Basic Income as a Policy Option: Technical Background Note Illustrating Costs and Distributional Implications for Selected Countries

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The concept of a Basic Income (BI), an unconditional transfer paid to each individual is not new. However, although many OECD countries have non-contributory, non-means tested benefits for certain groups (most commonly children or pensioners) no country has made a BI the central pillar of its social security system. The recent upsurge in attention to BI proposals in OECD countries, including in those with long-standing traditions of providing comprehensive social protection, is therefore remarkable.

Ongoing debates on the subject of a Basic Income in different OECD countries and the potential advantages and disadvantages of replacing existing social protection systems for working-age households with a Basic Income are summarised in an OECD policy brief entitled "Basic Income as a policy option: Can it add up?" (available via www.oecd.org/employment/future-of-work.htm). The policy brief also shows some headline results from a simulation of the introduction of a particular variant of a Basic Income in four European countries with differing existing social security systems: Finland, France, Italy and the United Kingdom. This technical note gives a more detailed description of this simulation analysis, and shows more comprehensive results of these simulations. It also presents some additional results, including information on the impact of a hypothetical BI reform on the incomes of particular family types and the direct effects of the reform on financial work incentives.

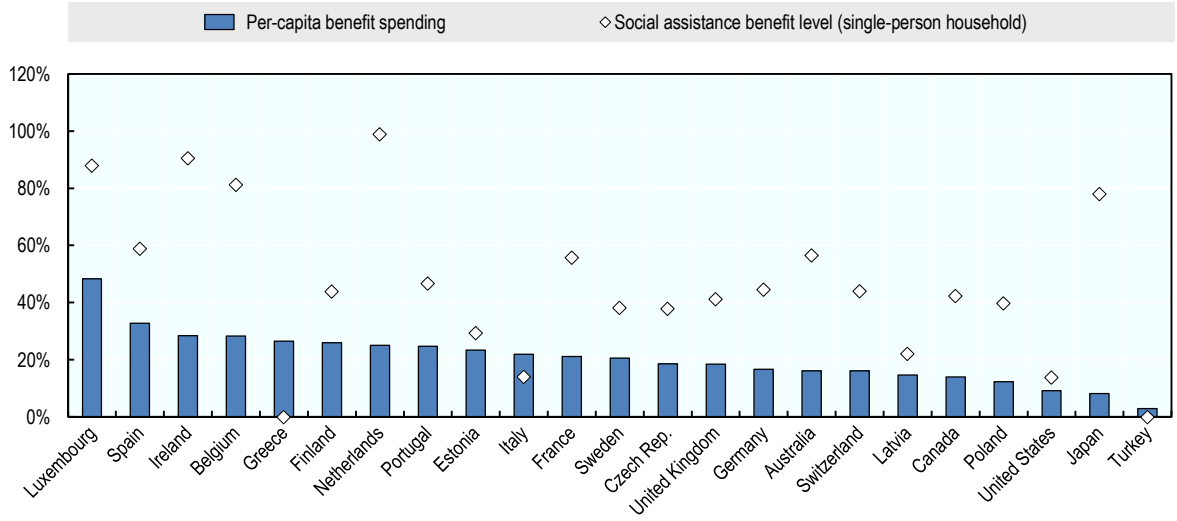
1. Methodology

This note focuses on a BI that would replace most cash benefits for working age households. The incomes of those above normal retirement age (which is taken to be 65 in Finland and Italy, 65 for men and 62 for women in the UK and 62 in France) would thus be unaffected, and the provision of public services, such as health, education, care, or other in-kind supports is assumed to continue unchanged. In practice, extending benefit coverage may have implications for access to services, notably in countries where benefit recipients are covered by health insurance, but those without employment or benefit entitlements are not, but this is beyond the scope of this paper.

Perhaps the simplest way of introducing a BI would be to take existing cash benefits paid to those of working age and to spread total expenditure on these benefits equally across all those aged below normal retirement age. However, it is clear that the resulting BI amount would be very much lower than the poverty line for a single individual. Therefore, without any additional taxes, a budget-neutral BI will be very far from eradicating poverty, whereas a BI set at the poverty line would be very expensive (Figure 1).

Figure 1. At current spending levels, a BI would be well below the poverty line

Non-elderly benefit spending per capita and social assistance amount for a single person without children as a % of the poverty line, 2013



1. Poverty thresholds are 50% of median disposable household income adjusted for household size using the square root of household size.
2. Per-capita spending is in gross terms and refers to total cash transfer except old-age and survivor pensions, but including early-retirement benefits where these can be identified, divided by the number of residents aged below 65 (62 in France). Where receipt of old-age pensions among working-age individuals is relatively common (e.g. in France), true per-capita amounts of all "non-elderly" benefits is significantly higher.
3. Some countries (e.g. Luxembourg) pay significant amounts of benefits to non-residents; dividing total expenditure by the resident populations only overestimates true per-capita amounts in these cases.
4. Social assistance amounts refer to the main means-tested safety-net benefit available for working-age people and do not include cash housing benefits that may be available separately. Social Assistance in Italy refers to the Sostegno per l'inclusione attiva GMI programme that started being rolled out nationally in 2016; no nationally applicable GMI programme existed prior to that.

Source: OECD social expenditure, income distribution, and tax-benefit policy databases.

Rather than setting the BI amount at the level of (relative) poverty thresholds, a perhaps less ambitious alternative may be to use the levels of guaranteed minimum-income benefits (GMI) in existing social protection system as an initial target value for a BI. However, many individuals receive benefits other than a GMI to pay for additional costs for specific needs that they have, such as the costs related to a disability or of renting suitable accommodation. These people would lose out even more from a flat-rate BI. Losses among those receiving categorical benefits designed to cover needs arising in certain circumstances are an unavoidable consequence of replacing large parts of existing social protection with a comprehensive BI. Nevertheless, it is likely that it would be desirable to retain some targeted cash transfers, for instance disability or housing benefits, alongside the BI. This would, however, require even greater reductions of BI amounts if expenditures are to be kept at current levels.

Therefore, a BI at socially and politically meaningful levels would likely require additional benefit expenditures, and thus higher tax revenues to finance them. By taxing the BI alongside other incomes, its net value would fall for those in higher tax brackets, reducing its cost and making it more targeted to lower-income groups, who pay lower tax rates.

A further option for financing a BI is to abolish any existing tax-free allowances. This is commonly included in BI proposals, as the rationale for allowing individuals to keep a portion of their income tax-free becomes less convincing when everyone receives a minimum level of income. Moreover, since unlike existing means-tested benefits, a BI would not get withdrawn when people start earning, tax-free allowances could be abolished while still lowering marginal effective tax rates for many low-income earners (typically the group most likely to work more in response to stronger incentives).

Thus, the starting point of the analysis in this note is to abolish most, but not all, existing working-age benefits, and tax-free allowances and replace them with a BI set at the level of GMI benefits. In conceptual terms, the stages in the construction of these policy scenarios are as follows:

- First, a number of existing benefits are *abolished*. These include unemployment benefits, social assistance and other generalised minimum-income schemes, in-work benefits, early retirement pensions (i.e. pensions paid to those below the normal retirement age whatever their official label), student maintenance grants and family benefits.

- Disability benefits are *reduced* by the amount of the BI. Thus, recipients of these benefits do not lose out from the introduction of the BI.

- Means-tested support for housing costs remains in place but may change in value for families whose incomes change due to the introduction of the BI. In cases (for example, in Finland) where this is provided through the social assistance system, social assistance is retained but non-housing elements are set to zero so it essentially becomes another housing benefit. The BI amounts is counted as income in means tests in cases where this is also the case for those benefits that are replaced by the BI, so that those with no private income continue to receive the same amount of cash housing support as in existing tax-benefit systems.

- All tax-free amounts or zero-rate bands in personal income tax and in employee social security contribution systems are abolished. When the tax-free amount in the personal income tax system is abolished, the income tax threshold of each tax bracket is reduced by the amount of the zero-rate band so that the width of each bracket remains the same. The effect of this is that tax liabilities increase more in absolute terms for those in higher tax brackets than those in lower ones.

- Finally, a BI is introduced into the system. For adults (aged 18 and over), the net (after-tax) BI amount is set at the level of existing GMI benefits for a single person without children. For children, the BI amount is set such that a two-adult two-child family receiving GMI benefits and without any other source of income continues to receive the same amount of support as under the existing tax-benefit system.[1] The BI is also included as taxable income and taxed in the same way that other taxable benefits are in existing systems.

This note uses two different tax-benefit microsimulation models that calculate households' tax liabilities and means-tested benefit entitlements under different scenarios to examine the impacts of a BI along these lines. First, in Sections 2 and 3 it uses the OECD tax-benefit models to examine its impacts on the incomes and financial work incentives of particular family types in ten OECD countries. The OECD tax-benefit models simulate taxes and transfers for a well-defined set of hypothetical households. These households have a single nuclear family, only income from dependent employment, are not entitled to any

1. So in mathematical terms, twice the adult BI amount is subtracted from the amount of GMI benefits received by a two-adult two-child family, and then the result is divided by two.

disability benefits or early retirement pensions and do not use any itemised deductions that may be available in income tax systems for particular expenditure categories.[2] This approach enables the identification of pure policy effects, in this case, how far existing social protection systems in different countries are from a basic income, abstracting from the differences in the structure of the household population that lead to similar policies having different effects in different countries. But as the OECD tax-benefit models focus on particular household types, they cannot be used to examine the impacts of those in other situations who face different tax and benefit rules (for example, the self-employed and those entitled to disability benefits). To examine the impact of a BI on the whole household population, this note also uses EUROMOD, a population based model which can be used to calculate tax liabilities and benefit entitlements for a representative sample of the whole population under different scenarios, for four selected countries: Finland, France, Italy and the UK.[3] This enables overall revenue effects to be calculated, and changes to be made to the policy scenarios (by altering BI amounts or tax rates) to achieve budget neutrality (Section 4). Sections 5 and 6 use EUROMOD to examine the impact of different BI policy scenarios on household incomes across the full range of working-age households, and on poverty rates among those below normal retirement age.

It is important to account for non-take-up of existing benefits when examining the impact of a BI: since a universal BI would likely have near-complete take-up, whereas existing benefits often do not, not accounting for non-take-up would underestimate the increase in household incomes arising from a BI. EUROMOD models non-take-up in cases where information is available on the extent of non-take-up of a particular benefit, for example for means-tested benefits in the UK and social assistance in Finland and France.[4] However, in other cases this information is not available, and hence gains from a universal BI might be larger, particularly among low-income groups, than is suggested by the results of these models. The synthetic households considered in the OECD tax-benefit models are assumed to take up all the benefits to which they are entitled; gains from a BI would be larger among similar households who did not take up their full benefit entitlement under existing systems.

2. The impact of a basic income set at the level of GMI benefits on household incomes

In some countries, the above variant of a BI would broadly replicate existing systems of support for single people without children (Panel A of Figure 2). Those receiving GMI benefits would of course receive the same amount as under current systems of support from a BI set at the same level, and in many cases those in work would see the amount they receive from the BI offset by higher income taxes as tax-

2 . A full list of the assumptions and income concepts used in the OECD tax-benefit models can be found in http://www.oecd.org/els/soc/Methodology.pdf.

3 . Results presented in this note make use of EUROMOD version G3.0+. EUROMOD is maintained, developed and managed by the Institute for Social and Economic Research (ISER) at the University of Essex, in collaboration with national teams from the EU member states. We are indebted to the many people who have contributed to the development of EUROMOD. The process of extending and updating EUROMOD is financially supported by the European Union Programme for Employment and Social Innovation 'Easi' (2014-2020). Data sources for EUROMOD results reported in this note are as follows. Finland: microdata from the EU Statistics on Incomes and Living Conditions (EU-SILC) made available by Eurostat (59/2013-EU-SILCLFS); France and Italy: national EU-SILC PDB data made available by respective national statistical offices. United Kingdom: Family Resources Survey data made available by the Department of Work and Pensions via the UK Data Archive. None of the individuals or organisations mentioned in this acknowledgement are responsible for the analysis or interpretation of the data reported here.

4 . Note that Italy did not have a GMI benefit in 2015, so this discussion is not relevant for Italy.

free amounts were abolished. This is the case in Finland, the UK and the USA for example.[5] In France, those on higher incomes would actually lose between 5% and 10% of their income as the value of the zero-tax band is greater than the BI amount at these income levels, but those with lower earnings would gain.

In many other countries, however, a single person without children would see (often quite substantial) gains at all income levels (Panel A of Figure 2). In these countries, gains generally increase with earnings for lower earnings ranges: the BI would not be means tested away, and peak at the point where entitlement to existing means-tested support expires. The gain would then be a smaller percentage of net income for those with earnings above that point: the cash value of the BI represents a smaller percentage of net income as earnings increase, and the tax increase resulting from abolishing tax-free amounts is higher for those with higher incomes. Gains remain substantial in Japan and the Netherlands, however, as the BI amount still exceed additional tax payments made even at relatively high earnings levels.

In Italy, there was no social assistance scheme in 2014 (the baseline year used for illustrating gains and losses in this section). In the simulations here, the BI amount is set at the level of the *Sostegno per l'inclusione attiva* benefit that started to be rolled out in 2016. As those with no earnings would previously have received no state support, introducing a BI would involve very large percentage changes in incomes at low earnings levels, but as the amount of the BI, like that of the *Sostegno per l'inclusione attiva*, is relatively small, changes are small for those with higher income levels.

The individualised nature of the BI means that it cannot replicate the levels of support that are available in existing social protection systems to different family types:

- The total BI amount for a couple with children is the same as the GMI amount (with the exception of Japan and the Netherlands, where this rule would lead to a negative BI amount for children, Panel D of Figure 2).

- But in almost all countries, couples without children and no other income sources would receive more from this variant of the BI than from existing systems. The reason is that existing social assistance systems generally set the amount for couples at less than twice the amount for a single person (Panel C of Figure 2).

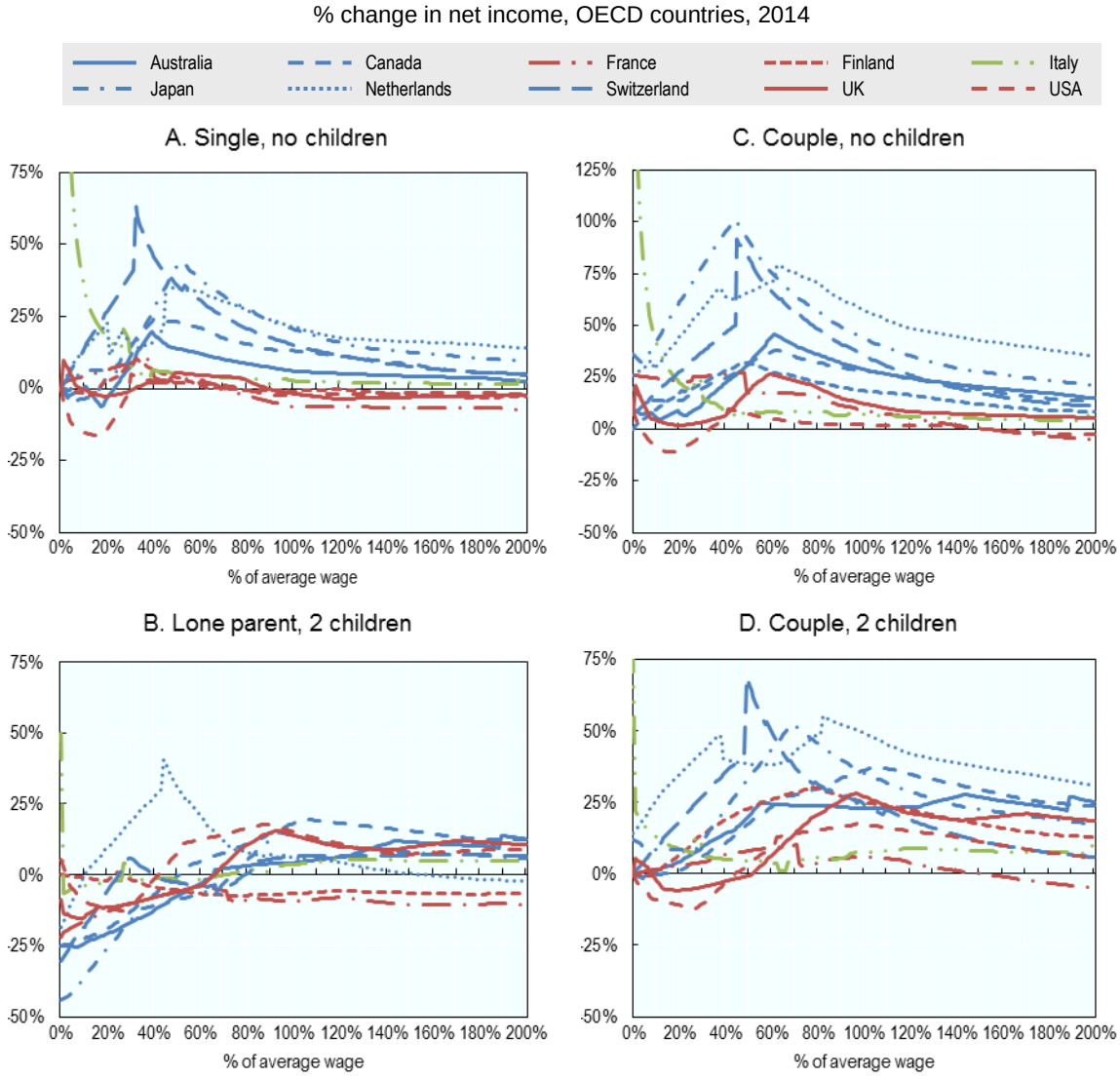
- Lone parents with no earnings or other private incomes would generally receive less than they do under existing GMI systems, which often provide extra support to single-parent households.

As a result, even in those countries where the chosen BI reform scenario broadly replicated existing support for a single person without children, the same does not hold for other family types. Although lone parents who are not in paid work or who earn very little would receive less than they do under existing support systems, since support for children is means-tested in most countries, those with higher levels of earnings would receive more when BI amounts for children are paid irrespective of income and are no longer be means tested away (Panel B of Figure 2). Exceptions to this pattern are Finland, where existing cash support for children is not means-tested, and France, where the *quotient familial* makes the zero-rate band (which is abolished in the chosen BI reform scenario) particularly valuable for high-income families with children. Similarly, there would be large gains for higher-income couples with children (Panel D of Figure 2), with France again the only exception.

5. In the USA, there are some losses at very low income levels. These arise as a result of the abolition of the Earned Income Tax Credit (EITC).

For couples without children, gains would again be largest at relatively low earnings levels: the BI amount is higher than the GMI systems it replaces, and in addition those earning an income where the income tests of existing means-tested benefits "bite" are better off as the BI is not means-tested away as earnings rise (Panel C of Figure 2). There would also be gains at higher earnings levels for single-earner couples in countries with individual income tax systems: essentially, non-working partners do not use "their" tax-free amount under the current system and thus do not lose out from its abolition.

Figure 2. Gains and losses for four household types from basic income set at level of GMI benefits at different levels of earnings



1. Details of basic income design are described in the text. Assumes no entitlement to unemployment insurance benefits.
2. In Panels C and D, one member of the couple is assumed to earn all the income.

Source: Authors' calculations using OECD tax-benefit models.

The extent of gains shown in Figure 2 suggests that replacing existing social protection systems with a BI along the lines described here would not be budget-neutral. However, it is important to remember though that these figures refer only to particular types of family that, under current tax-benefit rules, receive social assistance benefits at low income levels, and possibly in-work benefits when they work or child benefits when they have children. But the calculations of gains did not consider entitlements to unemployment insurance, sickness, or early retirement benefits, which are typically more generous. Those currently receiving these types of out-of-work benefits would generally lose out when they are replaced by a BI. The detailed simulations for four countries reported in Sections 4-6 below examine the budgetary consequences of a BI, as well as patterns of gains and losses, for rich and representative samples of actual households.

3. Impact of a BI on financial work incentives

The previous section showed how a BI would increase the incomes of some families, and reduce those of others. Economic theory would predict that those who gain from a BI might work less as a result, and those who lost out would work more. In a revenue-neutral reform where the total gain of the winners equalled the total loss of the losers, however, the net effect would likely be small. But by changing in-work and out-of-work incomes amounts, a BI would also alter individuals' financial work incentives by changing the gain from working at different wage levels. On the whole, as GMI benefits would no longer be withdrawn when moving into work, a smaller percentage of earnings would be lost to higher taxes or benefit withdrawal upon taking up employment (a measure called the participation tax rate) for those who were eligible to means-tested earnings-replacement benefits when not in paid work (i.e. those without a working partner, Table 1). Their financial work incentives would therefore be stronger after a move to a type of BI as outlined above.

Table 1. Impact of Basic Income on Participation Tax Rates

Percentage point change at Average Wage, 2014

	Single, no children	Single, 2 children	1-earner couple, no children	1-earner couple, 2 children	2-earner couple, no children	2-earner couple, 2 children
Australia	-4.7	-16.1	-18.5	-21.2	+12.6	-5.9
Canada	-10.1	-29.1	-17.3	-33.3	+0.4	-14.2
Finland	+0.6	+5.8	-12.8	-18.9	+14.0	+11.9
France	+4.6	-0.3	+0.6	-5.4	+13.5	+10.6
Italy	+1.3	+6.6	+1.3	+6.6	+0.2	-4.6
Japan	-16.1	-40.2	-24.0	-23.8	+2.8	+1.4
Netherlands	-13.5	-18.4	-26.1	-26.2	+8.4	+5.1
Switzerland	-11.1	-12.9	-22.4	-19.0	+8.9	+10.2
UK	+1.3	-15.9	-6.8	-22.0	+12.0	-4.6
USA	+1.7	-11.4	-1.0	-15.0	+3.6	-2.6

1. Design of BI described in text.

2. For 2-earner couple, partner earns 67% of the average wage.

Source: Authors' calculations using OECD tax-benefit models.

In most countries, these effects are most noticeable for single-earner couples and for lone parents. As a BI would remove the means test for family benefits, benefit reductions when moving into work would be smaller for those with children. Single-earner couples without children also gain more from a BI if they are in work than if they are not working (Panel C of Figure 2): the BI amount for two people is greater than the value of the lost tax-free allowance for the person who is in paid work. Single people without children are largely unaffected by the BI variant considered here in some countries (recall Panel A of Figure 2), but see a significant strengthening of incentives in other countries where those in work would gain significantly from the BI.

There are some exceptions to this. In Italy, there was no GMI scheme, so there would be no strengthening of work incentives arising from making this support non means-tested. Indeed, family benefits resemble an in-work benefit and are therefore higher for those in work than for those who do not work. Therefore, replacing these with a BI would *weaken* work incentives for those with children. In France, the abolition of tax-free allowances more than offsets the removal of means tests for social assistance for those without children, and the two effects come close to offsetting each other for those with children.

A BI as outline above would severely weaken work incentives for those whose partner is in paid work. This is the case in almost all countries, but especially pronounced for childless couples. The reason is the abolition of tax-free allowances and the shifting down of income tax bands to partly finance the BI reform. The only exceptions to this are where *(i)* tax-free amounts are fully transferable between members of a couple (Canada and Japan), and the second earner does not benefit from a separate tax-free amount in any case, or where *(ii)* there is no general tax-free allowance, only credits that can be offset against certain types of income (Italy). These individuals typically are not entitled to means-tested social assistance benefits when not working, as their partner's income is generally sufficiently high to eliminate any entitlement. In summary, for second earners in these couples, work incentives are weakened by the tax increases resulting from the abolition of tax-free allowances, and this is not offset by the positive incentive effects of doing away with means-testing.

For two-earner couples with children, the situation is more complicated, and net effects vary between countries. In countries with universal family benefits (Finland and Switzerland), where benefit withdrawal rates are very gradual (the Netherlands), or where benefit withdrawal occurs only at high income levels (Japan) there is little difference between the cases of 2-earner couples with and without children: a BI for children is much the same as the existing system of family benefits, and moving from existing child-related support to a flat BI for each child has little effect on participation tax rates. By contrast, in countries where family benefits are means-tested (Australia, Canada, Italy, the UK and the US), replacing these with a universal BI for children strengthens financial work incentives as families have less to lose when the second member of the couple moves into work.

Overall, it is clear that changes in work incentives from replacing existing social protection would be large for the families considered here, much larger than from other policy reforms that are typically considered in the literature. It is therefore hard to say how large labour supply responses would be expected from such a large change, though responses would likely be substantial. Other groups not considered here might have even larger changes in their work incentives: those entitled to unemployment benefits or early retirement pensions under existing systems would see their out of work incomes fall when these were replaced by a BI set at the (lower) level of GMI benefits. However, examining static participation tax rates (i.e. measures that focus on income at a point in time rather than faced by these people might not be the best way of evaluating their work incentives. Unemployment insurance benefits are generally time-limited, so claimants face a strong incentive to move into employment before their entitlement comes to an end even if their earnings in work would not be much higher than their unemployment insurance benefits. Also, those who take their retirement pension early usually do so with a penalty (i.e. they receive a lower pension than they would have done had they taken it at normal retirement age), but the lower pension they will receive in future is not taken into account in the calculation of their participation tax rate. It is therefore not clear that expanding this analysis to a wider population would be informative about likely labour supply responses to a BI.

4. Revenue implications of a BI

This section examines the revenue implications of a BI as described in Section 1 using EUROMOD (for full details, see Section 1). In France, it turns out that the variant of a BI examined here is close to budget-neutral (Table 2): the savings from reduced spending on existing benefits and pensions replaced by the BI, together with the additional tax revenue from abolishing the zero-rate income-tax band would almost offset total spending on the BI. In Finland and particularly in Italy, a BI set at the level of GMI benefits (which are very low in Italy) would cost less than the combined expenditure on benefits and tax-free allowances that would be replaced under this scheme. In the UK, however, a BI would be much more expensive than the existing benefits it would replace, and abolishing tax-free amounts would not cover the additional cost.

Table 2. Budget implications of BI set at level of GMI benefits

Changes in tax revenues and expenditures on different benefits, annual amounts, 2015

Country	Change in non-pension benefits	Change in pensions	Change in income tax	Change in social security contributions	Spending on BI set at GMI levels	Overall direct budget effect
Finland	-€8.9bn	-€4.8bn	+€20.2bn	+€0.1bn	+€32.6bn	+€1.5bn
France	-€69.4bn	-€47.1bn	+€123.5bn	€0	+€242.7bn	-€2.7bn
Italy	-€19.0bn	-€66.0bn	+€17.5bn	€0	+€60.9bn	+€41.6bn
UK	-£58.9bn	-£0.4bn	+£115.0bn	+£14.4bn	+£232.9bn	-£44.3bn

Source: Secretariat calculations using Euromod version G3.0+.

The increase in income tax would come about through two different channels. First, taxpayers would pay income tax on the BI and all their other existing taxable income, whereas existing benefits may be taxed at a lower rate or not at all. Second, higher tax rates would apply from lower income levels as a result of abolishing the zero-tax band / tax-free allowance. In two countries, the additional tax revenue would contribute significantly more financing to the BI reform than the savings from abolishing or reducing existing benefits: in the UK, 69% of the gross 'takeaway' from households to pay for the BI comes from higher taxes, while the share is 59% in Finland. In France, higher tax revenues would contribute around half (51%) of gross BI expenditure, while in Italy, higher tax payments would represent a lower share of BI spending (17%) even though the implied increase in tax revenues would still be large.

To compare like with like across countries, all remaining results are calculated for budgetary neutral BI reforms, effectively bringing the "overall direct budgetary effect" in Table 2 to zero. This is done in two different ways:

1. Either the BI amount, which is initially set at GMI levels as explained above, is increased or reduced until net government spending is the same as before the reform;

2. Or all income tax rates are increased or reduced by the same percentage until net government spending matches the pre-reform aggregate (while leaving BI amounts unchanged at GMI levels).

In Finland and Italy, the two countries showing a positive budget effect in Table 2, a BI at GMI levels results in overall budget savings, so it would be possible to increase BI levels without sacrificing budget neutrality. In Finland, a BI 8.5% higher than the GMI amount for a single person without children would be possible, while in Italy it would be possible to increase the BI amount to 97% above the (very low) level of the recently-introduced GMI. In France, a small 2% reduction of BI levels would be needed to achieve budget neutrality. However, in the UK the cost of a BI at GMI levels would significantly exceed current spending on cash benefits and the revenue raised from abolishing tax-free allowances. A revenue-neutral scheme would require the BI amount to be reduced to 28% below GMI levels. The levels of the revenue-neutral BI are set out in Table 3.

Table 3. Budget-neutral BI amounts

Net of tax, monthly

	Budget -neutral amounts		BI set "at GMI" levels	
	Adult	**Child (<18)**	**Adult**	**Child (<18)**
Finland	€527	€316	€485	€291
France	€456	€100	€465	€102
Italy	€158	€158	€80	€80
United Kingdom	£230	£189	£317	£261

1. Budget-neutral amount assumes most working-age benefits and tax-free amounts abolished. See text for details.

Source: Secretariat calculations using Euromod version G3.0+.

The adjustment could equally be made on the tax side. If the BI amount was kept at the GMI level, income tax rates could be reduced by 4.5% in Finland and 31% in Italy, or it would require a 2% increase in income tax rates in France and a 25% increase in the UK. In this case, since the GMI benefit level used in Italy (the amount of the social assistance benefit introduced in 2016) is so low, replacing existing social protection with a BI set at this level would allow a substantial reduction in income tax rates and so total tax revenues would fall. In other countries, where income tax rates fall by less (Finland) or where an increase in tax rates is required to finance a BI at the level of GMI benefits (France and the UK), a substantial part of the revenues to pay for the BI come from additional tax revenues: 57% in Finland, 52% in France and 76% in the UK.

Table 4 shows the implications of the two different ways for achieving budget neutrality on different types of tax revenues and benefits expenditures (using the same format as Table 2 before, and accounting for relevant interactions between spending and tax categories, such as the taxes due on the BI)

Table 4. Change in benefit and pension spending and tax revenue in revenue-neutral BI scenario

BI amount adjusted to achieve budget neutrality

A: BI amount adjusted to achieve budget neutrality						
Country	Change in non-pension benefits	Change in pensions	Change in income tax	Change in social security contributions	Spending on BI	Overall direct budget effect
Finland	-€9.0bn	-€5.0bn	+€21.3bn	+€0.1bn	+€35.3bn	+€0.1bn
France	-€69.3bn	-€47.0bn	+€122.0bn	€0	+€237.8bn	+€0.5bn
Italy	-€19.0bn	-€67.3bn	+€33.7bn	€0	+€119.9bn	+€0.0bn
UK	-£54.2bn	-£0.4bn	+£100.0bn	+£14.4bn	+£168.9bn	+€0.1bn
B: Tax rates adjusted to achieve budget neutrality						
Country	Change in non-pension benefits	Change in pensions	Change in income tax	Change in social security contributions	Spending on BI set at GMI levels	Overall direct budget effect
Finland	-€9.0bn	-€4.8bn	+€18.2bn	+€0.1bn	+€32.0bn	+€0.0bn
France	-€69.4bn	-€47.0bn	+€126.5bn	€0	+€242.7bn	+€0.3bn
Italy	-€19.0bn	-€65.9bn	-€29.9bn	€0	+€55.6bn	-€0.6bn
UK	-£58.8bn	-£0.4bn	+£175.3bn	+£14.4bn	+£248.5bn	+€0.4bn

Source: Secretariat calculations using Euromod version G3.0+.

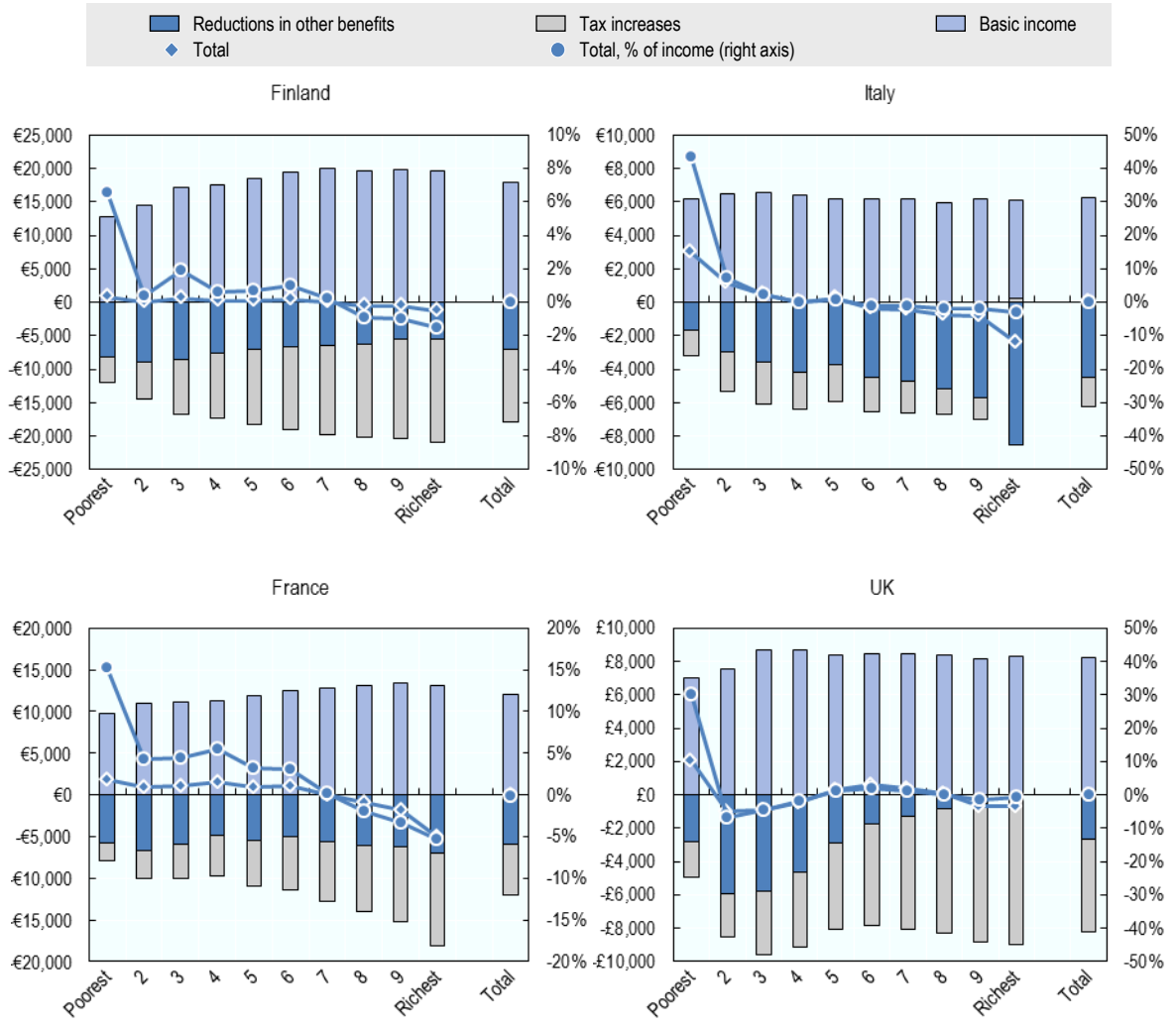
5. Distributional effects and winners and losers from a budget-neutral BI

5.1 Budget neutrality is achieved by adjusting the BI amount

In each of the four countries considered here, the largest average gains from a BI would occur among the lowest-income households (Figure 3). This arises as those who are not covered by social protection in existing systems for whatever reason (not having sufficient past contributions to qualify or non-take-up of benefits) and who hence have the lowest incomes would gain from the introduction of a universal BI. The richest income group would lose overall in each country too: in Finland, France and the UK, this is because of higher tax payments: the tax-free amounts which are abolished are worth more to those with higher incomes, and since the BI is taxable, more of it is taxed away from those in higher tax brackets. But there are interesting differences between the four countries that relate to the nature of their existing social protection systems. In Finland, aggregate gains and losses more or less offset for each income decile: as Finland has universal family benefits, social insurance benefits for the unemployed and early retirees and means-tested GMI schemes, the existing system is perhaps closer to a BI than the other countries. France is similar, but has greater opportunities for claiming early retirement pensions, which increase the amount of benefits going to higher-income households in the existing system, and hence aggregate losses for higher-income households are larger than in Finland. As the existing system of social protection in Italy is poorly targeted on low-income households[6], redistributing existing non-elderly benefit spending equally among all those aged below the main statutory retirement age would represent a transfer from richer to poorer households. In the UK, replacing existing (largely means-tested) benefits with a BI set significantly below the level of GMI benefits leads to losses towards the bottom of the income distribution (though not among the very poorest, who do not claim the means-tested benefits to which they are entitled and so would gain from the introduction of a BI).

6. See Figure 1 of the accompanying brief to this paper, OECD (2017), "Basic Income as a policy option: Can it add up?".

Figure 3. Average gain and loss from revenue-neutral BI (adjusted amount) by income decile



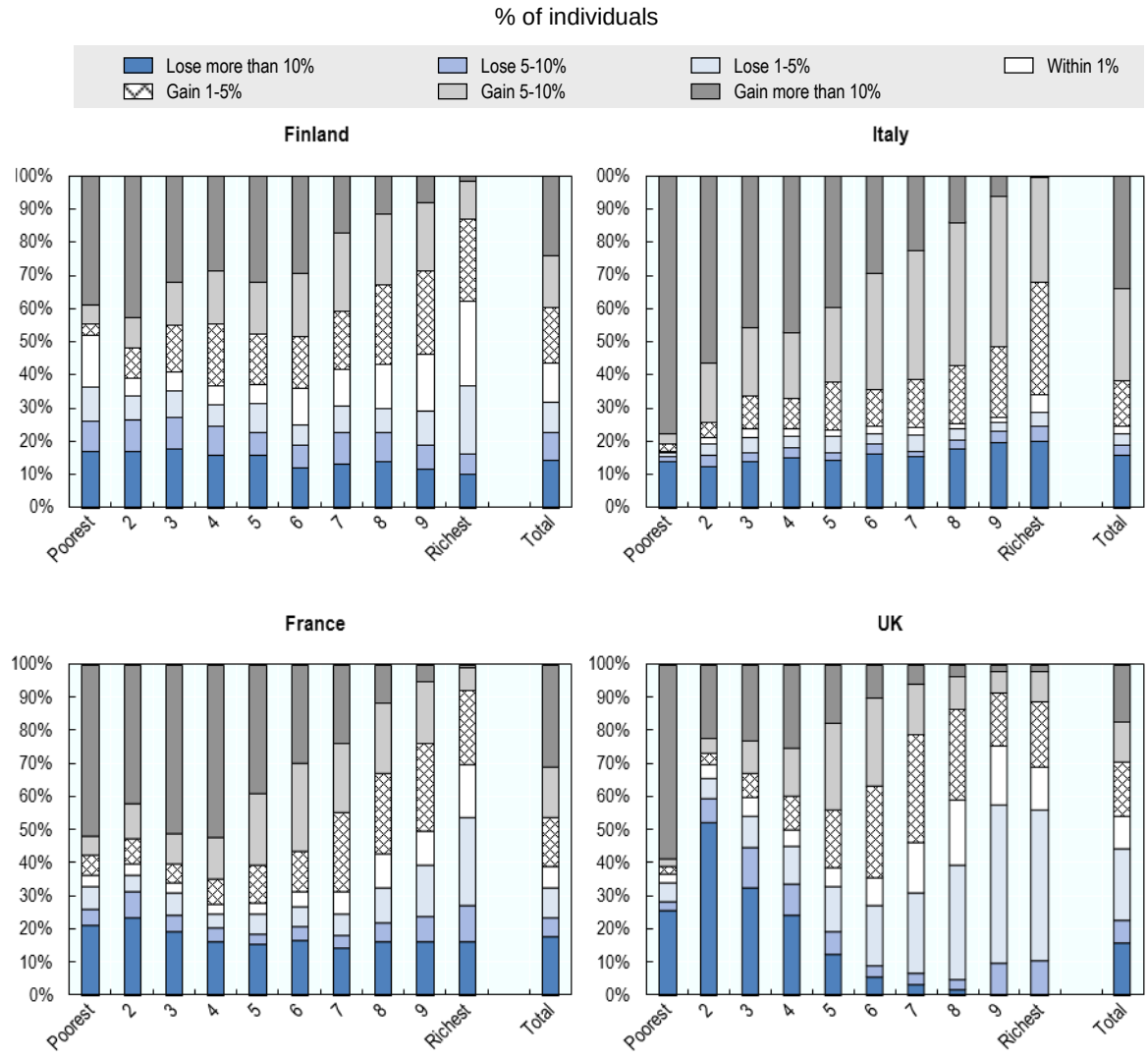
1. Income deciles constructed by ranking households by their income adjusted for household size using square root of household size.

Source: Secretariat calculations using Euromod version G3.0+.

These amounts are just averages however. A closer examination reveals that at all income levels a significant number of households would see large gains or losses (Figure 4). In Finland, France and Italy, large losses would occur among those who receive unemployment insurance benefits or early retirement pensions, since these are typically much higher than the BI set around the level of GMI benefits. As these are not targeted on low-income households, these losses occur at all income ranges. Most other people would gain as a result of receiving a BI, and this represents a larger percentage of income at lower income levels. In France, many higher-income households would also lose: tax-free amounts are worth more to them than the basic income (Figure 2). The pattern in the UK is different: as the revenue-neutral BI amount is lower than the value of GMI benefits, lower-income groups often lose. Gains are more common than losses among middle-income groups, as they do not receive means-tested benefits in the first place and the gain from receiving the BI more than offsets losses from the abolition of tax-free allowances. This reverses

at the highest income levels, however, as tax-free allowances are worth more to those in higher tax brackets. Those in the lowest income decile would also gain, as these are often households that are entitled to means-tested benefits but do not claim.

Figure 4. Winners and losers by income decile from budget-neutral BI (adjusted amount)

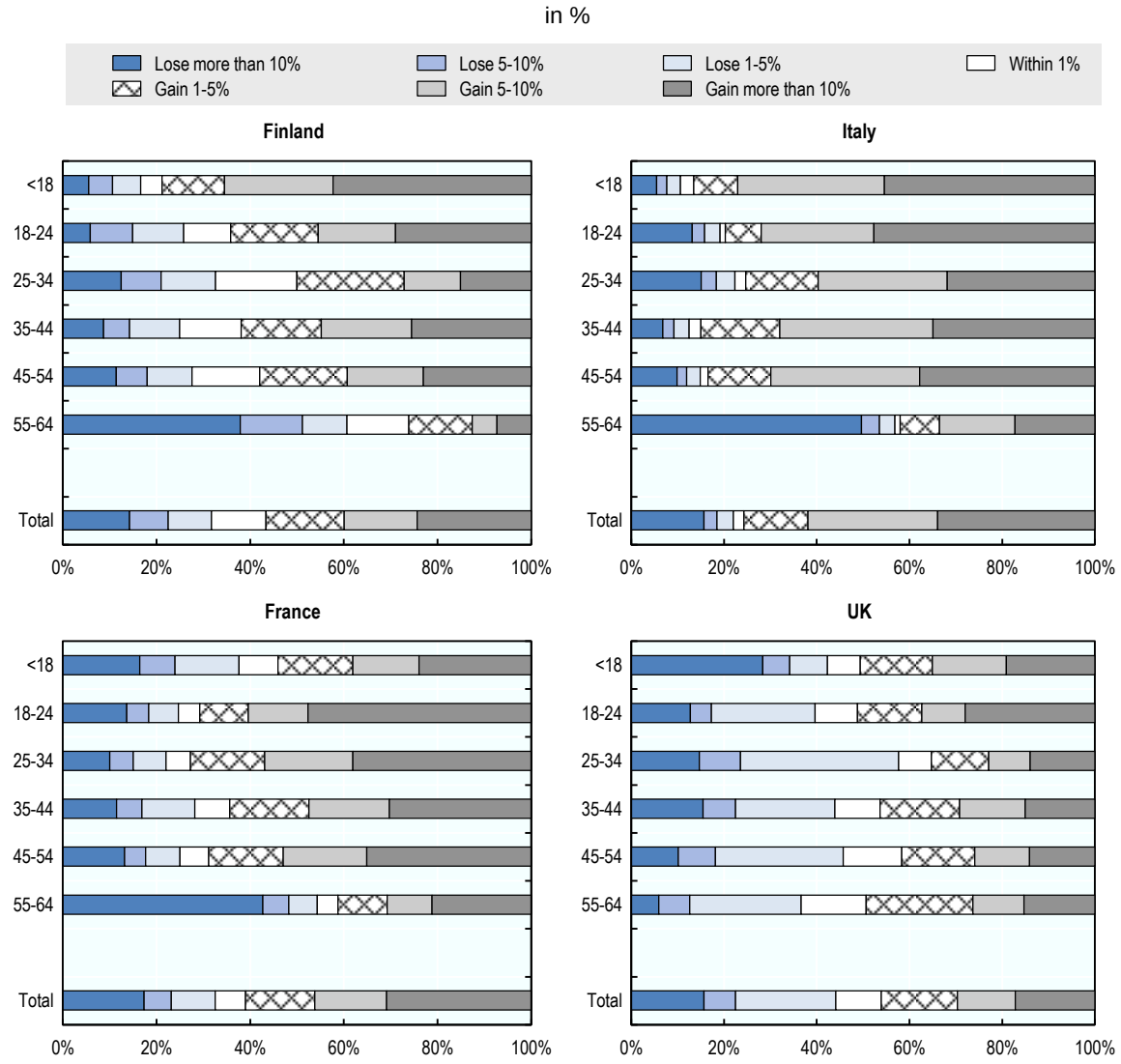


1. Deciles created using household income adjusted for family size using square root of household size with equal numbers of households in each decile.

Source: Secretariat calculations using Euromod version G3.0+.

Many of the large losses in Finland, France and Italy would occur among those receiving early retirement pensions, which are typically much higher than the BI (Figure 5). This would not happen in the UK as it is not possible to take retirement pensions before statutory retirement age, and so the proportion of gains and losses is roughly the same in each age group.

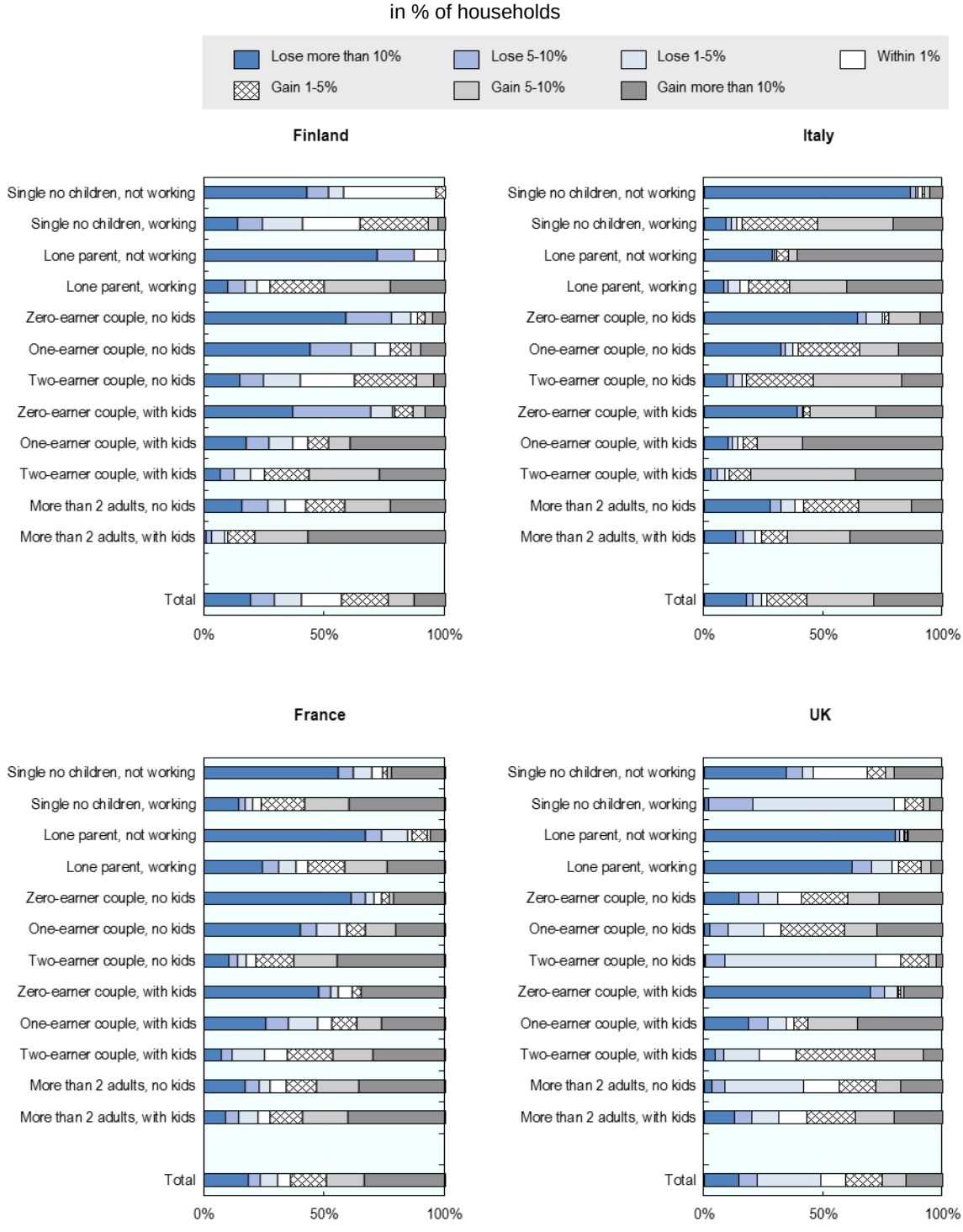
Figure 5. Winners and losers by age from revenue-neutral BI (adjusted amount)



Source: Secretariat calculations using Euromod version G3.0+.

There are also significant differences between different family types (Figure 6). As highlighted previously, the individualised nature of a BI could not replicate the ways in which existing social protection systems give support to different household types. In all countries, losses are concentrated among workless households: in Finland, France and Italy this arises because losers are concentrated among recipients of unemployment insurance benefits and early retirement pensions, in the UK because the BI is set at a lower level than existing benefits in this scenario. Figure 6 also shows that in both France and the UK, losses are also very common among lone parent households. The way in which the BI amounts are calculated mean that BI levels for a lone parent family are generally lower than the levels of GMI benefits they replace (recall Figure 2).

Figure 6. Winners and losers by household type from revenue-neutral BI (adjusted amount)



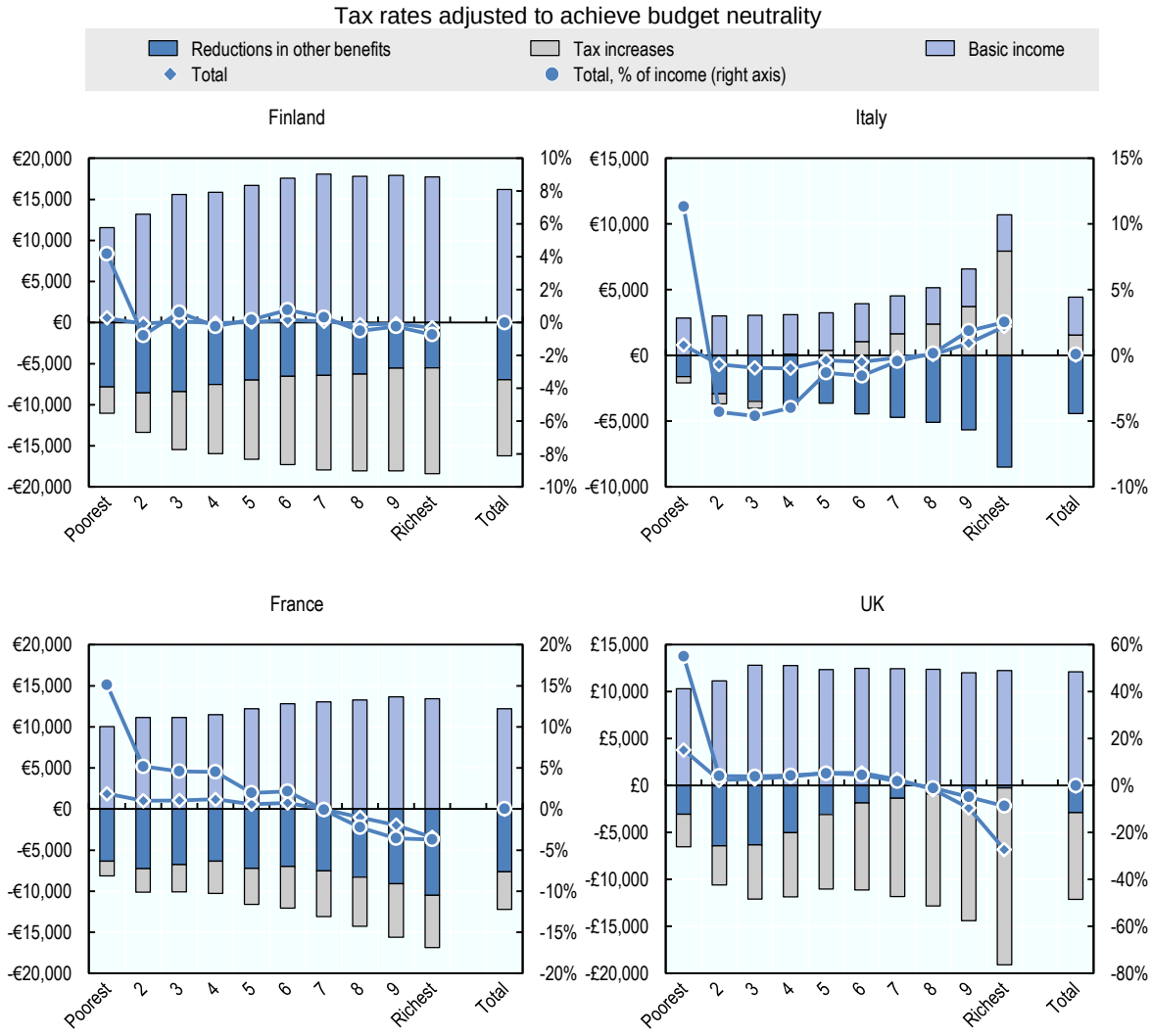
Source: Secretariat calculations using Euromod version G3.0+.

5.2 Budget neutrality is achieved by adjusting income-tax rates

The other variant of a BI examined here sets the BI amount at the level of GMI benefits and adjusts tax rates to achieve budget neutrality. In Finland and France, this is little different from the previous variant as a BI set at GMI levels is close to budget-neutral without any adjustment to tax rates. In Italy, this variant involves a big reduction in income taxes, which significantly benefits richer households but does little to increase the incomes of many poorer households (though not the very poorest who receive nothing at the moment, Figure 7). The opposite is the case in the UK. Setting the BI at GMI levels leads to the incomes of lower-income groups being unaffected overall.[7] Middle income groups also see little change in their incomes in aggregate: overall, additional taxes paid roughly offset the BI received. The richest 20% of households would lose significantly however as higher taxes more than offset the gain from the BI.

7. As with the other variant, households in the very lowest income group gain on average in the UK: these are households who do not take up their existing benefit entitlements and so see their incomes increase when they start receiving the BI.

Figure 7. Winners and losers by income decile from BI set at level of GMI benefits



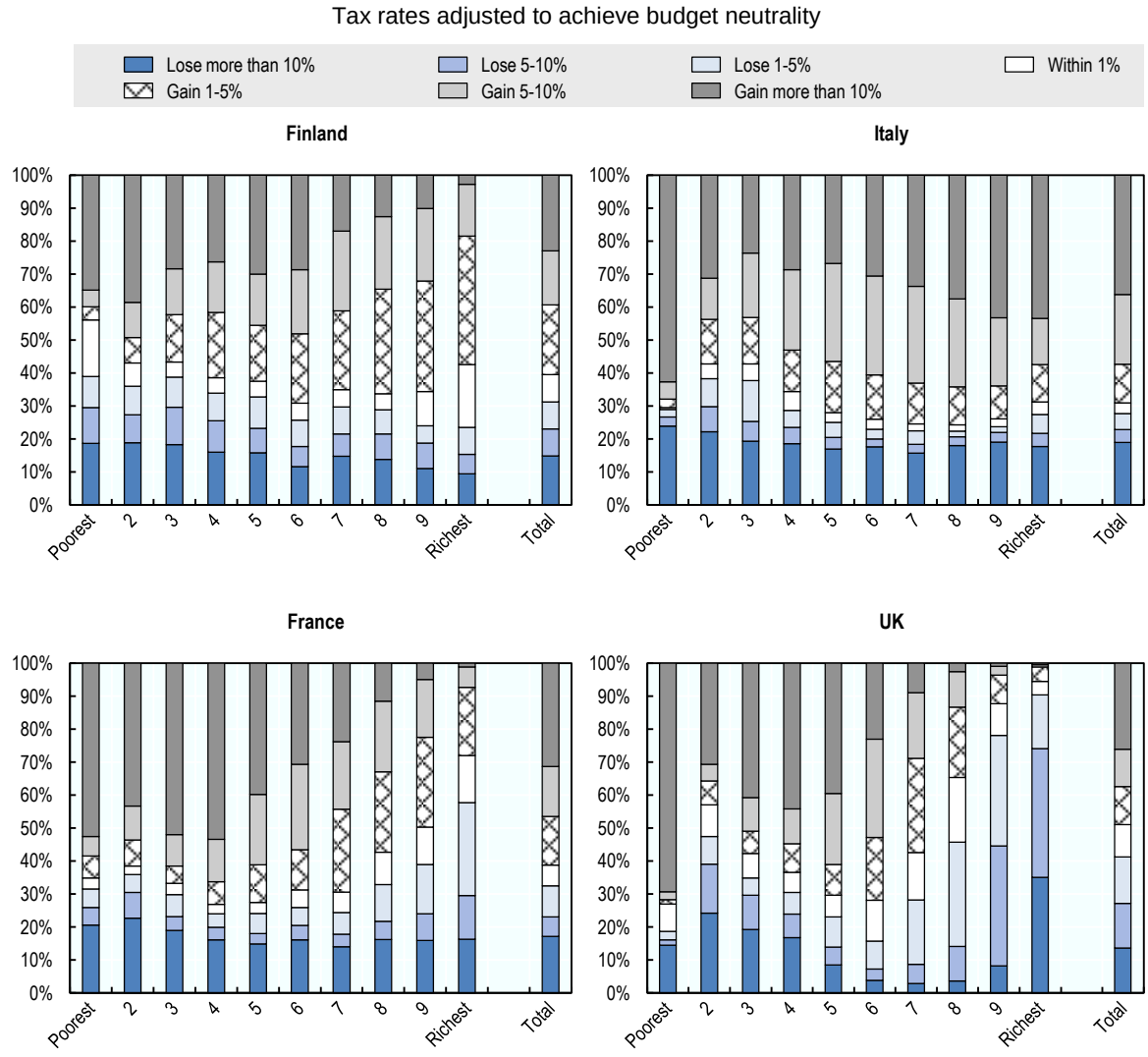
1. Income deciles constructed by ranking households by their income adjusted for household size using square root of household size.

Source: Secretariat calculations using Euromod version G3.0+.

The number of winners and losers in each income decile changes along similar lines (Figure 8). In Finland, slightly lower tax rates and BI amounts mean that there would be more losers at low income levels but fewer at high income levels under this variant of the BI. Gains would still be most common in middle-income households, however. The opposite is the case in France, as both the BI amount and tax rates are very slightly higher than in the previous scenario, but the broad picture remains the same: at each income level there are still large numbers of winners and losers, but losses would be most common at higher income levels as these households lose the most from the abolition of tax-free amounts. In Italy, a BI set at the very low level of the social assistance programme introduced in 2016 would leave room for substantial tax cuts, which would particularly benefit higher-income groups but leave almost all recipients of existing benefits worse off. In the UK, by contrast, a BI set at the level of GMI benefits would require significant tax rises, which would far offset the gain from the BI for those in the richest households, almost all of

whom would be worse off. This would also alleviate the large losses that would occur under the previous scenario where the BI amount was much lower than existing GMI benefits.

Figure 8. Winners and losers by income decile from BI set at level of GMI benefits

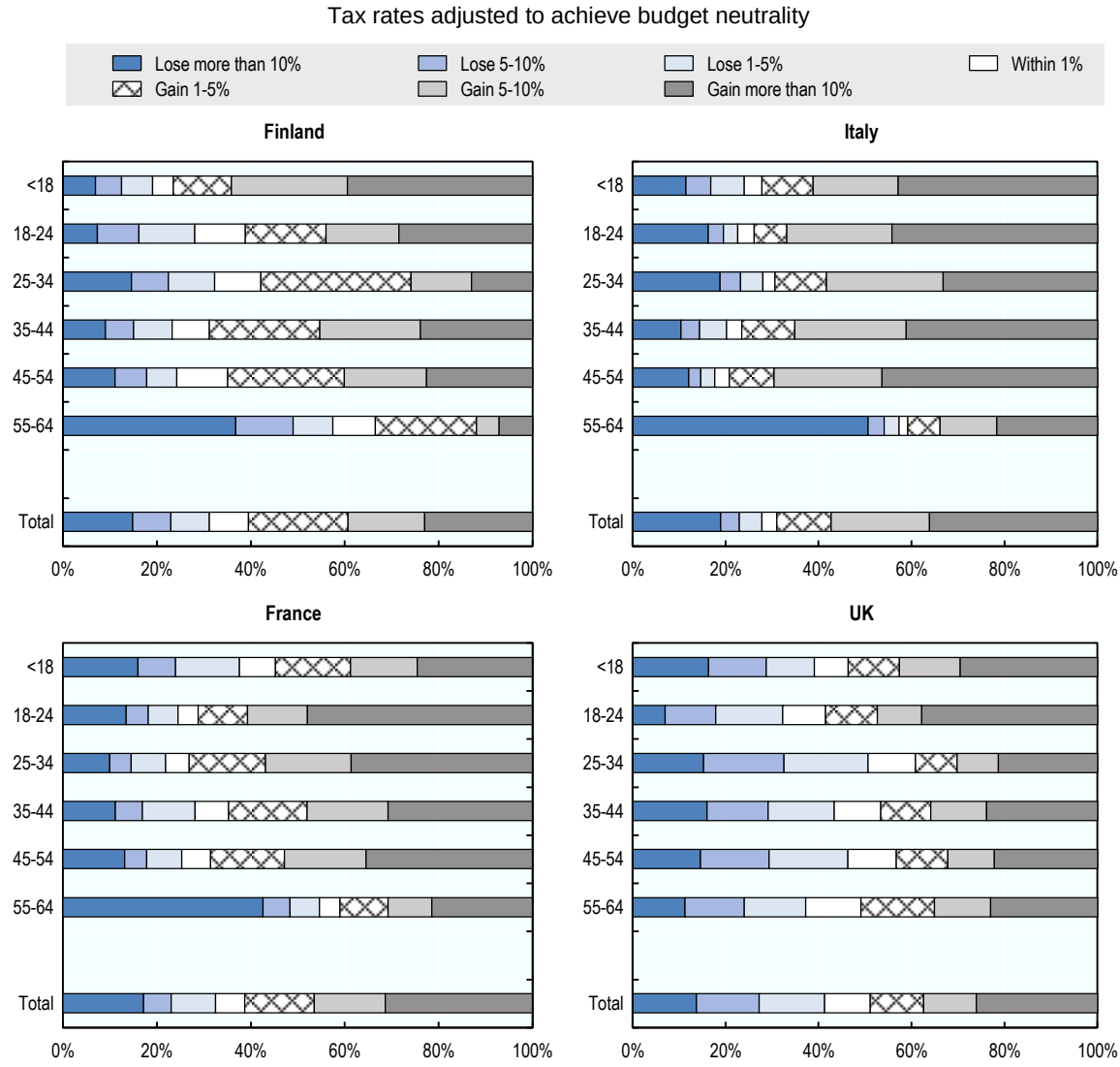


1. Deciles created using household income adjusted for family size using square root of household size with equal numbers of households in each decile.

Source: Secretariat calculations using Euromod version G3.0+.

Gains and losses would occur among similar age groups under this variant of the BI (Figure 9). In Finland, France and Italy, those claiming early retirement benefits would lose and so losses are heavily concentrated among those who are just below the main statutory retirement age. The UK does not have a system of early retirement pensions, and so gains and losses would again be roughly the same for each age group.

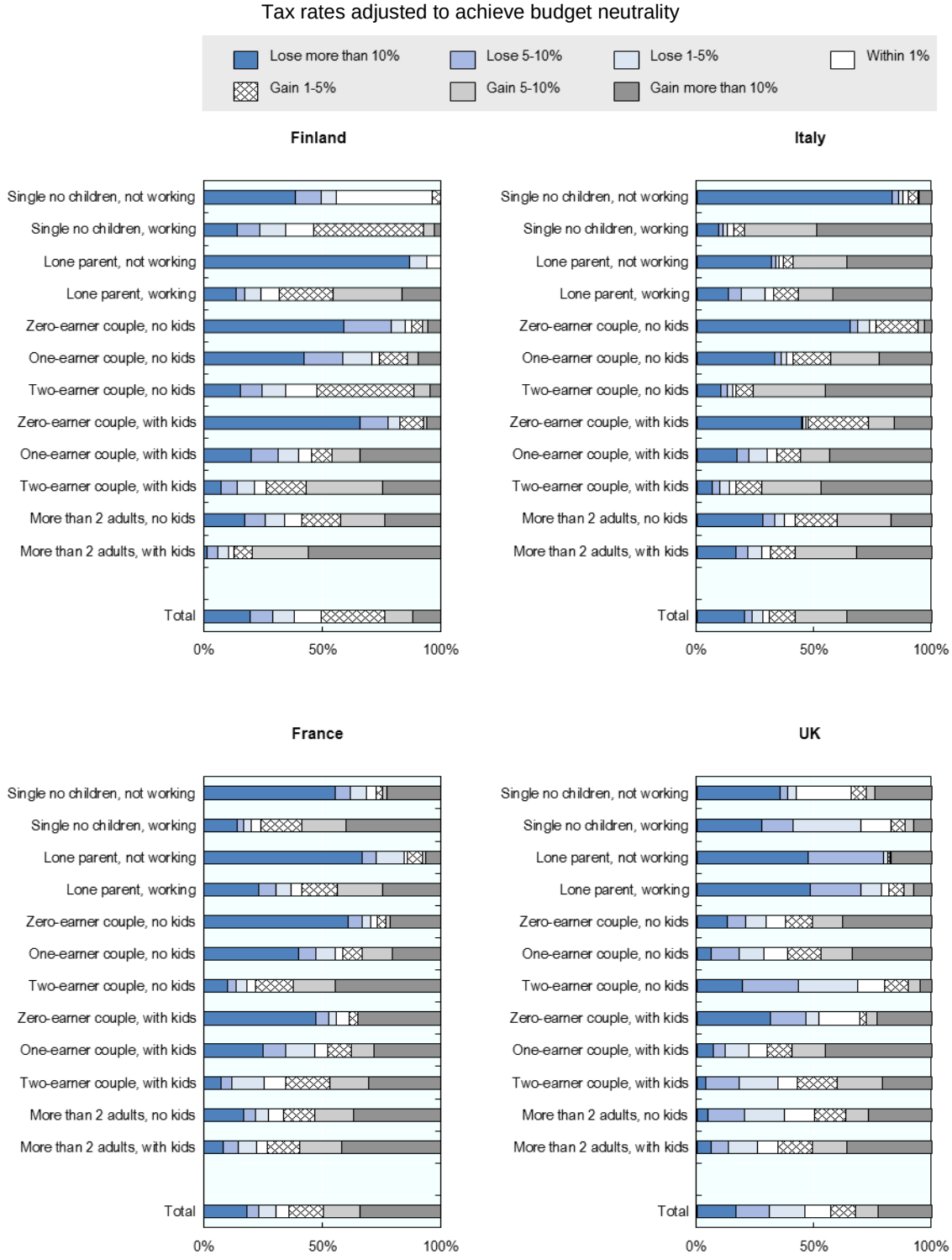
Figure 9. Winners and losers by age from BI set at level of GMI benefits



Source: Secretariat calculations using Euromod version G3.0+.

In Italy, adjusting tax rates rather than the BI amount would make the distributional impact between household types more equal (Figure 10). Relative to the previous scenario, there are fewer gains among households with children in Italy because the BI is set at levels roughly corresponding to existing family benefits. Gains among working groups are generally larger in this scenario where there are substantial tax reductions alongside a lower basic income, with correspondingly smaller gains among workless households. In the UK, a BI amount that was closer to the level of GMI benefits would reduce the scale of losses among lone parents and increase the scale of gains among couples and workless households. Large losses would be more common among working households without children in this scenario, however: relative to the previous scenario, the higher value of the BI does not make up for additional tax payments resulting from higher tax rates for this group. The pattern of gains and losses in Finland and France does not significantly differ from the previous scenario as the differences between the two scenarios are smaller than in Italy and the UK.

Figure 10. Winners and losers by household type from BI set at level of GMI benefits



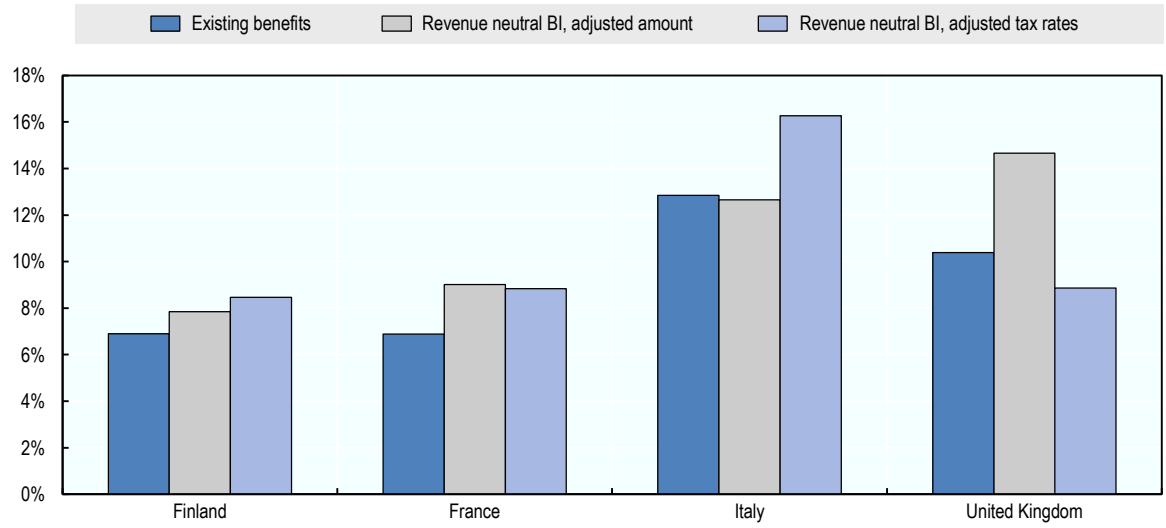
Source: Secretariat calculations using Euromod version G3.0+.

6. Direct effect of a BI on income poverty

Although there would be more winners than losers among low-income groups under a BI (recall Figures 4 and 8), it would not prove to be an effective tool for reducing poverty (Figure 11). In Finland and France, relatively good benefit coverage among poorer households means that poverty would be higher under both BI variants considered here as, despite benefit spending being much higher with a BI, it would be much less well targeted. Many of those who are brought out of poverty by unemployment insurance and early retirement benefits would fall into poverty again if they received a BI at around GMI levels. Even in Italy, where existing benefit spending is not well targeted on poorer households, poverty would be roughly the same in the case where existing spending was used to give everyone a BI rather than targeted on specific groups. In the scenario where the BI was set at the very low level of the social assistance benefit introduced in 2016 and tax rates reduced, the poverty rate would be significantly higher. In the UK, the revenue-neutral BI amount is significantly below the level of existing GMI benefits, so it is perhaps unsurprising that this leads to much higher levels of poverty. However, even in the case where taxes are raised significantly to pay for a BI at the level of GMI benefits, the BI does not significantly reduce poverty.

Figure 11. Poverty rate under existing social protection systems and two BI variants

% of working-age population (below main statutory retirement age in each country)



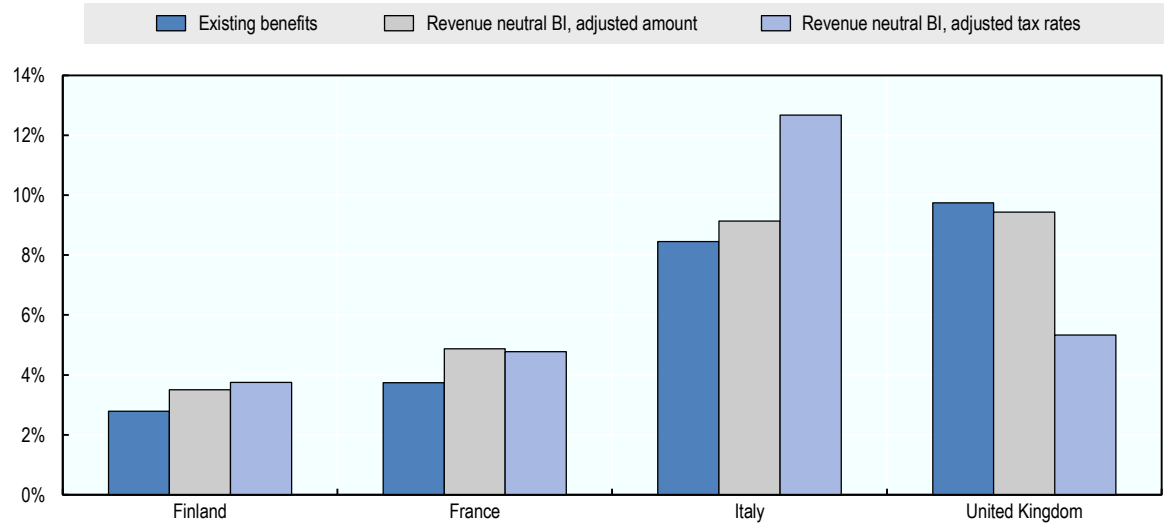
Note: The poverty line defined as 50% of median household income adjusted for household size using square root of household size.

Source: Secretariat calculations using Euromod version G3.0+.

A BI would have similar impacts on the aggregate poverty gap in Finland, France and Italy (Figure 12). In the UK, however, improved benefit coverage – a BI would not have the same problems of non-take-up as existing means-tested support – would at least bring those with the lowest incomes closer to the poverty line, even if it did not reduce the headcount measure level of poverty.

Figure 12. Poverty gaps under existing social protection and two BI variants

For those below normal retirement age, % of total benefit spending



Notes and source: see Figure 11.

Rather than reducing the overall headcount of those in poverty, a BI would change the composition of the income-poor population (Table 6). In all countries, a reduction in poverty among those currently not covered by social protection systems would be offset by some of those who are covered by existing social protection systems and who lose out from the introduction of a BI moving into poverty.

Table 6. Poverty transitions following the introduction of a BI

% of population below normal retirement age

		In poverty under BI (adjusted amount)?				In poverty under BI (adjusted tax rate)?			
		No		Yes		No		Yes	
In poverty under existing system?	No	Finland: 90%	Italy: 83%	Finland: 3%	Italy: 4%	Finland: 90%	Italy: 82%	Finland: 3%	Italy: 5%
		France: 89%	UK: 83%	France: 5%	UK: 7%	France: 89%	UK: 87%	France: 4%	UK: 3%
	Yes	Finland: 2%	Italy: 4%	Finland: 5%	Italy: 9%	Finland: 1%	Italy: 2%	Finland: 5%	Italy: 11%
		France: 2%	UK: 2%	France: 4%	UK: 8%	France: 2%	UK: 4%	France: 4%	UK: 6%

Notes and source: see Figure 11.