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Working Paper

How Reliable Are Social Safety Nets? Value and Accessibility in Situations of Acute Economic Need

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DISCUSSION PAPER SERIES

IZA DP No. 15232

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Value and Accessibility in Situations of
Acute Economic Need**

Herwig Immervoll
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APRIL 2022

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ABSTRACT

How Reliable Are Social Safety Nets? Value and Accessibility in Situations of Acute Economic Need*

Social protection systems use a range of entitlement criteria. First-tier support typically requires contributions or past employment in many countries, while safety net benefits are granted on the basis of need. In a context of volatile and uncertain labour markets, careful and continuous monitoring of the effectiveness of income support is a key input into an evidence-based policy process. This paper proposes a novel empirical method for monitoring the accessibility and levels of safety net benefits. It focusses on minimum-income benefits (MIB) and other non-contributory transfers and relies on data on the amounts of cash support that individuals in need receive in practice. Results show that accessibility and benefit levels differ enormously across countries – for instance, more than four out of five low-income workless one-person households received MIB in Australia, France and the United Kingdom, compared to only one in five in Greece and Italy, two countries that have since sought to strengthen aspects of safety-net provisions.

JEL Classification: H53, H31, D31, I38, C31, C53

Keywords: minimum-income benefits, accessibility, coverage, non-take-up, adequacy, poverty

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How reliable are social safety nets?

1. Introduction

1. Social protection systems employ a broad range of entitlement criteria. Workers in many OECD countries acquire entitlements to first-tier earnings-replacement benefits such as unemployment insurance, accident insurance, disability and parental-leave benefits through contributions. Some groups, e.g. families with children, receive support regardless of income or past employment (universal benefits). In addition, households with limited resources may have access to minimum-income benefits (MIB). A principal purpose of these “safety-net benefits” is to prevent extreme hardship. The accessibility of MIB, and the support levels that they provide for recipients, are of central interest because they shape the economic security of the least-well off in society.

2. As non-contributory benefits, MIB are not linked to past employment or contribution histories; instead, they employ a low-income criterion as a central entitlement condition. They therefore include social assistance benefits as well as other means-tested payments that are typically received by households with no other income sources, although they can also top up incomes of low-paid workers and recipients of other benefits. Examples are means-tested lone parent benefits, means-tested housing benefits as well as any income support for jobseekers that is not conditional on past work or contributions.¹

3. Recent labour-market trends and the ongoing health crisis are reinforcing attention on social safety nets in the policy community. The Future of Work debate has highlighted that some social protection systems are not well prepared for the faster pace of job reallocation that is likely to accompany the adoption of new production technologies. For instance, in a majority of OECD countries, and prior to the COVID-19 crisis, less than one third of jobseekers received unemployment benefits (OECD, 2018^[1]). Technological advances make alternative work arrangements that bypass traditional employer-employee relationships a viable option for a growing number of jobs. But social protection provisions that were designed around traditional forms of employment often do not protect workers with “non-standard” contracts to the same extent. The resulting support gaps not only represent an inequitable, and possibly regressive, treatment of workers based on their employment status, but also erode the financial sustainability of social protection provisions (OECD, 2019^[2]).

4. The COVID-19 pandemic has further accentuated structural challenges facing social protection policies (OECD, 2020^[3]). Paid sick-leave schemes and unemployment insurance benefits have supported many who have lost their incomes early on during the health crisis. Countries quickly expanded these benefits and eased employers’ access to short-time work schemes. Yet, many emergency measures mostly aided dependent employees. Even in countries with well-developed (or recently reinforced) social protection systems, many workers without standard employment contracts, or with short or unstable work histories, are struggling to make ends meet when confronted with a job or earnings loss. Moreover, those who were already out of work before the crisis may now face

¹ This includes Unemployment Benefit II in Germany, or the main benefit for jobseekers in Australia and New Zealand. But it *excludes* unemployment assistance benefits that do require a contribution history or are only available after entitlement to insurance benefits, such as *Notstandshilfe* in Austria.

protracted periods of hardship. As the crisis and its economic consequences evolve, MIB will likely become an increasingly crucial part of governments' strategies for stabilising family incomes, tackling inequality and relieving acute economic need.

5. In a context of volatile and uncertain labour markets, careful and continuous monitoring of the effectiveness and reach of MIB is a key input into an evidence-based policy process. Legal provisions, such as statutory benefit *levels*, provide important policy indicators, but they are not sufficient for assessing whether last-resort benefits meet their objectives. For instance, although MIB are occasionally characterised as income floors, not all low-income individuals receive support, and the impact of MIBs on family incomes (and on poverty, inequality and work incentives) therefore depends crucially on their *accessibility* in practice (Immervoll, Jenkins and Königs, 2014^[4]; Immervoll, 2010^[5]).

6. The accessibility of MIB – the share of individuals and families in acute economic need who receive support – depends on a number of factors: The strictness of income and asset tests define legal entitlements and may preclude access for some households in need of support (see Section 3). In addition, stigma, information gaps or behavioural requirements, such as active job search, may make otherwise eligible households less likely to apply for support in the first place (Immervoll and Knotz, 2018^[6]; Bargain, Immervoll and Viitamäki, 2010^[7]; Eurofund, 2015^[8]). The implementation of legal regulations or government guidelines may also vary over time and across countries, regions and groups of claimants (e.g. if budgetary or administrative constraints hinder a timely assessment of benefit claims). Support needs and other characteristics of low-resource households also vary over time and geographically, and this affects observed patterns of benefit receipt.

7. This paper proposes a novel empirical method for monitoring and comparing the accessibility and levels of MIB support using data on de-facto benefit receipt. It focuses on working-age individuals and their families (“working-age households”) and reports the likelihood of benefit receipt, as well as the amount of benefit payments in practice. The results are comparable indicators of benefit accessibility and generosity for specific policy relevant household types (or “vignettes”). They translate empirically observed patterns of benefit receipt into quantitative indicators of de-facto benefit receipt for different household characteristics and circumstances. As such, these indicators are strictly descriptive. As this approach does not seek to establish causality between household characteristics or behaviour and benefit receipt, it sidesteps the methodological challenges of feedback mechanisms (or endogeneity) between benefit receipt and household behaviour.

8. The study covers twelve OECD countries that employ very different types of social-protection systems, and for which good-quality household data were available: Austria, Australia, Belgium, Czech Republic, France, Germany, Greece, Italy, Korea, Slovak Republic, Spain and the United Kingdom. It adopts the perspective of households facing economic difficulties with no or very limited access to market incomes or to contributory benefits. The people-centred approach complements studies that focus on comparisons of spending levels, legal parameters or broader institutional mechanisms.

9. Section 2 of this paper provides an overview of the reach of MIB and other key benefits across OECD countries, and situates MIB in the context of countries' broader support provisions for working-age individuals and their families. Section 3 presents a statistical model that can be used as a descriptive tool for quantifying and comparing benefit accessibility and generosity across populations and over time. Section 4 presents results for selected policy relevant household circumstances. Section 5 concludes.

2. Income assistance in practice – support needs, targeting, and benefit receipt

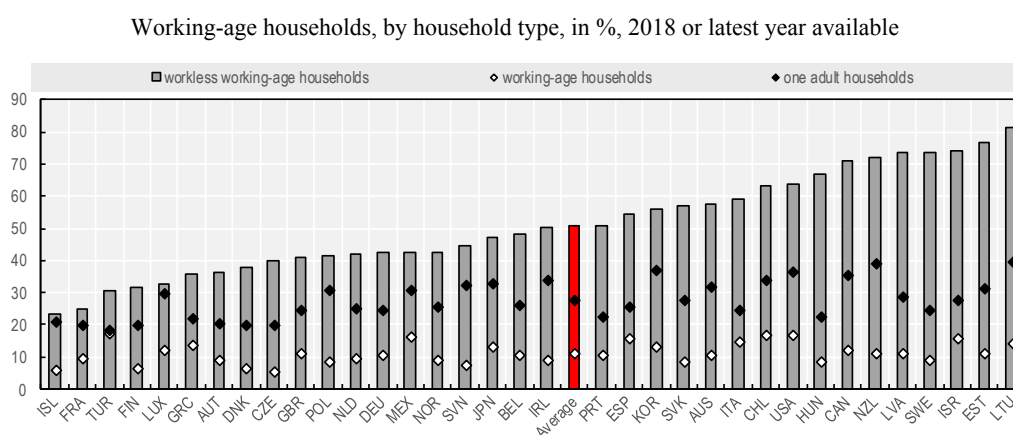
This section provides context for a comparative empirical study of MIB receipt patterns. It compares poverty risks among working-age households, the incidence of support payments across income groups, and the overall reach of MIB in terms of total recipient numbers.

Who is facing situations of acute economic need?

10. In a comparative setting, commonly used measures of relative poverty provide a useful context for discussions of acute economic need and of the potential role of MIB in relieving it. According to one commonly used measure, one in ten people living in working-age households may be classified as income-poor across OECD countries on average, with disposable income below half the national median (Figure 1).

11. Poverty risks are much higher for some household types, such as one-adult households, including lone parents (poverty rates of just under 30% on average across OECD countries), and workless households (51%), indicating that benefits may be inaccessible for some groups. Indeed, despite well-developed unemployment insurance and other out-of-work benefits in many countries, jobless people may lack the necessary contribution history or they have exhausted their entitlements. Across 24 OECD countries, only one in three jobseekers received unemployment benefits in 2016 (OECD, 2018^[1]). For those with reduced work capacity due to longer-term health problems, access to disability benefits can be limited as well.² For some recipients of such transfers, e.g., those living in larger households, entitlements may not be sufficient to prevent relative income poverty.

Figure 1. Poverty rates after taxes and transfers



Note: Share of persons living in working-age households with equivalised disposable income below 50% of the national median. Workless households are those without any income from employment or self-employment throughout the year. One-adult households include lone parents. Categories are not exclusive.

Source: OECD Income Distribution Database, version 25th of February 2020, <http://oe.cd/idd>.

² For instance, across 26 EU countries, 55% of those with a severe chronic illness that hampers their daily activities did not receive disability related benefits in 2018 (MacDonald, Prinz and Immervoll, 2020^[35]).

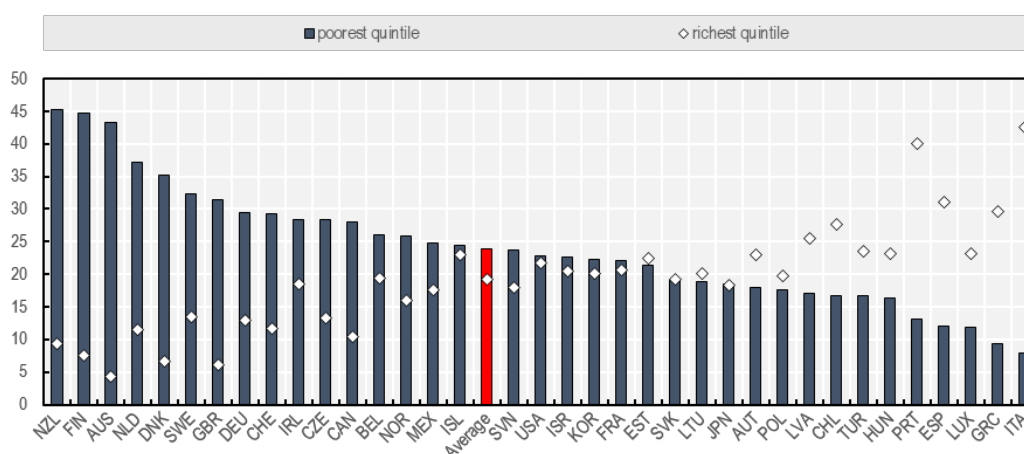
What systems are in place to help those in urgent need?

12. Income-support strategies and policy setups differ significantly across countries. This reflects different policy institutions and traditions, but also different strategies for balancing the various objectives of social protection – such as risk sharing, income smoothing over time, inequality reduction and poverty alleviation. Some rely very strongly on means-tested benefits for working-age support. With tightly income-targeted transfers in New Zealand, Australia and the United Kingdom, households with income in the bottom 20% received almost a third of total working age transfers, while only 6% went to the top quintile (Figure 2). The share of cash transfers going to low-income families was also high in Nordic countries and in some parts of continental Europe. Several of them use “layered” systems that combine insurance-based out-of-work benefits with universal support for families with children and MIB as a lower-level safety net. For some of them, and for some non-European OECD countries, Figure 2 points to a remarkably similar share of benefit payments going to low-income and high-income groups (e.g. Estonia, France, Iceland, Japan, Lithuania, Slovak Republic, United States).

13. In other countries, low-income households received much smaller shares of overall transfer spending. In fact, in several OECD countries, transfer spending in the top quintile was *higher* than in the bottom quintile group. In Italy, as much as 43% of all working age benefits went to the top 20%, and only 8% to the bottom income quintile. Incomplete coverage is one reason for low shares of support going to low-income groups in southern European countries. In addition, not all social transfers are designed to redistribute from rich to poor. Significant benefit receipt among higher-income groups reflect entitlements to earnings-related transfers that redistribute little or not at all, and that require contribution histories that low-income groups often do not achieve.

Figure 2. Benefit coverage can be patchy and support is not always targeted to the poor

Share of total cash transfers received by working-age persons in low and high-income households, 2018 or latest year available



Note: Working-age households. Income quintiles refer to income before benefit payments and taxes.

Source: Calculations based on the [OECD Income Distribution Database](#), adapted from (OECD, 2012^[9]) and (OECD, 2017^[10]).

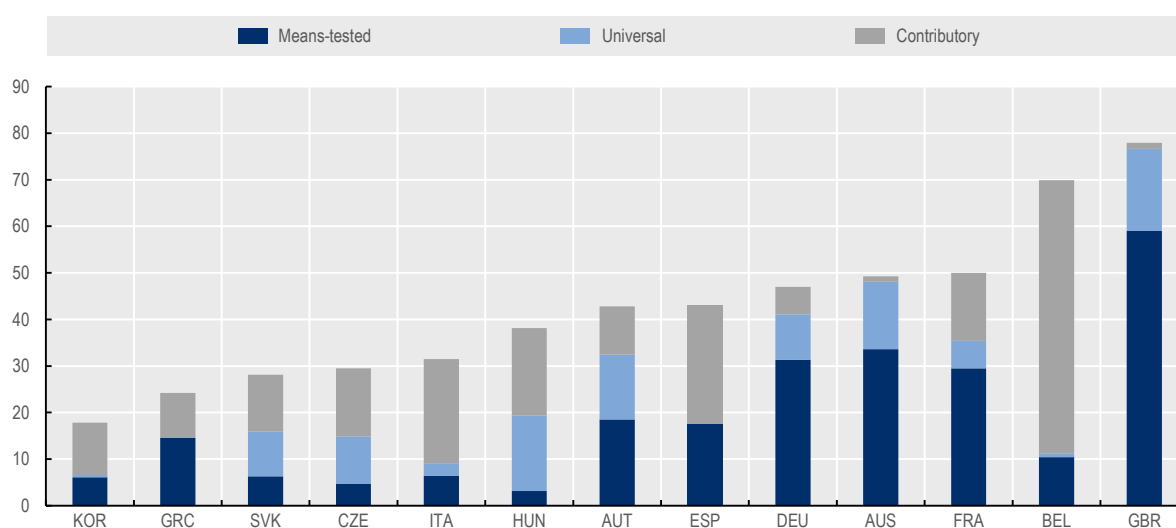
The relative importance of the *insurance* and the *assistance* functions in a country’s social protection system has consequences for the circumstances of households that would

potentially seek support from MIB and other non-contributory benefits. Where insurance-based programmes provide primary income support for many low-income households (e.g. Belgium, Spain), MIB are likely to be narrowly targeted to comparatively small numbers of more disadvantaged households (such as long-term unemployed or those who do not qualify for unemployment support in the first place). In countries where insurance benefits play less of a role (e.g. Australia or the United Kingdom), MIB can be expected to reach a much larger share of out-of-work individuals, including less disadvantaged short-term unemployed.

14. This is illustrated in Figure 3. In both Belgium and the United Kingdom, public benefits made up over 70% of the incomes of households in the first income decile (before benefits), but with very different underlying targeting mechanisms. The support package in the United Kingdom consists almost entirely of universal and means-tested support, while contributory benefits accounted for two thirds of the support package in Belgium. Similar differences can be seen across Germany and Spain, which also had similar benefit shares for low-income households. Public benefit payments in Australia made up half of the income in the bottom income decile and insurance-based benefits were quantitatively negligible. Means-tested benefits in several other countries were a relatively minor share of total transfer spending (see Annex A) but they nevertheless dominated support going towards the lowest-income households, e.g. in Germany, and, to a lesser extent, in France.

Figure 3. The importance of non-contributory benefits in the incomes of low-resource households varies considerably across countries

Share of benefits in total household incomes in the bottom income decile, by entitlement criterion, at or before 2018



Note: Working-age households. Income decile refers to income before benefit payments. Countries are ranked by the share of working-age benefits in total gross household incomes. Benefits that are both contributory and means-tested (e.g. unemployment assistance or “Notstandshilfe” in Austria) count as contributory.

Source: EU-SILC (EU statistics on income and living conditions, 2016 waves), GSOEP (German Socio-Economic Panel, 2018 wave) KLIPS (Korean Labor and Income Panel Study) (2019 wave), HILDA (The Household, Income and Labour Dynamics in Australia Survey) (2018 wave).

How many people receive minimum-income benefits?

15. On average across countries, less than one third of poor “working-age” households received support from programmes classified as MIB in recent years. Figure 4 shows the

number of households receiving payments from the main MIB programme in their country, expressed in percent of the number of poor households in each country. For the reasons discussed above, and although MIB are targeted to low-income households, not all income-poor households receive support.

16. In most countries, the main income support programme is either the main social assistance benefit (e.g. the *Bedarfsorientierte Mindestsicherung* in Austria), or a jobseeker benefit that is means-tested and not contingent on past employment histories (e.g. *Newstart* in Australia, the *Unemployment Benefit II* in Germany, or the income-tested component of the *Jobseeker's Allowance* in the UK).³

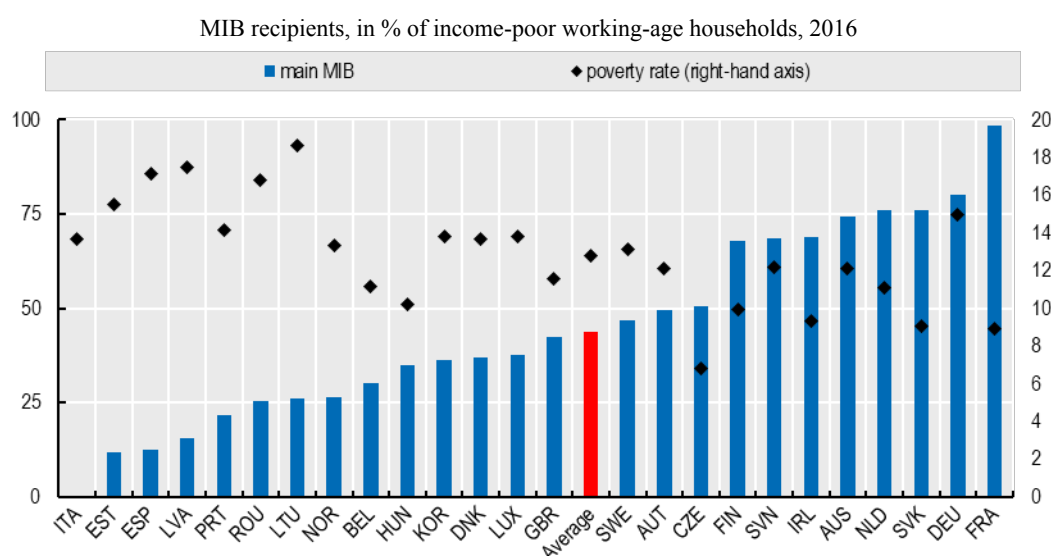
17. Recipient numbers in France are very close to the number of income-poor households and they are around 75% in Australia, Germany, Netherlands and Slovak Republic. In most other countries, the ratios are 50% or lower, and below 20% in Latvia and Estonia. Italy introduced a new programme in September 2016, and extended minimum-income support in 2019, but did not operate a generally applicable national main earnings replacement scheme for poor families prior to that.⁴ Spain introduced a national minimum income programme in June 2020 (*Ingreso Mínimo Vital*). In Figure 3, recipients of 'means-tested' benefits in Spain are mostly recipients of *Rentas Mínimas*, that are provided by regions, with regionally varying entitlement criteria and benefit amounts.

18. "Main MIB" provide income support based on the overall socio-economic conditions of households (they are always means-tested). However, those core programmes do not always include related non-contributory support payments that low-income households may receive, for example support for specific groups (such as families with children or people with disabilities); cash transfers administered through refundable tax credits (except some refundable tax credits in the UK and Korea), or income support provided in the form of non-contributory supplements. Comparing MIB support packages across countries therefore requires a broader look at the overall benefit packages that may be available to those in acute economic need.

³ In some countries, these benefits also top up low incomes from work or other (insurance-based or universal) benefits, e.g. Unemployment Benefit II in Germany. In Spain, the *Ingreso Mínimo Vital* was introduced in 2020 and is not part of this analysis.

⁴ On recent reforms in Greece and Italy, see Bulman et al., (2019_[11]) and OECD (2020_[12]). More recent recipient numbers for Italy and other countries will be available from the OECD SOCR data during the first quarter of 2021 (<http://oe.cd/socr>).

Figure 4. Minimum-income benefits: What role in poverty-alleviation strategies?



Note: “Income poor” refers to households with income below 50% of the national median. Recipient numbers refer to the “main” MIB in each country plus specific lone-parent benefits (in Ireland, and the United Kingdom) and non-contributory unemployment benefits (in Australia, Denmark, Germany, Ireland, Spain and the United Kingdom). Greece, Poland: comparable recipient data were not available. Italy: A national minimum-income programme was introduced in September 2016 and was extended subsequently (see footnote 4). The denominator for Australia and Ireland is poor working-age individuals, as main MIBs are awarded at individual level. The ratio of benefit recipients to income-poor households could in principle exceed 100% if recipients include large numbers of non-poor households. Lump-sum payments, grants, supplements and refundable tax credits are not included.

Source: OECD SOCR database (www.oecd.org/social/recipients); EU-SILC for poverty headcounts. OECD Income Distribution Database (<http://oe.cd/idd>).

3. A statistical model of MIB accessibility and support levels

19. This section develops a simple statistical model of MIB receipt. Its aim is to summarise the complex patterns of observed benefit receipt using indicators of support *accessibility* and *generosity*. To make the resulting metrics informative and transparent in a comparative setting, the model accounts for key policy levers and country differences in the characteristics of low-income households.

20. In a nutshell, the approach seeks to quantify the support that households receive in specific policy-relevant circumstances (e.g., for a certain income level, labour-market situation and family structure). It proceeds in two steps. A first step estimates the probability of MIB receipt at the household level, and, conditional on receipt, the expected size of the benefit package.

21. In a second step, the estimated statistical relationships are then used for inference on benefit receipt in concrete household circumstances (“vignettes”). All results refer to 2015 incomes (2016 in Australia and 2018 in Korea) and therefore do not account for any reforms implemented in later periods, notably the introduction of a national MIB scheme in Italy and Greece (Bulman et al., 2019^[11]; OECD, 2020^[12]).

22. Estimates rely on data from the 2016 waves of the European Union Statistics of Income and Living Conditions (EU SILC) for eight EU countries and the United Kingdom, the German Socioeconomic Panel (GSOEP, 2018 wave), the University of Melbourne

Household Income and Labour Dynamics Australia survey (HILDA, 2017 wave) and the Korean Labour and Income Panel Study of the Korean Labour Institute (KLIPS, 2019 wave).⁵ The main variable of interest (the “left-hand” variable in the statistical model) is the value of the *total package of non-contributory cash benefits*. This corresponds to the final column in Table 1 and includes MIB (e.g. social assistance, housing and other means-tested benefits that do not depend on past employment) and universal transfers (in practice child benefits). This broad definition reflects the fact that countries provide support for low-income families through a number of different channels and programmes. To arrive at the total package of non-contributory benefits for each household, we categorised individual benefits by entitlement criterion (such as means-testing) according to statutory rules (Australia, Germany and Korea), or used categories such as “means-tested” or “contributory” that are provided for each benefit variable directly in the data source (all other countries).⁶ See Annex B for details. Available household data do not systematically record the value of in-kind benefits and they are therefore not part of the analysis.⁷

Table 1. Working-age benefits by entitlement criterion

	Conditional on past contributions or past employment	Available irrespective of past contributions or past employment
Means-tested	E.g. Unemployment assistance in Austria	E.g. social assistance, housing benefit, but also some unemployment assistance programmes (Australia, Germany, UK)
Not means-tested	E.g. Unemployment insurance benefit, disability pensions, sickness benefit	Universal benefits, in practice: child benefits

Step 1: Regression models for benefit receipt and entitlements

23. The dependent variable is total non-contributory cash benefits *received over the course of an entire year* (net of any old age and survivors’ benefits) by households with at least one non-retired working-age member (age group 18 to 64 years old, “working-age household”). It therefore accounts for both the average monthly benefit level and the duration of receipt during a 12-month period. A notable advantage of using a broader benefit concept (all non-contributory cash benefits) and a longer time period (12 months) is that this reduces the scope of known measurement errors in surveys, such as

⁵ For Korea, KLIPS was chosen because its content and structure is broadly comparable with the data sources for other countries, and because it has been the dataset of choice for numerous studies relating to low-income households. An interesting alternative data sources for future work is the Korea Welfare Panel Study (KOWEPS), which strongly oversamples low-income households.

⁶ Note that the non-contributory benefits category in the UK and Korea includes refundable, income-related child and in-work tax credits, but that somewhat similar programmes are not recorded as social transfers in other countries.

⁷ In-kind benefits, such as subsidised housing, or the public provision of child- or healthcare significantly contribute to poverty alleviation and redistribution in many countries (see, e.g., Förster and Verbist (2012_[33])). Information on the receipt of in-kind transfers is not systematically recorded in the survey data that we use in this paper. Converting in-kind benefits into a cash-based metric that is comparable across countries is also not methodologically straightforward. While the exclusion of in-kind support is a drawback of most analyses of social transfers, cash benefits are clearly essential in providing households with a basic standard of living.

misclassification, recall bias or “forward telescoping” bias (Bruckmeier, Riphahn and Wiemers, 2020^[13]).

24. Independent variables include the following key determinants of benefit receipt: family composition (one-adult household, couple with children etc.), household income (other than non-contributory benefits,⁸ expressed in decile groups of the national income distribution), work intensity and volatility during the year, housing tenure and rent paid (important for housing benefits, as they tend to support rent payments), as well as health status.

25. The approach is entirely descriptive and does not claim or seek to establish causality. Results are indicators of the probability of benefit receipt given certain observable household characteristics that typically affect benefit entitlement. They therefore do not rely on the interpretation of individual parameters, but on the joint correlation of the independent variables with benefit receipt. For individual households, benefit receipt may well be driven by unobservable characteristics that are correlated with independent variables in this model – e.g. for single parents, a local lack of affordable childcare may simultaneously cause reduced work-intensity and an MIB claim. Omitted variable bias can be an issue with any regression model. In the context of this paper, the explanatory power of the model’s independent variables is strong, suggesting that it does include the most important drivers of benefit receipt (see Annex B). Nevertheless, omitted variables may introduce a bias to model predictions, e.g., if their relevance varies across countries and over time.

26. The characteristics of the benefit system itself may also influence household circumstances and behaviour, e.g. through work incentives. As these effects vary across countries, they shape the population of households in urgent need to some extent. The aim of the indicators presented here is to capture how well safety-net benefits protect households “in acute economic need”, irrespective of the mechanisms that shape the circumstances of this population.

27. Separate models are estimated for *benefit receipt* (yes/no, stage-1 regression) and *benefit amounts* (estimated only on observations with positive benefits, stage-2 regression). We use a generalized Hurdle approach, as the process that determines whether a person receives social benefits is not necessarily the same as the process that determines the amount received (Wooldridge, 2010^[14]; Cragg, 1971^[15]). Effective sample sizes range from about 4,000 households in Austria, Belgium and Slovak Republic to more than 14,000 in Italy. Annex A presents further information about the selected samples, while Annex B contains details on model selection and a comprehensive list of independent variables.

Step 2: Inference about benefit receipt in specific circumstances (“vignettes”)

28. For a number of reasons, the coefficients of the model estimates in Step 1 are difficult to compare and interpret across countries.⁹ To facilitate like-with-like

⁸ That is, gross labour income, unearned income (capital income, rents etc.), contributory benefits, and all old-age and survivors’ benefits. Most results do not control for household assets, but the model allows to control for homeownership.

⁹ A direct interpretation of the estimated coefficients is complicated by interaction effects, categorical variables and other nonlinear functional forms. Significant interpretation difficulties arise also in nonlinear models such as logistic regression and the raw coefficients are often not of immediate interest.

comparisons, and identification of relevant policy mechanisms, we define a number of “vignettes”, i.e. combinations of characteristics and circumstances of hypothetical but policy-relevant households (e.g. a workless adult living alone, a couple with children with low work intensity etc.). The vignettes are created by fixing values of one or several independent variables, while allowing other variables to assume the sample mean. For each vignette, we then compute marginal effects at the resulting vector of independent variables, allowing us to summarise the entire vector of estimated parameters into a single value using the same metric as the dependent variable (in this case, the probability of receipt and the benefit amount respectively). Each vignette yields two key results: A probability of receiving non-contributory benefits (stage one) and the expected benefit amount for households receiving benefits (stage two), along with measures of statistical significance to facilitate the interpretation of observed gaps.¹⁰

4. Results

29. This section discusses patterns of benefit accessibility and generosity for some of the main groups of MIB recipients, including those emphasised in Section 2. First, it presents results for a “baseline vignette” of a workless adult living alone with very low income (the bottom 10%) from market sources and contributory benefits. The characteristics of this baseline vignette are then changed one at a time, in order to explore how accessibility and benefit levels vary across specific groups, such as individuals with health problems, low-wage part-time workers, and low-income couples with children.

Baseline results: workless, able-bodied low-income individual living alone

30. The simple case of a workless low-income adult living alone is a useful starting point for the cross-country comparison.¹¹ Indeed, with no access to incomes from partners or other adults, workless single-person households face very high poverty risks, as shown in Section 2. They are therefore an important target group for safety-net programmes.

31. Across the 12 countries, workless, low-income households in Italy and Greece were least likely to receive non-contributory benefits (receipt probability of 15 to 20%, Figure 5, Panel A, left-hand figure). Italy and Greece did not operate national and generally applicable MIB schemes in 2015, but both countries have since introduced them (Bulman et al., 2019_[11]). Expected coverage was close to or below 50% in Korea and Spain. In Korea, the means-test for the main MIB programme (National Basic Livelihood Security, NBLs) included a support obligation for parents and children of claimants even if they did not live in the same household, resulting in low recipient numbers (Sohn, 2019_[16]). This

¹⁰ Note that the estimated variance associated to model predictions depends on the empirical distribution of the independent variables that are “fixed”. That is, marginal effects associated with different vignettes not only have different expected values but also different variances, with variances increasing as the number of observations in the sample with the characteristics of any chosen vignette decreases. A large number of observations in the sample enables precise (i.e. low-variance) estimates. This technical detail has important consequences for the interpretation of observed gaps between vignettes. The estimated receipt probabilities of two vignettes are statistically significant from each other if their 90% confidence intervals do not overlap. Therefore, small differences in receipt probabilities are only statistically significant for very precise estimates.

¹¹ In practice, we define, “workless” as a work-intensity of under 10% of potential working hours – this is consistent with working up to four hours per week throughout the year, or up to six weeks of full-time work.

familial support obligation was, however, scheduled to be abolished in 2022 (Joint Ministries, 2020_[17]).¹² Social assistance recipient numbers in Spain were low, but there is significant regional variation; for instance, not all regions operate housing benefits (OECD, 2020_[12]). At around 90%, MIB receipt probabilities for the single-person vignette were highest in France (where means-tested benefits are a lower-tier form of support that complements insurance benefits), and in the United Kingdom (where means-tested benefits are the main form of earnings replacement for jobless individuals).¹³

32. In part, country patterns can be explained by the specific configurations of benefit systems. In countries that rely strongly on insurance benefits, such as Belgium, Greece, Italy or Spain, the role of last-resort benefits is, by definition, secondary (see also Figure 3). Many jobless people claim insurance benefits and, as indicated in Figure 2, recipients of these transfers often have incomes significantly above the bottom 10%. The “space” for MIB to operate therefore consists of individuals who do not qualify for insurance transfers. In countries where insurance-based benefits are very accessible – e.g. Belgium, where unemployment benefits are not time limited – these are often households in complex socio-economic circumstances (e.g., with multiple barriers), whose claims may be difficult to assess, and who may be less likely to actively engage with benefit bureaucracies in the first place.

33. By contrast, “layered” systems that combine insurance-based support with more sizeable last-resort benefits, such as France and Austria, achieve comparatively high MIB receipt probabilities in the bottom decile. MIB accessibility is also high in Australia and the United Kingdom, where income support strategies rely very heavily on means-testing, making MIB a principal form of income support. The visibility of MIB as a central benefit programme in the UK, and the fact that low-income households there have little other income to draw on, is also consistent with findings of comparatively low rates of MIB non-takeup in the UK. For instance, the Department for Work and Pensions estimates that in 2017/18, 87% of entitled households claimed housing benefits, and 88% claimed means-tested lone-parent and disability benefits (Department for Work and Pensions, 2020_[18]).¹⁴ For other countries, take-up rates of 60% below are not uncommon, e.g. for Social

¹² Means-tested tax credits for low-income working households in Korea (Earned Income Tax Credit, EITC and Child Tax Credit, CTC) increased substantially in both recipient numbers and expenditures, following the easing of age and income requirements in 2019 (OECD, 2021_[36]). The 2018 information reported here do not reflect these reforms, and the CTC is also not relevant for adults living alone. As in other countries, receipt of tax credits in Korea may also be somewhat underestimated in the survey data. There is in fact significant evidence of under-reporting of tax credits in the KLIPS data overall, eg KLIPS reports 437,380 households in receipt of these tax credits in 2016, compared to 2,597,071 reported by the National Tax Service, see also (Nam, 2017_[30]). The effect of this on our measure of total MIB is difficult to assess, but it may be limited for single-person households in the first income decile (CTC are not relevant for them, while EITC entitlements to are small or zero for the lowest-income groups as 38% of single-person households in the first decile do not have any in-work earnings).

¹³ Non-contributory social transfers in the UK include some tax credits that most likely are not reported as social transfers in other countries, see also I.1. Annex B.

¹⁴ Adjusting for the underreporting of benefit receipt leads to even higher take-up rates (Resolution Foundation, 2018_[29]). Note that take-up statistics for the Universal Credit are currently not published by the Department of Work and Pensions. The same is true for income-tested Job-seeker’s Allowance payments that continue to operate alongside the Universal Credit during the roll-out phase.

Assistance in Finland (50-60%, late 1990s to early 2000s), France (36%, 2010), or Slovak Republic (21%, 2009). See also (Bargain, Immervoll and Viitamäki, 2010^[7]), (Eurofund, 2015^[8]).

34. In all countries, average benefit *levels* are significantly lower than commonly-used relative poverty thresholds. For those receiving support, expected benefit levels for single-person households ranged from 15% of median household income or less in Greece, Korea and Slovak Republic, to 40% or more in Belgium and the United Kingdom (Figure 5, Panel A, right-hand figure). Overall, we find no evidence of a major trade-off between accessibility and generosity. In the Slovak Republic, receipt probabilities are relatively high, while benefit amounts are modest. Other countries combine broad access with higher benefit levels (the United Kingdom and, to a lesser extent, Austria and France). In Italy and Greece, receipt probabilities and benefit amounts are both low.

35. Empirically observed benefit amounts are the result of the interplay between legal entitlement rules, the implementation of these rules, and the circumstances and behaviours of households claiming support. Maximum legal entitlements for households without any other resources differ across countries and frequently also vary sub-nationally across regions (see Annex Figure C. 12 for a summary of statutory benefit amounts, drawing on the OECD Tax-Benefit model [TaxBEN](#)). In practice, numerous other factors affect the size of actual benefit pay-outs: The implementation of statutory rules can differ between countries as well as regionally, e.g., if legal provisions leave some room for discretion, or if the claiming process is time consuming, resulting in delays and a possible timing mismatch between household need and subsequent receipt of support. Benefit sanctions (e.g. if claimants do not comply with job-search requirements) can also reduce empirically observed benefit amounts.

36. Perhaps most importantly, even among the poorest 10% of the population, not all families will have the same *need* for support. Some households may claim benefits for only part of the year (e.g. if claimants move onto MIB after exhausting their entitlement to first-tier benefits or if time lags delay entitlements for those experiencing low-income spells). Others may receive support during the entire year but use it to top up modest or occasional incomes from other sources (such as sporadic, part-time employment). Even for those without any other cash incomes, needs (and resulting entitlement to cash support) may be reduced if they receive in-kind support (e.g. social housing).

37. Closer inspection suggests that, for many low-income households, benefit pay-outs below maximum statutory entitlements are indeed a direct result of benefit reductions due to the operation of means tests. In France, Austria, Spain and the Slovak Republic, about half of all households in the bottom decile have some labour income during the course of the year, and in the United Kingdom and Australia, it is about one third (Annex Figure A. 8, Panel A).¹⁵ MIB claimants may also receive some insurance-based benefits that enter applicable means tests and lower MIB entitlements. This is likely to play a role in Belgium (50% of households in the bottom income decile receive some insurance-based benefits), Austria (42%) and France (30%, Annex Figure A. 8, Panel B).¹⁶ MIB in Austria and France

¹⁵ Lower expected benefit levels in Australia as compared to the United Kingdom are at least partly a result of lower statutory entitlements in Australia, see Figure C. 12

¹⁶ A model that includes a dummy variable for contributory benefit receipt, and specifies that all vignettes not receive contributory benefits, yields virtually identical results. However, most households who receive insurance-based out-of-work benefits for a significant part of the year will

therefore frequently function as a top-up, with about two thirds of household incomes from other sources, even among the poorest 10% of the population (see Figure 3 above). By contrast, MIB in the United Kingdom, are frequently the *main* source of income for low-income households. They account for over three quarters of household incomes in the bottom 10%. As a result, reduced entitlements due to means-tests are less likely and the estimated de-facto benefit amounts are relatively close to the (maximum) theoretical MBI entitlements for somebody without any other resources.

Low-income people with health problems

38. This vignette is similar to the baseline, except that the estimates fix respondents' reported health status as "poor" or "bad". In all countries, individuals with health problems were more likely to receive benefits than the baseline individual without health problems (Figure 5, Panel B, left-hand figure), notably in the Czech Republic and the Slovak Republic. However, the differences were mostly small and not statistically significant (90% confidence interval). MIB access for people with health problems is very patchy in Italy and Greece.¹⁷ Receipt probabilities were just over 50% in Spain. Although all these countries operate contributory disability pension systems, results suggest that those with insufficient contribution histories often had no safety-net to fall back on.

39. For those receiving support, benefit amounts tended to be higher than for able-bodied recipients. But, with the exception of the United Kingdom and (to a lesser extent) Italy, differences were, again, very small and may not be statistically significant.

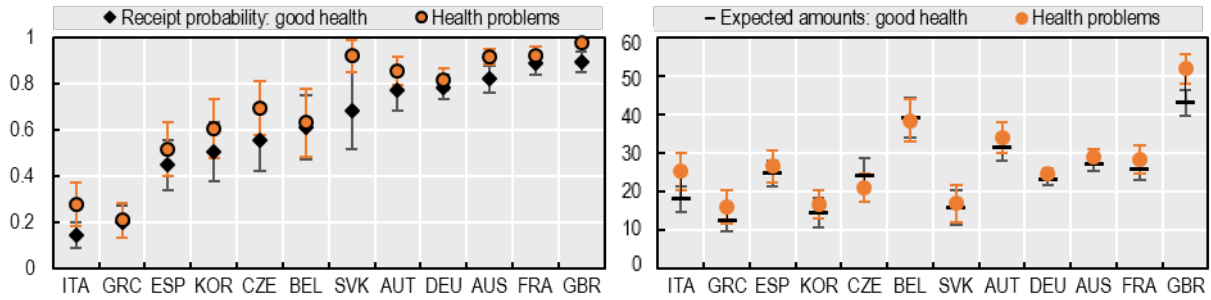
**Figure 5. Accessibility and value of non-contributory benefits:
One-person households, at or before 2018**



have incomes that lift them out of the first decile of the income distribution before non-contribution-based benefits.

¹⁷ In Greece, poor access can be due to very long waiting times for applicants. Greece was in the process of reforming its disability support system, expanding the conditions that qualify for unlimited benefit entitlement, and revising disability assessments/categories for a number of diagnosed conditions (Ziomas et al., 2018_[34]).

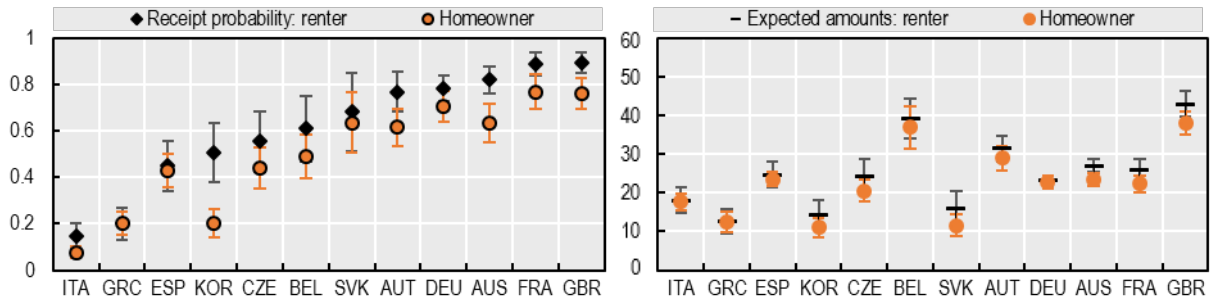
B. Workless low-income adult living alone, health problems



C. Part-time / part-year worker on low pay living alone



D. Workless low-income homeowner living alone



Notes: Bars indicate 90% confidence intervals. Expected non-contributory benefit receipt for different “vignettes” of low-income individuals. See Table 1 for the definition of non-contributory benefits. In Korea and the United Kingdom, benefits include refundable means-tested tax credits. “Workless” means worked less than 10% of potential full-time hours during 2015 (i.e. less than one month of full-time work during the entire year). “Low income” corresponds to the bottom decile of the distribution of income from market sources and contributory benefits (workless situation) or in the second-lowest decile (low-pay situation). **Panel A:** Low-income working-age adults reporting to be in “good” or “fair” health and living in privately rented accommodation paying a “low” rent (bottom quintile of the national rent distribution). **Panel B:** Same as Panel A, but reporting to be in “poor” or “bad” health. **Panel C:** worked 10-30% of potential full-time hours (e.g., between 1.2 and 4 months full-time work, or between 4 and 12 hours a week part-time work during an entire year, or a combination of part-year and part-time work). Countries ranked by the probability of receiving non-contributory benefits for a workless low-income adult living alone enjoying good health (*baseline*).

Source: Estimates based on EU-SILC (2016 waves), GSOEP (2018), HILDA (2017), and KLIPS (2019).

Safety nets and labour income: Low work intensity and low pay

40. Do benefit systems support partial and low-paid employment? Income gains from taking up low-paid work can be small if benefits are withdrawn quickly against labour income. This can create poverty “traps” and complicate governments’ efforts to tackle in-work poverty. Indeed, compared to the baseline vignette, part-time or part-year

employment makes benefit receipt significantly less likely, even at low or very pay. Results for workers in marginal and low-paid work are shown in Panel C of Figure 5 (see figure notes for the definition of “low pay”). They indicate that a gradual phase-out of MIB (as in Austria, Australia, France and Germany) or the availability of in-work benefits (as in France and the United Kingdom) can provide continued support to low-paid workers and those in intermittent employment and strengthen work incentives. Expected benefit amounts are lower for those with some labour income in all countries, reflecting gradual withdrawal of benefits against labour income.

Asset holdings: Homeowners

41. Results so far have focussed on the MIB receipt of low-income households. Asset holdings are also an important element of household resources and can influence entitlements to means-tested benefits. While good-quality data on total assets – movable and real property, financial assets etc. – are not available in the household survey datasets used here, information on homeownership was available in all of them, and was included in the empirical model in order to distinguish receipt patterns for renters and homeowners.¹⁸

42. In countries where the family home is exempt from asset tests (Marchal et al. (2020_[19])), receipt probabilities for homeowners and tenants typically do not differ significantly (Czech Republic, Germany, the Slovak Republic, and the United Kingdom, see Figure 5, Panel D, left hand side). An exception is the United Kingdom. Receipt probabilities here are slightly lower for homeowners, perhaps because homeownership correlates with ownership of other assets that disqualify from MIB receipt. In Belgium, homeownership does not affect MIB entitlements directly, but it does generate imputed rents, which count towards the income test; predicted differences in receipt probabilities are nonetheless statistically insignificant.

43. In Australia, Austria, France and Korea, receipt probabilities are significantly lower for homeowners. In Australia, the main residence is generally exempt from asset tests, but the asset allowance for home owners is significantly lower than for non-home owners (OECD, 2020_[12]). The means test for the main MIB programme in Korea also effectively considers monetary values of privately owned properties. In Austria, all types of significant assets generally disqualify from MIB receipt, and the social welfare authority may launch a claim against the property after six months of benefit receipt. France does not operate a routine asset test, but assets can be taken into account if there is a large “discrepancy” between the observed lifestyle of a household and its declared circumstances (Marchal et al., 2020_[19]). Italy and Greece did not have a national MIB programme in 2015, and the legal rules and implementation of asset tests likely differed across regional schemes.

¹⁸ Note that homeownership is likely to be correlated with other unobservable characteristics that also influence benefit receipt. The indicator on receipt probability does not propose a causal relationship between homeownership and benefit receipt.

Families with children

44. This section shifts the focus from low-income individuals living alone to a family setting – a couple with one or more children. Cross-country patterns of benefit receipt for workless lone parents are very similar and not reported here.¹⁹

45. In several countries, families with qualifying children receive family benefits regardless of household income (Austria, Belgium, France, Germany, Slovak Republic and, for all but very high incomes, the United Kingdom). As a result, practically all low-income families with dependent children received at least some non-contributory benefits in these countries (Figure 6). In Spain, a means-tested child allowance provides support to most, but not all, low-income families. In Greece, several means-tested family benefits meant that almost all low-income families received at least some support in the period covered in the data (2015). Greece has since consolidated several programmes to support low-income families into one means-tested child benefit (Ziomas et al., 2018_[20]). In Belgium, the low probability of receiving means-tested benefits for families with children is likely connected to widespread receipt of insurance-based benefits (see Figure 3): the long-term unemployed, for example, do not have to rely on minimum income benefits, as unemployment insurance is not time-limited. This leaves less “space” for minimum income benefits to provide support to Belgian jobseekers. The main working-age, means-tested minimum income benefit in Belgium, the integration income (*Revenue d’Integration* or *Leefloon*), had only 147,000 recipients in June 2019, only 29% of whom had children (Government Service for Social integration, 2020_[21]).

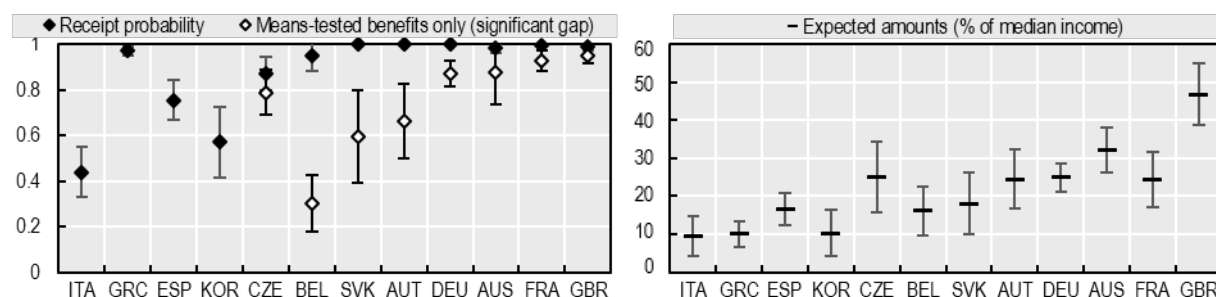
46. As was the case for one-person households, non-contributory support to low-income families was most generous in the UK, with an expected amount relatively close to a relative poverty threshold (50% of median household income). Non-contributory support for low-income recipient families were less generous in Australia, Germany, Austria, Czech Republic and France (about 25% to 30% of median household income, including any universal child benefit). In Italy, Korea and Greece, expected benefit levels were only around 10% of median household income.²⁰ All of these countries have introduced reforms since then. In much of 2018, Korea operated no universal child benefit but a universal Child Allowance for all children under age 7 was introduced in 2019.²¹ Greece has consolidated several programmes to support low-income families into one means-tested child benefit (Ziomas et al., 2018_[20]). Italy replaced five previous family benefits with a new universal transfer for all families with children under 21. The new integrated benefit also includes a means-tested component that aims to tackle high levels of child poverty. In addition, the new benefit will provide for the first time adequate support to families of self-employed and long term unemployed (Pavolini, 2021_[22]).

¹⁹ Lone-parent households are less numerous in the data than couples with children. The comparatively small numbers of lone parents working part-time precludes statistically meaningful estimates for part-time, low-income lone parents in particular (see also OECD (2020_[28])).

²⁰ See footnote 12 **Error! Bookmark not defined.** for measurement challenges that may influence the results for Korea.

²¹ See footnote 23.

**Figure 6. Accessibility and value of non-contributory benefits:
Workless couple with children, at or before 2018**



Notes: See notes for Figure 5. Children are aged 4-17 – results therefore do not reflect receipt of maternity benefits and one-off birth grants. White diamonds indicate that the probability of receiving means-tested benefits only is significantly lower than the probability of receiving any non-contributory benefits (means-tested or universal).

Source: Estimates based on EU-SILC (2016 waves), GSOEP (2018), HILDA (2017), and KLIPS (2019).

47. Figure 7 shows the probability of receiving means-tested benefits for low-paid working parents with “low” work intensity (10-30% of potential full-time hours) and “medium” work intensity (30-60% of potential full-time hours). Compared to childless benefit claimants, benefit amounts are higher for families with children, and benefit withdrawals tend to be less steep (see Annex Figure C. 13). This explains why receipt probabilities differ little between workless families and those with marginal low-paid employment in some countries (Australia, France, United Kingdom, Belgium, Korea and the Czech Republic). Support *levels* are lower for working families in most countries, however (Figure 7, Panel A, right hand side).

48. Do MIB benefits also support families who may not be in acute economic need, but still have low incomes? Figure 7, Panel B shows results for a couple with children in the second quintile of the income distribution, which, in most countries, means that these families have incomes just above commonly used poverty thresholds.²² In Australia and France, most families at these somewhat higher income levels still received means-tested benefits (in Australia likely means-tested child benefits, in France in-work benefits and housing assistance). In Korea, a parental-leave / parental-care allowance was available without means-test, along with a quasi-universal child allowance.²³ Low-income families can also receive refundable tax credits (CTC and the EITC in-work benefit). In-work benefits contributed to the high receipt rate in the United Kingdom. In Greece, low-income working families were likely to receive means-tested family benefits. In some other countries, housing benefits may be the only means-tested support available to lower-middle income families; these appear common for this family situation in Austria and the Czech Republic. Italy does not operate a national housing benefit programme.

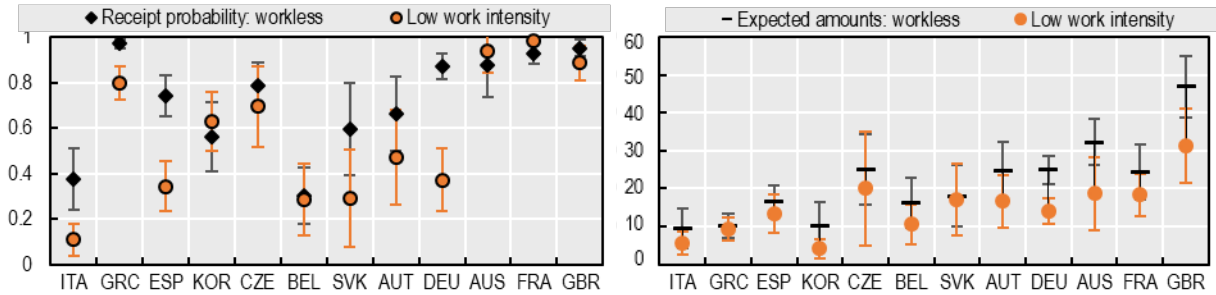
²² <https://www.oecd.org/social/income-distribution-database.htm>.

²³ The child allowance was initially introduced for children under the age of 6 living in the bottom 90% of income distribution in September 2018. Currently, all children aged under 7 are eligible to the allowance since the means-testing was eliminated since April 2019.

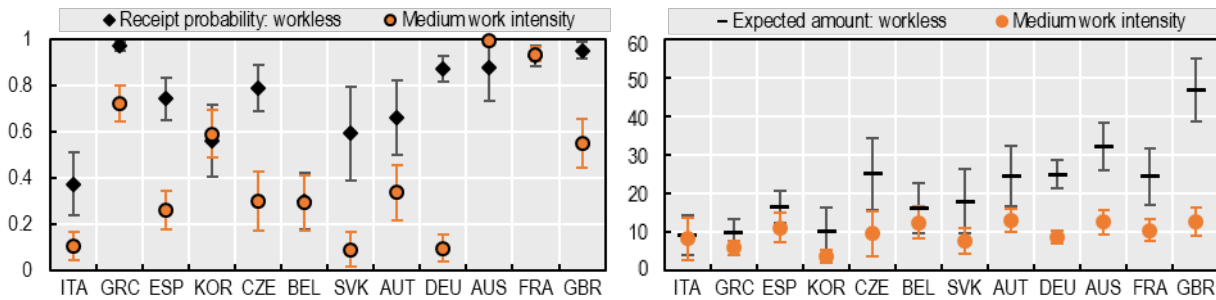
**Figure 7. Accessibility and value of means-tested benefits:
Couple with children and in low-pay, part-time work, at or before 2018**

Left hand side: probability of receiving means-tested benefits,
Right hand side: expected amounts (all non-contributory benefits) in percent of median income

A. Couple with children: Workless versus low work intensity (10-30% of the year)



B. Couple with children: Workless versus medium work intensity (30-60% of the year)



Notes: See notes to Figure 5. **Panel A:** worked 10-30% of potential full-time hours during the reference year (for a couple, this is consistent with one adult working part-time, full-year, while the other adult does not work), with income in the second income *decile*. **Panel B:** worked 30-60% of potential full-time hours during the year (for a couple, this is consistent with one adult working full-time, full-year, while the other adult does not work), with income in the second *quintile*. All children are aged 4-17.

Source: Estimates based on EU-SILC (2016 waves), GSOEP (2018), HILDA (2017), and KLIPS (2019).

5. Conclusions

49. All EU and OECD countries operate Minimum Income Benefit programmes (MIB) for working-age individuals, either as lower-tier programmes alongside primary income replacement benefits, or as a principal instrument for delivering social protection. These benefits typically employ a low-income criterion to target households with no or limited access to other resources. As benefits of last resort, MIB play a vital role in alleviating poverty and social exclusion for those with inadequate market incomes and no or limited entitlements to insurance-based benefits.

50. Such safety-nets benefits may be the only, or the main, means of support for non-standard workers or those with intermittent work who lack access to first-tier benefits, and they are a crucial income source for jobseekers in weak labour-market positions, e.g. the long-term unemployed or those with no or patchy past work history. As the COVID-19 crisis evolves, the demand for MIB support can be expected to rise, as a result of persistent labour market slack, or because a recovery is accompanied by structural transformations that lead to the permanent displacement of workers in some sectors. Emergency support measures and related reinforcements to first-tier support programmes are mostly short-

lived, and fiscal constraints may lead to a subsequent tightening of entitlement rules at a time when households do not yet benefit from a sustained recovery.

51. However, past crises have shown that MIB often do not readily respond to growing support needs. Ensuring that MIB programmes remain or become accessible and provide meaningful support in the aftermath of the health emergency is therefore important. Ensuring that MIB programmes work as intended requires careful policy monitoring and benchmarking at the national and international levels. Monitoring the effectiveness of MIB also promotes the transmission of good practices as policymakers test novel approaches in a changing economic environment.

52. Proposing a novel method for assessing and summarising MIB receipt patterns, this paper shows that MIB accessibility and levels have differed enormously across the twelve OECD countries for which suitable data were available. For instance, in or before 2018, more than four out of five workless one-person households with low incomes received MIB in Australia, France and the United Kingdom, compared to only one in five in Greece and Italy. Results indicate that accessibility does not hinge on one specific social protection strategy but is achievable with different policy configurations. For instance, receipt probabilities are high in countries that rely heavily on means-testing and concentrate benefit spending at the bottom of the income distribution (such as the United Kingdom and Australia), but also in countries that complement insurance-based support with last-resort safety net benefits (such as France, Germany, or Austria). However, MIB appear to be comparatively difficult to access in countries that mainly rely on insurance-based benefits such as Greece and Italy, and to a lesser extent Korea and Spain. All four of these countries have taken steps to introduce new MIB or reinforce some aspects of safety-net benefits after the period covered in this paper.

53. Results also point to the need for employing a range of methods in comparative policy analysis. Legal entitlements are crucial determinants of the support families receive. But the *de-facto accessibility* of MIB programmes is also shaped by several other factors. These include the complexity of claims procedures, the administrative capacity for processing benefit claims in a timely fashion (especially during periods of high demand), any social stigma attached to the claiming process or to benefit receipt, the administration of income and asset tests, and enforcement of behavioural conditions, such as job-search requirements. Importantly, the needs and characteristics of low-income households differ between populations and over time, and this affects observed patterns of benefit receipt.

54. For monitoring purposes, it is therefore desirable to complement *policy indicators* on statutory provisions with people-centred *outcome indicators* of the support that households in need do receive in practice. Together, these two monitoring instruments provide a rich basis for assessing the effectiveness of MIB and poverty alleviation strategies, for identifying policy challenges, and for promoting policy learning. Continued monitoring of outcome indicators is crucial for assessing the reliability of safety nets in the face of rapidly changing economic conditions and in the context of heightened reform activity.

55. The statistical method proposed in the paper seeks to facilitate comparisons over time or between countries by referring to specific, policy relevant household circumstances or “vignettes”. These vignettes control for household characteristics that shape MIB claims and entitlements (e.g., incomes, employment status, and household composition). Yet, available data do not allow controlling for all relevant claimant characteristics. As a consequence, country differences remain partly shaped by the composition and characteristics of the low-income population.

56. Building on the results of the present analysis, future work should undertake more granular analyses at the country level to examine more explicitly the role of statutory rules, their implementation and the characteristics of claimant households that are driving MIB receipt in national contexts. Such work can include policy reviews to analyse institutional and policy features that produce empirically observed receipt patterns and gaps. Methodological extensions could further develop the accessibility and generosity indicators (e.g., by examining gendered patterns of benefit receipt). Future work could also explore additional or alternative data sources, such as harmonised income data with wider country coverage (such as the Luxembourg Income Study), larger panels or suitable administrative data that are available in some countries.

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Annex A. Descriptive statistics

Descriptive statistics presented here exclusively draw on the GSOEP 2016 wave for Germany, the EU-SILC 2016 wave for the remaining European countries, the HILDA 2017 wave for Australia and the KLIPS 2019 wave for Korea. This Annex is organised in three sections: the first section describes the selection of relevant households from the original sample and presents the number of observations by country; the second section presents descriptive characteristics of the final sample²⁴ for different household types, and the third presents statutory benefit entitlements for selected model household based on the OECD TaxBEN model.

Sample selection

To be included in the estimation sample, households need to contain at least one working age person and information on key variables of the model have to be complete for all working-age household members. In particular, households in the estimation sample must contain complete information on monthly labour force status for each working-age household member, and complete information on household income components. Table A.2 shows how the original sample contracts to the final sample, by reason for sample exclusion.

Table A.2. Sample selection

In number of individuals and households

	AUS*	AUT	BEL	CZE	DEU	ESP	FRA	GBR	GRC	ITA	KOR	SVK
Households included	4,872	3,943	4,118	5,230	8,532	10,552	7,430	6,139	12,233	14,451	7,772	4,096
Individuals included	12,300	9,800	10,961	13,879	24,802	30,341	20,005	16,149	34,712	38,122	16,886	13,772
Individuals excluded, because of	10,250	3,249	2,812	5,085	23,689	6,039	6,642	6,056	9,382	10,194	6,339	2,735
<i>no working-age active person in household</i>	2,771	2,713	2,364	4,558	4,971	5,065	5,369	4,413	8,783	8,993	4,533	2,234
<i>top 1% of MIB receipt</i>	295	126	152	179	490	287	270	202	146	374	133	266
<i>incomplete labour status calendar</i>	4,942	0	0	0	17,675	511	866	35	382	0	0	0
<i>missing education</i>	0	0	249	0	155	0	68	82	0	0	0	0
<i>missing health status</i>	855	0	0	0	0	0	5	12	0	582	0	18
<i>missing housing tenure</i>	6	0	0	0	98	0	0	0	0	0	0	0
<i>missing rent</i>	26	0	0	0	11	0	0	0	0	0	0	0
<i>inconsistent work-earnings information</i>	1,232	410	47	348	174	176	64	1,312	71	245	826	217
<i>inconsistent social insurance information (KR only)</i>	0	0	0	0	0	0	0	0	0	0	665	0
<i>persons with weight=0 (DE & KR only)</i>	123	0	0	0	115	0	0	0	0	0	182	0
Total (individuals)	23,433	13,049	13,773	18,964	48,491	36,380	26,647	22,205	44,094	48,316	23,225	16,507

Note: Exclusion reasons apply in the same order they are presented in the table. For example, if an individual is over 65 and his labour status calendar is incomplete, the table will report him as excluded because he is a *non-relevant person* (and not because his labour status calendar is incomplete). Only households composed at 100% by valid individuals are included in the final sample. (*) In Australia, 312 households were also excluded because the HILDA benefit imputation prevents a reliable categorisation of benefits by entitlement criterion.

Source: HILDA 2017 for Australia, GSOEP 2016 for Germany, KLIPS 2019 for Korea and EU-SILC 2016 for other countries.

²⁴ Observed characteristics complement the outputs presented in Section 4, which can be viewed as *estimated* characteristics of household groups.

The number of households in the final sample varies from 4,096 households for Slovakia to 14,451 for Italy. For all countries, the number of observations is large enough to fit econometric models on benefit receipt and amounts received (see Annex B). However, the analysis also includes statistical inference on specific subpopulations, such as workless low-income households with and without children. Table A.3 provides information on the number of available observations for each category of the most relevant variables: household type, work intensity and income.

Table A.3. Sample size by household's characteristics

A. Household type													
	AUS	AUT	BEL	CZE	DEU	ESP	FRA	GBR	GRC	HUN	ITA	KOR	SVK
Single	1,309	1,073	986	992	1,718	1,420	1,554	1,285	1,782	846	3,400	1,262	358
Couple without children	1,397	1,067	1,029	1,518	2,146	2,624	1,997	1,747	3,360	1,408	3,114	1,597	832
Lone parent	314	177	249	220	745	337	454	550	216	171	480	76	81
Couple with children	1,337	1,016	1,093	1,211	2,979	2,736	2,270	1,672	3,086	995	3,351	2,306	825
3+ adults without children	344	409	479	904	517	2,504	710	585	2,914	984	3,106	2,036	1,268
3+ adults with children	171	201	282	385	427	931	445	300	875	532	1,000	495	732
Total	4,872	3,943	4,118	5,230	8,532	10,552	7,430	6,139	12,233	4,936	14,451	7,772	4,096

B. Income ranges													
	AUS	AUT	BEL	CZE	DEU	ESP	FRA	GBR	GRC	HUN	ITA	KOR	SVK
Decile 1	674	374	460	438	1,300	1,002	807	840	1,483	416	1,404	593	376
Decile 2	351	285	404	319	737	896	661	545	1,236	586	1,013	680	341
Deciles 3 - 4	829	668	659	729	1,326	1,762	1,342	1,001	2,238	919	2,286	1,825	685
Deciles 5 - 6	1,034	740	804	1,174	1,635	2,050	1,514	1,161	2,268	1,018	2,893	1,636	944
Deciles 7 - 10	1,984	1,876	1,791	2,570	3,534	4,842	3,106	2,592	5,008	1,997	6,855	3,038	1,750
Total	4,872	3,943	4,118	5,230	8,532	10,552	7,430	6,139	12,233	4,936	14,451	7,772	4,096

C. Work intensity													
	AUS	AUT	BEL	CZE	DEU	ESP	FRA	GBR	GRC	HUN	ITA	KOR	SVK
0 to 10%	684	326	766	390	988	1,761	817	905	2,894	573	2,126	1,066	349
10-30%	143	127	161	139	216	848	247	153	1,487	173	1,035	2,288	184
30-60%	830	776	865	1,098	1,582	2,993	1,463	1,053	4,079	1,121	4,110	3,137	987
60-90%	661	620	534	922	1,305	1,601	1,207	773	1,284	843	1,927	961	947
90%+	2,554	2,094	1,792	2,681	4,441	3,349	3,696	3,255	2,489	2,226	5,253	320	1,629
Total	4,872	3,943	4,118	5,230	8,532	10,552	7,430	6,139	12,233	4,936	14,451	7,772	4,096

Note: Please refer to Annex 2 for a detailed definition of each variable category.

Source: HILDA 2017 for Australia, GSOEP 2016 for Germany, KLIPS 2019 for Korea and EU-SILC 2016 for other countries.

Observed characteristics of households in the final sample

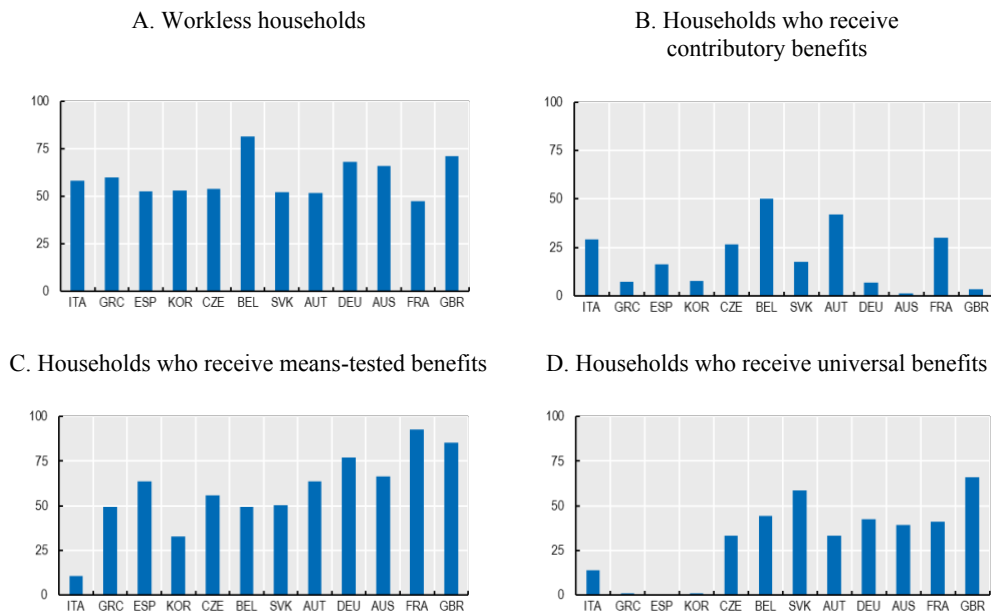
This section provides information on observed characteristics of the households included in the final sample. As the focus of this analysis is the income support received by low-income households (bottom decile of income from market sources and contributory benefits), most descriptive statistics presented here also refer to low-income households.

Figure A. 8, Panel A, provides information on the observed labour supply of low-income families and the type of cash support they receive. The share of workless households is particularly high in Belgium (82%) and the United Kingdom (71%). Few of these households received contributory benefits in 2015 (Panel B); only in Belgium and Austria more than 40% of households received some contributory benefits. As expected, means-

tested benefits play a major role for these households; in all countries, with the only exception of Italy, 50% or more of low-income households received means-tested benefits (Panel C), in France and the United Kingdom receipt shares are above 80%. Universal benefits, here mainly child allowances, also play an important role in most countries (Panel D). It is important to note that households can receive, in one single year, contributory, means-tested and universal benefits. Hence, shares in panels B, C and D cannot be summed-up.

Figure A. 8. Work intensity and benefit receipt of low-income households

In % of all households in the first income decile, at or before 2018/19



Note: The first income decile corresponds to the bottom 10% of income from market sources and contributory benefits calculated over the whole population. “Workless” means worked less than 10% of potential full-time hours during 2015 (2018 for Korea) (i.e. less than one month of full-time work during the entire year). Countries are ranked by the probability of receiving non-contributory benefits for a workless low-income adult living alone (*baseline*, see Figure 5 Panel A).

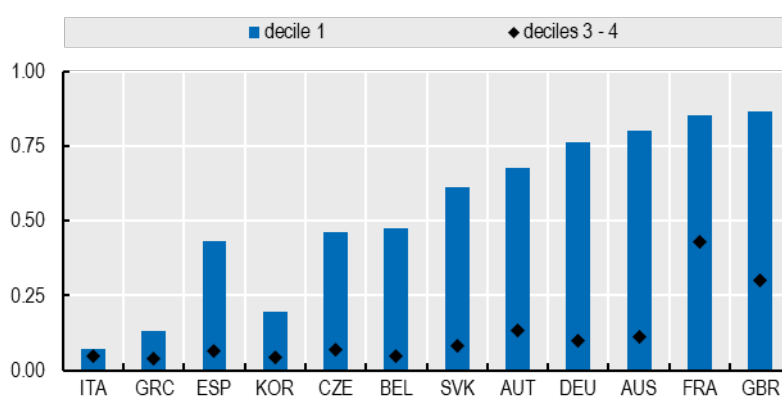
Source: Estimates based on HILDA 2017 for Australia, GSOEP 2016 for Germany. KLIPS 2019 for Korea and EU-SILC 2016 for other countries.

Figure A 9 shows the share of low-income households who receive non-contributory benefits (i.e. either means-tested or universal benefits), broken-down by family type, for households in the bottom income decile, and in deciles 3 and 4 (i.e. medium-income households). For households without children, those in the bottom decile are significantly more likely to receive non-contributory benefits, whereas in most countries, a high share of middle-income families with children also received benefits (panels B and C).

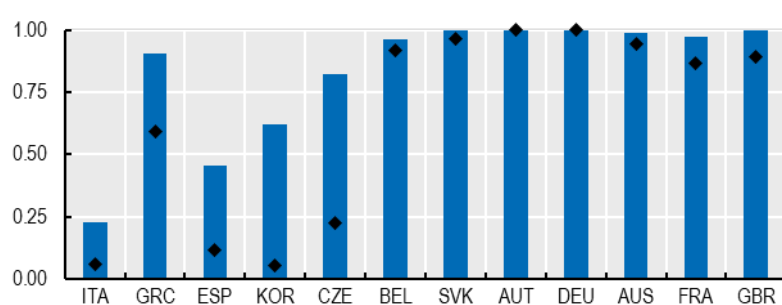
Figure A 9. Non-contributory benefits receipt for low-income households, selected household types

Share of households in each group, selected household types, at or before 2018/19

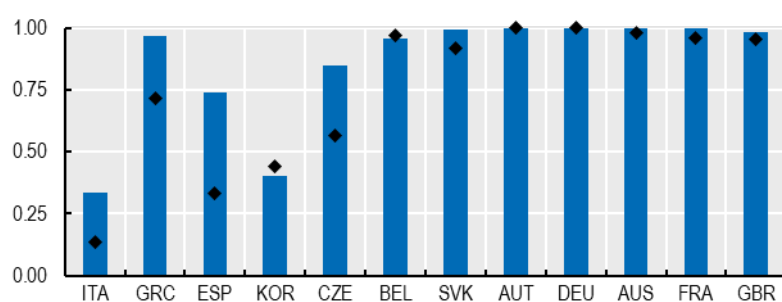
A. One adult household



B. Lone parent



C. Couple with children



Reading note: In Panel A, in Germany, 76% of one adult households belonging to the first income decile received non-contributory benefits in 2015 whereas only 10% of one adult households belonging to deciles 3 and 4 did.

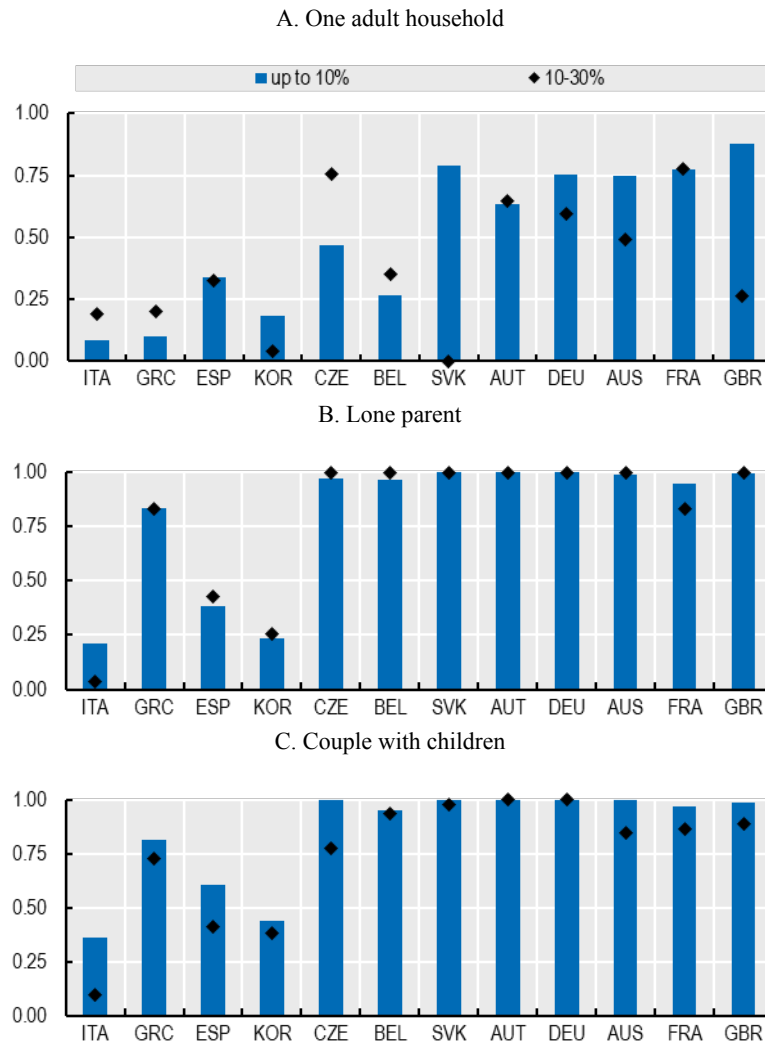
Note: Income deciles are determined from market income and contributory benefits over the entire population. Countries are ranked by the probability of receiving non-contributory benefits for a workless low-income adult living alone (see Figure 5 Panel A).

Source: Estimates based on HILDA 2017 for Australia, GSOEP 2016 for Germany. KLIPS 2019 for Korea and EU-SILC 2016 for other countries.

Figure A 10 shows benefit receipt for low-income households by work intensity. Receipt of non-contributory benefits in one adult households is not systematically lower for those who did not work at all than for those who worked a little (between 10 and 30% during the year), partly reflecting the fact that some workless households receive contributory benefits, and may therefore not be eligible for means-tested benefits. Families with children are likely to receive some family benefits regardless of their work intensity.

Figure A 10. Non-contributory benefits receipt for households with low work intensity

Share of households in each group, selected household types, at or before 2018/19

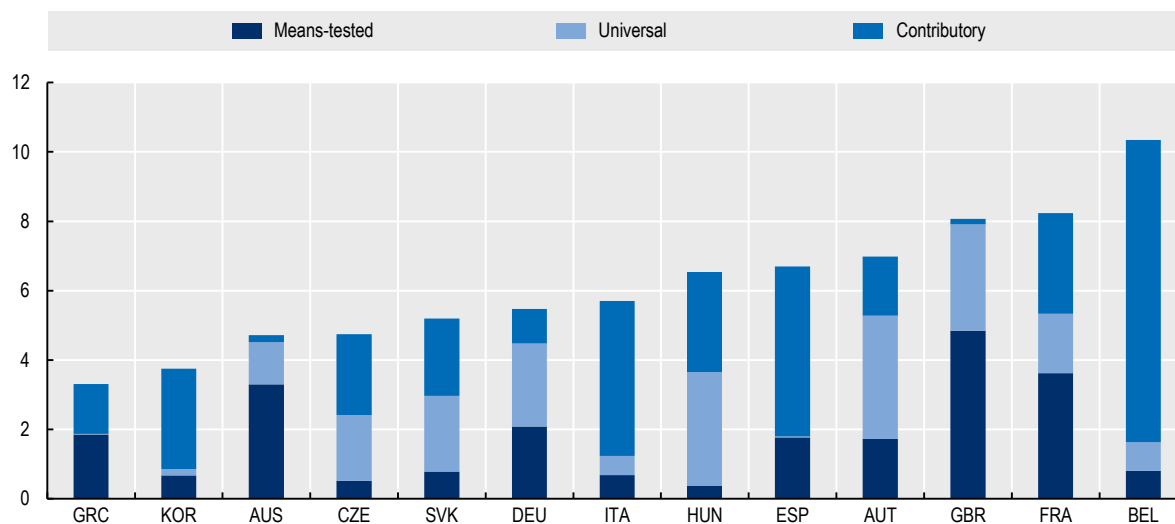


Note: See the reading note Figure A.6. Countries are ranked by the probability of receiving non-contributory benefits for a workless low-income adult living alone (see Figure 5 Panel A).

Source: Estimates based on HILDA 2017 for Australia, GSOEP 2016 for Germany, KLIPS 2019 for Korea and EU-SILC 2016 for other countries.

Figure A 11. Countries' income support systems differ both in size and composition

As % of working age benefits in total household incomes, by entitlement criterion, at or before 2018/19



Note: Working-age households. Countries are ranked by the share of working age benefits in gross working-age household incomes.

Source: EU-SILC (EU statistics on income and living conditions, GSOEP (German Socio-Economic Panel) KLIPS (Korean Labor and Income Panel Study) (2019 waves), except the United Kingdom (2016), HILDA (The Household, Income and Labour Dynamics in Australia Survey) (2018 wave, financial year 2017),.

Annex B. Model specification and model selection

This Annex provides additional details on the empirical models developed in Section 3, defines the dependent and explanatory variables and explains the criteria used for model selection.

The main variable of interest is the value of the *total package of non-contributory benefits*, including means-tested transfers (such as social assistance and jobseeker benefits that do not require a contribution- or work history, housing benefits, means-tested family benefits etc.) or universal transfers (de-facto child benefits), reflecting the fact that countries provide support through a number of different channels and programs.

For Germany, information on benefit receipt is available on the level of individual transfers. The EU-SILC provides information on the income received by individuals and families in the form of standardised comparable variables for all countries. For social transfers, these variables may include the aggregated amount related to several benefits, without further breakdown. Although EU-SILC variables are already harmonised, it is important to note that methodological differences between countries may subsist. For example, for the United Kingdom, family transfers (variable hy050g) include the *Child Tax Credit*, while social assistance (hy060g) includes the Working Tax Credit. Other countries also provide income support in the form of tax credits, but do not include them in the EU-SILC social transfer variables.²⁵ Contributory benefits are excluded from the dependent variable and are added to the explanatory variable encoding household income (see below). For the coverage model, a binary variable indicates if the household received non-contributory benefits in 2015.²⁶ For the entitlements model, the dependent variable is the amount of non-contributory benefits received in 2015, expressed as percentage of the median income in each country.

For Austria and Germany, universal child benefits were imputed for children under 17 years of age according to statutory benefit entitlement rules in 2015, using an approach similar to Stichnoth (2018_[23]). Imputed values were only substituted if they were greater than reported benefit receipt; this concerns a small share of observations. Family benefits in HILDA are imputed based on eligibility criteria, assuming 100% take-up (Wilkins, 2014_[24]). In other countries, even in those where a large majority of families are entitled and benefit from child benefits (e.g. France, Belgium or the United Kingdom), not all families with children receive benefits, either because there is a cap on total benefits a family can receive, because some family types are not entitled to benefits, or because benefits are not paid out automatically, and some families do not claim them. Therefore, we use the benefit amounts reported by the households.

In the KLIPS, the (means-tested) benefits *Basic Pension*, *Child Home Care Allowance*, *Disability Allowance* and *Childbirth Incentive/Child Care Subsidy (municipal level)* are not reported separately. Working age benefits are separated from the old-age *Basic Pension*

²⁵ Further information on comparability of income variables in EU-SILC can be found here: <https://timgoedeme.com/tools/metasilc-2015/>

²⁶ For families with children, to avoid the saturation effect produced by universal benefits (100% of observed households receive benefits), an alternative specification looks only at means-tested benefits receipt.

benefit using household composition and the age of household members, as well as the statutory rules for the main programmes (*Basic Pension* and *Child Home Care Allowance*) in the following way: For households where all members are aged 65 or younger, the entire amount is considered to be working-age benefits. For households with at least one member aged 66 or older, and without any preschool-aged children, the amount is considered to be *Basic Pension*, an old-age benefit. In households with both a person aged 66 and older and preschool-aged child(ren), the amount of *Child Home Care Allowance* is imputed based on the age of the child and the remaining amount is considered as *Basic Pension* paid to the elderly member.²⁷ This is only the case for 58 households in the final sample.

²⁷ As of 2016, Child Home Care Allowance was a flat-rate benefit only depending on the age of the child as long as the means-test was met, while the amount of Basic Pension varied by income.

Table B.4. Independent variables, one observation per household

	Definition	Categories	Other comments
Household type	Family arrangements based on the number of adults and number of dependent children in the household	- One adult - Couple without children - Lone parent - Couple with children - 3+ adults no children - 3+ adults with children	
Age	Age of the oldest working-age person in the household	- under 30 - 31 – 54 - 55+	
Foreign born	Indicates if any working-age person in the household was born abroad	- 0 - 1 (foreign born)	
Education	Lowest education level among working-age persons in the household	- low (ISCED 0 – 2) - medium (ISCED 3 - 4) - high (ISCED 5+)	Does not consider dependent (not working) 18 – 24 year-olds
Poor health	Indicates if at least one person in household has bad health	- 0 - 1	Poor health is self-declared
Dependent adults	Indicated if at least one person in household is over 80 or is over 65 and has poor health	- 0 - 1	Definition of poor health as above.
Dependent youth	Indicates the presence of dependent young person(s) in the household	- 0 - 1	Dependent young people are 18 – 24 year-olds who are not working or looking for a job (incl. students)
Work intensity	Work intensity is evaluated at the household level based on the declared labour status of working-age adults in the household over the year. The number of months effectively worked by each person (full-time counts as 1 month and part-time counts as 0.5 months), is divided by 12 (the maximum potential months worked in a year). Individual work intensity indicators are aggregated at household level to create a household work intensity indicator.	- 0 – 10% - 11 – 30% - 31 – 60% - 61 – 90% - 91 – 100%	This indicator differs from EUROSTAT work intensity variable provided by EU-SILC. A more accurate indicator may be built based on the number of hours effectively worked during the year. But this information is not available in the surveys.
Work instability	Indicates the presence of at least one working-age adult having worked between 2 and 8 months in the year.	- 0 - 1	
Rent paid	Amount of rent paid by tenants (in quintiles) plus an extra category to identify owners.	- 0 (homeowner) - 1 quintile 1 - 2 quintile 2 - 3 quintile 3 - 4 quintile 4 - 5 quintile 5	Quintiles are calculated over the entire population of tenant households who pay a positive rent.
Income range	Income distribution categories <u>from market income, unearned incomes, old-age and contributory benefits calculated over the entire population.</u>	- Decile 1 - Decile 2 - Deciles 3 – 4 - Deciles 5 – 6 - Deciles 7 - 10	Income equalized by the square root of the household size. Unearned income refers to rents et.al.
Old-age benefit receipt	Indicates if any person in the household received old-age benefits in 2015	- 0 - 1	Old-age benefits as classified by SILC and GSOEP

Source: EU-SILC, GSOEP and KLIPS surveys.

For each country, we estimate a “coverage” model (a logit model where the dependent variable is binary – benefit receipt yes or no) and an “entitlements” model (a Poisson model, calculated only over the population who receive benefits, where the dependent variable is the amount of benefits received). Since ten countries are included in the analysis, twenty models are estimated. The principles used for model selection are:

1. **A common specification for all countries.** This basic condition guarantees that the resulting vignettes have a common interpretation.
2. The **number of observations in key interaction cells** (for example low-income couples without children) has to allow for statistical interference.

Starting from a basic specification without interactions, we run a series of models of increasing explanatory power. The final specification respects criteria 1 and 2, provided a good fit for each one of the 20 models and, on average across countries, maximised R2 and minimised BIC.

Table B.4 lists the variables included in the final specification. All variables are defined at household level and there is only one observation per household. Table B.5 shows a set of selected coefficients of models 1 to 10 (coverage) and Table B.6 presents selected coefficients for models 11 to 20 (entitlements). For space reasons, other variables coefficients as well as full interaction coefficients are not included.

Table B.5. Coverage models (selected coefficients)

		AUS	AUT ⁽²⁾	BEL	CZE	DEU ⁽²⁾	ESP	FRA	GBR	GRC	ITA	KOR	SVK
Household type	one-adult household ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0	0
	couple without children	0.961***	0.363	-0.325	-0.294	0.822*	0.558*	0.171	-0.984**	-0.00439	1.069***	-0.713*	-0.153
	lone parent	4.8e09***	0	2.994***	2.017***	0	0.195	2.089	4.681***	3.750***	1.400**	0.597	7.542***
	couple with children	2.620***	0	2.561***	1.731***	0	1.360***	3.612***	2.415**	5.078***	1.553***	0.233	7.022***
	3+ adults without children	2.539**	2.456***	-2.001**	2.065**	2.320***	1.017***	1.572	1.396***	0.147	0.936**	-0.576	-0.384
	3+ adults with children	3.463***	0	7.639***	2.268*	0	1.657***	3.989***	1.202	4.040***	1.209**	-0.805	3.072**
Income	decile 1 ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0	0
	decile 2	0.135	-1.045**	-2.770***	-1.294**	-1.186***	-1.176**	-1.060**	-0.581	-0.890*	-0.006	-2.097***	-0.769
	deciles 3 - 4	-1.183***	-2.044***	-2.675***	-1.132*	-2.527***	-2.174**	-1.744***	-1.171	-1.247**	0.091	-1.645***	-1.110
	deciles 5 - 6	-3.046***	-2.315***	-3.481***	-2.985***	-3.270***	-3.617***	-2.308***	-4.057***	-1.386**	-1.030*	-2.882***	-1.095
	deciles 7 - 10	-3.660***	-3.129***	-2.550***	-2.722***	-2.986***	-3.373***	-3.342***	-3.397***	-2.684***	-1.841***	-4.080***	-0.197
Health	good or fair ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0	0
	bad	0.199	0.577***	0.095	0.615***	0.181	0.271*	0.401**	1.514***	0.0648	0.827***	0.514***	1.828***
Work intensity	0 - 10% ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0	0
	11 - 30%	0.612	0.114	-0.038	-0.822**	-0.433	-0.508***	-0.456	-1.667***	-0.122	-0.632***	0.0765	-1.447**
	31 - 60%	0.445	-0.281	0.041	-1.538***	-0.505	-0.337**	-0.226	-1.410***	-0.200	-0.470**	0.103	-1.741***
	61 - 90%	0.244	-0.493	0.204	-1.935***	-0.447	-0.611***	-0.706**	-1.578***	-0.112	-0.877***	-0.0276	-2.357***
	91 - 100%	-0.815**	-1.066***	-0.881**	-2.018***	-1.251***	-0.809***	-0.829***	-1.644***	0.092	-0.890***	-0.481	-3.123***

Note: There is one logit model per country, models are estimated independently. The star-notation corresponds to the standard output for significance levels (0.05, 0.01, 0.001). The specifications include a full set of interactions. Other variables coefficients and full interaction coefficients are not shown. (1) Base category. (2) Coefficients associated to families with children in Austria and Germany are omitted by the model because 100% of families with children receive family allowances (see above).

Source: Calculations based on HILDA 2017 for Australia, GSOEP 2016 for Germany. KLIPS 2019 for Korea and EU-SILC 2016 for other countries.

Table B.6. Entitlement models (selected coefficients)

		AUS	AUT	BEL	CZE	DEU	ESP	FRA	GBR	GRC	ITA	KOR	SVK
household type	one-adult household ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0	0
	couple without children	0.294***	0.102	-0.0738	-0.147	0.291***	0.154*	0.295***	0.368***	-0.0422	-0.280*	-0.112	0.360
	Lone parent	0.659***	0.433***	-0.279*	0.510***	0.625***	0.0136	0.653***	0.616***	0	-0.033	0.399*	0.612**
	couple with children	0.853***	0.398***	-0.219	0.675***	0.793***	0.235**	0.601***	0.735***	0.411**	-0.013	0.306	0.776***
	3+ adults without children	0.560***	0.100	-0.389	0.930***	0.492***	0.366***	0.366**	0.730***	0.133	0.236	0.023	0.648***
	3+ adults with children	1.076***	0.413	0.0378	0.778***	0.926***	0.459***	0.683***	0.841***	0.355*	-0.160	-0.124	0.976***
income	decile 1 ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0	0
	decile 2	-0.632***	-0.725***	-1.221***	-0.532	-0.269	-0.331*	-0.360**	-0.365***	-0.363*	-0.082	-0.830*	-1.636**
	deciles 3 - 4	-0.677***	-0.816***	-0.937	-0.272	0.0752	-0.586	-0.556***	-0.777***	-0.287	-0.064	-0.165	-2.041***
	deciles 5 - 6	-0.476	-0.670**	-1.131***	-1.975***	-0.186	-1.139***	-0.770***	-0.288	-0.898***	-0.130	-1.341***	-1.701***
	deciles 7 - 10	-0.230	-0.787***	-1.233***	0.422	-0.503***	-0.514**	-0.482***	-0.754**	-1.635***	0.026	0.099	-0.529
health	good or fine ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0	0
	bad	0.071*	0.08	-0.021	-0.148	0.032	0.071	0.093	0.186***	0.244**	0.334***	0.146	0.061
work intensity	0 - 10% ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0	0
	11 - 30%	-0.160	-0.158	-0.057	-0.198	-0.072	0.087	-0.009	-0.130	-0.083	-0.053	-0.158	-0.135
	31 - 60%	-0.170**	-0.228**	0.134	-0.274*	-0.306***	-0.088	-0.069	-0.172**	-0.101	-0.169	-0.221	-0.372**
	61 - 90%	-0.412***	-0.384***	-0.263*	-0.678***	-0.364***	-0.324***	-0.177*	-0.394***	-0.144	-0.290*	-0.331*	-0.815***
	91 - 100%	-0.318***	-0.441***	-0.181	-0.753***	-0.515***	-0.415***	-0.213***	-0.297***	-0.027	-0.336**	-0.737**	-0.763***

Note: There is one logit model per country and they are independent. The star-notation corresponds to the standard STATA output for significance levels (0.05, 0.01, 0.001). Other variables coefficients and full interaction coefficients are not shown. (1) Base category.

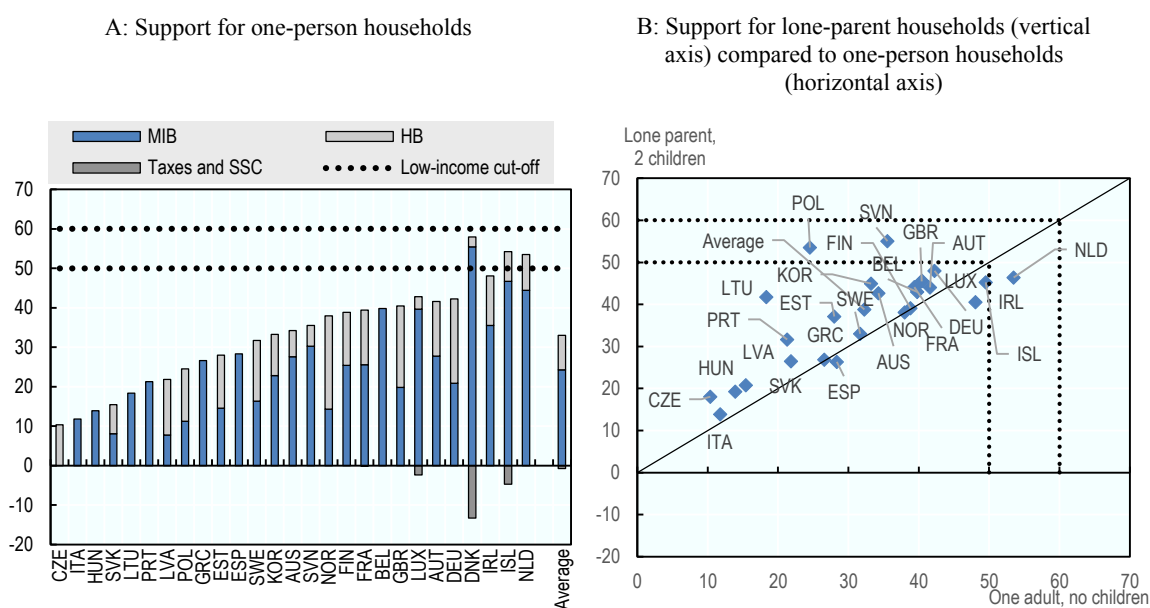
Source: Calculations based on HILDA 2017 for Australia, GSOEP 2016 for Germany, KLIPS 2019 for Korea, and EU-SILC 2016 for other countries.

Annex C. Statutory MIB entitlements

Families with no or little income from other sources may be entitled to support from a number of different programmes. Their income levels and poverty risks depend on the size of that overall benefit package, including notably MIB but also cash housing benefits (for those living in rented accommodation) and family benefits (for families with children). The statutory rules affecting these entitlements are complex. Figure C. 12 and Figure C. 13 draw on the OECD TaxBEN model to assess statutory entitlements in specific policy-relevant, but hypothetical, household circumstances. Figure C. 12 shows statutory entitlements for a workless one person household who is not entitled for unemployment benefits, by benefit type, 2019 (Panel A), and the net incomes from the total benefit package for a one person household and a lone parent with two children (Panel B).

Figure C. 12. Those relying on minimum-income support face sizeable poverty risks

Value of total benefit package for a jobless household without any other incomes,
% of median household income, 2019



Note: All incomes adjust for differences in household size. Housing-benefit entitlements are calculated for privately rented accommodation with rent equal to 10% of national average full-time earnings, irrespective of income or household size. Any dedicated housing components of social assistance schemes are also identified as housing benefits. Data for the UK are for 2018, i.e., prior to the rollout of Universal Credit to all new claimants. Panel B: The two children are aged 7 and 9.

Source: OECD TaxBEN model version 2.2.1, 2020. <http://oe.cd/TaxBEN>.

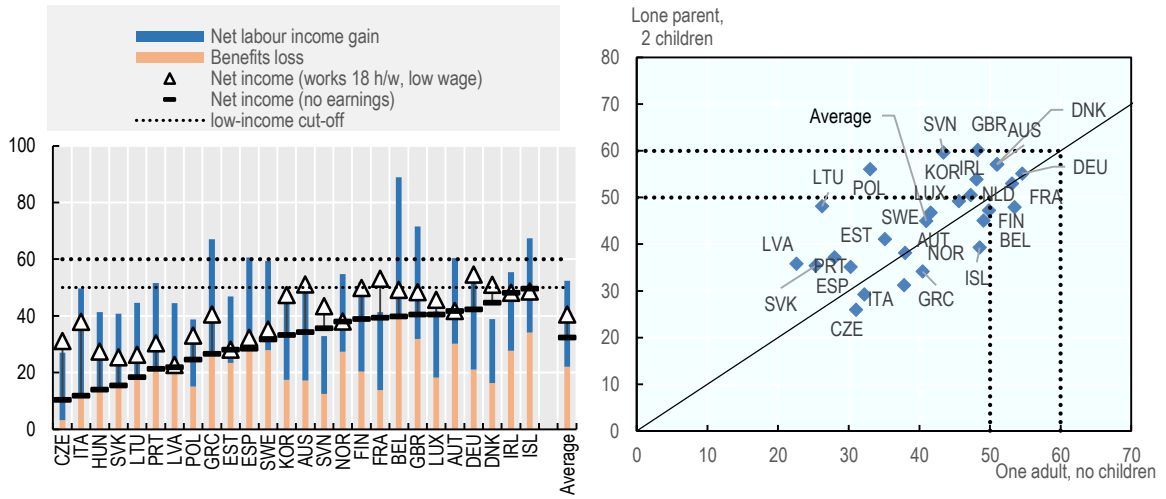
Figure C. 13 shows statutory entitlements for the same household types, assuming they work 18 hours per week with hourly wages at the 10th percentile of the national wage distribution (a value that is often close to the national minimum wage).

Figure C. 13. Income gains from low-paid work are small in many countries

Incomes of part-time low-wage workers, % of median household income, 2019

A: One-person household: With / without employment

B: Support for low-wage, part-time working lone-parents (vertical axis) compared to low-wage, part-time one-person households (horizontal axis)



Notes: See Figure C. 12. Results refer to part-time work at 18 hours per week and with hourly wages at the 10th percentile of the national wage distribution.

Source: OECD TaxBEN model version 2.2.1, 2020. <http://oe.cd/TaxBEN>.