and household characteristics belonging to each poverty transition group to show common poverty determinants.

Second, I will introduce the transition probability model, which is the most used in the literature on poverty dynamics. These models account for state dependence and poverty determinants while allowing transition rates to vary with time and with selected individual and household characteristics (Jenkins, Devicienti F, & Rigg, 2001). In this case, I will utilize a probit model specifically designed to estimate probabilities when the outcome variable is binary, i.e., I calculate the probability of entering poverty in t , $P(Y_{it}=1)$, or not entering poverty $P(Y_{it}=0)$, which will be explained by the poverty status ($P0=not\ poor, P1=poor$) in $t-1$ and the explanatory variables which indicate observed individual and household characteristics.

$$P(Y_{it}=1)/P(Y_{it}=0) = \beta_1 P1_{t-1} + \beta_2 P0_{t-1} + \dots + \beta_k X_{kit-1} + \epsilon_{it}$$

As explained in the data section, the individual poverty status is determined by the households trespassing the poverty threshold specified by the MIS. With this empirical strategy, I will demonstrate the probabilities to enter and leave poverty and its determinants during the three intervals to complete the picture of the MIS design evaluation.

iii. Descriptive statistics

Table 5 describes the poverty transitions in Spain from 2016 to 2019 and shows similar trends of the four groups for the three studied intervals. There are 3.5% to 4% individuals as a share of each two-period total sample that remained in poverty in t . In this case, the MIS is efficient for these individuals because they receive social aid during their time of poverty. The MIS also proves to be effective because it assists them in getting out of poverty or reduce their poverty intensity, which might also help reduce their chance of being poor in $t+1$. Also, having up to 4% of individuals who remained in poverty in t confirms the importance of the state dependence concepts; being poor in $t-1$ increases the chances of transitioning into poverty again in t . In this sense, further research is needed to assess the causes of chronic poverty in Spain, which is recurrent (Cantó, Gradín Lago, & del Río, 2010), including examining the access, coverage, and impact of policies tackling persistent poverty.

Moreover, almost 3% of individuals of each two-period total sample enter poverty in the three intervals. People who transition into poverty in t were not poor in $t-1$, and because of the MIS mechanism design, they do not receive the benefit in t . Even though the households can report their economic situation during t , the MIS legislation establishes that the benefit will not be granted until the first day of $t+1$. This mechanism design makes the MIS ineffective in reducing poverty as it leaves the new poor households without social protection when they most need it. Moreover, the consequences of delaying the poverty detection and hence, leaving people to fall into poverty could constitute a cause of chronic poverty or social exclusion.

Furthermore, there are 3% to almost 4% of individuals of each two-period total sample that exit poverty among the three intervals. Individuals belonging to these groups would have received the MIS in t because they were poor in t . However, as they exited poverty in t , i.e., their household trespass its corresponding poverty threshold, they did not need the benefit anymore in t . This case proves that the MIS is inefficient in considering household income in $t-1$ when establishing the poverty status for t . It wastes resources in almost 4% of the individuals from each period that are no longer in need of the social benefit. According to the legislation, when a household receives the MIS but has exited poverty, the household will have to return the money in $t+1$. Of course, not having a mechanism to detect these exceptional cases earlier comes at a high administrative cost.

Finally, up to 90% of the individuals as a share of each two-period total sample remained not poor according to the MIS poverty thresholds.

Table 5: Yearly Individuals Poverty Transitions in Spain, 2016-2019

	2016-2017	2017-2018	2018-2019
	Total (N=7,109)	Total (N=12,166)	Total (N=17,017)
Poverty Transition			
Exit from poverty	230 (3.2%)	471 (3.9%)	525 (3.1%)
Entry to poverty	223 (3.1%)	354 (2.9%)	448 (2.6%)
Remained poor	274 (3.9%)	475(3.9%)	584 (3.4%)
Remained non-poor	6,382 (89.8%)	10,868 (89.3%)	15,460 (90.9%)

Source: LCV, own estimates

Table 6 goes beyond this analysis and presents the distribution of the individual characteristics of the four poverty transition groups in the three intervals. Comparing the characteristics of the different groups will allow us to consider critical poverty determinants that could play a major role in the poverty transition probabilities.

The table shows that a significant share of the individuals who transition into or out of poverty belong to the sample's younger age group, representing almost 40% of those who remained poor. Spain is the European country with higher unemployment rates among young people, which influences the probability of entry into poverty. In this regard, young adults also represent the biggest share of people who exited poverty. Then, even though young people might face higher chances of falling into poverty, these individuals might have more resources to get out of poverty, lowering their poverty intensity. Among the poverty transition groups, the second age groups most represented are adults aged 36 to 65, which distribution is quite even. The share of adults older than 70 years in the groups who entered poverty in t is around 4% higher than in groups that exited poverty and remained in poverty.

Regarding "Gender," it shows that the distribution of men and women among the four groups is relatively even, contrary to what is commonly found in the literature, where women tend to be more affected by poverty (Malgesini, Cesarini-Sforza, & Babovic, 2017). "Education Level" suggests that people who transition into poverty in $t-1$, t , and both periods are largely composed of individuals with lower education levels, with almost 50% of the total share of each poverty transition group with this characteristic. Even though these three groups share similar characteristics on education levels, the group that remained poor is characterized by extremely low rates of higher education. Also, the group of individuals who remained non-poor in both periods is mostly composed of individuals with low education attainment. However, for this last group, individuals with high education levels are from 10% to even 16% higher than those who ever transitioned into poverty.

"Employment" indicates that the group of individuals who transitioned into poverty in both periods are likely to suffer from unemployment, while the group who remained non-poor is mostly composed of people who are employed. Also, this variable shows that the group who remained non-poor have a more substantial share of the non-working individuals than the groups who transitioned into poverty. "Health" indicates an even distribution among the four groups, with slightly better health for those who remained non-poor in both periods. Last, the groups who transition into poverty in both periods are composed of more single and divorced people than those who remained poor.

Table 6: Distribution of Individuals Characteristics by Transition Poverty Groups in Spain, 2016-2019

	Exit from poverty (N=1226)	Entry to poverty (N=1023)	Remained poor (N=1333)	Remained non-poor (N=32710)	Total (N=36292)
Age					
16-25	443 (36.1%)	313 (30.6%)	514 (38.6%)	8474 (25.9%)	9744 (26.8%)
26-35	156 (12.7%)	136 (13.3%)	152 (11.4%)	3066 (9.4%)	3510 (9.7%)
36-45	175 (14.3%)	133 (13.0%)	174 (13.1%)	5025 (15.4%)	5507 (15.2%)
46-55	241 (19.7%)	198 (19.4%)	242 (18.2%)	5640 (17.2%)	6321 (17.4%)
56-65	164 (13.4%)	161 (15.7%)	192 (14.4%)	6625 (20.3%)	7142 (19.7%)
70+	47 (3.8%)	82 (8.0%)	59 (4.4%)	3880 (11.9%)	4068 (11.2%)
Gender					
1-Female	657 (53.6%)	541 (52.9%)	696 (52.2%)	16802 (51.4%)	18696 (51.5%)
0-Male	569 (46.4%)	482 (47.1%)	637 (47.8%)	15908 (48.6%)	17596 (48.5%)
Education Level					
1-Low	580 (47.3%)	477 (46.6%)	658 (49.4%)	13043 (39.9%)	14758 (40.7%)
2-Medium	192 (15.7%)	191 (18.7%)	190 (14.3%)	6068 (18.6%)	6641 (18.3%)
3-High	146 (11.9%)	138 (13.5%)	120 (9.0%)	8043 (24.6%)	8447 (23.3%)
Missing	308 (25.1%)	217 (21.2%)	365 (27.4%)	5556 (17.0%)	6446 (17.8%)
Employment					
1-Employment	457 (37.3%)	407 (39.8%)	357 (26.8%)	17638 (53.9%)	18859 (52.0%)
2-Unemployment	296 (24.1%)	257 (25.1%)	445 (33.4%)	2971 (9.1%)	3969 (10.9%)
3-Student	88 (7.2%)	70 (6.8%)	90 (6.8%)	2094 (6.4%)	2342 (6.5%)
4-Not Working	80 (6.5%)	84 (8.2%)	77 (5.8%)	4576 (14.0%)	4817 (13.3%)
Missing	305 (24.9%)	205 (20.0%)	364 (27.3%)	5431 (16.6%)	6305 (17.4%)
Health					
1-Very Good	156 (12.7%)	167 (16.3%)	173 (13.0%)	5348 (16.3%)	5844 (16.1%)
2-Good	508 (41.4%)	387 (37.8%)	489 (36.7%)	14805 (45.3%)	16189 (44.6%)
3-Okay	190 (15.5%)	170 (16.6%)	218 (16.4%)	5165 (15.8%)	5743 (15.8%)
4-Bad	54 (4.4%)	61 (6.0%)	74 (5.6%)	1472 (4.5%)	1661 (4.6%)
5-Very Bad	10 (0.8%)	21 (2.1%)	14 (1.1%)	368 (1.1%)	413 (1.1%)
Missing	308 (25.1%)	217 (21.2%)	365 (27.4%)	5552 (17.0%)	6442 (17.8%)
Marital Status					
1-Single/Divorced	440 (35.9%)	374 (36.6%)	502 (37.7%)	9581 (29.3%)	10897 (30.0%)
2-Married	421 (34.3%)	389 (38.0%)	417 (31.3%)	15547 (47.5%)	16774 (46.2%)
3-Widowed	57 (4.6%)	43 (4.2%)	49 (3.7%)	2030 (6.2%)	2179 (6.0%)
Missing	308 (25.1%)	217 (21.2%)	365 (27.4%)	5552 (17.0%)	6442 (17.8%)

Source: LCV, own estimates

Table 7 present the results of the household characteristics among the four poverty transition groups. The mean of the household income suggests that those groups who remained poor for both periods have seven times lower incomes than those who were never poor.

"Household type" shows significant differences among those who transition into poverty and those who did not. While the households that remained non-poor are of medium sizes households, with the biggest share of households with three (type 3) or four members (type 4), the poverty groups are composed of larger shares of small households, like type 1 (single-adult) or type 6 (single-parent), than the households that remained non-poor.

Table 7: Distribution of Households Characteristics by Transition Poverty Groups in Spain, 2016-2019

	Exit from poverty (N=1226)	Entry to poverty (N=1023)	Remained poor (N=1333)	Remained non-poor (N=32710)	Total (N=36292)
Household Income (€)					
Mean (SD)	6080 (3260)	18500 (11800)	5060 (3160)	35800 (23300)	33100 (23600)
Median [Min, Max]	6350 [0, 11900]	15000 [5430, 111000]	5130 [0, 11800]	30600 [5450, 357000]	28300 [0, 357000]
Household Type					
1	124 (10.1%)	76 (7.4%)	159 (11.9%)	1717 (5.2%)	2076 (5.7%)
2	151 (12.3%)	178 (17.4%)	188 (14.1%)	6939 (21.2%)	7456 (20.5%)
3	224 (18.3%)	237 (23.2%)	207 (15.5%)	8444 (25.8%)	9112 (25.1%)
4	360 (29.4%)	293 (28.6%)	326 (24.5%)	10575 (32.3%)	11554 (31.8%)
5	263 (21.5%)	186 (18.2%)	302 (22.7%)	4449 (13.6%)	5200 (14.3%)
6a	55 (4.5%)	24 (2.3%)	76 (5.7%)	333 (1.0%)	488 (1.3%)
6b	35 (2.9%)	24 (2.3%)	48 (3.6%)	224 (0.7%)	331 (0.9%)
6c	14 (1.1%)	5 (0.5%)	27 (2.0%)	29 (0.1%)	75 (0.2%)
Region					
Andalucía	209 (17.0%)	186 (18.2%)	299 (22.4%)	4049 (12.4%)	4743 (13.1%)
Aragón	17 (1.4%)	12 (1.2%)	15 (1.1%)	1391 (4.3%)	1435 (4.0%)
Cantabria	20 (1.6%)	26 (2.5%)	27 (2.0%)	1178 (3.6%)	1251 (3.4%)
Castilla-La Mancha	82 (6.7%)	75 (7.3%)	86 (6.5%)	1686 (5.2%)	1929 (5.3%)
Castilla y León	56 (4.6%)	45 (4.4%)	22 (1.7%)	2167 (6.6%)	2290 (6.3%)
Cataluña	82 (6.7%)	67 (6.5%)	79 (5.9%)	2868 (8.8%)	3096 (8.5%)
Ceuta	16 (1.3%)	35 (3.4%)	40 (3.0%)	336 (1.0%)	427 (1.2%)
Comunidad de Madrid	112 (9.1%)	74 (7.2%)	134 (10.1%)	3283 (10.0%)	3603 (9.9%)
Comunidad Valenciana	81 (6.6%)	57 (5.6%)	94 (7.1%)	2321 (7.1%)	2553 (7.0%)
Extremadura	85 (6.9%)	71 (6.9%)	47 (3.5%)	1423 (4.4%)	1626 (4.5%)
Galicia	85 (6.9%)	41 (4.0%)	96 (7.2%)	2205 (6.7%)	2427 (6.7%)
Islas Baleareas	29 (2.4%)	24 (2.3%)	9 (0.7%)	979 (3.0%)	1041 (2.9%)
Islas Canarias	101 (8.2%)	73 (7.1%)	85 (6.4%)	1239 (3.8%)	1498 (4.1%)
La Rioja	25 (2.0%)	23 (2.2%)	21 (1.6%)	1080 (3.3%)	1149 (3.2%)
Melilla	19 (1.5%)	24 (2.3%)	82 (6.2%)	455 (1.4%)	580 (1.6%)
Navarra	35 (2.9%)	20 (2.0%)	15 (1.1%)	953 (2.9%)	1023 (2.8%)
País Vasco	31 (2.5%)	42 (4.1%)	38 (2.9%)	2109 (6.4%)	2220 (6.1%)
Principado de Asturias	35 (2.9%)	49 (4.8%)	59 (4.4%)	1421 (4.3%)	1564 (4.3%)
Región de Murcia	106 (8.6%)	79 (7.7%)	85 (6.4%)	1567 (4.8%)	1837 (5.1%)
Urban					
1- Very Populated	562 (45.8%)	480 (46.9%)	666 (50.0%)	15290 (46.7%)	16998 (46.8%)
2- Medium Populated	214 (17.5%)	228 (22.3%)	296 (22.2%)	7386 (22.6%)	8124 (22.4%)
3- No Populated	450 (36.7%)	315 (30.8%)	371 (27.8%)	10034 (30.7%)	11170 (30.8%)

Source: LCV, own estimates

Moreover, individuals who exited from poverty mostly belong to Andalucía, Madrid, Murcia, Islas Canarias, and Valencia. The group that entry into poverty in t is composed of people from Andalucía, Murcia, Madrid, Castilla-La Mancha, Extremadura, and Cataluña. People who remained poor in $t-1$ and t mostly come from Andalucía, Madrid, Valencia, Galicia, Murcia, Melilla, and Islas Canarias, regions where the median income is below the national income, except Madrid. Last, the group who remained non-poor is composed of people living in Andalucía, Madrid, Cataluña, Valencia, Galicia, and País Vasco. "Urban" indicates an uneven

distribution among the four groups, but it is essential to highlight that more than half of those individuals who remained poor in both periods live in very populated areas.

Tables 6 and 7 show considerable differences among those individuals who transitioned into poverty during any period than those who never did. Overall, table 6 presents appealing results of the individual characteristics among the different poverty transition groups. The individuals who transition into poverty, either in $t-1$, t , or in both periods, share very similar characteristics of low education levels, high unemployment rates, and many of them are single and divorced people. In contrast, the individuals who remained non-poor have opposite features; they are individuals with higher education levels, better employment rates, and higher married rates. Note that the missing value among all the variables is markedly large for those who remained poor in both periods, signifying that those individuals who belong to poor households are less likely to show their own characteristics for stigmatization issues. Table 7 reveals that poor individuals are composed of all kinds of household types, but the share of single and single-parent households is relatively larger than for those individuals who never transitioned into poverty. Last, poverty groups are mostly concentrated in those regions below the MIS poverty line, as indicated in Figure 2, like Andalucía, Extremadura, Islas Canarias, Galicia, and Murcia. Madrid is an interesting case as it concentrated a big share of the four poverty transition groups, indicating that it is a region with very high levels of inequality.

Concluding, the MIS definitely plays a major role in reducing poverty among the Spanish territory regardless of the possible misallocations. Because of state dependence, it accurately covers half of the poor Spanish population, assisting them in getting out of poverty, thus achieving the MIS objective. Still, tables 6 and 7 shows that certain MIS design aspects might be enhanced to make it more effective and efficient. The MIS legislation does not cover all individuals who entered poverty in t but were not poor in $t-1$ until the first day of $t+1$. The analysis also confirms inefficiencies in the MIS design because the legislation grants the benefit to 3% to 4% of individuals above the poverty line, causing extra administrative costs because of the reimbursement processes. Last, when considering poverty in a static way and dropping from the design the evolution of the household's economic status within and across years, the legislation misses the poverty determinants' role through the life course of the individuals, which are important to understand the probabilities to move in and out of the poverty status. The next section focuses on knowing the causes of poverty duration and the reasons to fall into poverty.

iv. Regression results

Tables 8 presents the probit marginal effects for the transition probabilities into poverty in 2017, 2018, and 2019 and shows the probability of being poor in t . The first column of each period in the table belongs to a simple model without controls covariates. The second column of each period includes the transition probability when controlling individual poverty determinants, like age, gender, education, employment, health, and marital status. Furthermore, the third column of each period incorporates household poverty determinants apart from the individual ones, like household type, region, and urbanization level of the household residence.

Column 1, 4 and 7 of table 8 suggests that if the individual was poor in $t-1$ the probability of being poor in t increases by almost 40 % to 50% across the three periods compare to those who were not poor in $t-1$, holding all regressors at their sample average, confirming the state

dependence theory. The probability of reentering poverty in t when the person was poor in $t-1$ slightly decreases when controlling for individual and household characteristics, as indicated in the rest of the columns, where the magnitudes range between 32% to 42%, holding all regressors at their sample average. The coefficient on poverty is statistically significant, meaning that there is a significant difference between the probability of being poor in t , for those poor who were not poor in $t-1$, and those who were poor.

Regarding the poverty determinants in table 8, it is important to mention that they have a small effect on poverty transition with not even an increase of 7% of the probability of being poor in t in any of the cases. There is an exceptional case when accounting for household type 6c, which increases the probability of being poor by 98% in 2017. Moreover, the poverty determinants with statistically significant results are education, unemployment, and marital status across the three intervals. Compared to lower education individuals, those with higher education are less likely to fall into poverty across the three models in all periods. The effect is stronger in 2017 and 2018, where magnitudes decrease to 2.4% on the probability of being poor in t , holding all regressors at their sample average. Unemployment has the biggest effect on poverty transition after household type 6c. Compared to those employed, being unemployed in $t-1$ increases the probability of being poor in t , between 3.1% to 6.4% across the different models, holding all regressors at their sample average. Widowhood decreases the probability of being poor across all periods with magnitudes that range up to 2%.

The effects of medium education, health, household type, regions, and urbanization level vary within the categories and throughout the intervals. For 2017 and 2018, having medium levels of education slightly decreases the probability of being poor but no more than 1% in 2017 and 2018. In 2019, the effect is the opposite, but it is not statistically significant. Overall having bad or very bad health positively affects the probability of being poor in t , but these results are just statically significant in 2019, where the probability of being poor increases by up to 2%. Household types indicate that across the three intervals, those individuals that belong to a medium-size household, like household type 2, 3, 4, and 5 reduces the probabilities of being poor in t compared to individuals that belong to type 1 households and the results are statistically significant for 2018 and 2019. For household types, 6a and 6b, neither of the results of each period are statistically significant. Murcia is the only region that shows statistically significant results across the three periods. For 2017 and 2018, living in Murcia decreases the probability of entering poverty in t ; for 2019, the probability increases by 2%. Overall, living in Aragón, Cantabria, Castilla-La Mancha, Castilla y León, Cataluña, Extremadura, Galicia, Islas Baleares, La Rioja, Melilla, and País Vasco decreases the probability of being poor in 2017 and 2018. The results for these regions are statistically significant. In 2019, the only regions that show statistically significant results, apart from Murcia, are Ceuta and Extremadura. In all cases, the probability of falling into poverty in 2019 increases when living in any of these regions. Last, in 2019, living in a no-populated area decreases the probability of falling into poverty by 1% compared to those living in populated areas—any of the age group categories and gender offer statistically significant results.

Tables 8 show to what extent the duration of poverty and non-poverty affects the probability of exiting, entering, reentering, and never entering poverty. Overall, the results indicate that mobility exists but at very low rates because the most significant effect in the

transition's probabilities into poverty from 2016 to 2019 in Spain is poverty status, corroborating that poor people from one year are likely to be poor the next year. This effect is highly persistent when introducing other socioeconomic characteristics of the individuals of the household. Nonetheless, specific poverty determinants strongly affect being poor, such as being a single parent with three children (household type 6c), employment status, education, or widowhood.

In this sense, the results reveal that the MIS design is successfully effective when considering past year income to determine the current years' poverty status and program eligibility. However, its design misses the other causes of poverty when not contemplating poverty determinants. By broadening the scope of poverty duration and causes, the MIS could be consistently more effective and efficient as it could target those individuals who might be at risk of experiencing poverty, and consequently allocating the resources accurately to those households, mostly composed of unemployed individuals and with very low levels of education. Such a dynamic perspective would generate a proactive policy instead of a passive one.

Table 8: Transition's probabilities into poverty 2016-2019: Probability of being poor, marginal effects of the probit models

(category: 0(non-poor in t), 1(poor in t), beta coefficients, and standard errors in parenthesis)

	2017			2018			2019		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant									
Poverty	0.5097***	0.4204***	0.3271***	0.4703***	0.3971***	0.3664***	0.4968***	0.4020***	0.3822***
AGEC26-35		0.0062	0.0019		0.0156	0.0120		0.0131	0.0094
AGEC36-45		0.0024	0.0013		-0.0010	-0.0053		0.0027	-0.0010
AGEC46-55		0.0089	0.0062		0.0117	0.0031		0.0064	0.0014
AGEC56-65		0.0055	0.0044		0.0084	0.0029		-0.0038	-0.0089
AGEC70+		0.0090	0.0097		-0.0014	-0.0039		0.0075	0.0008
gender0-Male		-0.0028	-0.0011		-0.0004	0.0009		-0.0015	-0.0008
EDU2-Medium		-0.0107**	-0.0049		-0.0146***	-0.0111***		0.0032	0.0045
EDU3-High		-0.0204***	-0.0107***		-0.0243***	-0.0200***		-0.0142***	-0.0130***
EMP2-Unemployment		0.0640***	0.0354***		0.0378***	0.0318***		0.0533***	0.0478***
EMP3-Student		-0.0009	-0.0012		0.0105	0.0082		0.0136	0.0128
EMP4-Not Working		-0.0075	-0.0051		-0.0110**	-0.0105**		-0.0099**	-0.0086*
HEALTH2-Good		-0.0102	-0.0064		-0.0090*	-0.0068		-0.0009	-0.0016
HEALTH3-Okay		0.0052	0.0018		-0.0048	-0.0020		0.0113*	0.0088
HEALTH4-Bad		0.0224	0.0154		0.0020	0.0032		0.0246**	0.0219**
HEALTH5-Very Bad		0.0437	0.0242		0.0302	0.0226		0.0442**	0.0406*
MARITAL2-Married		-0.0249***	-0.0159***		-0.0086*	-0.0003		-0.0040	0.0019
MARITAL3-Widowed		-0.0219***	-0.0130***		-0.0095	-0.0114*		-0.0161***	-0.0158***
household_type2			-0.0010			-0.0145***			-0.0135***
household_type3			0.0042			-0.0252***			-0.0163***
household_type4			-0.0026			-0.0158***			-0.0195***
household_type5			0.0010			-0.0188***			-0.0103*
household_type6a			0.0081			-0.0041			0.0002
household_type6b			0.0061			0.0589			0.0226
household_type6c			0.9816***			0.1067			-0.0194
regionAragón			-0.0193***			-0.0291***			-0.0110
regionCantabria			-0.0139***			-0.0169***			0.0078
regionCastilla-La Mancha			-0.0053			-0.0032			0.0052
regionCastilla y León			-0.0157***			-0.0178***			-0.0077
regionCataluña			-0.0144***			-0.0135***			-0.0025
regionCeuta			0.0115			-0.0082			0.0488**
regionComunidad de Madrid			-0.0050			-0.0228***			-0.0038
regionComunidad Valenciana			-0.0058			-0.0181***			-0.0040
regionExtremadura			-0.0016			-0.0197***			0.0230**
regionGalicia			-0.0127***			-0.0187***			0.0023
regionIslas Baleareas			-0.0109**			-0.0235***			-0.0102
regionIslas Canarias			0.0043			-0.0030			0.0030
regionLa Rioja			-0.0272***			-0.0150**			0.0096
regionMelilla			-0.0203***			0.0148			0.0070
regionNavarra			-0.0072			-0.0299***			-0.0116
regionPais Vasco			-0.0146***			-0.0163***			-0.0059
regionPrincipado de Asturias			0.0049			-0.0068			0.0112
regionRegión de Murcia			-0.0135***			-0.0180***			0.0254**
urban2- Medium Populated			0.0104**			0.0008			-0.0043
urban3- No Populated			0.0038			-0.0009			-0.0105***
N	7,125	5,892	5,892	12,243	10,043	14,086	17,114	14,086	14,086

Notes: *** Significant at the 1 percent level.
 ** Significant at the 5 percent level.
 * Significant at the 10 percent level.
 Reference category age groups (AGEC): 16-25
 Reference category Gender: 1-Female
 Reference category education (EDU): low education
 Reference category employment (EMP): employment
 Reference category health(HEALTH): 1-Very Good
 Reference category marital status(MARITAL): 1-Single/Divorced
 Reference category household type: 1
 Reference category region(REGION): Andalusia
 Reference category urban(URBAN): 1-Very Populated
 Source: LCV, own estimates

Source: LCV, own estimates

VI. Conclusion

In light of the severe poverty situation that Spain has been experienced during the past decades, in May 2020, the national government activated a Minimum Income Scheme, marking a before and after in the fight against poverty. It is designed as a last resort social scheme, and its main objective is to reduce the percentage of people living in extreme poverty by guaranteeing the basic right to a decent minimum standard of living. Welcomed by large sectors of the public opinion, the MIS is the first "pro-poor" policy intended to diminish or reduce the poverty intensity. This paper has sought to predict the impact of the MIS in Spain and recognizes the magnificent direction of the institutional efforts in protecting the most vulnerable.

The first question addressed in the paper is whether the Spanish MIS ensures a sufficient amount of aid for its citizens to reduce extreme poverty in the national territory. For this, I use two poverty thresholds, one corresponding to the standards poverty lines commonly found in the literature, 40% of the median income, referred to as the "extreme poverty line," and last, the one used by the Spanish legislation. In the national analysis, the results reveal that the MIS will play a fundamental role in reducing national poverty because it consistently decreases the number of people living in extreme poverty in all poverty household types. The quantity received for single-parent households places them above the extreme poverty line, and the aid granted for small households and households where minors are present positions them closer to the extreme poverty thresholds. However, there is room for improvement when assisting the medium-sized households and very big households composed of adults, as they are far from getting out of poverty as they do not receive enough quantity. When looking at the regional impact of the MIS, the benefit will unevenly impact the different regions. For those poorest regions, Autonomous Communities below the national median income, the MIS undoubtedly positively impacts poverty reduction because the quantities granted are sufficient to trespass the regional extreme poverty line. For those richest regions, Autonomous Communities above the national median income, the MIS will be insufficient to cover the people in extreme poverty. Except for very single and single-parent households, the rest of the households are far off from the poverty line. Overall, the MIS is a very "pro-poor" tool, as it greatly reduces the intensity of poverty in the national territory, i.e., the extra amount in euros required to put an end to poverty is much lower; thus, the poor people in Spain theoretically will be less poor thanks to the scheme.

Given the previous reflections, some modifications in the MIS design are proposed to improve the impact of poverty reduction in Spain:

- Pursue the objective that all Spanish households exceed the threshold of extreme poverty, reaching 40% of the median equivalent income regardless of the type of households they live in. For this, it will be necessary to set the amount of MIS granted to a single-household (household type 1) at around 40% of the median equivalent income. Every year this quantity would, of course, change. Considering the high cost of this proposal, enlarging the coverage every year, as it has been done for 2021, is the right path.
- Following the equity principles, for each additional household member, the MIS should grant an extra amount without size limitations, as in line with OECD criterion, i.e., using the OECD equivalent modified scale. In particular, it should be distinguished between

adult or minor, adapting the amount to the household composition. The needs of a household grow with each additional member, but the growth is not proportional because of the economics of scale consumption. This redistribution mechanism would promote a more equitable MIS, as it would offer the same treatment to all households, regardless of their type, which could receive the same MIS amount in equivalent euros.

- Preserve the specific protection to single parents' households (type 6 household) as it successfully eradicates extreme poverty in most Spanish regions.
- Coordinate with the Autonomous Communities to maximize the coverage of those households that are not fully secure by the MIS. Considering that the MIS has an asymmetrical coverage among the different regions, the Autonomous Communities should reassess their last resort scheme to alleviate extreme poverty to cover those households with bigger poverty gaps with the aim of bringing them closer to the poverty threshold. This is possible thanks to the MIS feature compatibility with other social benefits. Of course, including the Autonomous Communities' competencies in the social protection process will cause some of them to spend more public funding than others; however, the regions with bigger expense projections will be the richest ones, and therefore their redistribution power is expected to be higher.

The second question assessed is whether the MIS design mechanism properly assigns the aid or whether the same quantity distributed differently would reduce poverty to evaluate the MIS's design and potential misallocations. I use the yearly poverty trends of the four previous years to suggest a hypothetical prediction of the consequences when considering the past year's income to establish the program eligibility in the current year. The outcomes reveal that in terms of effectiveness, the MIS accurately covers half of the poor population in Spain every year, almost 4%, while it will leave uncovered the other half until a new year begins, around 3%. In terms of efficiency, the MIS allocates resources every year to almost 3.5% of the poor population in the previous year, but that is not poor anymore, thus misusing public funding. This analysis has also allowed showing the characteristics of the four transition poverty groups each year, exited poverty, entered poverty, remained poor, and remained non-poor to indicate considerable differences among those who transitioned into poverty during any period than those who never did. In general, they have higher unemployment rates, lower education levels, and tend to stay single or divorce. Over the three intervals studies, poverty dynamics appeared to have very similar transition probabilities, being poverty status among other poverty determinants the biggest effect to determine people's poverty status in the subsequent year. In this sense, since state dependence is significant compared to other individual and household characteristics, the MIS mechanism design realistically contributes to bringing individuals out of poverty.

Accorded with the last conclusion and to boost the MIS effectiveness and efficiency, the following policy recommendations are presented:

- Encompass the program eligibility and quantity granted to the household's present economic status. I propose two adjustments following the Basque Country MIS design. First, to determine the household's poverty status in the present and, therefore, their program eligibility, the legislation should utilize an affidavit of the last three months' net income instead of requesting the corresponding last year's Income Tax Statement.

Second, the MIS should be granted as soon as the application is approved without waiting until the next year, or it should be restricted as soon as the application is revoked. Adapting the premises set out in the legislation will improve the effectiveness of reducing poverty as the right people will be protected at the right time while it will enhance its effectiveness in facilitating bureaucratic obstacles.

- Since individual and household characteristics appear to be significant for getting people into poverty or keeping them out of poverty, the MIS should be accompanied and coordinated with other existing policies such as education, development of individual skills and capacities, or other labor market and social policies.

This paper offers theoretical impacts considering the MIS coverage and a hypothetical prediction of the effectiveness and efficiency, so further research is needed with more recent data to examine the MIS with the consequences of the Covid-19 crisis. From a more technical point of view, the results presented in this paper should be deemed by considering that the data studied is insufficient for analyzing the recurrence of poverty. Last, it will be necessary to include a procedural evaluation when more data about the program is published.

VII. Bibliography

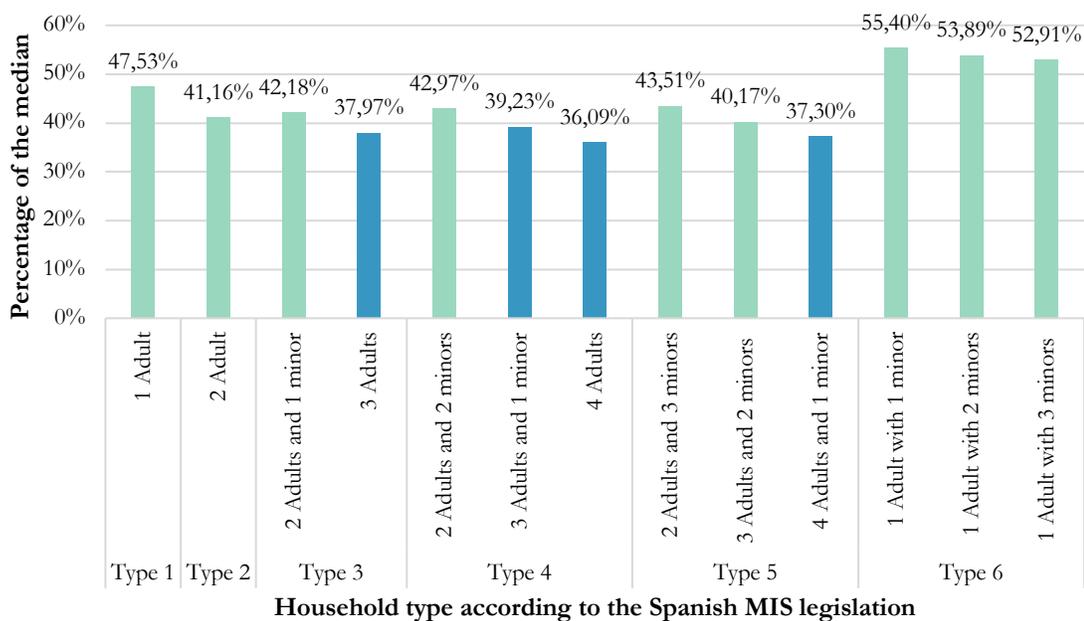
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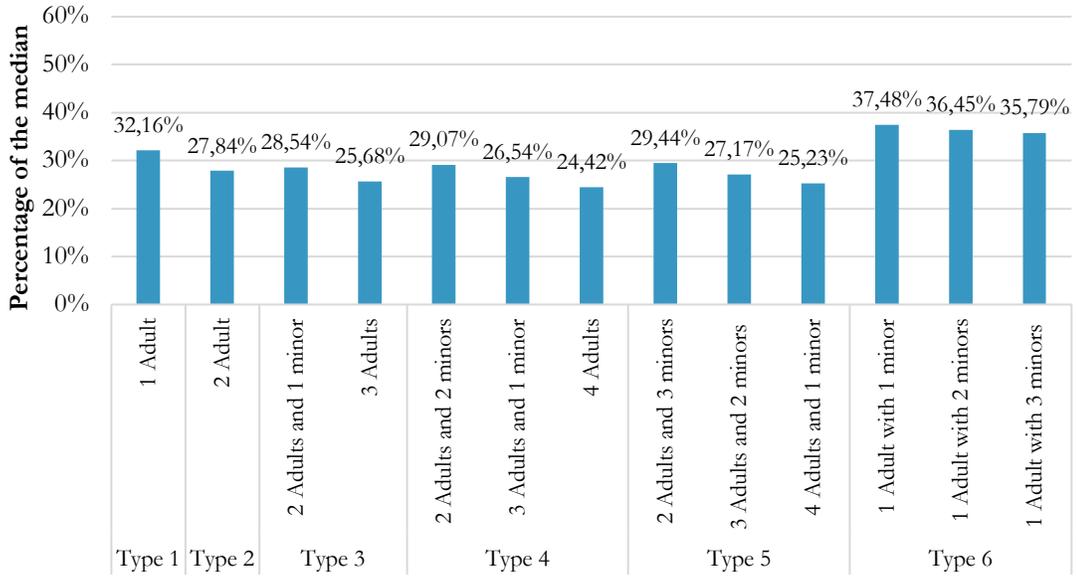
VIII. Annex I

Figure 3: Equivalent poverty of the line as a percentage of the 2019 median income in Andalucía (971.916€)



Source: Own elaboration based on Spanish Living Condition Survey

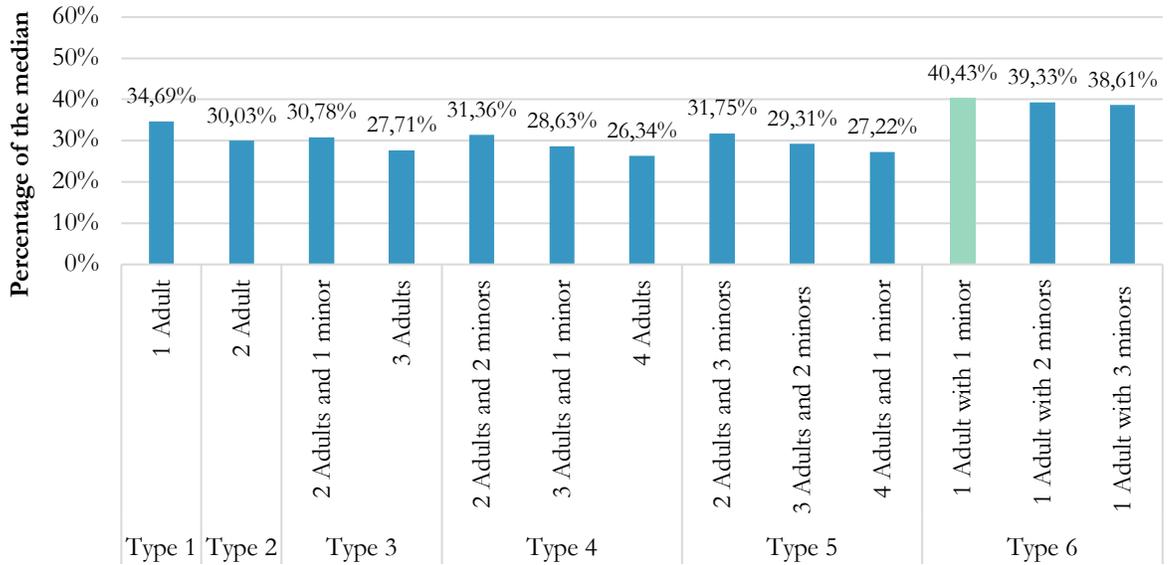
Figure 4: Equivalent poverty of the line as a percentage of the 2019 median income in Aragón (1,436.75€)



Household type according to the Spanish MIS legislation

Source: Own elaboration based on Spanish Living Condition Survey

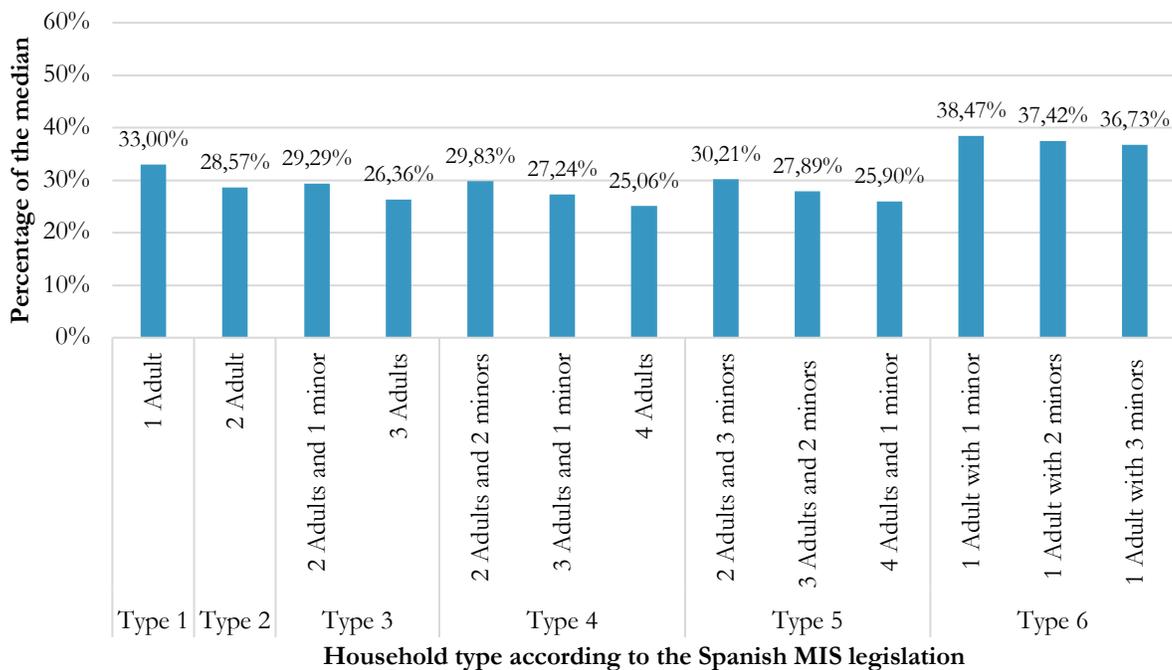
Figure 5: Equivalent poverty of the line as a percentage of the 2019 median income in Principado de Asturias (1,331.83€)



Household type according to the Spanish MIS legislation

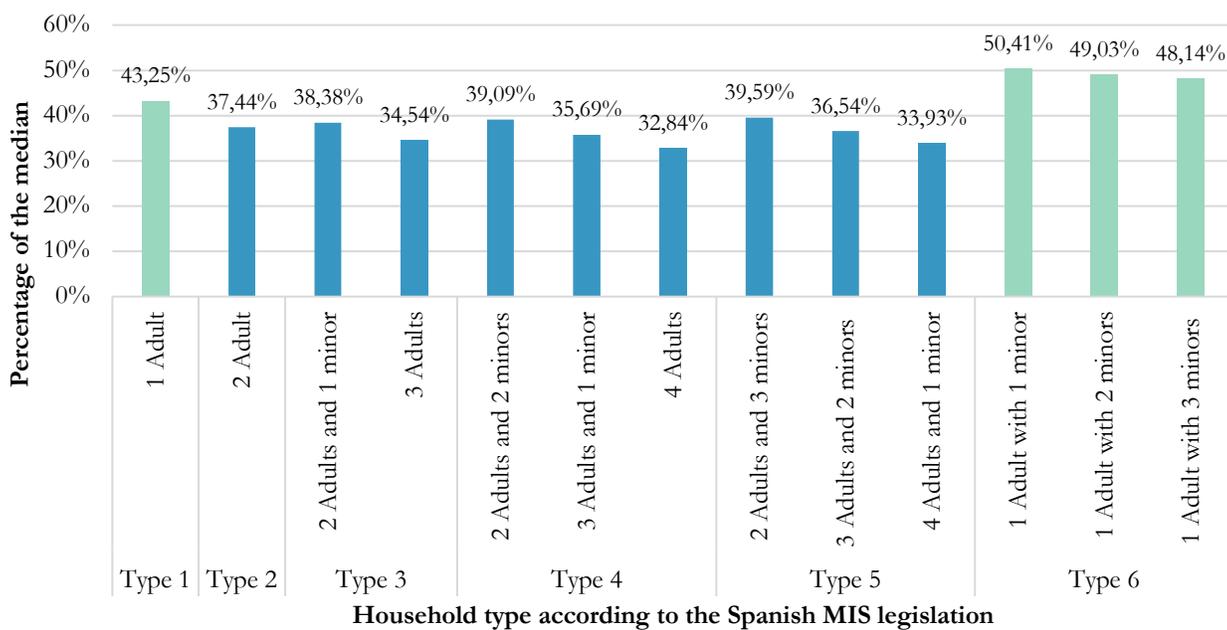
Source: Own elaboration based on Spanish Living Condition Survey

Figure 6: Equivalent poverty of the line as a percentage of the 2019 median income in Islas Baleares (1,399.83€)



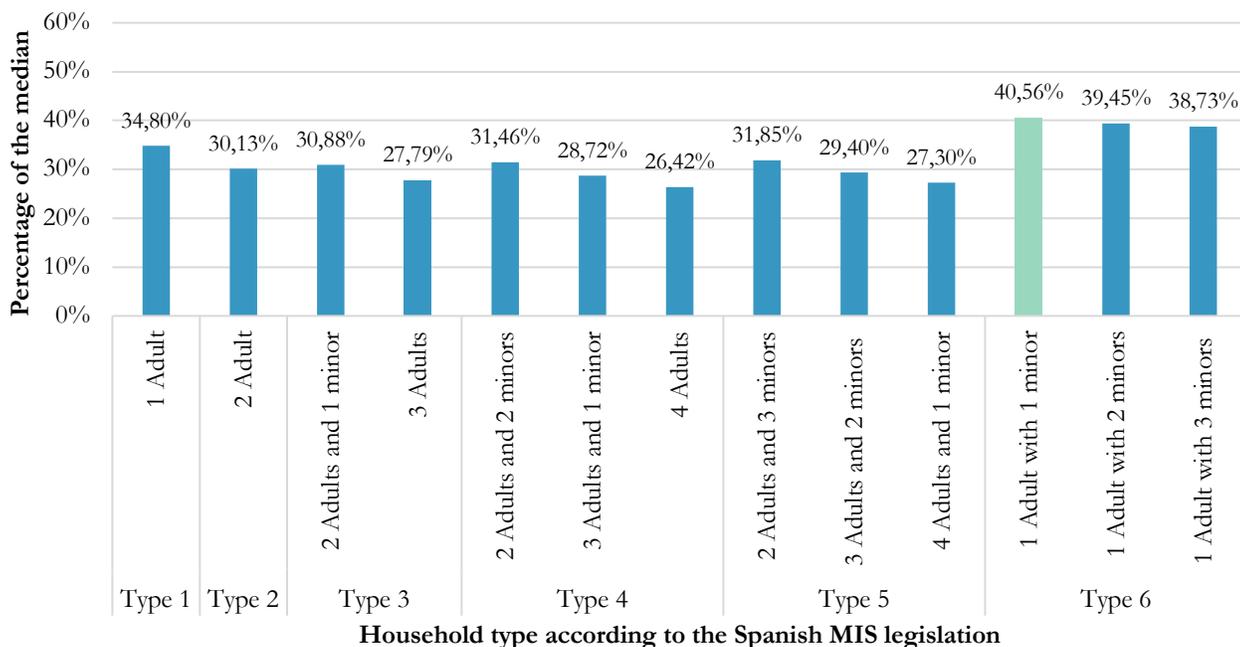
Source: Own elaboration based on Spanish Living Condition Survey

Figure 7: Equivalent poverty of the line as a percentage of the 2019 median income in Islas Canarias (1,068.25€)



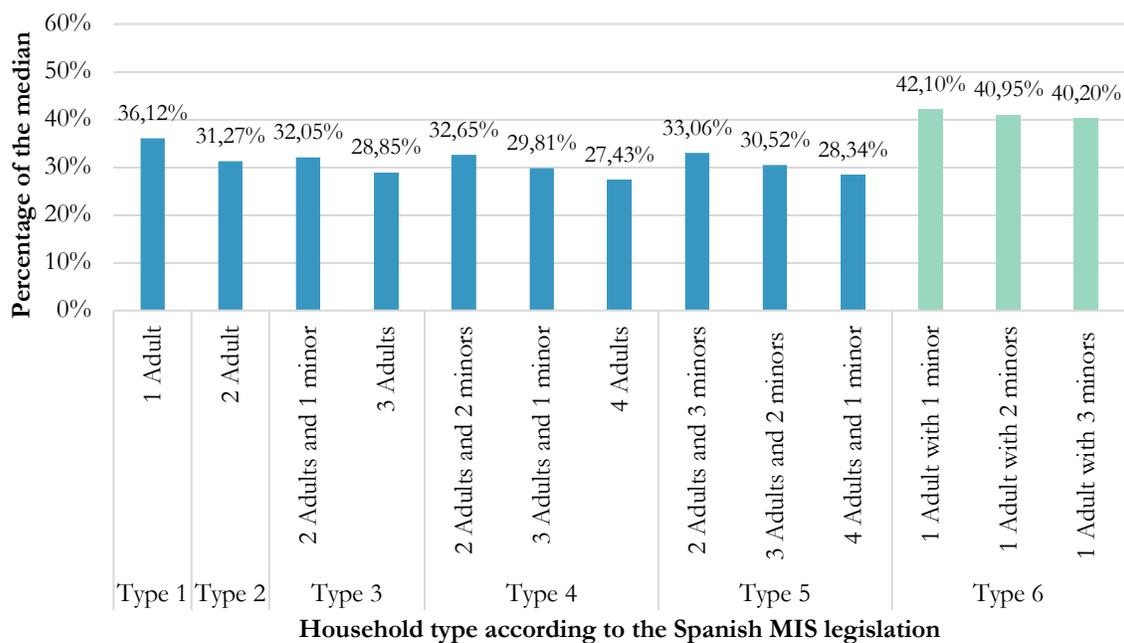
Source: Own elaboration based on Spanish Living Condition Survey

Figure 8: Equivalent poverty of the line as a percentage of the 2019 median income in Cantabria (1,327.67€)



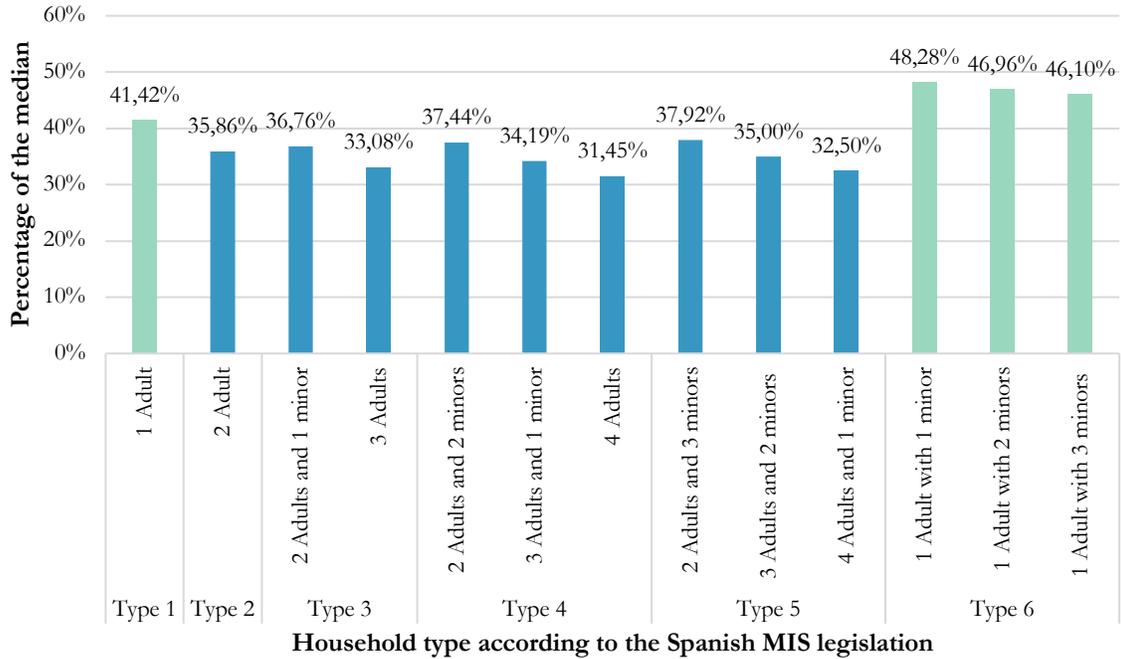
Source: Own elaboration based on Spanish Living Condition Survey

Figure 9: Equivalent poverty of the line as a percentage of the 2019 median income in Castilla y León (1,279.08 €)



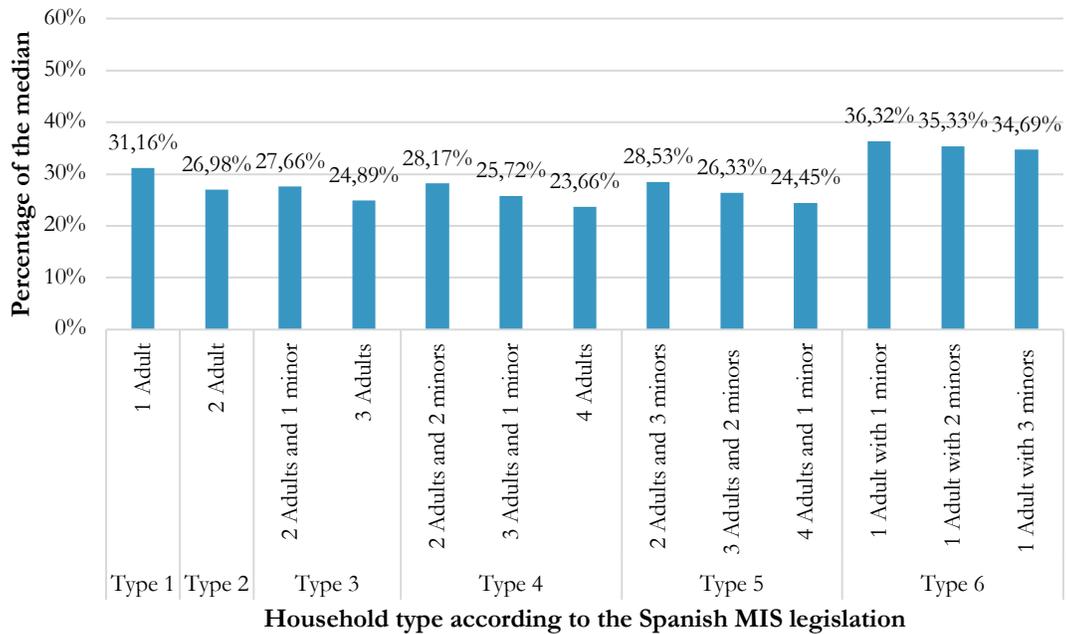
Source: Own elaboration based on Spanish Living Condition Survey

Figure 10: Equivalent poverty of the line as a percentage of the 2019 median income in Castilla-La Mancha (1,115.33 €)



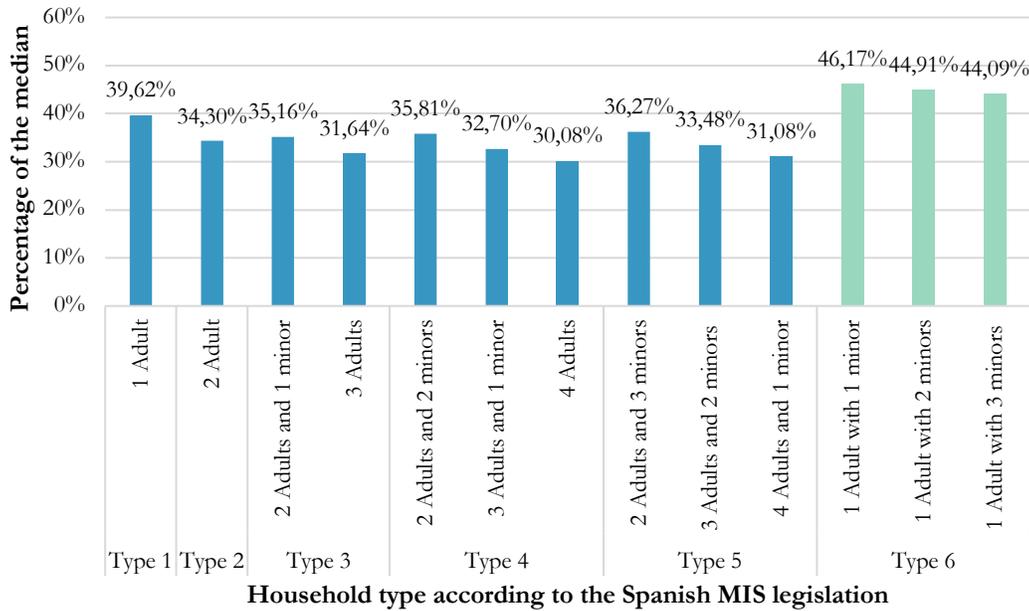
Source: Own elaboration based on Spanish Living Condition Survey

Figure 11: Equivalent poverty of the line as a percentage of the 2019 median income in Cataluña (1,482.5€)



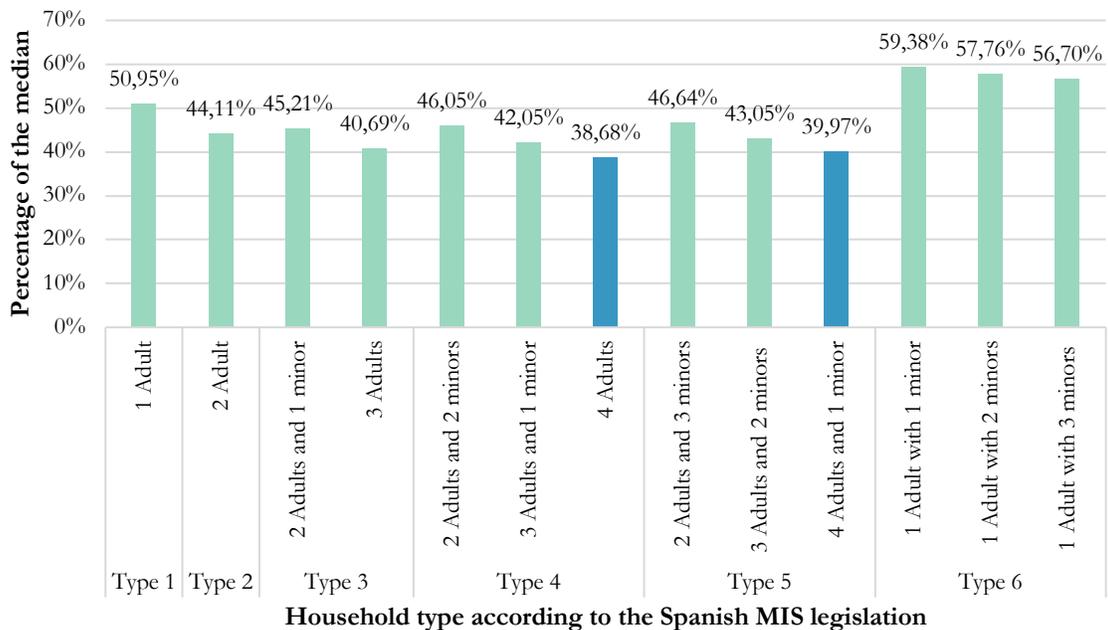
Source: Own elaboration based on Spanish Living Condition Survey

Figure 12: Equivalent poverty of the line as a percentage of the 2019 median income in Comunidad Valenciana (1,166.17€)



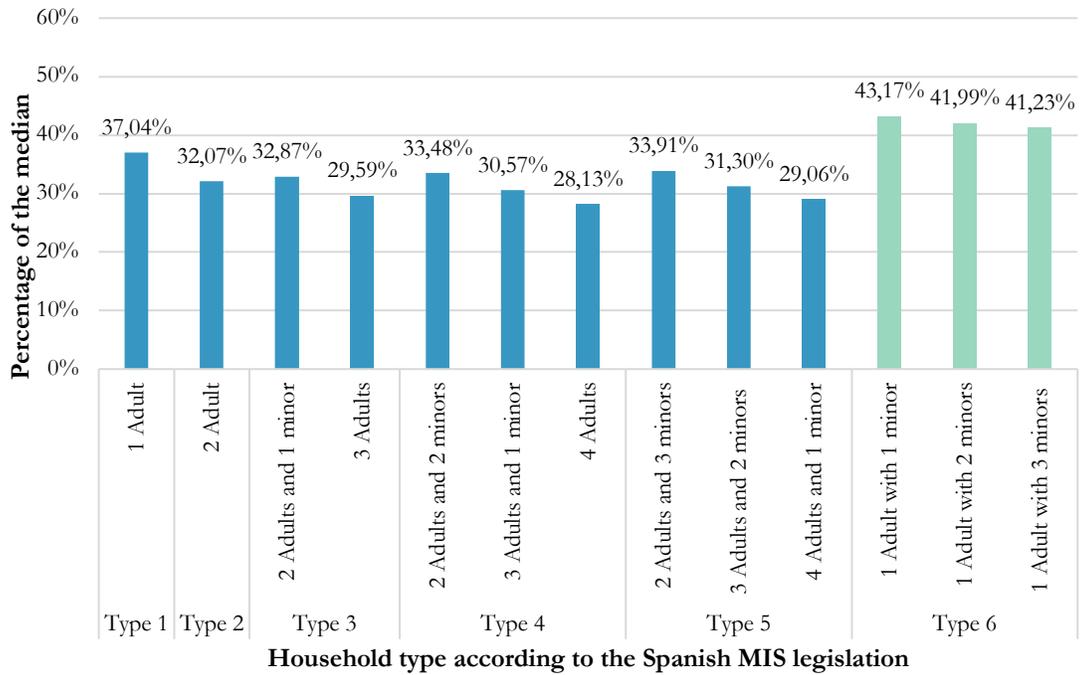
Source: Own elaboration based on Spanish Living Condition Survey

Figure 13: Equivalent poverty of the line as a percentage of the 2019 median income in Extremadura (906.83€)



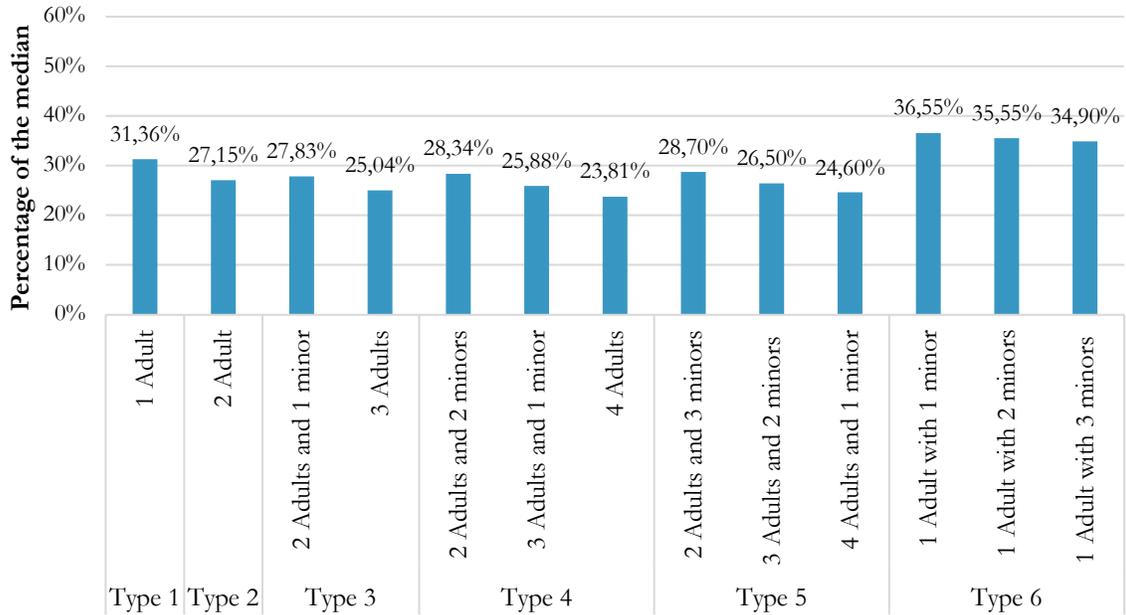
Source: Own elaboration based on Spanish Living Condition Survey

Figure 14: Equivalent poverty of the line as a percentage of the 2019 median income in Galicia (1,247.25 €)



Source: Own elaboration based on Spanish Living Condition Survey

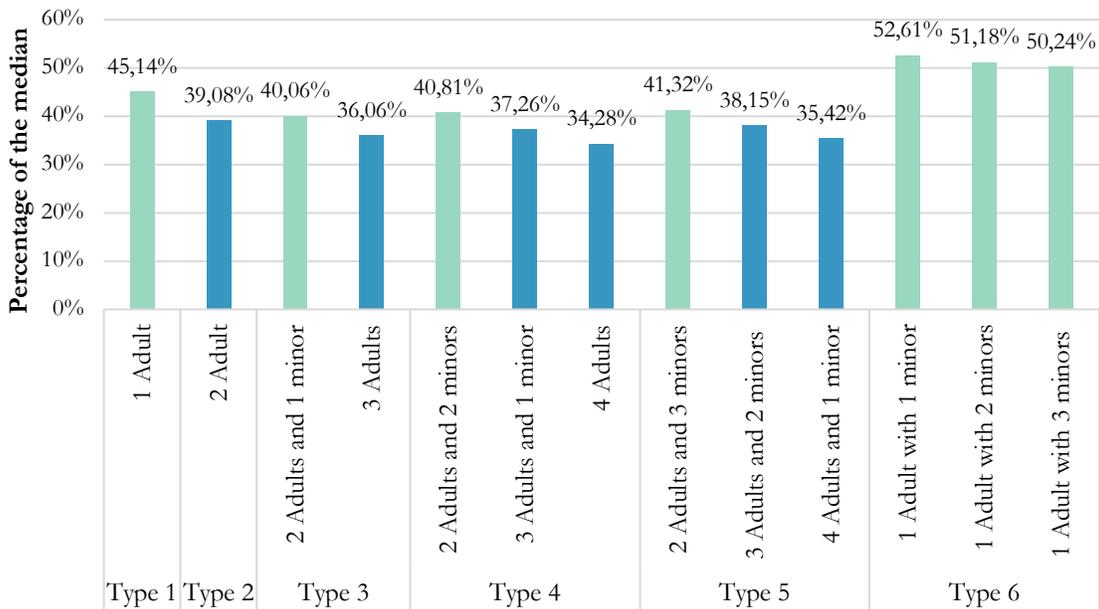
Figure 15: Equivalent poverty of the line as a percentage of the 2019 median income in Comunidad de Madrid (1,473.42 €)



Household type according to the Spanish MIS legislation

Source: Own elaboration based on Spanish Living Condition Survey

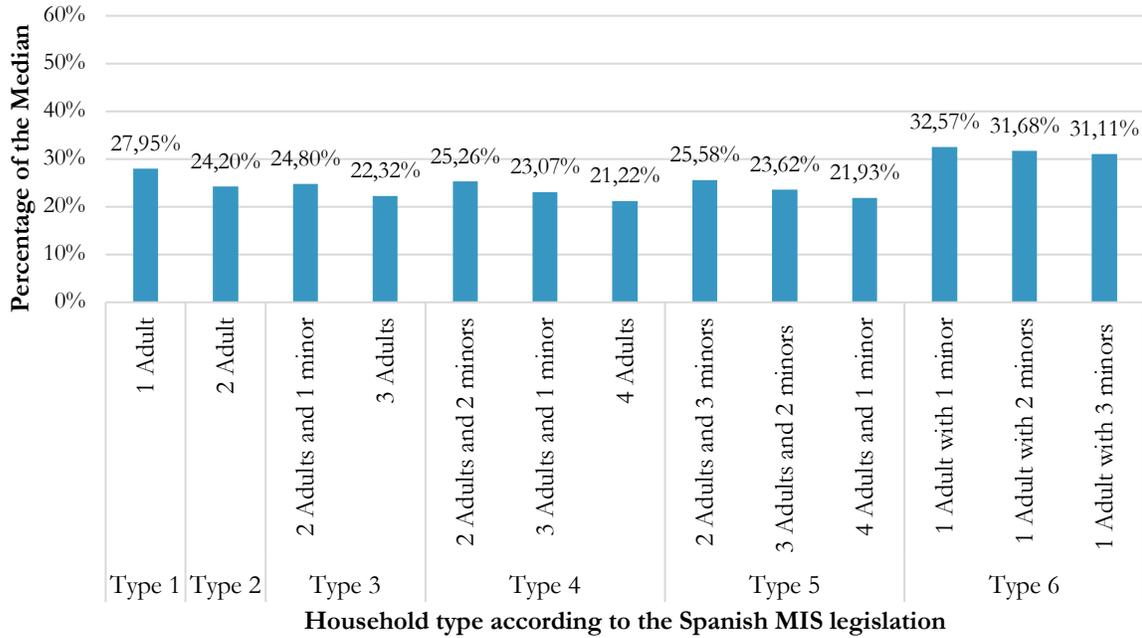
Figure 16: Equivalent poverty of the line as a percentage of the 2019 median income in Región de Murcia (1,023.42 €)



Household type according to the Spanish MIS legislation

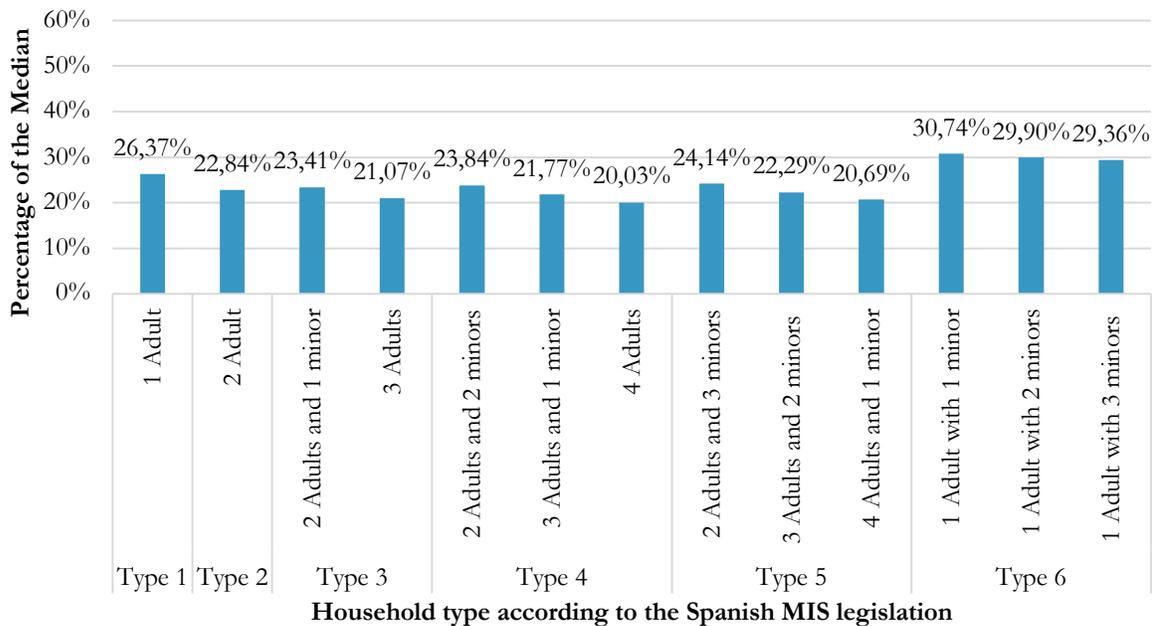
Source: Own elaboration based on Spanish Living Condition Survey

Figure 17: Equivalent poverty of the line as a percentage of the 2019 median income in Comunidad Foral de Navarra (1,653.08 €)



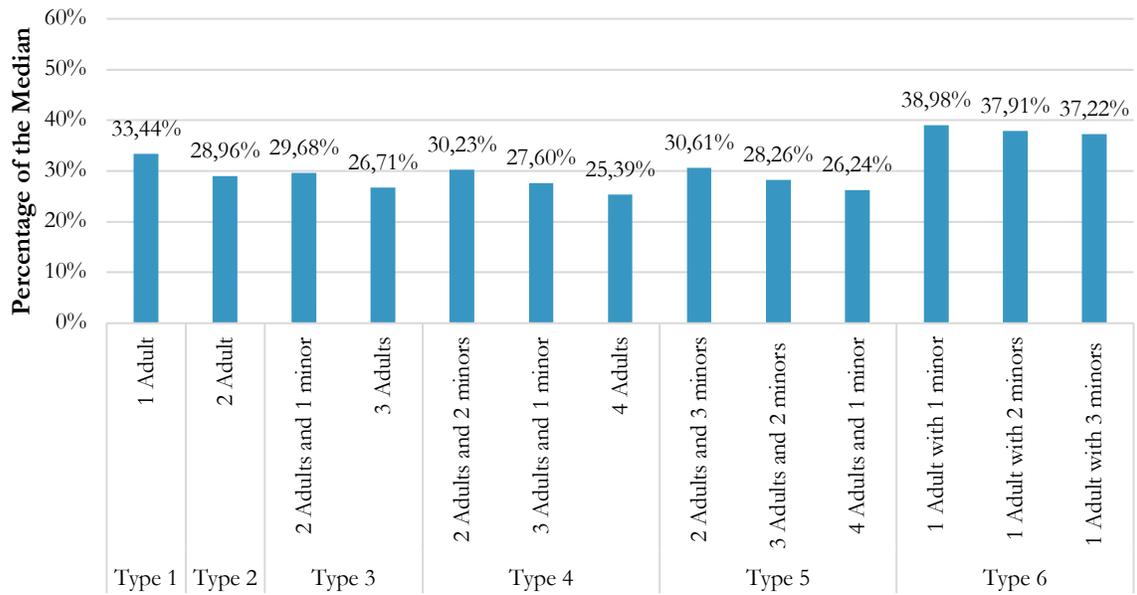
Source: Own elaboration based on Spanish Living Condition Survey

Figure 18: Equivalent poverty of the line as a percentage of the 2019 median income in País Vasco (1,751.67 €)



Source: Own elaboration based on Spanish Living Condition Survey

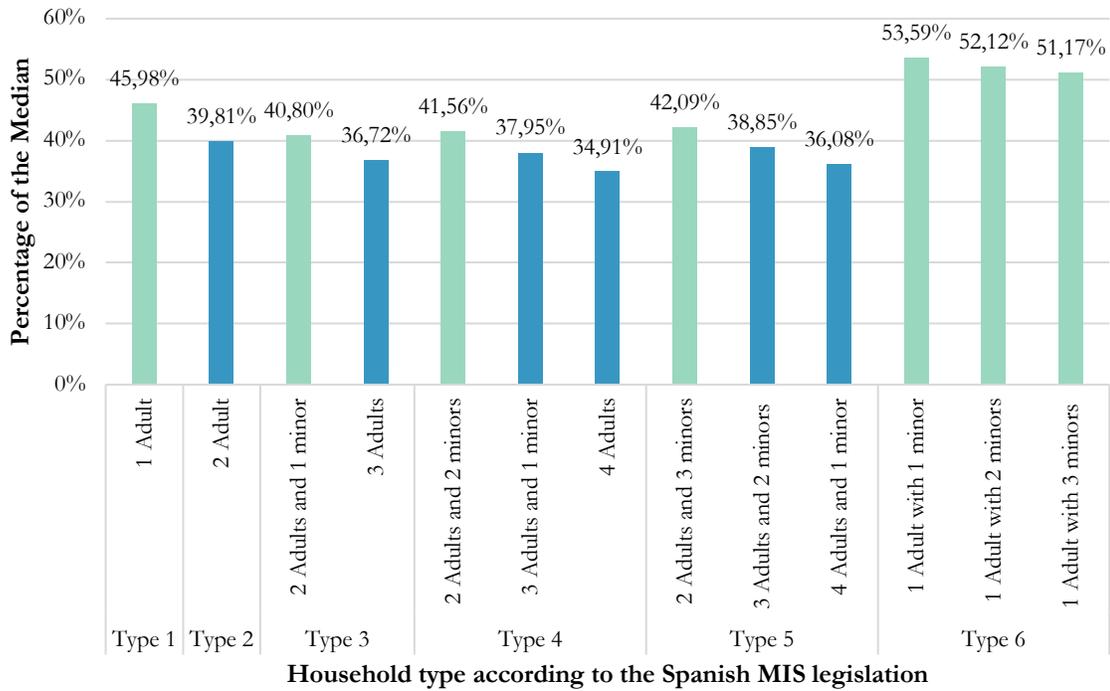
Figure 19: Equivalent poverty of the line as a percentage of the 2019 median income in La Rioja (1,381.42 €)



Household type according to the Spanish MIS legislation

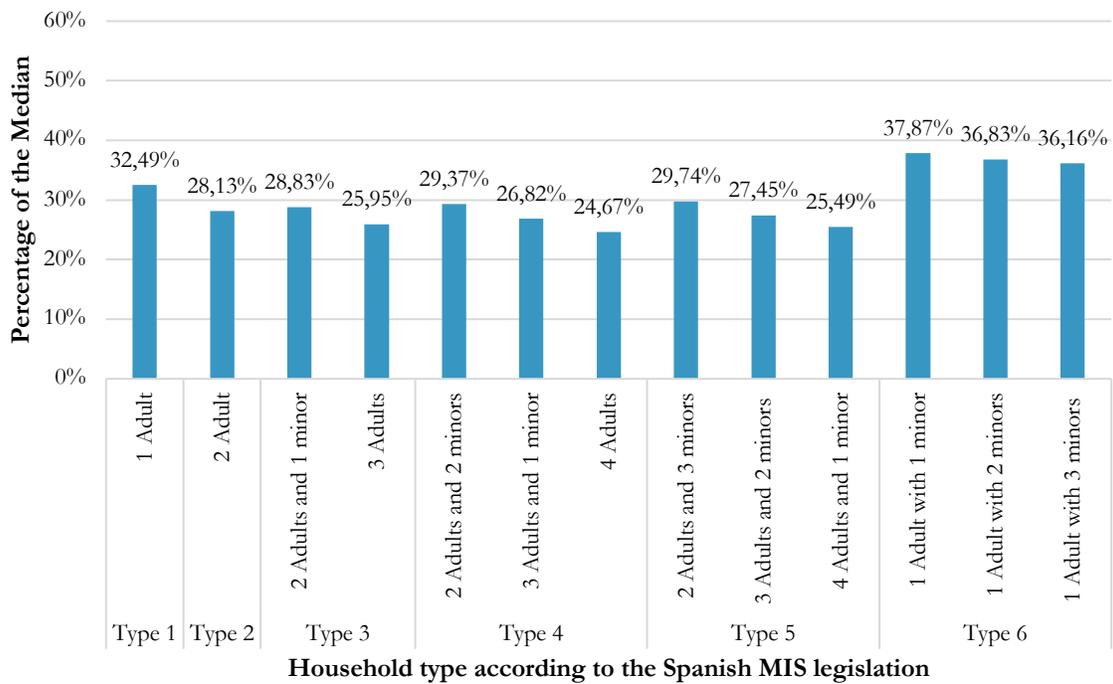
Source: Own elaboration based on Spanish Living Condition Survey

Figure 20: Equivalent poverty of the line as a percentage of the 2019 median income in Ceuta (1,004.83 €)



Source: Own elaboration based on Spanish Living Condition Survey

Figure 21: Equivalent poverty of the line as a percentage of the 2019 median income in Melilla (1,421.92 €)



Source: Own elaboration based on Spanish Living Condition Survey