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Reducing inequality and poverty in Portugal

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Rodrigues**

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ECONOMICS DEPARTMENT

REDUCING INEQUALITY AND POVERTY IN PORTUGAL

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By Jens Arnold and Carlos Farinha Rodrigues

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ABSTRACT/RÉSUMÉ

Reducing Inequality and Poverty in Portugal

Portugal has one of the most unequal income distributions in Europe and poverty levels are high. The economic crisis has halted a long-term gradual decline in both inequality and poverty and the number of poor households is rising, with children and youths being particularly affected. Unemployment is one of the principal reasons why household incomes declined. The tax and benefit system alleviates both inequality and poverty significantly. The tax system is markedly progressive, and recent tax reforms have likely increased this progressivity. Transfer payments, especially non-pension benefits, are reducing inequality and poverty in a fairly efficient way. Nonetheless, a number of adjustments could strengthen the equalising role of the benefit system, which is generally biased towards benefits for elderly people, while families with children should receive more support. The education system should provide more support to students at risk of falling behind to reduce grade-repetition and drop-out rates, while further increasing class sizes would be a reasonable way to generate savings without affecting learning progress much. Scaling up vocational courses and adult education, including in the context of active labour market policies, could improve the capacity of many households to generate income and lead to a more equitable income distribution.

This Working Paper relates to the 2014 *OECD Economic Survey of Portugal* (www.oecd.org/economy/surveys/economic-survey-portugal.htm).

JEL classification: D3; H2; H4; I2; I3; J3; J5

Keywords: Distribution, Education, Transfers, Pensions, Wages, Tax

Réduire les inégalités et la pauvreté au Portugal

Le Portugal est l'un des pays d'Europe où la distribution des revenus est la plus inégalitaire, et les niveaux de pauvreté y sont élevés. La crise économique a mis fin à une baisse progressive de longue durée à la fois des inégalités et de la pauvreté, et le nombre de ménages pauvres s'accroît, les enfants et les jeunes étant particulièrement touchés. Le chômage est l'une des principales raisons du recul des revenus des ménages. Le système de prélèvements et de transferts contribue à soulager fortement les inégalités et la pauvreté. Le système fiscal est fortement progressif, et il est probable que les réformes récentes l'ont rendu encore plus progressif. Les transferts, en particulier les prestations autres que les pensions, réussissent assez bien à réduire les inégalités et la pauvreté. Le système éducatif devrait mieux soutenir les étudiants en risque de décrochage afin de réduire les taux de redoublement et d'abandon, tandis que l'augmentation des effectifs dans les classes serait un moyen raisonnable de générer des économies sans compromettre trop les apprentissages. En développant l'enseignement professionnel et la formation des adultes, notamment dans le contexte de politiques actives du marché du travail, on pourrait offrir à de nombreux ménages la possibilité d'accéder à de meilleurs revenus, ce qui aboutirait à une distribution des revenus plus équitable.

Ce Document de travail se rapporte à l'Étude économique de l'OCDE du Portugal, 2014 (www.oecd.org/fr/economy/etudes/etude-economique-portugal.htm).

Classification JEL: D3; H2; H4; I2; I3; J3; J5

Mots clefs : Distribution des revenus, Education, Transferts, Pensions, Salaires, Impôts

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REDUCING INEQUALITY AND POVERTY IN PORTUGAL

By Jens Arnold and Carlos Farinha Rodrigues¹

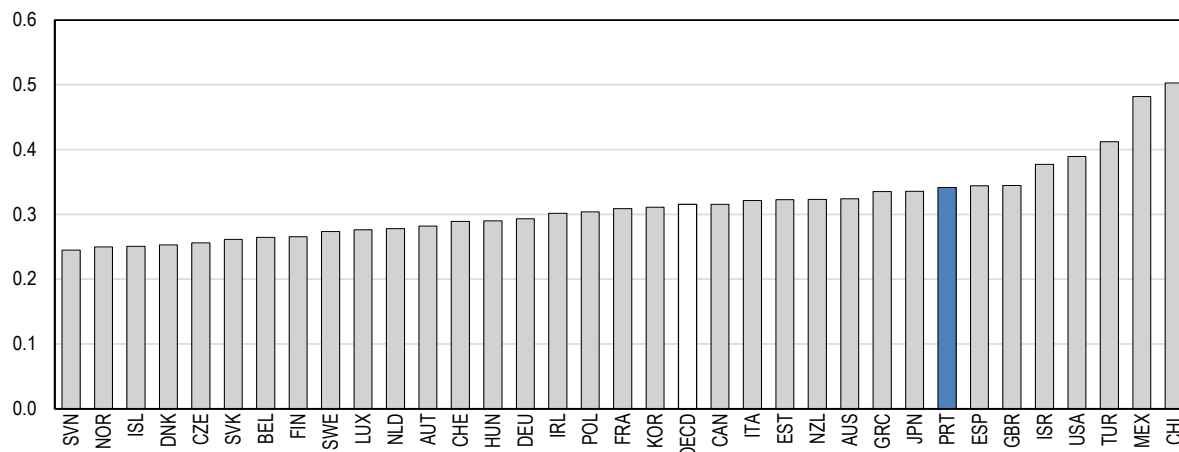
Portugal has been severely affected by the recession, which has caused a steep rise in unemployment and a decline in disposable incomes. In such difficult times, paying attention to well-being and the social dimension of the adjustment process is crucial for maintaining social cohesion and political support for further reforms.

Recent developments in income distribution

The crisis has halted a long-term decline in inequality

Portugal has one of the most unequal income distributions in Europe. In 2011, the Gini index, a commonly used measure of inequality, was equal to 0.341, about 2.6 percentage points above the OECD average of 0.315 (Figure 1). Using other inequality measures that give more weight to the tails of the income distribution than the Gini index, Portugal also stands out as one of the most unequal countries in Europe.

Figure 1. Gini coefficient
2011¹



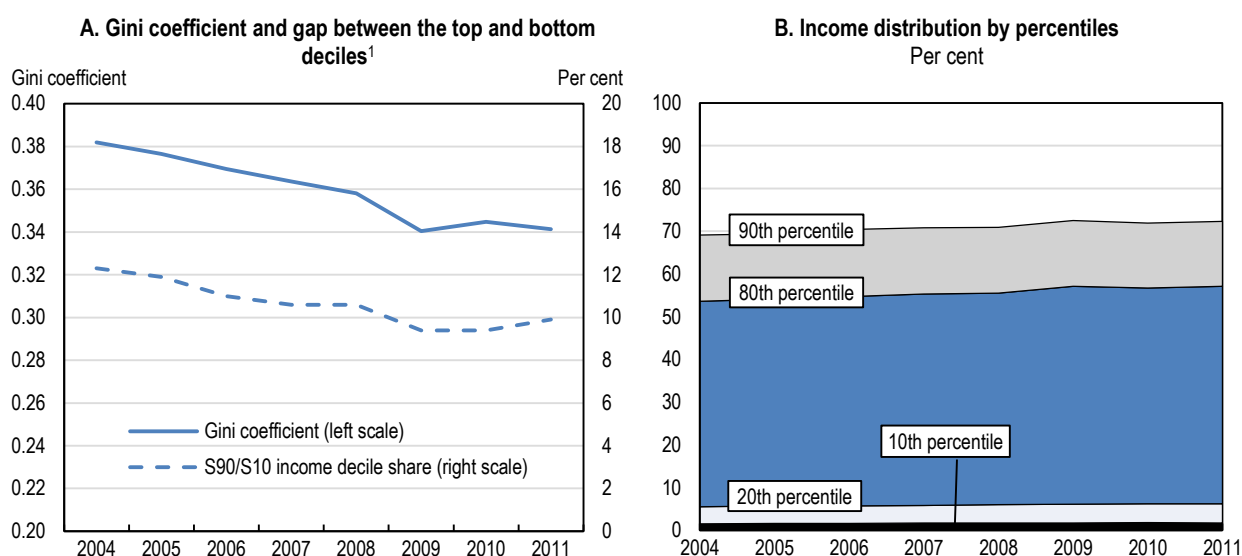
1. Gini coefficient is calculated for household disposable income after taxes and transfers, adjusted for differences in household size. 2009 for Japan. 2010 for Belgium. 2012 for Australia, Hungary, Netherlands and Mexico.

Source: OECD (2014), "Income Distribution Database", *OECD Social and Welfare Statistics* (database), July.

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Since 2004, inequality has been on a downward trend (Figure 2), with an average annual decline of the Gini coefficient of almost one percentage point. Similarly, the share of income accruing to the top 10% income earners has been coming down, while lower brackets of the income distribution recorded mild improvements. The economic crisis, however, has brought this downward trend to a halt and the Gini coefficient has been broadly stable since 2010, with a small decrease in 2012. Similarly, some of the decreases in the share of income appropriated by the top 10% income earners and some of the gains of the lower income strata have reversed since 2009. Portuguese households felt the impact of the crisis later than those in other European countries, with the disposable incomes still rising until 2010, and increases in unemployment becoming steeper as of 2011. By contrast, household disposable incomes started slowing down for the European Union as a whole as early as 2008, and were already declining in 2010.

Figure 2. Trends in income distribution



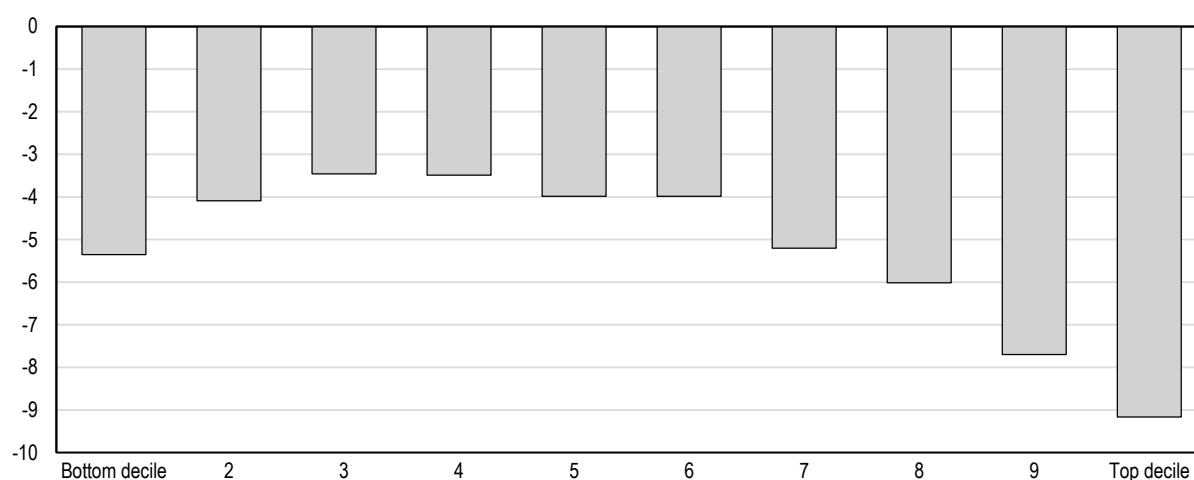
1. The Gini coefficient is calculated based on household disposable income after taxes and transfers, adjusted for household size. The S90/S10 ratio is the share of income received by the top decile divided by the share of income of the bottom decile.

Source: OECD (2014), "Income Distribution Database", *OECD Social and Welfare Statistics* (database), July.

While recent policy reforms in the context of fiscal consolidation have shifted most of the burden to high-income households, simulations suggest that the lowest income group has also suffered significant losses in disposable income as a result of reforms, and social policies could do more to alleviate this negative effect on the most vulnerable (Figure 3).

Figure 3. Simulated change in household disposable income due to fiscal consolidation

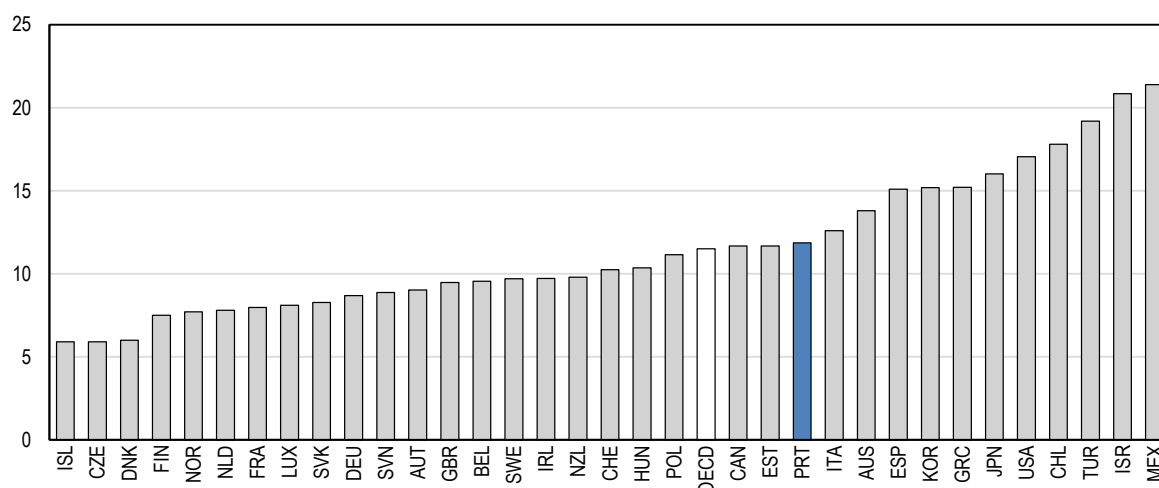
By income deciles, per cent of household disposable income, 2009-2012



Source: Avram, S., F. Figari, C. Leventi, H. Levy, J. Navicke, M. Matsaganis, E. Militaru, A. Paulus, O. Rastrigina and H. Sutherland (2012), "The distributional effects of fiscal consolidation in nine EU countries", *Research note 01/2012*, European Commission, DG Employment, Social Affairs & Inclusion, December.

Poverty has increased in recent years

At the bottom end of the income distribution, Portugal is characterised by a higher poverty rate than the OECD average, although poverty is lower than in some European countries like Italy, Spain and Greece (Figure 4). These numbers are based on a standard relative poverty measure, defined as those below 50% of the median disposable income.

Figure 4. Relative poverty ratePer cent, 2011¹

1. Relative poverty rate is defined as the share of people living in households with less than 50% of the median disposable income (adjusted for family size and after taxes and transfers) of the entire population. 2009 for Japan. 2010 for Belgium. 2012 for Australia, Hungary, Netherlands and Mexico.

Source: OECD (2014), "Income Distribution Database", *OECD Social and Welfare Statistics* (database), July.

Box 1. Measuring inequality and poverty

Income inequality

A number of summary statistics are used to describe the shape of the income distribution. The Gini, probably the most widely used measure of income inequality, is particularly sensitive to changes in the middle of the income distribution, while the other measures focus more on the tails of the distribution.

- Gini coefficient: measures the extent to which the income distribution amongst individuals or households deviates from a perfectly equal distribution. Geometrically, this is the surface between a cumulative income distribution function and the 45 degree line. The values of the Gini coefficient range between 0 ("perfect equality": each person receives the same income) and 1 ("perfect inequality": all income is held by one individual or household);
- P90/P10 inter-decile ratio: The ratio between the upper bound value of the 9th decile and the upper bound value of the 1st decile.
- Inter-decile share ratio S90/S10: The ratio of the average income of the 10% wealthiest to that of the 10% poorest, adjusted for household size.
- Inter-quintile share ratio S80/S20: The ratio of the average income of the 20% wealthiest to that of the 20% poorest, adjusted for household size.

Poverty indicators

Poverty measures count the incidence or the intensity of poverty.

- Relative poverty line: The proportion of individuals living in households whose income is below a relative threshold, usually either 50% or 60% of the median disposable income. Usually referred to as the "headcount ratio".
- "Anchored" poverty line: The proportion of individuals living below a poverty line is set relative to the median household disposable income adjusted for household size in a chosen base year. In subsequent years, it is only adjusted for inflation.
- Poverty gap: The percentage by which the average income of the poor falls below the poverty line. It measures the poverty intensity amongst the poor.

Adjusting household income for different household sizes

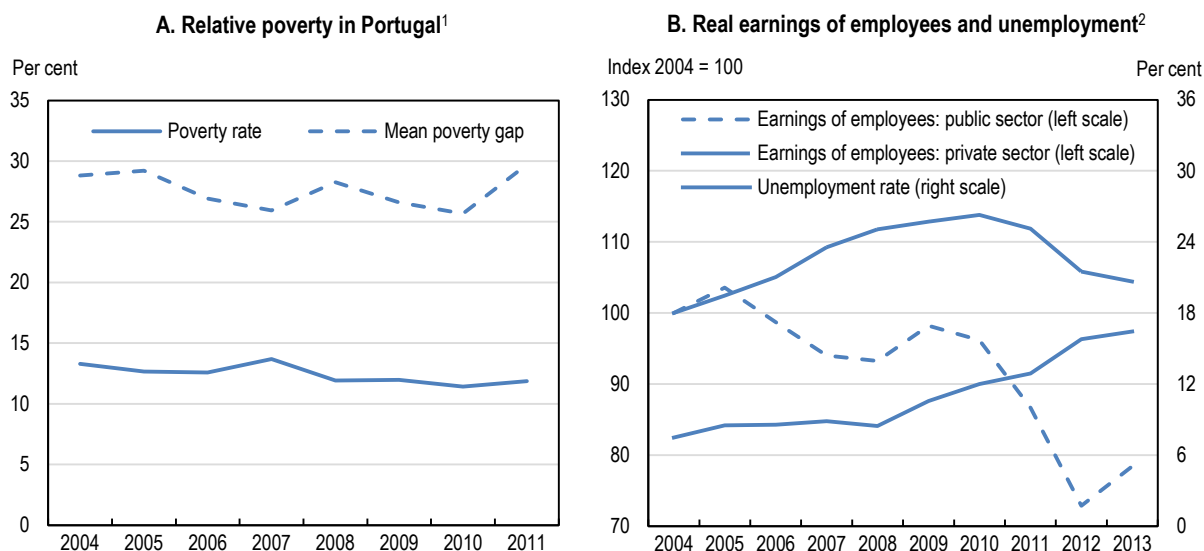
Household surveys that provide the basis for data on inequality and poverty typically report incomes at the household level. As households differ in size and composition, comparisons require a conversion of household income into individual income using an equivalence scale. See <http://www.oecd.org/els/soc/OECD-Note-EquivalenceScales.pdf>.

- Square root scale: The main equivalent scale used in this paper is the square root of the household size. Cross-country comparisons for OECD countries can only be done using this equivalence scale, but the most recent observation for Portugal is 2011.
- "Modified OECD equivalence scale": Some of the studies mentioned in this paper use the so-called "OECD modified equivalence scale" that is used by Eurostat and the Portuguese statistics institute INE. Data for 2012 are only available using this equivalence scale. This scale gives a weight of 1.0 to the first adult, 0.5 to the other adults in the household, and 0.3 to each child.

Over time, the incidence of poverty – as measured by the relative poverty line – appears fairly stable since 2004, with a slight downward trend until 2010 and a mild increase thereafter, while the poverty gap has risen, meaning that the incomes of the poor have fallen further below the poverty line (Figure 5, Panel A). In the context of the economic crisis and its various effects on household incomes, however, a simple headcount ratio based on a relative poverty line can easily paint a misleading picture. The most recent years therefore warrant a closer look at the different elements of the poverty rate, including changes

in the poverty threshold. After 2009, real earnings of employees began to decrease, initially for public-sector employees only, but later also for private-sector employees (Figure 5, Panel B).

Figure 5. Developments in poverty, income and unemployment



1. The poverty line is 50% of the median disposable income after taxes and transfers, adjusted for household size.
2. Seasonally adjusted harmonised unemployment rate.

Source: OECD (2014), "Income Distribution Database", *OECD Social and Welfare Statistics* and *OECD Employment and Labour Market Statistics* (databases), July; INE (2014), "National Accounts Statistics", Instituto Nacional de Estatística, June.

The fall in public sector wages is a consequence of both declining employment levels and cuts in the nominal rate of pay in the public sector, whilst in the private sector it is mainly a result of rising unemployment and lower pay and benefits offered to newly hired workers. As a result of lower earnings in the middle of the income distribution, the median income has fallen, thus resulting in a lower poverty threshold and less poverty in relative terms. Individuals that used to be poor in 2009 may have ceased to be so in 2012, not due to an improvement in their incomes, but simply because the poverty threshold declined together with median incomes.

One way of examining changes to the real incomes of those at the bottom of the income distribution is the use of an anchored poverty line, which fixes the real value of the poverty threshold at the level of a given year, 2009 in this case, and then adjusts only for inflation. Using this measure, and applying the modified OECD equivalence scale and the 60% of median income threshold for 2009, poverty has increased from 17.9% to 24.7% between 2009 and 2012 (Table 1). The use of this different definition is necessary because 2012 data are available only in this way.

Increases in poverty occurred mostly in the working age population, as well as among children and youths. Of those aged 17 and under, almost a third was below the 60% of median income poverty line in 2012. By contrast, poverty increased only marginally among the elderly. This marks the continuation of a trend that can be observed since 2004, whereby falling poverty rates of the elderly were the main driver behind the mild downward trend in overall poverty rates. Not surprisingly, this trend has not been affected by the crisis, as the elderly were not affected by deteriorating labour market conditions and pensions, the main income source for this income group, were not reduced for those at the bottom of the income distribution.

Table 1. Inequality and poverty indicators

	Unit	2009	2010	2011	2012
Disposable income ¹	EUR/year	8 678	8 410	8 323	8 173
Income inequality					
Gini index		0.337	0.342	0.345	0.342
S80/S20 income quintile ratio	%	5.6	5.7	5.8	6.0
S90/S10 income decile ratio	%	9.2	9.4	10.0	10.7
Relative poverty ²					
Poverty line	EUR/month	434	421	416	409
Poverty rate (all)	%	17.9	18.0	17.9	18.7
0-17 years	%	22.4	22.4	21.8	24.4
18-64 years	%	15.7	16.2	16.9	18.4
65+ years	%	21.0	20.0	17.4	14.7
“Anchored” poverty ³					
Poverty line	EUR/month	434	440	456	469
Poverty rate (all)	%	17.9	19.6	21.3	24.7
0-17 years	%	22.4	23.8	26.1	30.9
18-64 years	%	15.7	17.7	20.4	23.7
65+ years	%	21.0	21.6	20.1	22.4

1. In current EUR, adjusted for household size.

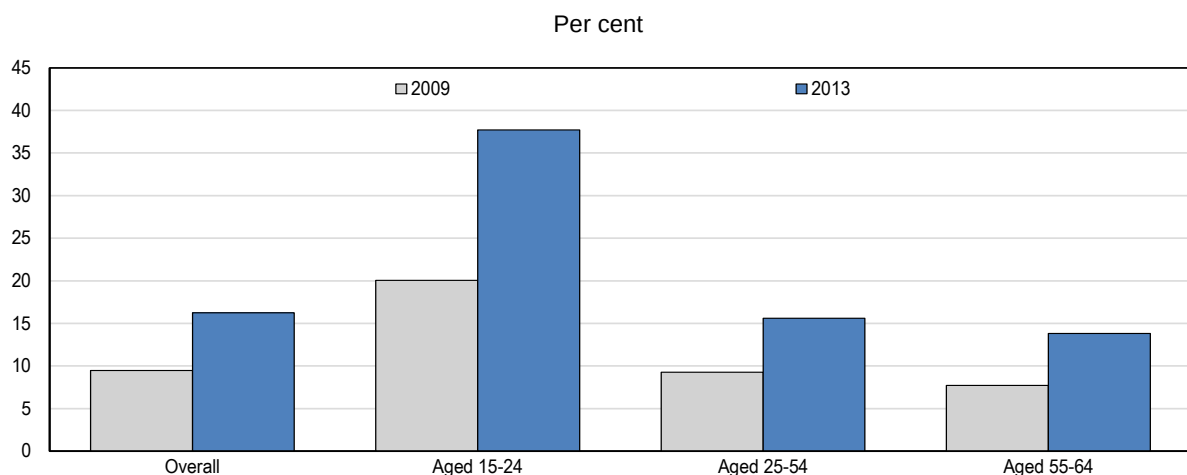
2. The poverty line is defined as 60% of median disposable income in each year, adjusted for household size.

3. The poverty line is fixed at 60% of median disposable income in 2009 and adjusted for inflation and household size.

Source: INE (2014), "EU Statistics on Income and Living Conditions (EU-SILC) 2013", Instituto Nacional de Estadística.

Rising unemployment has led to lower household incomes

Losing employment is one of the principal reasons why households have suffered income losses. Since 2009, the unemployment rate has risen from 9.5% to 13.9% in the second quarter of 2014, with an intermediate peak of almost 17.5% (Figure 6). The rise in unemployment has particularly affected young people, whose unemployment rate rose to over 42% in the first quarter of 2013. Youth employment fell by more than half for those with below upper-secondary education, and one out of six young adults aged 15-24 is neither in a job, nor preparing for employment. In 2013, 60% of the unemployment were considered in long-term unemployment.

Figure 6. Unemployment rate by age groups

Source: OECD (2014), *OECD Employment and Labour Market Statistics* (database), June.

When comparing individuals with different working status, the unemployed are clearly those with the highest incidence of poverty (Table 2). Over 40% of the unemployed lived in poverty in 2012, based on the 60% poverty line. Poverty also rose among the working population. Indeed, not all of the poor are out of work, as the poverty rate of 10.5% among those in work demonstrates. This can be explained by the significant number of low-paid workers, many of which work less than full time. Retirees, by contrast, saw their relative poverty levels decline as median incomes fell. Comparing different household compositions, poverty rates are highest and have increased most among families with children, with families that have more children being particularly affected by poverty.

Table 2. Poverty rate by working status and by household composition

	Per cent ¹		
	2009	2012	Change (% points)
By working status			
In work	9.7	10.5	0.8
Unemployed	36.4	40.2	3.8
Retired	18.5	12.8	-5.7
Other inactive	28.0	29.5	1.5
By household composition			
Households with no children	16.5	15.0	-1.5
Households with children	19.1	22.2	3.1
Single parent households	37.0	33.6	-3.4
Two adults + one child	12.6	16.0	3.4
Two adults + two children	17.1	19.8	2.7
Two adults + three or more children	32.2	40.4	8.2
Other households with children	20.7	23.7	3.0
Total	17.9	18.7	0.8

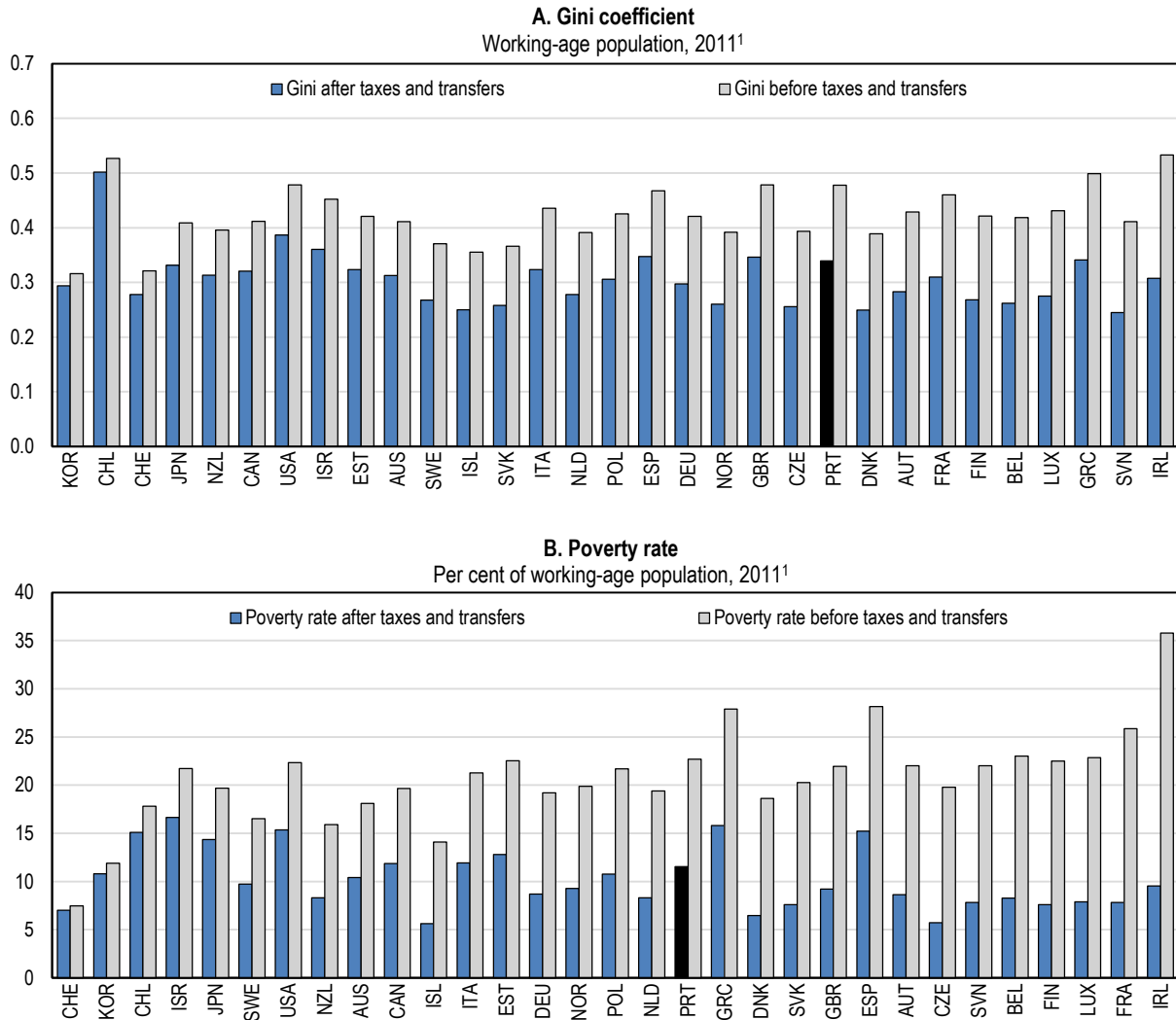
1. The poverty line is 60% of median disposable income in each year, adjusted for household size.

Source: INE (2011), "EU Statistics on Income and Living Conditions (EU-SILC) 2010", Instituto Nacional de Estatística and INE (2014), "EU Statistics on Income and Living Conditions (EU-SILC) 2013", Instituto Nacional de Estatística.

Policies for reducing inequality and poverty

Public policies play a significant role in shaping the income distribution, and without redistribution through taxes and transfers, both inequality and poverty would be much higher (Figure 7). In international comparison, however, a number of OECD countries (those to the right of Portugal in Figure 7) achieve stronger reductions in inequality and poverty through taxes and transfers, besides starting in most cases from already lower levels. This suggests that more can be done to improve equity through social policies.

Portugal's social expenditures are above OECD average, particularly in the areas of expenditures on old age and survivor pensions, which account for almost half of social expenditures (Figure 8). Health expenditures, which are typically also increasing in age, are also above the OECD average, while family expenditures are significantly lower. These numbers suggest a bias of social expenditures towards elderly recipients, which is one of the reasons why the overall decline in poverty since 2004 has largely been a result of lower poverty in this age group. The poverty reduction among elderly people is a remarkable achievement. However, given the strong and rising incidence of poverty among younger individuals, in particular among families with children, there may now be a case for focusing social expenditures more on these groups than in the past.

Figure 7. Reduction in inequality and poverty resulting from taxes and transfers

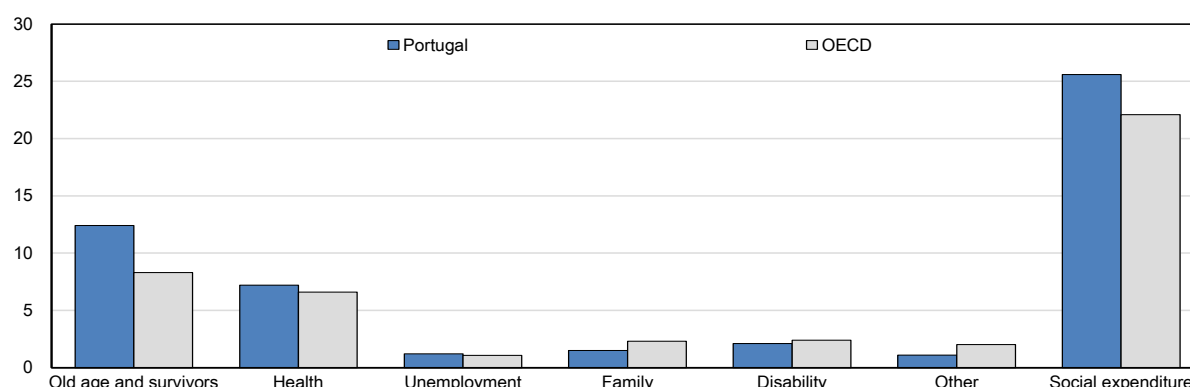
1. 2009 for Japan. 2010 for Belgium. 2012 for Australia and Netherlands. Working age is defined as 18-65 years old. Countries are ranked in increasing order of difference between the value of the respective indicator (i.e. Gini coefficient and poverty rate) before and after taxes and transfers. The poverty line is defined as 50% of the median income, adjusted for household size.

Source: OECD (2014), "Income Distribution Database", *OECD Social and Welfare Statistics* (database), July.

With social expenditures already high and fiscal space extremely limited, improvements in the effectiveness of social expenditures would most likely have to be achieved by making existing redistributive policies more efficient, as opposed to spending more. Raising the distributional impact of social expenditures can be achieved both by optimising the spending mix across different social expenditure items and by improving the targeting of existing benefits to those most in need, including by consolidating overlapping benefits and closing loopholes.

Figure 8. Social expenditure

Per cent of GDP, 2009



Source: OECD (2014), *OECD Social Expenditure Statistics* (database), July.

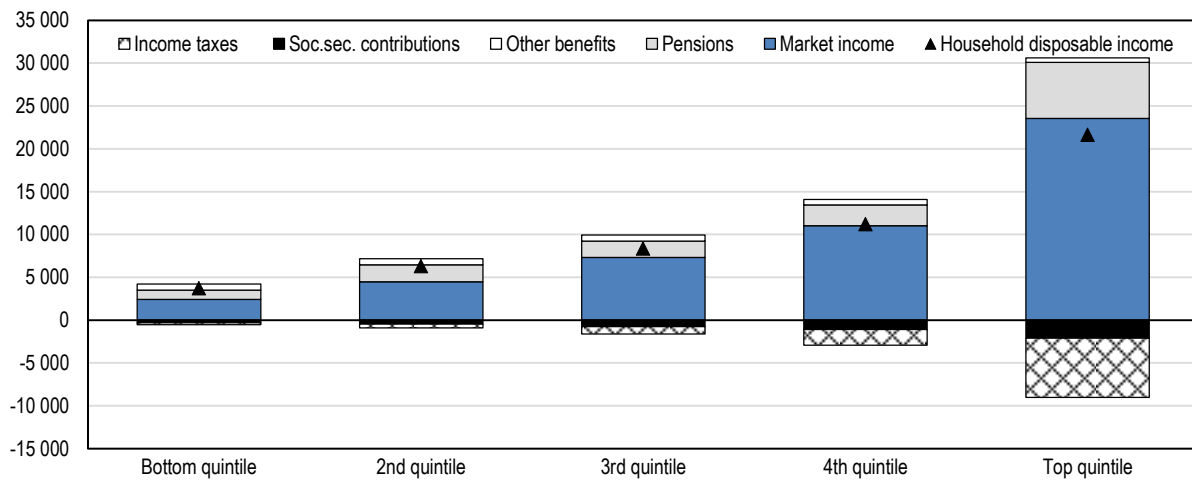
Rethinking the spending mix

An assessment of the spending mix requires an understanding of the distributional effects of different policy instruments. Household data allow a simple decomposition of the sources of disposable incomes for different quintiles of the income distribution (Figure 9). This exercise reveals the strongly progressive character of income taxes in Portugal. The top income quintile accounts for over two thirds of income tax payments, with the average income tax rate on the top quintile being three times higher than for the bottom quintile. Household data that reflect the 2013 income tax changes are not yet available, and these tax reforms have probably made personal income taxes more progressive. In addition, non-pension benefits provide strong support for low-income households, accounting for approximately 20% of disposable incomes for the bottom quintile. In monetary terms, however, an average household in the top quintile receives over 70% of the non-pension benefits that households in the bottom quintile receive, which may hint at scope for better targeting of benefits to low-income households, for example through a more use of means-testing. On the whole, these findings suggest a significant contribution of both non-pension benefits and income taxes to the reduction in inequality. The incidence of pension transfers, by contrast, is higher at the top than at the bottom, both in absolute terms and relative to disposable incomes.

The exact effect of policies on the Gini coefficient has been calculated by Rodrigues and Andrade (2014a) for three broad policy instruments, and these calculations have been updated for this paper. Of these three, taxes account for the largest reduction in the Gini coefficient, almost 5 percentage points, while non-pension benefits reduce the Gini by around 2.4 percentage points and pensions by around 1.3 (Table 3). At the same time, however, the three instruments differ in size, with the share of taxes and pension expenditures in aggregate income being around four times as high as that of non-pension benefits. As a result, one would naturally expect differences in the amount of redistribution that they achieve. Hence, decisions about the spending mix require a notion of which instrument would deliver the largest reduction in inequality for a marginal spending increase, which means that the overall effects mentioned above must be corrected for their size. This concept, which is typically referred to as the efficiency of the instrument, is also presented in Table 3. The results suggest that non-pension benefits are the most efficient redistribution instrument among these three broad categories, so for a given amount of resources, non-pension benefits would achieve the greatest reduction in inequality.

Figure 9. Disposable income by quintiles

EUR per year, 2011



Source: Rodrigues, C.F and Andrade, I. (2014a), "Robin Hood versus Piggy Bank: Income redistribution in Portugal 2006-10", *Panoeconomicus*, vol. 61, issue 5, pages 617-630.

Table 3. Effectiveness and efficiency of benefits and taxes¹

	2006	2007	2008	2009	2010	2011 ²
Taxes						
Reduction in Gini coefficient	0.042	0.039	0.038	0.039	0.040	0.047
Efficiency in reducing inequality (relative to size)	0.230	0.224	0.240	0.249	0.237	0.235
Non-pension benefits						
Reduction in Gini coefficient	0.022	0.019	0.024	0.030	0.026	0.024
Efficiency in reducing inequality (relative to size)	0.466	0.400	0.513	0.542	0.484	0.477
Pension benefits						
Reduction in Gini coefficient	0.020	0.026	0.029	0.029	0.024	0.013
Efficiency in reducing inequality (relative to size)	0.112	0.145	0.163	0.152	0.123	0.060

1. The efficacy of an instrument is defined as the difference between the Gini (or concentration coefficient (CC) counterpart) before and after the introduction of that instrument. Efficiency is defined as efficacy/size*100, where size is the average (instrument) amount received/paid by beneficiary/contributor.

2. Values for 2011 are calculated based on the same methodology applied by Rodrigues and Andrade (2014a).

Source: Rodrigues, C.F and Andrade, I. (2014a), "Robin Hood versus Piggy Bank: Income redistribution in Portugal 2006-10", *Panoeconomicus*, vol. 61, issue 5, pages 617-630 and OECD calculations.

The tax system also turns out to be a fairly efficient tool for redistribution in Portugal, even though significantly less so than non-pension benefits. In particular, the results suggest that the contribution of the tax system is not just a function of its size relative to the other two items, but that the tax systems is actually almost half as efficient as transfers.

Pensions are the least efficient instrument of redistribution. This is not surprising, due to the savings character of pension which creates an – in principle intentional – link between contributions paid during working age and pension received in retirement. This link will imply higher pensions to retirees who had higher earnings during their working life. A more detailed discussion of the redistributive effects of the pension system can be found in the next section.

Improving the efficiency of individual redistribution policies

Eliminating benefit overlap

The efficiency of the benefit system could be enhanced by eliminating benefit overlaps and improving means-testing. There are several other different programmes in place to protect the most vulnerable individuals and households, which leads to a fragmented and complex situation of overlapping benefits with different sets of rules. This makes monitoring difficult, facilitates fraud and jeopardises the effectiveness and efficiency of the programmes. For example, there are 93 different sickness benefits classified in 39 different types related to such aspects as length of payment, industries (textiles, energy), and type of disease. Another example of poorly implemented means-testing is that an individual who is entitled to the social pension will always get its full amount and never fractions of it, when the income is just below the threshold of the means-testing procedure. An additional solidarity complement is also always awarded automatically to those receiving the social pension benefit. One way to reduce the overlap and improve targeting would be to consider a cap on accumulated social benefits, which would also improve the monitoring of total benefits received by households, including those provided by local governments. The authorities should examine the cumulative effect of these programmes and rationalise them as needed to strengthen the social safety net.

Reforming the guaranteed minimum income benefit

Guaranteed minimum income (GMI) benefits exist in almost all OECD countries as a last-resort safeguard to provide an acceptable standard of living to families in risk of extreme hardship and unable to earn sufficient income from other sources. In some countries, they are designed as a main income support-scheme and in others as a lower-tier programme, and while they have broad scope in some countries, other countries target them to specific groups, like the one-parent family payment in Ireland and the youth allowance in Australia. In some countries, GMI benefits are complemented by ‘near-cash’ or in-kind social-assistance providing items as food, transport and education. They typically have lower budgetary impact in European countries where they are used as a lower-tier fall-back safety net (Immervoll, 2010).

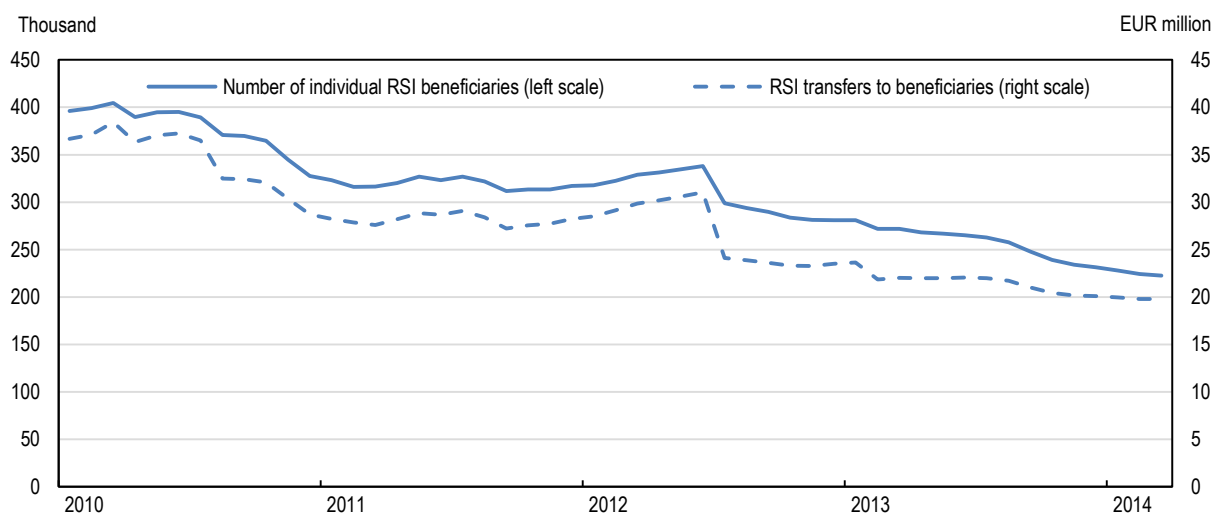
Portugal’s main GMI benefit programme is the *Rendimento Social de Inserção* (RSI), a non-contributory monthly transfer that tops up the recipient’s monthly income to a reference minimum income threshold. Benefits are conditional on participation in a compulsory social inclusion programme, which includes short training courses and return to work initiatives, as well as requiring regular school attendance for all school-age children living in the household and adherence to children’s vaccination plans. The RSI is subject to extensive means-testing, considering the income of all members of the household, to ensure that virtually all beneficiaries are indeed poor. Household assets are also considered in the means-testing, and beneficiaries cannot have financial assets or a car valued above EUR 25000. Given that the benefit level is set below the poverty line, the RSI does not alter the poverty rate *per se*, but it reduces the poverty intensity by over 25%, despite the fact that a significant number of eligible households do not take up this benefit (Rodrigues, 2009).

Since its inception in 1997, improvements in the assessment of applicants’ resources of the beneficiaries and better ways to prevent fraud strengthened the distributional impact of the RSI. However, reforms undertaken in 2010 and 2012 have modified the way that household income per person is calculated for multi-person households. The original RSI scale gave a weight of 1.0 to the two first adults

in the household, 0.7 to any further adults, 0.5 to each child until the second one and 0.6 to each child from the third onwards. The monthly minimum income threshold value for each adult equivalent was EUR 189.52. For a family consisting of two adults and two children, the RSI would lift the monthly income to EUR 568 if the household's own resources fell below that level. The two reforms reduced the weight of adults beyond the first one to 0.5 and the weight for each child to 0.3. In combination with a 6% nominal cut in the monthly threshold level per adult equivalent in 2013, this implied that the same family would only remain eligible if its monthly income was lower than EUR 374.

The first effect of these changes was a significant decline in the number of beneficiaries, almost halving the 400 000 recipients of January 2010 by March 2014, including the loss of RSI benefits for more than 50 000 children and youths. This implied a reduction in total RSI expenditures of about 24%, equivalent to 0.07% of GDP (Figure 10). For a household with two adults and two children, the threshold level of income guaranteed by the RSI has dropped from 62% of the poverty line in 2009 to 46% in 2013.

Figure 10. Beneficiaries and transfers of the guaranteed minimum income benefit RSI¹



1. Portugal's main guaranteed minimum income benefit programme is the Rendimento Social de Inserção (RSI), a non-contributory monthly transfer that tops up the recipient's monthly income to a reference minimum income threshold.

Source: Ministério da Solidariedade e da Segurança Social (MSSS), Instituto de Informática, I.P., Departamento de Gestão de Informação.

Micro-simulations suggest the effectiveness of the RSI to reduce inequality and poverty was severely dented by the reforms (Rodrigues, 2012; 2013). The changes have hardly affected the incidence of poverty, since most of the affected incomes below the poverty line. However, the reforms have made the poor poorer. The poverty gap, defined as the difference between the median income of those below the poverty line and the value of the poverty line itself, expressed relative to the poverty line, has increased by almost 6 percentage points (Table 4). At the same time, the low budget impact of the reform suggests that the trade-off between fiscal savings and inequality was probably not very favourable in this case.

Table 4. Effect of the changed eligibility rules of the guaranteed minimum income benefit RSI¹

	Without RSI	RSI pre 2010 changes	RSI post 2010 changes	RSI post 2012 changes
Poverty rate ² (%)	17.8	17.5	17.7	17.7
Poverty gap ³ (%)	29.5	20.9	24.5	26.7
Gini index	0.353	0.343	0.347	0.350
S80/S20 income quintile ratio (%)	6.1	5.5	5.7	5.9
S90/S10 income decile ratio (%)	10.7	8.5	9.2	9.8

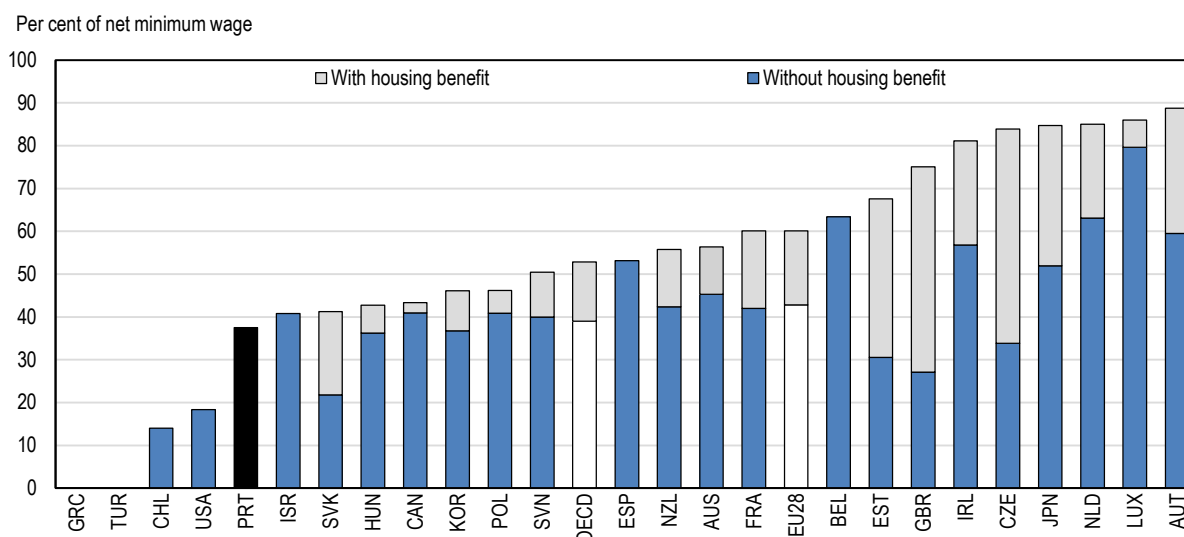
1. Portugal's main guaranteed minimum income benefit programme is the Rendimento Social de Inserção (RSI), a non-contributory monthly transfer that tops up the recipient's monthly income to a reference minimum income threshold.
2. The poverty line is defined as 60% of median disposable income in each year, adjusted for household size.
3. The poverty gap is defined as the difference between the median income of those below the poverty line and the value of the poverty line itself, expressed relative to the poverty line.

Source: Rodrigues, C.F (2013), "Moving the goalposts not once but twice: minimum income benefit in Portugal", Paper presented at the 2013 EUROMOD research workshop, ISEG, Lisbon.

Compared to either the minimum wage, RSI benefits in Portugal are low in international comparison, which suggests that the disincentives for taking up work generated by the benefits are probably very limited (Figure 11). A person moving from RSI benefits to a minimum wage would increase monthly income by over 150%. Even an individual with two children would still increase the monthly family income by 65%.

Figure 11. Minimum-income benefits

Net income level provided by cash minimum-income benefit (with or without housing assistance) for single person families, 2012¹



1. Median net household incomes are from a survey in or close to 2012, expressed in 2012 prices and are before housing costs (or other forms of "committed" expenditure). Results are adjusted for household size (equivalence scale is the square root of the household size) and account for all relevant cash benefits (social assistance, family benefits, housing-related cash support as indicated). The OECD and EU28 (i.e. European Union) aggregates refer to the unweighted averages of those countries that have minimum wage policy and are included in the chart.

Source: OECD (2014), "Taxes and benefits", *OECD Social Expenditure Statistics* (database), June.

Another way to look at work incentives is to calculate the effective marginal tax rate of a transition from social assistance to full-time employment. When taking up a job, a significant portion of these new earnings can be "taxed away" through reductions in benefit entitlements combined with imposition of income taxes. These participation tax rates, which are calculated by the OECD for many countries, are significantly below the OECD average in Portugal. For example, for a single person without children who takes up work at 33% or 50% of the average wage, the participation tax rates are 51% and 38%, respectively, compared to an OECD average of 69% and 60%, respectively. For a married couple with two children, the participation tax rates for one person taking up work are 55% and 57% for work paid at 33% and 50% of the average wage, respectively, while the OECD average is 71% and 69%, respectively. 33% of the average wage corresponds approximately to a minimum wage in Portugal.

With 40% of the unemployed and a quarter of children living below the poverty line, the recent reduction of the last-resort income support for the poor should be reversed. RSI reference thresholds should be raised, which would lead to higher benefit levels and more eligible beneficiaries. Better targeting resources to households with children could be achieved by giving children a more generous weight in the calculation of RSI benefits. Reducing existing overlaps in the benefit system and ensuring better targeting could free resources that would allow to eventually raise RSI reference thresholds, and with that benefit levels, in a fiscally-neutral way.

At the same time, control and anti-fraud mechanisms should be further reinforced and the social inclusion programmes made more effective, with the aim of integrating RSI beneficiaries in the labour market whenever possible. Work incentives could also be strengthened through in-work benefits such as the earned income tax credits granted by the New Zealand, the United Kingdom or the United States, for example.

Making unemployment benefits less age-dependent and widening their coverage

Unemployment insurance benefits are available to dependent workers who have contributed to unemployment insurance for 12 months or more. Self-employed workers who get at least 80% of their revenues from a single company are considered *de facto* employees of that company for the calculation of unemployment benefits and are also eligible. The unemployment benefit payment is equal to 65% of the previous year's average wage for the first 6 months, and 55% thereafter. Couples that are both unemployed and living with children and/or step-children are entitled to an extra 10% of the amount that would have been otherwise awarded. The same rule applies to single parents who do not receive child maintenance payments. Unemployment benefits are also subject to a floor of EUR 419.22.

The duration of unemployment benefits depends on the age of the individual and the length of contribution prior to losing employment, with a maximum duration that was reduced from 3 years to 18 months in 2012. Prior to the 2012 reform, the required minimum contribution period to be entitled to unemployment benefit was 15 instead of the current 12 months (360 days over the last 24 months).

After the unemployment benefits expire, individuals with low household incomes that have not found a new job are eligible for "social unemployment assistance". This benefit, whose level is in between the regular unemployment insurance benefits and the RSI, is paid for half the duration of the unemployment insurance benefit the person received, except for individuals aged 40 and above, for whom it is paid for the same duration as unemployment insurance benefits. The combined duration of unemployment insurance benefits and social unemployment assistance for a person above 40 years of age can therefore be as long as 3 years.

Despite the fact that recent reforms extended the coverage, unemployment benefits reach only about 45% of the unemployed, and they have a built-in bias towards older workers. Benefit levels remain heavily

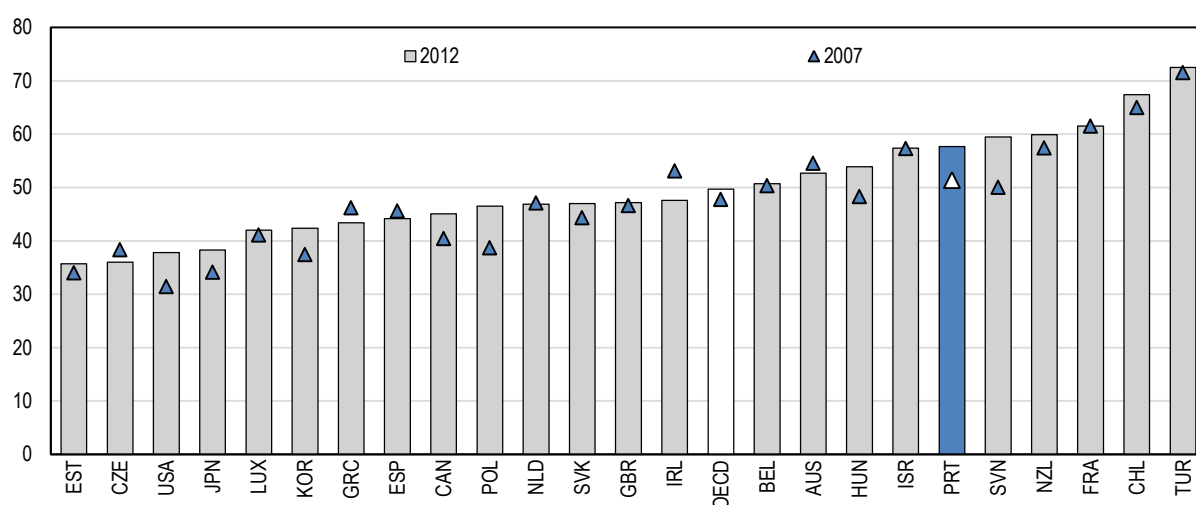
age-dependent, as larger cuts in the duration of unemployment insurance for older workers are partly offset by longer unemployment assistance. The link between age and benefit duration should be eliminated by aligning the benefit duration for older workers to that of young workers. At the same time, the eligibility conditions should be made less stringent to extend benefit coverage, especially for young workers.

Giving priority to in-work benefits rather than minimum wage increases

Portugal's minimum wage is relatively high in international comparison, relative to the median wage (Figure 12), although its absolute level of currently EUR 505 is the lowest in Western Europe. The minimum wage rose significantly between 2007 and 2010, and then remained frozen at the same nominal level of EUR 485, until it was raised to EUR 505 in September 2014. Recent years saw a rise in the fraction of workers who earned the minimum wage, from 6% in 2007 to 11.3% in 2011. This suggests that the minimum wage has become increasingly binding, and further increases of the minimum wage risk reducing employment among current minimum wage earners. With productivity growth being low, there is a risk that raising the minimum wage may actually sharpen inequalities rather than reducing them if such a measure generates significant employment losses. Already, not all people paid at the minimum wage rate manage to work full time, and raising the minimum wage might further reduce the demand for low-skilled labour. Future minimum wage adjustments should occur in line with productivity growth and inflation, as announced by the government.

Figure 12. Minimum wages

Per cent of median wage¹



1. Data refer to 2006 and 2011 for Chile.

Source: OECD (2014), *OECD Employment and Labour Market Statistics* (database), July.

At the same time, raising the minimum wage is not the only way to support low-income households. An earned-income tax credit limited to low-income households would reduce the earnings dispersion without reducing labour demand, although at a cost to the budget. By strengthening work incentives, its employment impact is likely to be positive. Although the introduction of such a scheme would raise public expenditures, it could be a comparatively efficient way of reducing inequality without reducing employment. Against this background, potential savings that could be made in other areas, such as aligning the duration of unemployment benefits for older workers to that of young workers, might be better invested in earned income tax credits.

Making pensions more equitable

Portugal has a defined-benefit pension system, and spends 12.5% of its GDP on old age and survivor pensions, which is the fifth highest in the OECD. Separate public and private sector pension systems have been unified for those who joined the labour force as of 2006, but remain separate for most current workers and pensioners. Demographic conditions and pension increases that outpaced growth in GDP per capita have led to rising public spending on pensions, and several pension reforms have been implemented to improve the sustainability of the pension system in the face of population ageing. These measures have included reducing accrual rates and rewarding delayed retirement. Most of these reforms have exempted current retirees through “grandfathering” rules, which has shifted much of the burden of adjustment onto future generations (EC, 2012).

As a result, projected increases in pension spending over 2010–20 are among the largest in Europe, while those over 2020–60 are among the smallest. Two thirds of the burden of benefit reductions, for example, has been put on those who receive pensions in more than 20 years from now, as opposed to an average of about half of the adjustment burden in the European Union (IMF, 2013). Given that the benefit system already contains a significant age bias at present, these long-term pension reforms only add to the significant redistribution from the current young to the older generations through public transfer payments, and there is a risk that pensions may crowd out resources available for other transfer programmes. Attempts by the government to change this intergenerational inequality effect of the pension system have turned out impossible due to constitutional concerns.

The pension system redistributes from the working population to retirees, whose incomes are typically lower. Nonetheless, 40% of old age pension benefits is received by the top quintile in the income distribution (IMF, 2013). This is largely due to the more generous legacy public sector pension scheme *Caixa Geral de Aposentações* (CGA), in which currently retired civil servants and those that joined the public sector before 2006 are enrolled, because the private sector pension scheme GCR is *de facto* almost a flat rate system, with about 90% of the pensioners receiving the minimum pension benefit. Based on a comparison of the average wage differentials and average pension differentials for public and private sector employees, it appears that public sector pensions carry a premium of about 15% relative to private sector pensions (IMF, 2013). In fact, as a result of the CGA system whose beneficiaries make up only a small fraction of the population, average public pensions are nearly 100% of average public wages. Attempts to curtail accrued benefit rights in the CGA, however, have been vetoed by a ruling of Portugal’s Constitutional Court, which has clearly limited the scope for pension reform.

Recent pension reforms have nonetheless found ways to reduce pension expenditures while strengthening the progressivity of the system. In 2011, pensions above EUR 5 000/month were subjected to an “extraordinary solidarity contribution”. This contribution has then been extended to lower pensions and currently increases progressively from 3.5% for pensions above EUR 1 000 to a marginal rate of 40% for pensions exceeding EUR 7 126. Pensioners with the lowest pensions have not been affected by any pension reductions. Even considering that pensioners’ incomes are below the overall average income, these cuts have likely improved the contribution of pensions to the reduction of inequality. With regard to poverty, the cuts had no direct effects, as they only affected pensions above the poverty line.

In addition to contributory pensions, a means-tested non-contributory pension benefit, the *Complemento Solidário para Idosos* (CSI), was introduced in 2006 and guarantees an annual minimum income for pensioners aged 65 and above. The program was particularly effective to reduce the poverty incidence, since the minimum income threshold was initially fixed at the relative poverty line corresponding to 60% of the median average income. This would have eliminated old-age poverty entirely if the benefit had been taken up by all eligible beneficiaries, but actual take-up rates are low. Simulations suggest the CSI reduces the old-age poverty rate by about 10 percentage points, which implies a reduction of the overall national poverty rate by around 2 percentage points (Rodrigues, 2009).

Strengthening family and education benefits

Family benefits include a means-tested cash benefit for children. Means-testing ensures that most of these benefits go to low-income groups, although an income threshold of approximately 1.5 times the minimum wage implies that two-thirds of the beneficiaries are non-poor (IMF, 2013). Child benefits are not taken into account for assessing eligibility in the guaranteed minimum income scheme RSI. Education benefits contribute to the living expenses and tuition costs of tertiary students, and are also subject to means-testing. While tertiary education benefits support those who should expect above-average incomes in the future, on top of the subsidies financing tertiary education, almost 80% of the benefits go to the lowest two income quintiles (IMF, 2013). Such measures can be a powerful tool to enhance intergenerational mobility and improve the equality of opportunities. Given Portugal's low average educational attainments, promoting tertiary education may also be useful from a perspective of enhancing productivity growth (see Arnold, 2014). Overall, means-tested family and education benefits seem to be providing a useful contribution to reducing inequalities. Given the high and rising incidence of poverty among children, raising the means-tested child benefits is likely to be an efficient way to reduce child poverty.

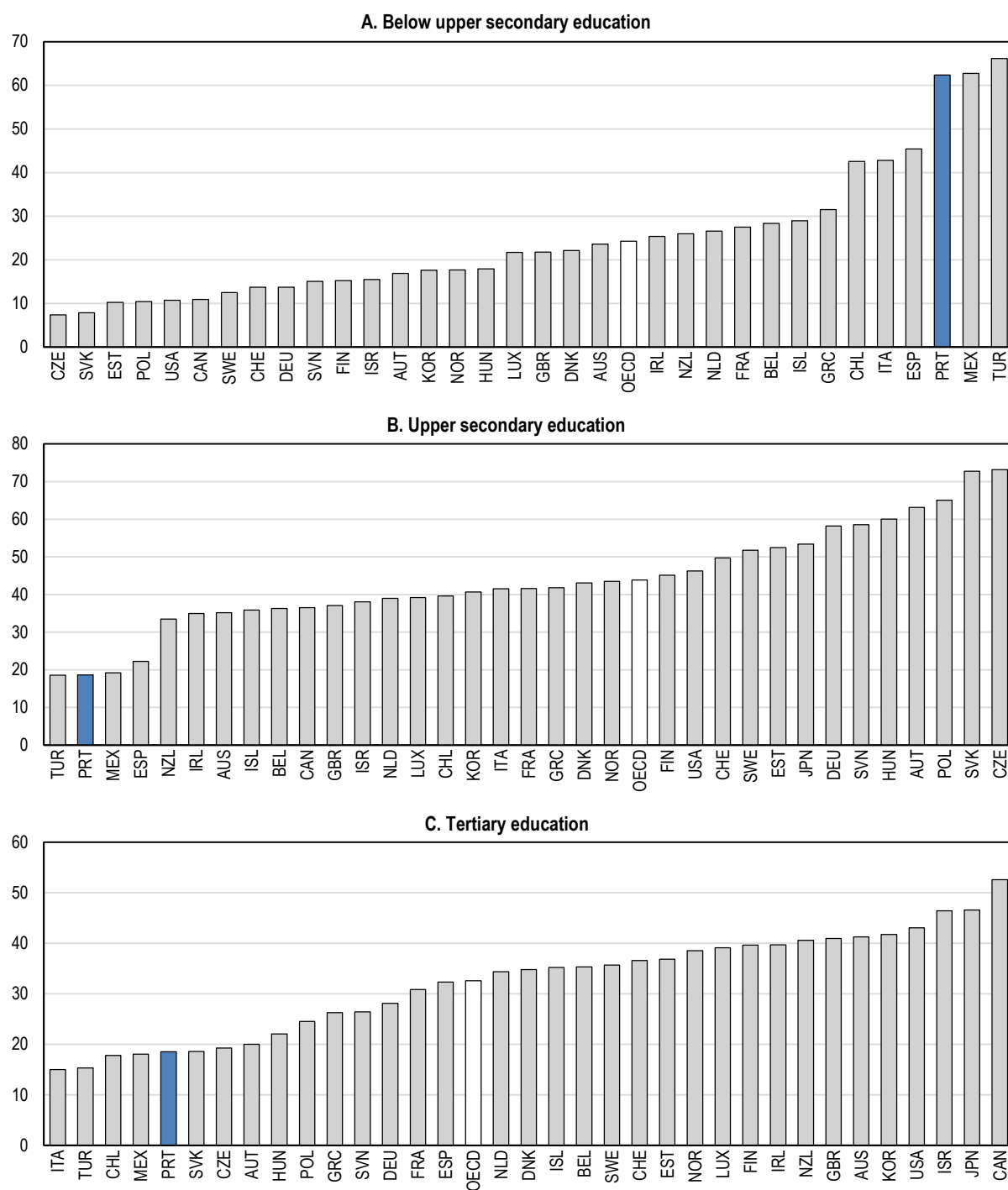
Taxes are clearly progressive

Portugal's income tax system is clearly progressive, with several estimates suggesting that the redistributive effect of income taxes is higher in Portugal than in the average EU country (Alves, 2012, OECD, 2011). The average effective income tax rate faced by the top quintile of the income distribution is around three times higher than for the bottom quintile, and as a result, the top quintile accounts for over two thirds of income tax payments (Figure 9). Income tax rates were increased in 2010, 2011 and 2013, and a comprehensive income tax reform in 2013 reduced the number of income brackets from 8 to 5, significantly increased marginal rates, and reduction in tax breaks, including for private education and health expenditures, which are overwhelmingly consumed by better-off households. The elimination of these tax breaks is clearly a step in the right direction, and it also makes the tax system simpler and more transparent. The overall redistributive effects of these changes to income taxes are difficult to evaluate, particularly the 2013 changes to personal income taxes. Most likely, however, they will reinforce the progressive character of direct taxes, and will therefore strengthen the inequality reduction achieved through personal income taxes.

Further tax reforms affected value-added taxes (VAT) and tax compliance. VAT reforms in 2012 included a wider application of the standard rate, including to restaurant meals and some prepared foodstuffs, which were previously taxed at a lower rate. These reforms likely made VAT more progressive as well, given that many of these items are consumed predominantly by wealthier households. Tax authorities also reinforced anti-tax evasion measures and compliance incentives, building on the work of previous governments. Strengthening tax compliance is also expected to improve the distributional efficiency of taxes, as high-income individuals typically have more opportunities to for tax evasion than low-income earners.

Education could do more to reduce inequality

Education affects people's capacity to generate earnings, and Portugal's low educational attainments are an important reason why average incomes are lower and poverty is higher than in other countries. Portugal is one of the OECD countries where the proportion of working-age adults with less than upper secondary education is highest (62% versus the OECD average of 24%) and tertiary education attainment is among the lowest at 14 percentage points below the OECD average (Figure 13). Household data suggest that the level of educational attainment of the household head is one of the major explanatory variables behind inequality, explaining about 25% of its total level. Higher educational attainments are also associated with lower unemployment and poverty rates (Table 5).

Figure 13. Highest educational attainment of 25-64 year-oldsPer cent, 2012¹

1. 2011 for Chile.

Source: OECD (2014), *Education at a Glance 2014*.

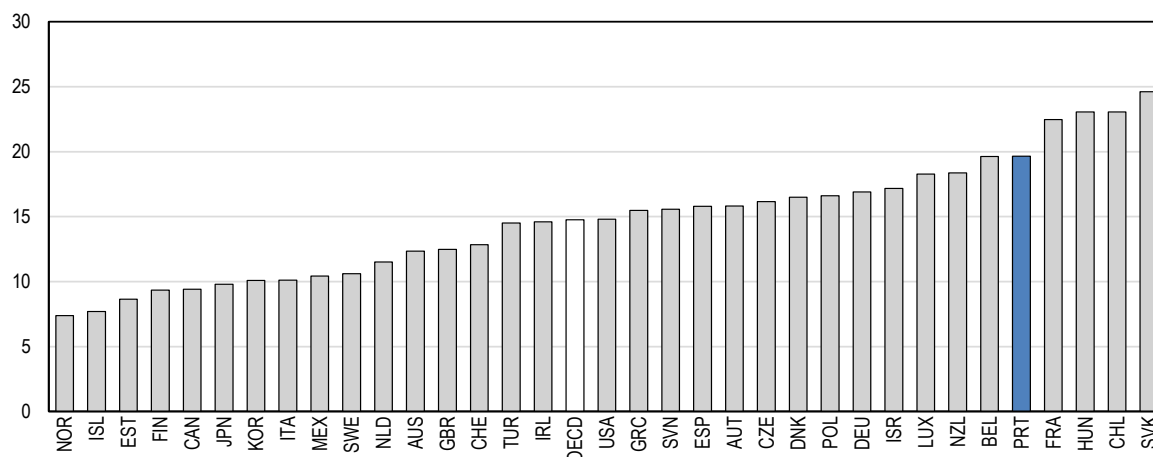
Table 5. Unemployment and poverty rates by level of educational attainment

	Per cent				
	2009	2010	2011	2012	2013
Unemployment rate (population aged 25-64)					
Primary and lower secondary education	10.1	11.8	13.3	16.0	17.1
Upper secondary and post-secondary non-tertiary education	8.2	9.7	10.9	14.5	14.4
Tertiary education	5.6	6.3	8.0	10.5	11.7
Poverty rate (population aged 18-64)					
Primary and lower secondary education	19.1	19.9	20.6	..	..
Upper secondary and post-secondary non-tertiary education	9.3	10.9	12.1	..	..
Tertiary education	3.3	2.5	3.6	..	..

Source: Eurostat (2014), "Employment and unemployment (Labour Force Survey)" and "Income and living conditions", databases, July.

Several studies have provided evidence of an empirical link between education on one hand and inequality and poverty on the other (Martins and Pereira, 2004; Rodrigues et al., 2012; Rodrigues and Andrade, 2014b). Portugal's dearth of highly educated people has also been mentioned as one of the reasons behind high returns to education, which exacerbate inequalities (Alves, 2012b). For example, the share of people living in households whose head has attained tertiary education rose from 7.4% in 1993 to 13.8% in 2009. Concomitantly, the disposable income of this group declined from 2.5 times the national average in 1993 to just 1.8 in 2009 (Rodrigues et al, 2012). Successive governments have made a determined effort to improve the general level of education of the Portuguese population, and although such improvements always take time to show up in the data, there are some encouraging results. Between 2001 and 2011 the proportion of people aged 25-34 who attained at least upper secondary education rose from 32% to 56%, and the proportion of people with tertiary education almost doubled.

Nonetheless, more could be done to improve the contribution of the education system to equity objectives. In Portugal, the association between students' socio-economic background and their performance at school is more pronounced than on average in the OECD, and much of this relation lies at the school level (Figure 14). As a result, the socio-economic differences across schools are largely predictive of a school's performance in the OECD PISA assessments. Policies that target disadvantaged schools, but also disadvantaged students, can therefore be particularly effective in raising performance and equity levels. Grade repetition is frequent, and this has proven an ineffective way to support poorly performing students. Around one third of students had repeated grades at least once by age 15 in 2012. Providing extra teaching time for students who fall behind and taking into account their needs so that they can catch up with their peers is a much better way of supporting those with learning difficulties than grade repetition, and is not necessarily more costly. With more than 20% of students leaving school early, Portugal still has one of the highest drop-out rates in the European Union. As drop-outs are likely to be significantly penalised in their earnings opportunities, continuing to reduce drop-out rates further could diminish the number of those at risk of falling into poverty. At the same time, class sizes are small, although OECD evidence suggests that class size is a far less important factor than teacher qualifications for student's learning progress. Increasing class sizes may be one way to free the resources needed for providing extra teaching time to those at risk of dropping out of the school system.

Figure 14. Relationship between student performance and socio-economic statusPer cent of explained variance in mathematics performance by socio-economic status, 2012¹

1. Socio-economic status is measured by the PISA index of economic, social and cultural status.

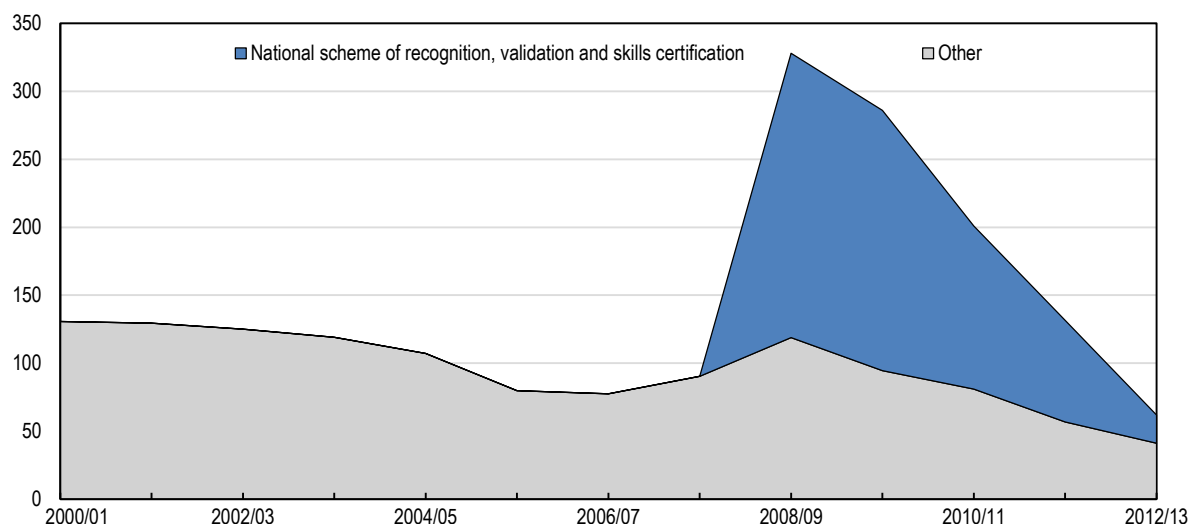
Source: OECD (2013), *PISA 2012 Results: Excellence Through Equity: Giving Every Student the Chance to Succeed (Volume II)*, PISA.

In the last few years, progress has been particularly significant in terms of adult education, which is an effective way to reduce the gap in educational attainment between younger and older cohorts. Enrolment in adult education programmes has risen sharply as of the school year 2008-09, although most of the sharp increase was accounted for by the national scheme of recognition, validation and skills certification (RVCC). This scheme involved a recognition and validation of acquired professional skills and work experience, with a lesser focus on providing new skills. However, a recent evaluation of the RVCC scheme argued that schemes that include formal teaching are more successful for improving the employability and increased earnings opportunities for adults than the RVCC (Lima, 2012). This has led to a sharp decline in the RVCC scheme, and reset the focus on schemes that combine the recognition of skills with new coursework, however at the cost of a significant decline in enrolment (Figure 15). The continuation and further development of adult learning initiatives is fundamental for achieving greater equity, and a particularly important challenge will be to compensate the lower enrolment in the RVCC scheme with higher enrolment in other schemes. Moreover, the education system should put more emphasis on providing training options to less academically-inclined students, by expanding the vocational education and training (VET) system.

Scaling up active labour market policies (ALMPs) that involve training activities can also improve the labour market performance of the unemployed, particularly for youth. Recently adopted enhancements of ALMPs include short training courses, financial support for internships, a hiring subsidy paid to companies that provide training and the temporary reimbursement of social security contributions for hiring unemployed individuals below 30 or above 45 years. Going forward, job centres could take a more active role in managing referrals to specific ALMP programmes. This would both promote the enrolment of job seekers who would benefit the most from these programmes, and ease capacity constraints. Efforts in this direction have already started and empirical results suggest a significant positive impact on reemployment probabilities (Martins and Pessoa e Costa, 2014). Monitoring and sanctions, while very strict in principle, are in practice far less stringent, as proof of job search is often perfunctory and benefit cancellation seldom enforced. Welcome progress has been made in the evaluation of programmes to help the unemployed, and these efforts should be further strengthened and used to channel scarce resources into the most effective programmes.

Figure 15. Adult enrolment in return to education initiatives

Number of students enrolled, in thousand



Source: Ministério da Educação e Ciência (2014). Estatísticas da Educação 2012/2013, DGEEC/MEC, Lisbon.

Recommendations to reduce inequality and poverty

- Strengthen the social safety net by reducing overlaps between programmes and ensuring better targeting, which could generate resources to eventually raise benefit levels of the minimum income support scheme *Rendimento Social de Inserção* (RSI).
- Prioritise the support given to children and youths, including by giving a more generous weight to children in the calculation of RSI benefits, or by raising child benefits.
- Make unemployment benefits independent of age and reduce eligibility requirements to widen their coverage.
- Raise the minimum wage only in line with productivity increases and inflation, as planned, but consider the use of in-work tax credits to improve the incomes of low-wage earners and strengthen work incentives.
- Continue to scale up active labour market policies and closely monitor programme performance.
- Scale up adult education and back to school schemes to help the unemployed and those in need gain relevant skills.
- Reduce drop-out rates from secondary education, including by reducing grade repetition and providing extra teaching time for students falling behind. Consider raising class sizes further if necessary to achieve this

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