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Coverage and Adequacy of Minimum Income schemes in the European Union



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Non-technical summary

Alleviating poverty is one of the key concerns of all welfare states. Almost all European countries have some sort of a minimum income scheme to protect their citizens from poverty. The aim of this paper is to explore the effectiveness of Minimum Income schemes in protecting working age people from poverty across 18 EU countries. In particular, the two key issues of adequacy and coverage are examined in detail. Most studies in this field are based on “model” families, i.e. using a number of stylised households to illustrate the differences in the effects of policies between countries. In contrast, the analysis in this paper is based on nationally representative survey data and the microsimulation model EUROMOD, which allows us to capture the effects of relevant differences in household circumstances, as well as policies, between countries. EUROMOD simulates the direct tax liabilities, social insurance contributions and cash benefit entitlements for the households and their members on the basis of the tax-benefit rules in place in each country.

The study focuses on people of working age and compares the household income of those in assessment units entitled to Minimum Income with income at the poverty line. Minimum Income is not always adequate to lift those entitled out of poverty. On average, the household income of those entitled to Minimum Income benefits falls well below the respective poverty lines in a number of countries such as Austria, Estonia, Portugal and Slovenia. In contrast, the average household income of those entitled to Minimum Income is above the relative poverty line in the Scandinavian countries and France. Furthermore, there are substantial gaps in the coverage of Minimum Income schemes in some countries. For example, looking at whether those in poverty are receiving Minimum Income benefits, suggests that there are gaps in some countries with relatively high adequacy on average (Denmark and France) as well as coverage problems in Austria, the Netherlands and Germany.

Coverage and adequacy of Minimum Income schemes in the European Union¹

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Abstract

The purpose of this paper is to explore and compare the effectiveness of Minimum Income (MI) schemes in protecting people of working age from poverty in the European Union. Using the EU-wide microsimulation model EUROMOD, we investigate (a) coverage and (b) adequacy of MI schemes in 18 countries. In contrast to previous comparative studies of MI benefits, relying on comparisons of the effects on stylised families, we are able to capture the full range of individual and household circumstances and to quantify the effects on people entitled to MI schemes using a comparable approach across countries.

Keywords: Minimum Income; European Union; Microsimulation; Adequacy; Coverage.

JEL codes: C81, H53, I38

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1. Introduction

The alleviation of poverty (at least, in the form of *extreme* poverty) is a common objective of all welfare states. The corrosive implications of poverty (be it to “the fabric of society” or, more prosaically, political stability) may be one of the few concerns that are common across political philosophies. As a result, difficult though it may be to define the “European social model”, there can be little doubt that it encompasses the need to guarantee a decent standard of living for all. This idea is reflected in works of scholarship. For instance, Baldwin (1990) defined Marschall’s concept of social citizenship as “‘full membership of community’, premised on a ‘kind of basic human equality’ that, while tolerating differences of class and wealth, guaranteed each a minimum standard, regardless of the hand dealt by fate, biology and society” (Baldwin, 1990, p.4; Marschall, 1950; see also Ringen, 1987).

Naturally, just how different welfare states attempt to alleviate poverty differs greatly. Esping-Andersen (1990) famously distinguished between three “welfare regimes”: Anglo-Saxon liberal, Continental corporatist and Scandinavian social-democratic. Relevant to the question of minimum income protection, Korpi and Palme (1998) identified five different “ideal types of institutional structures”, in order of historical appearance. These are the targeted, voluntary-subsidized, corporatist, basic security, and encompassing models. The targeted model relies heavily on means testing, although that can be used to exclude the rich (as in Australia) rather than strictly to include the poor. The voluntary-subsidized model was in many European countries the precursor to the corporatist model, where social insurance is compulsory, even though still organised along occupational lines. The basic security model resembles the original Beveridge design, with more comprehensive flat-rate benefits, and low ceilings on earning-related ones, on the assumption that higher-income groups will turn to the market and private insurance. Finally, the encompassing model combines generous citizenship-based universal programmes with earnings-related benefits for the economically active population. In principle, the alleviation of poverty can be achieved at different levels. An encompassing labour market, with high employment rates, low unemployment, limited earnings dispersion and relatively high minimum wages, will produce a low level of “primary” (i.e. pre-tax pre-transfer) poverty, making it easy for social security to take care of residual poverty. A comprehensive range of generous universal or contributory benefits covering the entire population will provide high income security, relegating social assistance to the marginal role of catching those few cases falling through the cracks. When the above conditions are met, the social safety net will offer means-tested assistance of last resort. In

contrast, an under-performing labour market producing high levels of unemployment or in-work poverty, combined with low flat-rate or earnings-related benefits offering weaker protection to a smaller share of the population, will put the safety net under stress and, inevitably, render it more vulnerable (Barr, 2004). In view of this, disentangling the effect of different policy instruments on the reduction of poverty is no easy task (Nelson, 2004).

The purpose of this paper is to explore and compare the effectiveness of minimum income (MI) schemes in the European Union in protecting people of working age from poverty. These are the cash benefits that are intended to provide a minimum level of support when income from the market, from other contributory or contingency cash benefits or from other family members, is non-existent or insufficient. Thus the level of income of a person in receipt of MI is, in effect, the minimum level of income that is deemed acceptable for that type of person by the social protection system in that country. The first question is whether that level of income is in fact guaranteed, or whether there are groups of working age people who do not qualify and fall below the threshold for one reason or another. The second question is about the adequacy of that level of income. We explore both issues.

Minimum income protection in Europe has a long pedigree, going back to the British Poor Law (1601), amended in 1834, and finally abolished with the introduction of the National Assistance Act in 1948. Similar legislation was passed in other European countries after World War II, introducing *Social Bistand* in Denmark (1961), *Sozialhilfe* in Germany (1962), *Algemene Bijstand* in the Netherlands (1963), *Socialbidrag* in Sweden and so on. In French-speaking countries progress was slower, with *Minimex* introduced in Belgium in 1974. However, the successful launch of *Revenue Minimum d'Insertion (RMI)* in France in 1988 set in motion developments that led to the adoption of similar schemes throughout southern Europe. Variations of *RMI* were adopted in Basque Country in 1988, in Catalonia in 1990 and in other Spanish regions later, while a national pilot scheme was introduced in Portugal in 1996 and became fully operational in 1997. In Italy a formal experiment was started in 1998 and extended further in 2000, before it was discontinued in 2003 (Matsaganis et al., 2003). On the other hand, Central and Eastern European countries moved swiftly since the early 1990s to creating social safety nets, even though in some cases minimum income protection is only provided at very low levels (Rat, 2009).

The empirical evidence presented in this paper provides a number of insights related to a specific methodology for such investigations, namely tax-benefit microsimulation modelling. First of all, section 2 discusses the scope of what to consider as a MI scheme, and the issues

raised for cross-country comparability of any such definition. Section 3 explains the methods used, including a description of the EUROMOD model and a discussion of its advantages relative to other approaches, as well as an introduction to the countries, policy years, data samples and categorical definitions that are used in our empirical analysis. One issue in particular deserves attention: our interest is in *individuals* of working age and the extent to which MI schemes protect them from poverty. But poverty is conventionally measured using *household* income; and MI benefits, while sometimes assessed for whole households, are typically based on the material circumstances of a smaller *inner-family* unit. Taking account of these multiple levels of income assessment and analysis is important in the context of the questions addressed here, and the approach taken is explained in section 3. Section 4 examines the prevalence of MI entitlement across the countries considered. One of the primary aims of MI schemes is to help protect against poverty. Section 5 describes how two groups – those who are poor and those entitled to MI benefits – overlap, and considers the first of the two key aspects of MI schemes: coverage. Section 6 considers adequacy in terms of how well incomes are protected in relation to poverty thresholds. The analysis of adequacy and coverage raises methodological issues and the relevance of these, together with the implications of this analysis for current policy, is discussed in section 7.

2. Minimum Income schemes in the EU

The scope of the term “MI schemes” is not easy to define in a way that is both meaningful and consistent across countries (Eardley et al., 1996). As pointed out by Adema (2006) comparing spending on social assistance across countries is fraught with difficulties. The same applies to the cash component, or “Minimum Income”.² In some countries (e.g. France, Germany and Spain), the assistance component of unemployment protection operates as an intermediate stage between receipt of unemployment insurance benefits and general social assistance. This contrasts with most of countries where the MI operates as an unemployment assistance benefit. MI benefits are often complemented by separate means-tested housing benefits, which make up an important component of the income package. Elsewhere, (e.g. Germany, Estonia, the Netherlands and Poland), the MI scheme itself is intended to cover housing assistance. In most countries the MI payment is intended to cover the basic needs of all family/household members. But in some cases (e.g. in the UK) the MI scheme is only

² Social Assistance may also include, for example, one-off grants for the purchase of necessary durables, social care and so-called “social reintegration” services including employment support.

intended to cover the needs of some family members (adults), whereas the needs of other members (children) are addressed by other benefits. Finally, there are instances where additional cash benefits are “passported”: eligibility is automatic when in receipt of MI. In other countries the equivalent additions are an integral part of MI.

In this paper, we overcome the difficulty, present in many cross-country studies, of defining the scope of MI schemes in a comparable way. Our starting point is the set of benefits listed as “Minimum resources: general non-contributory minimum” in the Mutual Information System on Social Protection (MISSOC) database, a widely used source of comparison of social protection schemes.³ The specific schemes for the countries we consider as MI are listed in table A1 in the appendix together with a summary of their main characteristics. Starting from this narrow definition of MI our measuring stick is the total disposable income of those people entitled to MI defined this way. Measured income therefore includes all the components listed above and in addition any sources of income disregarded by MI assessments (such as small amounts of earnings).

MI schemes as defined in our analysis involve a level of income that varies by personal and assessment unit characteristics in a way that is associated with assessed need. They tend to be benefits of last resort where entitlement is contingent on the exhaustion of all other benefits although they may “top up” other incomes to the required level. Generally, MI schemes require able-bodied recipients to participate in work search, training or social integration programmes. However, the schemes vary considerably in terms of the eligibility requirements related to age and residence and the existence and size of income disregards, e.g. for earnings from employment, capital or maintenance payments. As discussed above they also differ in their treatment of family and housing needs and in their tax treatment, as well as the definition of the unit of assessment (i.e. whether MI entitlement is assessed on the needs, income and work capability of the individual, the benefit unit or the household).

MI schemes exist in all European countries considered here except Hungary and Greece. Aside from existing at all, the most fundamental difference between MI schemes across EU countries is the determination of the level of benefit. While some countries have set their levels of MI in relative terms, e.g. in relation to the minimum wage or other benefits such as social pensions, others have set benefit levels in absolute terms, i.e. based on an assessment, at some point in time, of the cost of a range of needs such as food, clothing and participation in social life. As shown below, these different approaches, as well as varying political

³ http://ec.europa.eu/employment_social/spsi/missoc_en.htm

priorities, have resulted in income levels of social protection programmes that vary considerably.

3. Data and methods

EUROMOD is a unique tax-benefit microsimulation model, covering countries of the EU in a comparable manner (Sutherland, 2007; Lietz and Mantovani, 2007).⁴ It uses micro-data derived from representative national income surveys (or administrative registers in a few cases), as shown in table A2 in the appendix for the countries covered in this paper. It simulates direct tax liabilities, social insurance contributions and cash benefit entitlements for the households and their members on the basis of the tax-benefit rules in place in each country. Policy instruments that are not simulated are taken directly from the data, as are original incomes (i.e. earnings, income from capital, transfers from other households).

Our analysis covers 18 countries: Belgium, Denmark, Germany, Estonia, Greece, Spain, France, Italy, Luxembourg, Hungary, the Netherlands, Austria, Poland, Portugal, Slovenia, Finland, Sweden and the UK. The tax-benefit systems simulated refer to different years in different countries, ranging from 2001 to 2005 (see table A2). In most cases, the input datasets of household circumstances refer to a period a few years prior to the policy year, and the original incomes derived from them are updated to this date. This process relies on indexing each income component (which is not simulated) by appropriate growth factors, based on actual changes over the relevant period.⁵ No adjustment is made for changes in population composition.

Table A2 shows the sample size in each input dataset. This varies from around 3,000 households for the smaller countries to well over 25,000 in Poland and the UK. It should be noted that once the analysis focuses on working age people in extreme poverty and those entitled to MI, the sample size in terms of number of individuals can become quite small. Thus the differences between countries that we find may not be statistically significant.

Simulating Minimum Income scheme entitlements

Making use of all available information in the underlying micro data, we simulate entitlement to MI schemes in place in each country. Although not all the conditions of entitlement are included in the data (e.g. information on citizenship, availability for work and asset tests) it is

⁴ The version of EUROMOD used in this paper is F2.

⁵ This process is documented in EUROMOD Country Reports, see:

<http://www.iser.essex.ac.uk/research/euromod/resources-for-euromod-users/country-reports>

likely that in most cases this does not make much difference to the groups we consider in this study. As they stand our entitlement calculations demonstrate the intended effects of benefits and can generally be considered as providing an upper bound on the effectiveness of such benefits in protecting working age people from poverty. Furthermore, the discretion that operates at the local level in some systems is not possible to represent in our calculations. The MI schemes of Spain and Italy are not straightforward to simulate as they are administered at a regional rather than national level. There are many variations between the regions and no single system can be considered as representative. Instead, when those two countries are included in the analysis, the MI receipt information collected in the national surveys is used.⁶

For the remaining countries, our estimates assume full take-up of benefit entitlements, i.e. that the legal rules are universally respected, that everyone is aware of their entitlements and that the costs of compliance are zero.⁷ This can result in the overestimation of benefits actually received and is likely to apply particularly to MI benefits. Usually such benefits have to be applied for and the costs of claiming may be considerable; not all those who would be entitled may be aware of the benefit or their possible entitlement; and receipt of MI benefits may be considered by potential claimants to be stigmatising (Matsaganis et al., 2008).

By using a microsimulation approach it is, in principle, possible to model the non take-up behaviour of the individuals and this would allow us to capture a potentially important component of lack of coverage by MI benefits. However, here we adopt the assumption of full take-up because too little is known about take-up of benefits in many of the countries considered (Frazer and Marlier, 2009). To account for it in some countries, where more is known such as the UK (DWP, 2007) and Germany (Frick and Groh-Samberg, 2007), but not others, would reduce cross-country comparability (Matsaganis et al., 2009). To assume similar patterns of non take-up in the latter group of countries as in the former group would risk biasing the results as such patterns tend to be specific to the benefit and institutional arrangements in the country in question. Factors that are likely to have an impact on take-up rates are the level of stigma involved in claiming MI (and, linked to that, the stringency and nature of the means test), the complexity of the claims process, the size of the MI entitlement relative to the potential claimant's other income and needs, and whether MI receipt gives access to other passported benefits. Assuming full take-up allows us to identify the extent of

⁶ The estimates may be affected by survey under- and mis- reporting but will capture non take-up.

⁷ Poland is an exception. Account is taken of the very low take-up of the portion of the MI payment made by local authorities. This affects the average payment rather than the number of recipients.

non-entitlement to MI schemes among poor and very poor households which is an important issue for policy to address.

EUROMOD estimates of entitlement to MI may differ from those shown for receipt of MI payments by national administrative data.⁸ The differences are due to various factors. The national statistics may relate to a broader concept of MI than the one used in this analysis. Moreover, as discussed above EUROMOD assumes full take-up of MI benefits which is likely to cause an overestimation of MI receipt in EUROMOD. On the other hand, underestimation can also be expected in part by the fact that people in low income households tend to be under-represented in the surveys used as input into EUROMOD (Mantovani and Sutherland, 2003). Finally, our simulation of MI entitlement is based on incomes received in the previous year (except in the UK); while in practice entitlement may be based on incomes received in a much shorter period such as a month. To the extent that incomes vary over the year, this will lead EUROMOD to miss some entitlements related to individuals on MI for short period of the year. Generally we expect most of these factors to be at work in most countries, with the net effect depending on the strength of each factor but not distorting the overall results in a significant way.

EUROMOD versus other methods

Most of the large-scale comparative studies of welfare systems have been based on analysis of aggregate public expenditure data (for a review see Nelson (2010)). Micro-level comparisons of the effect of MI benefits have tended to rely on calculations of the effects on stylised households making use of the OECD model family calculations (Eardley et al., 1996; Gough et al., 1997; Cantillon et al., 2004; Adema, 2006; Nelson, 2010; Frazer and Marlier, 2009; Immervoll, 2010). Such approaches have many advantages, including transparency and no need to rely on the availability of specific information in micro-data. However, they also have limitations. In particular, the focus on particular family types disregards other types that may be equally important; in particular, it usually entirely neglects complex households including more than one narrow family. Furthermore it cannot directly account for the fact that some types are more common in some countries than others: for example 3-generation households are more common in Southern and Eastern Europe; lone parent households are much more prevalent in the Scandinavian countries and the UK than in Southern Europe.

⁸ For detailed national assessments see the EUROMOD Country Reports which are available from <http://www.iser.essex.ac.uk/research/euromod/resources-for-euromod-users/country-reports>

Using micro-data allows the full range of relevant individual and household circumstances to be reflected in the analysis (Marlier et al., 2007).

Survey micro-data can be analysed directly, but use of EUROMOD has further advantages. First, MI schemes are not always identified individually within cross-national datasets. For example, the European Union Statistics on Income and Living Conditions (EU-SILC) User Database (UDB) contains a variable (HY060 Social exclusion benefits, not otherwise classified) which in principle contains the MI benefits addressed in this paper. However, in some countries this variable also includes other benefits (for example, the UK Working Tax Credit). EUROMOD simulates each policy instrument (and indeed, each component of each instrument) separately and so variables can be customised for a particular analysis.

Furthermore, in EU-SILC the variable is defined at the household level. This is a potentially serious limitation in the countries where the assessment unit for MI is narrower: a household may receive more than one MI entitlement where there is more than one assessment unit. In understanding why a particular individual is entitled to MI or not, it is important to establish the characteristics of their MI assessment unit. It is also of interest to establish to what extent MI income from outside the assessment unit but within the household is, under a household income sharing assumption, supporting the person in question. Since EUROMOD simulates MI entitlements in a manner consistent with programme rules in each country, our analysis makes use of the correct assessment unit.

Finally, while the direct analysis of survey data has the apparent advantage of taking account of non take-up, implicit in reported receipt, this does not fully resolve the issue. First of all, measurement error in the surveys can lead to underestimation of the extent of receipt (Figari et al., 2010b). Secondly, in attempting to establish the extent of gaps in coverage of MI schemes such analysis cannot distinguish between non take-up on the one hand and non-entitlement for benefit on the other. Assuming full take-up allows us to identify the extent of non-entitlement among poor and very poor households. Both types of “gaps” in safety nets are important for policy to address, but the solutions are different and the two problems need to be distinguished. This analysis focuses on the extent and incidence of non-entitlement.

In addition, the capacity of EUROMOD to simulate changes in policy rules allows us to explore what might happen in the absence of the MI scheme, capturing interactions with other parts of the tax-benefit system, and also to experiment with reforms to existing

schemes. Both types of exercise are beyond the scope of this paper. For examples see Figari et al. (2010a).

Sample of interest

We focus on working age individuals and the households in which they live. “Working age” is defined as being aged 16 to 64 (inclusive), excluding those in full-time education. Table 1 shows what proportion of the whole national populations is made up of people in this age group. In fact, this is quite similar in most countries, ranging from 55 per cent in Belgium to 62 per cent in Spain.

Table 1: Samples of working age individuals: characteristics

	Percentage of population	Percentage of working age individuals:		
		in complex households	with household income below 60% median	with household income below 40% median
Belgium	55	12	9.0	3.9
Denmark	58	9	5.7	2.0
Germany	61	15	10.9	2.4
Estonia	58	32	16.7	6.5
Greece	56	37	15.5	6.6
Spain	62	35	15.1	6.1
France	56	15	9.1	1.3
Italy	61	35	15.6	7.2
Luxembourg	60	22	8.5	0.3
Hungary	61	35	15.0	4.6
Netherlands	61	10	10.0	1.7
Austria	60	24	7.5	1.7
Poland	59	33	16.4	4.5
Portugal	60	35	15.6	4.1
Slovenia	61	46	14.1	3.6
Finland	58	10	9.1	1.1
Sweden	57	7	6.8	1.4
UK	61	21	13.5	3.3

Notes: Figures refer to various years 2001-05 (see table A2 in the appendix). “Working age” is defined as being aged 16 to 64 (inclusive), excluding people in current full-time education. “Complex” households are those containing adults who are not the partner of the working age person. If adult children are present the household is defined as “complex” only if children aged under 16 or in full time education are not present. Incomes are equivalised using the modified OECD scale. Source: EUROMOD.

The income of other household members may or may not affect the MI entitlement, but will affect the overall level of household income and risk of poverty. This distinction is important when the assessment unit for MI is not the household unit. Table 1 shows the proportion of

individuals living in “complex” households: those containing other adults in addition to any partner, such as parents or adult siblings.⁹ The motivation for this particular categorisation is to identify a group for whom MI receipt and poverty risk might not be expected to be directly related, since such households are likely to contain more than one MI assessment unit. The information in Table 1 shows that in Scandinavian countries as well as Germany, the Netherlands and the UK, the proportion of working age people in households containing just working age adults and their children is much higher than in Southern and Eastern European countries, where “complex” households make up a substantial proportion of the total. In other words, the extent of sharing within households with others who might be independently assessed for MI benefits differs considerably among countries.

Table 1 also presents poverty rates for working age people, as estimated by EUROMOD, using two thresholds: 60 per cent and 40 per cent of median household disposable income, equivalised using the modified OECD equivalence scale. With respect to a poverty threshold at 60 per cent of median income, poverty rates are substantially lower in Scandinavian and Continental countries (usually between 7 and 9 per cent) compared to Southern and Eastern European countries where it frequently exceeds 15 per cent. Poverty rates are naturally much lower using a threshold of 40 per cent of the median, ranging from 1 or 2 per cent in most Scandinavian and Continental countries except Belgium, to 5 to 7 per cent in Southern and Eastern Europe.

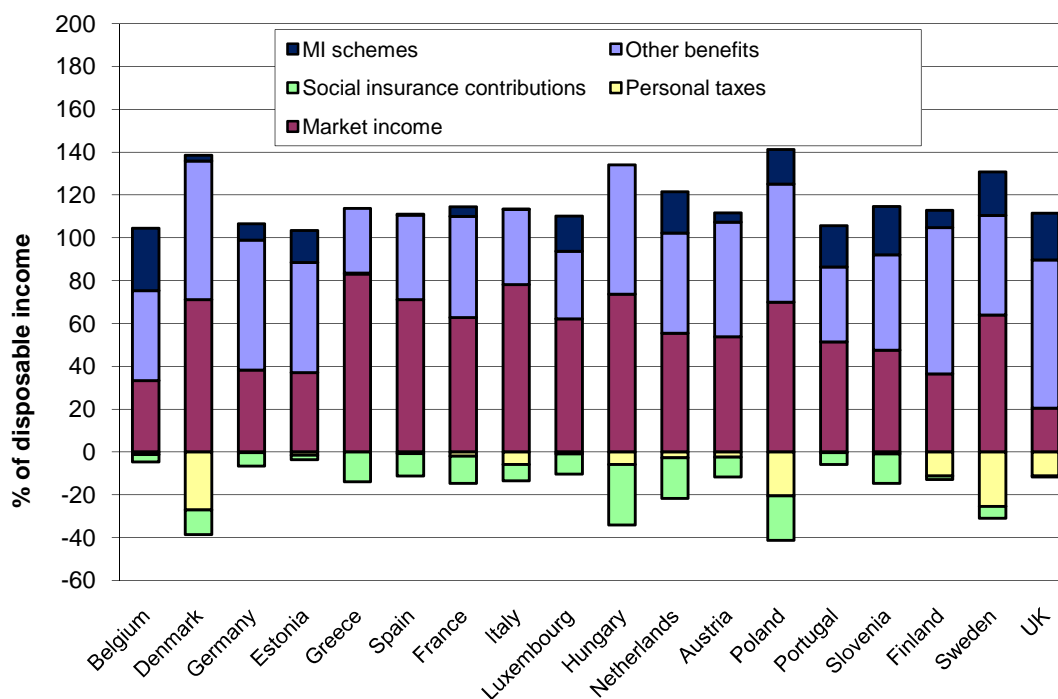
4. The role of MI schemes in household income

The importance of MI schemes to the household income of working age people on low incomes varies considerably across the 18 countries considered here. A breakdown of the income composition of households with at least one working age individual, in the poorest 10 per cent of households in each country, is shown in Figure 1. The dark part of the top sections of the bars refers to the MI schemes; it is clear that these on average provide a small proportion of overall household income in most countries. The proportion is largest in Belgium, the Netherlands, Poland, Sweden and the UK where MI schemes make up at least 20 per cent of disposable income in the lowest decile group. The largest income component on average besides market income is “other benefits”. A breakdown of those benefits, included in the appendix (table A3), suggests that in many countries old age benefits make up

⁹ If adult children are present the household is then defined as “complex” only if other children aged under 16 or in full time education are not present.

a substantial part of the benefit packages received by the poorest households (by definition not received by working age people themselves). Unemployment and family benefits are also important, though this varies among countries.

Figure 1: Components of disposable income of households with working age individuals in the poorest 10 per cent of the population



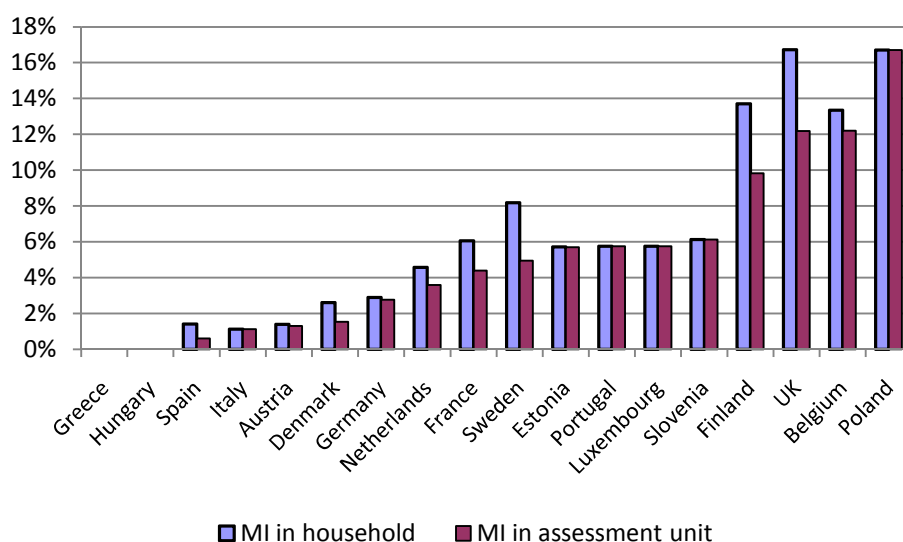
Note: Figures refer to various years 2001-05. “Working age” is defined as being aged 16 to 64 (inclusive), excluding people in current full-time education. Decile groups are based on equivalised household disposable income including the whole population. Source: EUROMOD.

Minimum income may provide a large share of household income, or merely a top up to other incomes. This is one factor that is not usually fully captured in analyses of model families, even though it differs across countries and welfare systems. Typically family benefits and housing benefits (included in “other” in table A3) are factored into such calculations, along with income taxes and social contributions. But the role of pensions, disability, sickness and unemployment benefits (sometimes due to household members outside the MI assessment unit), is generally neglected.

Figure 2 shows the prevalence of MI entitlement in terms of the share of individuals of working age living in households entitled to MI. In general, the countries where MI plays a relatively large role in the household disposable incomes of people of working age are also

those where larger proportions are in households with some MI entitlement.¹⁰ Overall, across the countries considered here, 5 per cent of people of working age are in households entitled to some MI payment. The proportion is much larger in the UK and Poland (17 per cent), Finland (14 per cent) and Belgium (12 per cent) and is larger than average in Sweden, France and Slovenia (shown by the pale bars). As explained above it is zero in two countries with no generalised MI scheme (Hungary and Greece) and also very low (less than 2 per cent) in Austria, Italy and Spain.

Figure 2 Percentage of working age individuals in households/assessment units entitled to Minimum Income



Notes: “Working age” is defined as age 16 to 64 (inclusive), excluding people in full-time education. Figures refer to various years 2001-05 (see table A2 in the appendix). For Spain and Italy estimates are for those recorded as receiving MI in the data. Countries are ranked by the prevalence of MI entitlement at the assessment unit level. Source: EUROMOD.

Figure 2 ranks countries by the proportion of individuals of working age in an assessment unit which is entitled to MI (darker bars). This proportion is always smaller when considering the narrower unit because in some cases individuals of working age live in an assessment unit not entitled to MI, sharing the same household with another assessment unit entitled to the MI. This applies to a sizeable proportion of working age people in some countries, particularly Finland, Denmark, France, the Netherlands, Sweden and the UK. Interestingly, these countries are not among those with high proportions of multi-unit households as shown

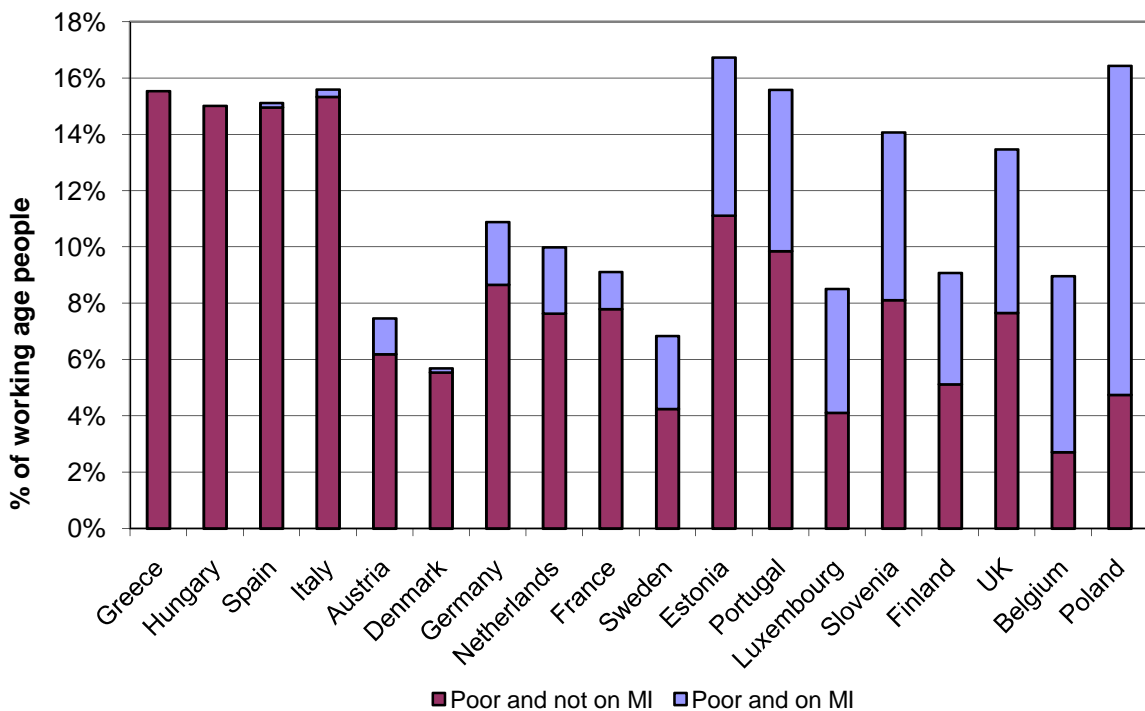
¹⁰ Exceptions are the Netherlands with relatively high average payments and low numbers entitled, suggesting that MI is an important source of income in a few cases. The opposite is the case for France, suggesting that the MI acts as a top up to other incomes in a relatively large proportion of lower income households.

in figure 1 (Southern and Eastern EU countries). Rather, this reflects the design of MI schemes in the countries where multi-unit households are less likely to be the norm.

5. Coverage of MI schemes

One measure of MI coverage is the extent to which working age people living in poverty are in assessment units entitled to MI benefits. This is shown in Figure 3. Coverage can be expressed as the ratio between the light-coloured section of the bar (poor and on MI) and the bar as a whole (all poor). It ranges from 3 per cent in Denmark to around 70 per cent in Belgium and Poland. Measured in this way coverage is relatively low also in France, Austria, the Netherlands and Germany. In contrast, relatively large proportions of those in poverty are entitled to MI benefits in Slovenia, Estonia, Portugal, the UK, Finland and Luxembourg. Lack of entitlement can either be due to gaps in the coverage of MI schemes, or due to the fact that the threshold for entitlement is set below the poverty line of 60 per cent of median income.

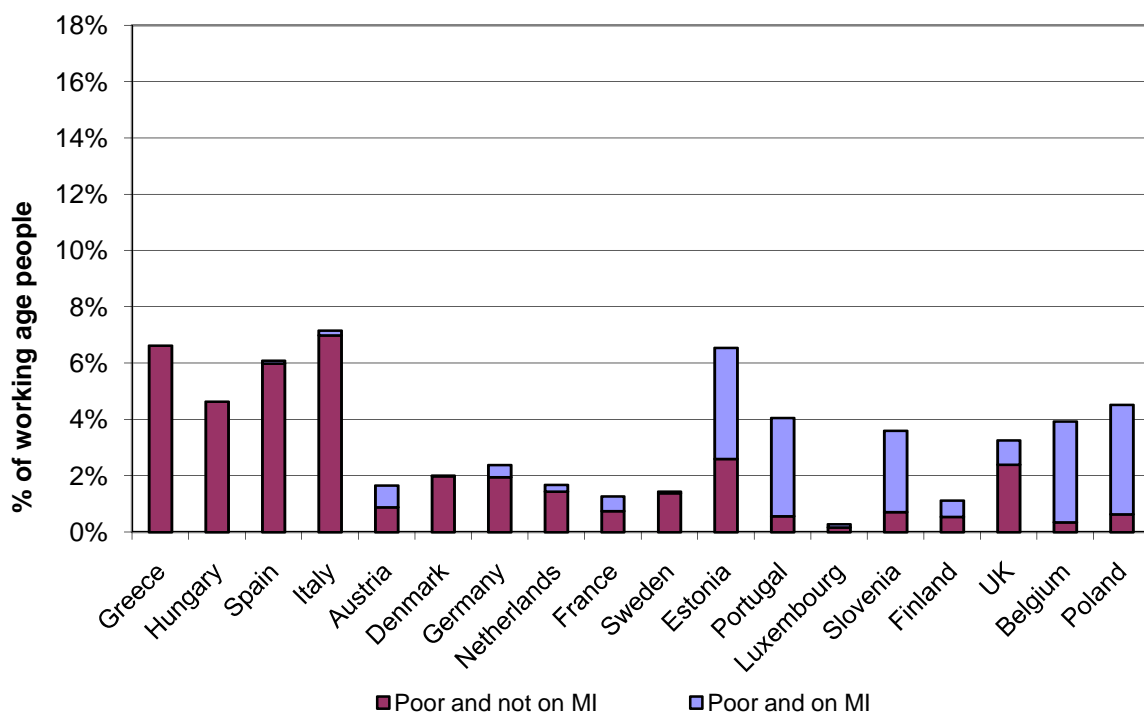
Figure 3: Working age individuals below the poverty line (at 60 per cent of median) by Minimum Income entitlement status



Figures refer to various years 2001-05 (see table A2 in the appendix). Working age individuals on MI are individuals (aged 16 to 64 (inclusive), excluding people in current full-time education), living in an assessment unit (see table A1 in the appendix) entitled to MI. The sample size of working age individuals below the poverty line entitled to MI is small in DK, ES and AT. The results should be treated with caution. Countries are ranked by the prevalence of MI entitlement at the assessment unit level. See figure 2. Source: EUROMOD.

In contrast, we would expect to see a higher proportion of the “extremely poor” entitled to MI. Figure 4 shows that this is indeed the case, if extreme poverty is defined by reference to a poverty threshold at 40 per cent of the median.¹¹ Except where MI schemes are non-existent (Greece, Hungary) or regional (Italy and Spain), most countries have schemes that appear to be successful at covering a significant proportion of the “extremely poor”. The target group is small, with low poverty rates (under 2 per cent) in Finland, France, Denmark, Luxembourg and Sweden. Sizeable proportions of the “extremely poor” are entitled to MI in Slovenia, Belgium, Poland, Portugal and Estonia. But sizeable proportions of the “extremely poor” in Germany, the UK, Estonia, Poland, Denmark and the Netherlands appear not entitled to MI. This may suggest either gaps in coverage, or else that the income level for entitlement to MI is very low.

Figure 4: Working age individuals below the poverty line (at 40 per cent of median) by Minimum Income entitlement status



Note: Figures refer to various years 2001-05 (see table A2 in the appendix). Working age individuals on MI are individuals (aged 16 to 64 (inclusive), excluding people in current full-time education), living in assessment unit (see table A1 in the appendix) entitled to MI. The sample size of working age individuals below the poverty line entitled to MI is small in DK, DE, ES, FR, IT, LU, NL, AT and SE. The results should be treated with caution. Countries are ranked by the prevalence of MI entitlement at the assessment unit level. See figure 2. Source: EUROMOD

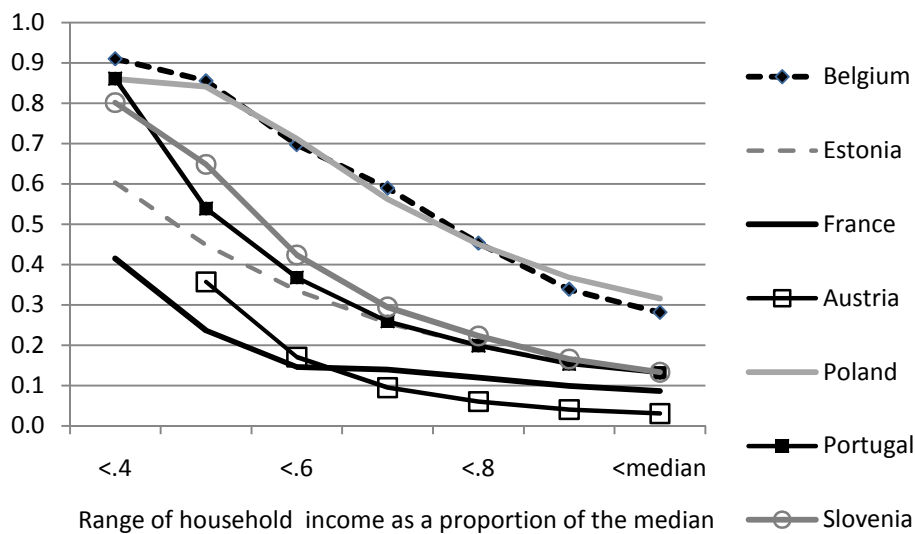
¹¹ The results using the 40% threshold should be treated with caution. Not only are sample sizes small but there are also concerns about the quality of survey responses which give rise to such low incomes, at least in some countries.

The next section considers adequacy. Here we pursue further the task of identifying possible gaps in coverage by examining the extent to which working age people are entitled to MI, according to their household income level measured relative to the median. We would expect rates of entitlement to be higher, the lower the level of household income. If the rate of entitlement is relatively low at low incomes, this suggests that there may be gaps in coverage.

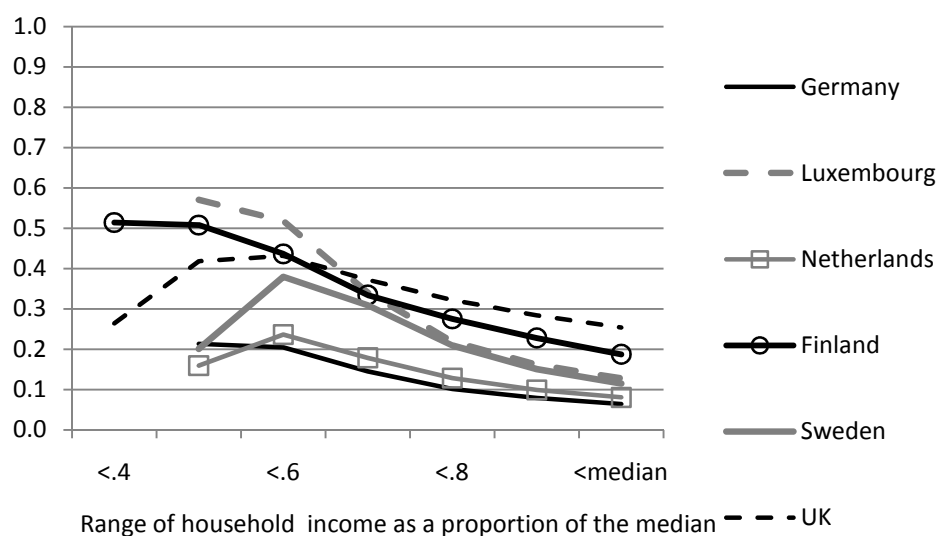
Figures 5a and 5b show the proportion of working aged people below successive proportions of the median who are in assessment units entitled to MI. (Points based on fewer than 50 people are not plotted.) For example, in Slovenia, while 80% of those with household incomes below 40% of the median are entitled, the percentage falls to 29% for those below 70% of the median and to 13% of all those with household incomes below the median. This compares with 6% in the working age population as a whole (Figure 2). In the seven countries shown in Figure 5a (Belgium, Estonia, France, Austria, Poland, Portugal and Slovenia) entitlement rates decrease as income increases. In contrast, in the six countries shown in Figure 5b (Germany, Luxembourg the Netherlands, Finland, Sweden and the UK) the entitlement rate does not rise so clearly as income falls. This suggests that there may be particular gaps in coverage in these countries, leaving non-negligible numbers of working aged people on very low incomes unprotected.

Figure 5: Prevalence of MI entitlement (assessment unit basis) among working aged individuals by level of household income as a proportion of the median

(a)



(b)

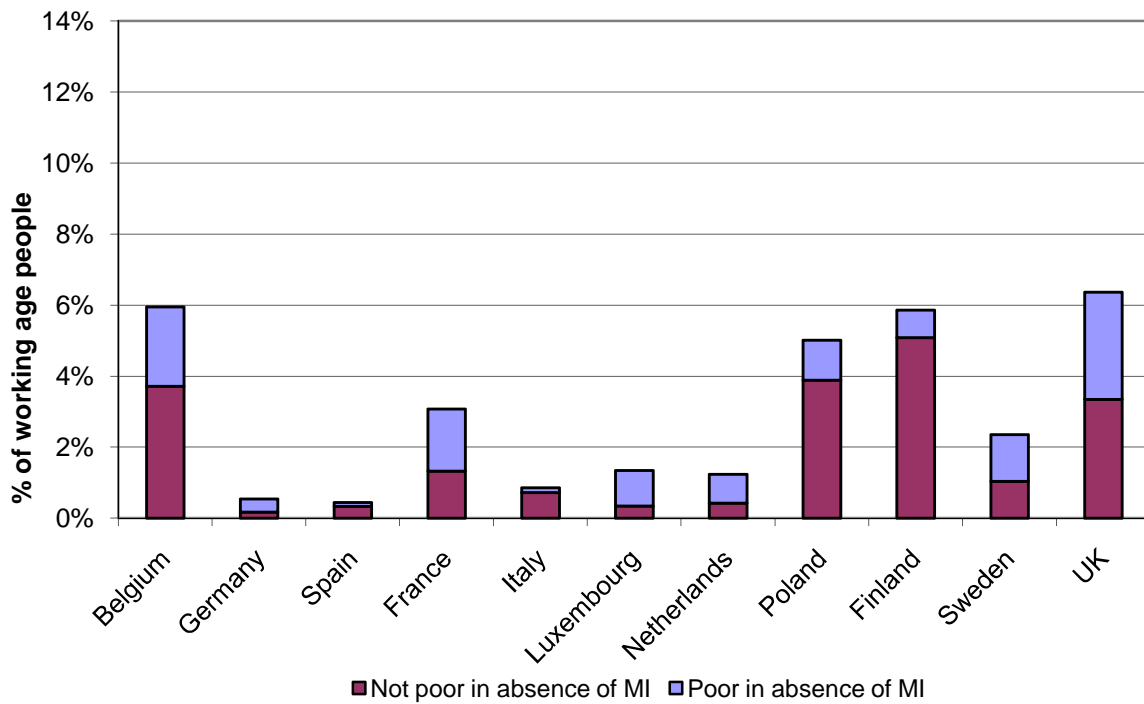


Note: Figures refer to various years 2001-05 (see table A2 in the appendix). Working age individuals on MI are individuals (aged 16 to 64 (inclusive), excluding people in current full-time education), living in assessment unit (see table A1 in the appendix) entitled to MI. Household income is disposable income equivalised using the modified OECD scale. As well as Hungary, Greece, Spain and Italy Denmark is excluded because of small sample size. Points corresponding to fewer than 50 sample observations are not plotted. Source: EUROMOD

Another aspect of coverage is whether MI recipients would be poor if they did not receive MI. Using 60 per cent of median disposable income as the poverty line, Figure 6 shows that this only applies in a small number of countries, mainly Belgium, France and the UK. The dark section of the bars identifies those entitled to MI schemes who would not fall below the 60 per cent poverty line even if they did not receive MI benefit. In contrast, the light-coloured sections identify recipients of MI schemes who would be in poverty without those benefits.

Finding recipients of MI schemes who would not be in poverty even without those benefits could be due to a range of factors. These include differences between the OECD modified equivalence scale (used to derive the equivalent income on which the poverty line is based) and the implicit “equivalence scale” of MI schemes. In particular, additional needs (due to e.g. disability) may be taken into account in assessing eligibility for, and level of, MI benefit, while they are ignored in the equivalence scale. Also, as discussed above, the assessment unit of MI schemes may be narrower than the household, and hence MI recipients may be sharing households with people in other higher-income assessment units.

Figure 6: Working age people entitled to Minimum Income above the poverty line (at 60 per cent of median) by whether poor in absence of Minimum Income



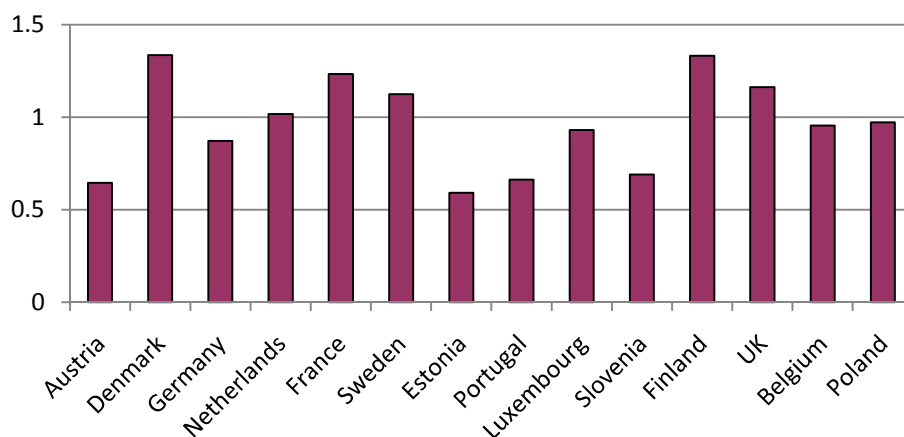
Note: Figures refer to various years 2001-05 (see table A2 in the appendix). Working age individuals on MI are individuals (aged 16 to 64 (inclusive), excluding people in current full-time education), living in assessment units (see Figure 2) entitled to MI. The sample size of working age individuals above the poverty line entitled to MI is small in AT, DK, DE, EE, EL, ES, HU, LU, NL, PT and SI. DK, EE, EL, HU, AT, PT and SI have been dropped while the results should be treated with caution for the remaining countries. Source: EUROMOD.

6. Adequacy of MI schemes

There is no consensus about what level of income should be deemed adequate (Frazer and Marlier, 2009). International comparisons of MI schemes tend to compare the incomes offered by such schemes to typical households (or “model families”) with national empirically-determined benchmarks such as median household income or average earnings (Immervoll, 2010). Figure 7 provides some similar evidence, which needs to be interpreted somewhat differently. It shows the mean of the ratio of equivalised household income to the poverty threshold, at 60% of the median, across all working aged people entitled to MI. It indicates how the household incomes of those entitled to MI compare with poverty levels, given all the income sources of those entitled, including those received by other household members. As expected, due to the use of a more comprehensive income measure, this ratio shows a higher level of income relative to the national benchmarks than those typically indicated by model family analysis. Even on this basis, average incomes of those on MI fall

far short of the poverty threshold in Estonia, Austria, Portugal and Slovenia. On the other hand, in the Nordic countries, France and the UK, the mean is well above the poverty line.

Figure 7: Working age people entitled to Minimum Income: equivalised disposable household income as a proportion of the poverty line (at 60 per cent of median)

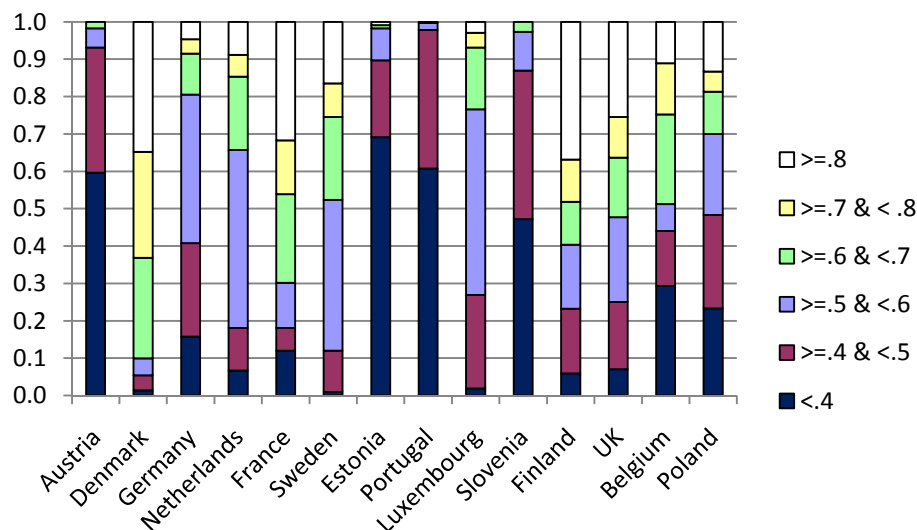


Note: Figures refer to various years 2001-05 (see table A2 in the appendix). Working age individuals on MI are individuals (aged 16 to 64 (inclusive), excluding people in current full-time education), living in assessment unit (see table A1 in the appendix) entitled to MI. Greece, Hungary, Italy and Spain are omitted. Countries are ranked by the prevalence of MI entitlement at the assessment unit level. See figure 2. Source: EUROMOD.

Since the means may be driven by vary high values for some people (e.g. if household members outside the MI assessment unit have high incomes), we also consider the proportions of those entitled to MI by range of household income relative to median income. This is shown in Figure 8. Again, Estonia, Austria, Portugal stand out with high proportions (60% or more) of those entitled failing to reach even 40% of median income (darkest sections of the bars) and the corresponding percentage is nearly 50% in Slovenia. In some countries relatively high proportions have household incomes well clear of the poverty line (above 80%, of the median shown by the white sections of the bars). This applies especially in Denmark, Finland and France and the UK. These are all countries with assessment units that are narrower than the household, making it more likely that people entitled to MI might be in high income households. In most countries incomes, while entitled to MI, can correspond to a wide range of levels, relative to the median. For example in the four countries with the highest rates or entitlement (UK, Poland, Belgium and Finland) and also France, there are substantial proportions in many of the six ranges of relative income shown (under 40%, 40-50%, 50-60%, 60-70% 70-80% and more than 80%). On the other hand, in other countries the MI system seems relatively closely targeted at the 40-60% median income range

(Germany, the Netherlands and Luxembourg). In some countries, however, the adequacy of MI is generally low (Estonia, Austria, Portugal and Slovenia).

Figure 8: Percentages of working age people entitled to Minimum Income by range of household income as a proportion of the median

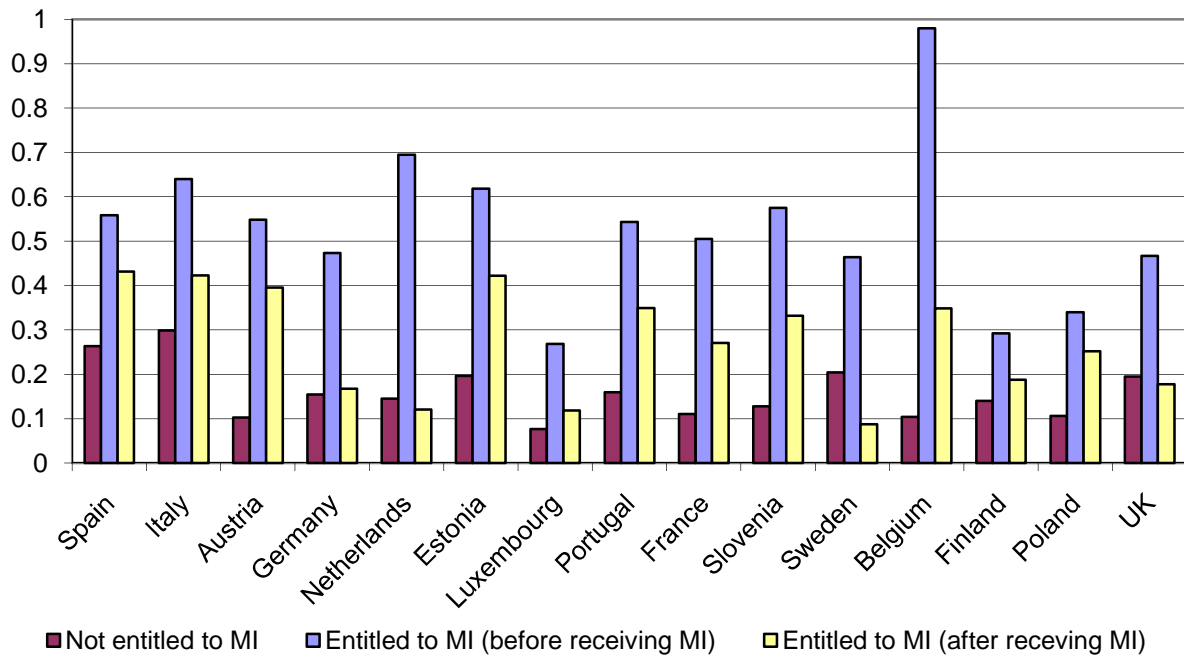


Note: Figures refer to various years 2001-05 (see table A2 in the appendix). Working age individuals on MI are individuals (aged 16 to 64 (inclusive), excluding people in current full-time education), living in assessment unit (see table A1 in the appendix) entitled to MI. Greece, Hungary, Italy and Spain are omitted. Countries are ranked by the prevalence of MI entitlement at the assessment unit level. See figure 2. Source: EUROMOD.

Finally, we explore the *contribution* of MI to reducing poverty. Specifically, we assess the adequacy of MI schemes in terms of how far short of the poverty threshold is the average income of working age people entitled to MI, compared to those who are not. The appropriate indicator is the poverty gap, measuring the “income deficit” of the poor expressed as a proportion of the poverty line.

Figure 9 compares the median poverty gap for working age individuals below the 60 per cent poverty threshold by entitlement to MI, showing the poverty gap for those entitled before and after receiving MI. By comparing the poverty gap of those entitled but before receiving MI to the poverty gap of those not entitled at all (the second and first bars respectively), we can establish the extent to which MI is targeted on the poorest households. In every country the poverty gap is larger among those entitled to MI (before receipt of MI), suggesting that MI schemes do, on average at least, target the poorest among working age people.

Figure 9: Median poverty gap of working age individuals below the poverty line (at 60 per cent of median) by MI entitlement status



Note: Figures refer to various years 2001-05. Working age individuals on MI are individuals (aged 16 to 64 (inclusive), excluding people in current full-time education), living in assessment unit (see Figure 2) entitled to MI. The sample size of working age individuals below the poverty line entitled to MI is small in DK, ES and AT. DK has been dropped while the results should be treated with caution for the remaining countries. Source: EUROMOD

Furthermore, by comparing the second and third bars for each country we can see that receipt of MI for those entitled makes a substantial difference to the poverty gap and income adequacy. The effect is particularly strong in Belgium, the Netherlands and Sweden, although it is smaller in Spain, Estonia, Austria, Poland and Finland.

Comparing the poverty gap for those not entitled to MI with that for those entitled when in receipt of MI (the first and third bars for each country) shows that in three countries, the Netherlands, the UK and especially Sweden, the gap is smaller for those on MI than those not entitled, implying that MI leaves recipients on average better off than non-recipients. In the remaining countries the opposite is the case: working age people on MI have lower average incomes than those not entitled to MI. This could suggest that in the former countries a key issue may be coverage, while in the latter countries the key issue may be adequacy rather than coverage.

7. Conclusions

The preceding analysis is an attempt to compare the effectiveness of European MI schemes in protecting working age people from poverty using microsimulation. We have identified a number of issues that render any comparison of effects across countries rather challenging, and outline ways in which the analysis might be refined and improved in the future.

First of all, we use a narrow definition of MI and then consider the incomes of those entitled on this basis. This permits our analysis to capture all the elements of cash income that may complement MI (e.g. housing benefits), without extending the focus beyond the narrow group of interest (e.g. those who may be higher up the income distribution, not entitled to MI but still entitled to housing benefits). An alternative approach would be to try to capture the monetary value of the whole MI “package”. This would not be without its conceptual and measurement challenges: for example, whether non means-tested payments and tax reductions should be included would need to be considered. In addition, this would also require a measuring stick for adequacy that can account for cross-country differences in MI assessment units.

The second key issue is the treatment of non take-up. We have argued that our analysis generally provides an upper bound on the effects of MI schemes, and allows us to distinguish non-entitlement from non take-up. However, ideally, one would want to capture the effect of both. In principle, the microsimulation approach allows us to do that. Nevertheless, the necessary information (required to simulate the benefit claiming process in detail, as well as to measure MI recipients on a consistent basis) is lacking in most countries.

Thirdly, while in many countries entitlement for MI is actually assessed on the basis of incomes received over a short period such as a month, in most countries our simulation of MI entitlement is based on incomes received in the previous year. To the extent that incomes vary over the year, this will lead to estimation errors. This is a limitation imposed by the survey data on which EUROMOD relies.

While these issues might limit the accuracy of our estimates, they also affect alternative approaches to comparing the effects of MI schemes across countries. On the one hand, focusing on benefit levels for representative recipients (e.g. Nelson 2010; Frazer and Marlier, 2009; Immervoll, 2010) inevitably relies on equally problematic assumptions about what

exactly constitutes minimum income support,¹² while failing to address at all the issues of non take-up and non-entitlement. On the other hand, direct analyses of survey data are as affected by lack of synchronisation between income earning and the assessment of benefit entitlement as microsimulation using these same survey data, in addition to often being unable precisely to identify MI benefits, the relevant assessment unit or distinguish between reasons for non-receipt.

In contrast, our microsimulation approach offers some advantages over alternatives. Specifically, by assessing eligibility under programme rules, for instance with respect to the assessment unit, we have shown the extent to which those entitled to MI live in households with income above the poverty line and vice versa.

Moreover, by simulating MI benefit entitlement under the assumption of full take-up, we have highlighted the *residual* coverage gap, due to non-entitlement. We have demonstrated that a significant proportion of low-income people of working age are ineligible for MI, although they fall below the poverty line (even when the poverty line is set at 40 per cent of median). Often, this is due to eligibility requirements of a categorical nature, e.g. citizenship, age or residence, or (less often) work availability conditions. Our finding, subject to the caveats discussed above, suggests that social safety nets may in fact be less tight than is commonly assumed – and not only because of non take-up, but also because programme rules limit coverage by design.

Furthermore, with respect to adequacy, rather than focusing on guaranteed income levels, we have estimated the contribution of MI schemes to reducing poverty, by comparing the median poverty gaps of those not entitled to MI to those entitled, before and after receipt of MI. Our results bear out that the insight of Frazer and Marlier (2009) that “although MI schemes are insufficient to lift people out of poverty, they do play a very important role in reducing the intensity of poverty”. Indeed, we have found that those entitled to MI are significantly poorer to start with than those non-entitled, that MI significantly reduces the median poverty gap of recipients, and that this effect is much stronger in some countries than in others. Estimating the contribution of MI in terms of reductions of median poverty gaps has the advantage that it is simpler and, arguably, more informative than alternative methods focusing on movements across the poverty line (Nelson, 2004).

¹² For example, the Social Assistance and Minimum Income Protection (SaMip) Interim Dataset used by Nelson (2010), defines “minimum income protection” as “the entire benefit package provided to low-income households”. Immervoll (2010) presents income levels provided by MI benefits including housing allowances, assuming that rents are equal to 20% of the average gross wage of a full-time worker.

Our final point concerns policy implications. As Immervoll (2010) has pointed out, the current economic downturn is bound to boost demand for minimum income protection throughout the EU. Increasing shares of non-standard workers, and reductions in the scope of unemployment benefits, imply that many of those losing their job in the recession may be ineligible for standard unemployment insurance. As a result, benefits of last resort such as minimum incomes will become the main (perhaps even the only) social safety net for large numbers of people.

This raises several issues at once. Perhaps paradoxically, minimum income benefits perform better in the context of a well-functioning labour market and a strong welfare state than when they are “the only game in town” (Ferrera, 2005). In this sense, the wisdom of a general shift to means-tested benefits, such as that experienced in some countries over the last few decades (Gough et al., 1997), may have to be questioned, and the relative roles of social insurance and social assistance reconsidered. In the meantime, policy makers will have to ensure that an effective safety net is in place to stop those losing their job (or otherwise experiencing a significant drop in income) from descending into poverty (Figari et al., 2010c).

The evidence presented here suggests that the current crisis will put MI schemes in several EU countries to a severe test. To meet the challenge, social safety nets must become stronger and tighter. MI schemes can play a key role in this, so long as extending coverage and/or improving adequacy are part of the agenda.

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Table A1: Details of the Minimum Income schemes in 18 EU countries

	Belgium	Denmark	Germany	Estonia	Greece	Spain	France	Italy	Luxembourg	Hungary
Name of policy	Droit a la l'integration sociale	Kontanthjælp; Starthjælp	Sozialhilfe	Toimetuleku -toetus	n/a	Renta M�nima de Inserci�n (regional)	Revenu Minimum Insertion	Minimo vitale / reddito minimo (regional)	Revenu Minimum Garanti	n/a
Assessment unit	Family	Individual unless married	Family	Household	n/a	Family	Family	Household	Household	n/a
Age	18 ⁱ	18	None	None	n/a	25 to 65 ⁱⁱ	25	No limit	25 ⁱⁱⁱ	n/a
Seeking work	Yes	Yes ^{iv}	Yes	Yes	n/a	Yes	Yes	Yes	Yes	n/a
Other conditions	None	None	None	None	n/a	None	None	None	Not having left work voluntarily	n/a
Disregards	Some earnings	Some assets; some earnings; Invalidation benefit	Basic pension; some earnings	Housing benefit; Family allowance ^v	n/a	None	None	Family home	Maternity benefits; Long term care benefits	n/a
Additional payments	Family; Housing; Maintenance	Child benefit Settlement Family benefit	Parental allowance	Housing Benefit	n/a	None	Housing benefit supplement	Regional variation	Housing benefit; Family allowance	n/a
Taxable	No	Yes	No	No	n/a	No	No	No	No	n/a

ⁱ Unless the claimant is married, pregnant or a parent, in which case they can be younger.

ⁱⁱ Under 25 if they are, or about to become, parents; special allowances for those aged over 65 and those with a disability.

ⁱⁱⁱ Unless the claimant is disabled, unable to work or looking after a child.

^{iv} Unless the claimant has a partner who is already working.

^v For families with 3 or more children.

Table A1: continued

	Netherlands	Austria	Poland	Portugal	Slovenia	Finland	Sweden	UK
Name of policy	Algemene Bijstand	Sozialhilfe	Poloc spoleczna	Rendimento social de insercao	Denarna socialna pomoč	Toimeentulotuki	Ekonomiskt bistand	Income Support
Assessment unit	Family	Family ⁱ	Household	Household	Household	Family	Family	Family
Age	23 ⁱⁱ	No age limits	18	18 ⁱⁱⁱ	18	In practice 18 or over	No age limit	18 ^{iv}
Seeking work	Yes	Yes	Yes for periodic allowance	Yes	Yes	Yes	Yes	Yes unless exempt
Other conditions	None	None	None	Be available for training	None	None	None	None
Disregards	Some capital	Care-related benefits; Education allowance	None	Some earnings	Scholarships; Alimony; Special childcare allowance	Some household income	None	Own home; Disability benefits; Some earnings
Additional payments	Family allowance; Rent subsidy	Family allowance; Child benefit; Housing benefit	None	Family allowance Housing supplements	Child benefit Rent subsidy	Family allowance; Housing benefit	Housing supplement	Child tax credit; Housing benefit; Council tax benefit
Taxable	No	No	No	No		No	No	No

Sources: EUROMOD Country Reports [<http://www.iser.essex.ac.uk/research/euromod/resources-for-euromod-users/country-reports>] and MISSOC tables XI: 'Guaranteeing Sufficient Resources' [http://ec.europa.eu/employment_social/spsi/missoc_tables_en.htm].

ⁱ In EUROMOD the household is used as the assessment unit

ⁱⁱ Can be reduced by the municipality for those aged 21-22.

ⁱⁱⁱ Can be aged under 18 if they have a dependent child, are married or cohabiting.

^{iv} Can be aged 16-17 in exceptional circumstances.

Table A2: EUROMOD input datasets and simulated tax-benefit systems

	Country	Dataset	Date of collection	Income reference period	Tax-benefit system	Sample size (households)
BE	Belgium	Panel Survey on Belgian Households	2002	annual 2001	2003	2,975
DK	Denmark	ECHP	1995	annual 1994	2001	3,215
DE	Germany	German Socio-Economic Panel Study	2002	annual 2001	2003	11,303
EE	Estonia	Household Budget Survey	2005	monthly 2005	2005	3,432
EL	Greece	Household Budget Survey	2004/05	monthly 2004	2005	6,555
ES	Spain	EU-SILC	2005	annual 2004	2005	12,937
FR	France	Enquête sur les Budgets Familiaux (EBF)	2000/01	annual 2000/01	2001	10,305
IT	Italy	Italian version of EU-SILC	2004	annual 2003	2003	24,270
LU	Luxembourg	Socio-Economic Panel (PSELL-2)	2001	annual 2000	2003	2,431
HU	Hungary	EU-SILC	2005	annual 2004	2005	6,924
NL	Netherlands	Sociaal-economisch panelonderzoek	2000	annual 1999	2003	4,329
AT	Austria	Austrian version of ECHP	1998+1999	annual 1998	2003	2,674
PL	Poland	Household Budget Survey	2005	monthly 2005	2005	34,692
PT	Portugal	ECHP	2001	annual 2000	2003	4,588
SI	Slovenia	A sub-sample of Population Census merged with administrative records	2005 (2002)	annual 2004	2005	4,777
FI	Finland	Income distribution survey	2001	annual 2001	2003	10,736
SE	Sweden	Income distribution survey	2001	annual 2001	2001	14,610
UK	UK	Family Resources Survey (FRS)	2003/04	monthly 2003/04	2003	28,860

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Table A3: Composition of total benefits paid to households with working age people in the bottom decile group of the household income distribution
% of household disposable income

	Old age benefits	Health related benefits	Family benefits	Unemployment benefits	Other benefits	MI schemes	Total benefits
Belgium	7.3	4.5	11.7	16.0	2.5	29.2	71.2
Denmark	4.2	7.7	16.7	30.4	5.5	2.7	67.3
Germany	13.6	0.3	14.0	17.8	15.0	7.5	68.3
Estonia	19.4	16.1	13.1	1.8	1.1	14.9	66.5
Greece	20.3	3.6	3.9	2.5	0.0	0.0	30.3
Spain	20.0	6.8	3.7	7.4	1.5	0.6	39.9
France	14.3	1.0	11.3	7.7	12.9	4.5	51.6
Italy	24.7	0.6	7.3	1.8	0.8	0.1	35.3
Luxembourg	4.1	6.9	17.5	2.6	0.4	16.6	48.0
Hungary	7.9	16.0	20.5	10.4	5.5	0.0	60.3
Netherlands	5.8	17.1	8.1	4.2	11.6	19.3	66.1
Austria	20.8	8.3	14.3	9.2	1.0	4.3	57.8
Poland	15.3	16.0	13.0	7.4	3.4	16.1	71.3
Portugal	16.6	5.7	7.6	5.0	0.0	19.3	54.3
Slovenia	19.5	9.0	11.8	3.0	1.3	22.5	67.1
Finland	16.5	0.8	10.4	29.0	11.6	8.0	76.3
Sweden	9.7	5.2	14.2	10.3	7.2	20.3	66.8
UK	7.0	6.9	33.9	1.0	20.4	21.8	91.1

Note: Figures refer to various years 2001-05. "Working age" is defined as being aged 16 to 64 (inclusive), excluding people in current full-time education. Decile groups are based on equalised household disposable income including the whole population. Source: EUROMOD