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# GROWTH AND INCOME INEQUALITY: TRENDS AND POLICY IMPLICATIONS

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## GROWTH AND INCOME INEQUALITY: TRENDS AND POLICY IMPLICATIONS

### Main findings

- Overall inequalities in household disposable income have widened in a majority of OECD during the past three decades, with the trend being most pronounced in countries starting from low levels of inequality. At the same time, the three OECD countries facing highest levels of inequality have become less unequal.
- Growing income disparities in the lower half of the distribution have been more widespread than increases in overall inequalities, indicating that poor households have lost grounds relative to the median even in countries where summary indices of inequality such as the Gini coefficient point to little change.
- Differences in the sources of variations in the income distribution within and across countries make it harder to identify obvious policy trade-offs between growth and equity. One clear source of tensions is technological progress, a fundamental driver of growth that also leads to stronger demand for high-skilled workers, and hence to more rapid wage increases in the upper-part of the distribution.
- The inequality impact of technological progress can be mitigated by improving the general skills level through broader access to high-quality education and training programmes as well as by promoting product market competition.

1. On average across OECD countries and from the mid-1980s to the late 2000s, gains in household disposable income have not matched those in GDP per capita and the gap has been particularly large among poorer households and the lower middle class, suggesting that growth has been associated with growing inequality. This is consistent with numerous reports showing that income inequality has widened in a majority of OECD countries during the past three decades, and that this trend holds across a wide range of income measures. This policy note briefly summarises key trends in income inequality, focusing on real household disposable incomes developments at different points of the income distribution. It then discusses the potential contribution of growth-enhancing policies to these developments and reports preliminary evidence on the effect of growing inequality on long-term GDP.

### *What have been the key trends in growth and income inequality developments?*

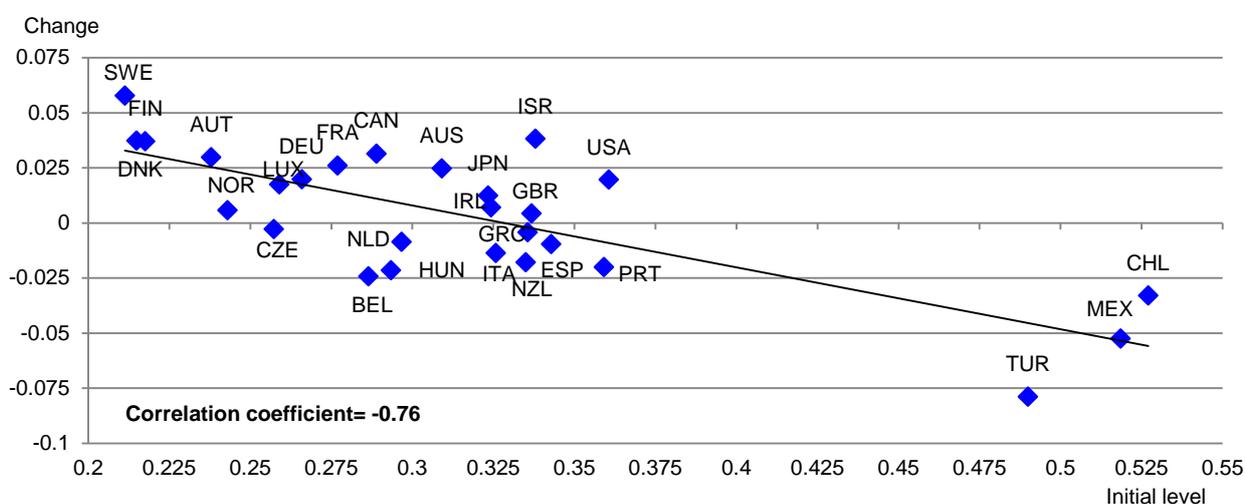
2. Trends in overall income inequalities across OECD countries have been well documented in previous reports such as *Divided We Stand* (OECD, 2011) and recent updates (OECD, 2013, 2014a). The picture painted in these studies is one of steadily growing income inequality in a majority of OECD countries during the past three decades. According to one traditional measure – the Gini coefficient – income inequality has risen by 10 per cent on average across countries from the mid-1980s to the late 2000s, while the ratio of top-to-bottom income decile – another conventional metric – had reached in 2010 its highest level in 30 years. And, this most likely understate the real extent of overall inequality insofar as

these trends are based on data collected through surveys of household incomes where top incomes are notoriously under-represented, in particular the top 1 per cent.<sup>1</sup>

3. However, the rise in income inequality has been far from uniform across countries, and a trend decline has been observed in a number of them. In fact, between the mid-90s and the late 2000s, OECD countries experienced a form of “inequality convergence”, with marked and opposite-sign changes in overall disposable income inequality for the most and the least unequal countries. The largest increases in inequality were observed in places such as Sweden, Denmark and Finland, which nonetheless remain among the most egalitarian countries, while the sharpest reductions were recorded in countries such as Turkey, Mexico and Chile, which started from a high level of inequality (Figure 1).

**Figure 1. OECD countries have experienced inequality convergence**

Change in Gini coefficient against initial level: Mid-1990s to late 2000s



1. Mid 90s refer to 1995 except for Austria for which the data refer to 1993, for Czech Republic, France, Luxembourg and Chile for which the data refer to 1996, for Greece, Ireland, Mexico, Turkey and the United Kingdom for which the data refer to 1994. Late 2000s refer to 2009 except for Australia, Canada, Denmark, France, Germany, Israel, Mexico, the Netherlands, Norway, Sweden, the United Kingdom and the United States for which the last available observation is 2010, for Korea for which it is 2011.

Source: OECD Income Distribution Database.

4. Trends in summary indicators of inequality such as the Gini coefficient can mask diverging developments across different portions of the income distribution. Another way of looking at inequality developments consists in comparing trends in household incomes -- on average and across the distribution -- with trends in GDP per capita. Such a comparison also sheds light on the link between economic growth, household material living standards and inequality (Causa, de Serres and Ruiz, 2014). It shows that in many OECD countries, gains in disposable incomes have for a large proportion of households fallen short of increases in GDP.

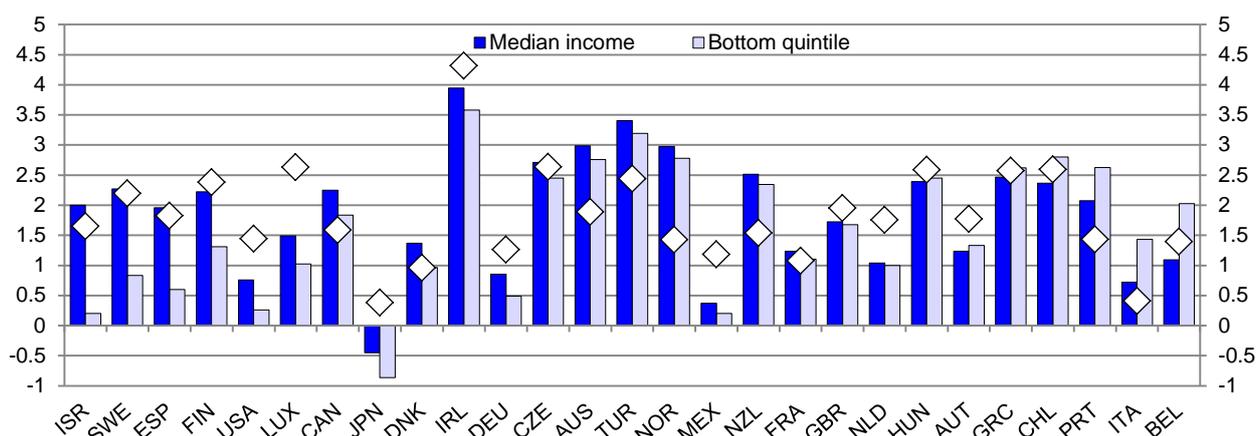
1. Using a separate source of data, a recent study focusing on top incomes has shown that the shares of the richest 1% in total pre-tax incomes have increased in most OECD countries in the past three decades, with the most substantial rises observed in English-speaking countries, Portugal and, to a lesser extent, Nordic countries (OECD, 2014b).

- This has been particularly the case for households at the bottom of the distribution: in around half of OECD countries for which data are available, GDP growth was substantially higher than households' income growth in the lowest quintile (Figure 2).
- In comparison to disposable incomes at the bottom of the distribution, disposable incomes in the middle of the distribution have generally fared better, even though they have also lagged GDP growth in a large number of countries. The growing gap of bottom *vis-à-vis* median incomes was particularly pronounced in Israel, Sweden, Spain, Finland and the United States (Figure 2).
- More generally, growing income disparities in the lower half of the income distribution – *i.e.* between bottom and median incomes -- have been even more widespread and pronounced than increases in “overall” inequality as measured by the Gini coefficient. For instance, a few countries (e.g. New Zealand, Mexico, Spain and Turkey) have seen widening disparities in the lower half of the income distribution taking place even as overall inequality have narrowed. This pattern was particularly striking in Spain, reflecting severe increases in income disparities between bottom and middle income households (Figure 3). This illustrates that trends in summary indicators of inequality such as the Gini coefficient can mask diverging developments across different portions of the income distribution.
- Meanwhile, in other countries (e.g. Australia, Canada, New Zealand, United Kingdom and the United States), between 20 and nearly 50% of total GDP gains have accrued to the top one-percent of households, pointing to rising inequalities also within the upper half (OECD, 2014b).

5. To sum-up, there are indications that growth in GDP per capita has not fully trickled down to household incomes over the past two or three decades, at least on average across OECD countries. In addition, it has been unequal, as growth in household disposable income has lagged GDP growth by an even wider margin at the lower end of the distribution. In most of the countries where increases in overall inequality have occurred, they resulted from higher income inequality within the lower and/or the upper half of the distribution rather than between them.

**Figure 2. In many OECD countries, low-income households have benefited little from GDP gains**

Real average annual growth rates of GDP, median and bottom quintile incomes across OECD countries (per cent)



1. Mid 90s refer to 1995 except for Austria for which the data refer to 1993, for Czech Republic, France, Luxembourg and Chile for which the data refer to 1996, for Greece, Ireland, Mexico, Turkey and the United Kingdom for which the data refer to 1994. Late 2000s refer to 2009 except for Australia, Canada, Denmark, France, Germany, Israel, Mexico, the Netherlands, Norway, Sweden, the United Kingdom and the United States for which the last available observation is 2010, for Korea for which it is 2011 and for Switzerland for which it is 2008.

Source: OECD Income Distribution Database.

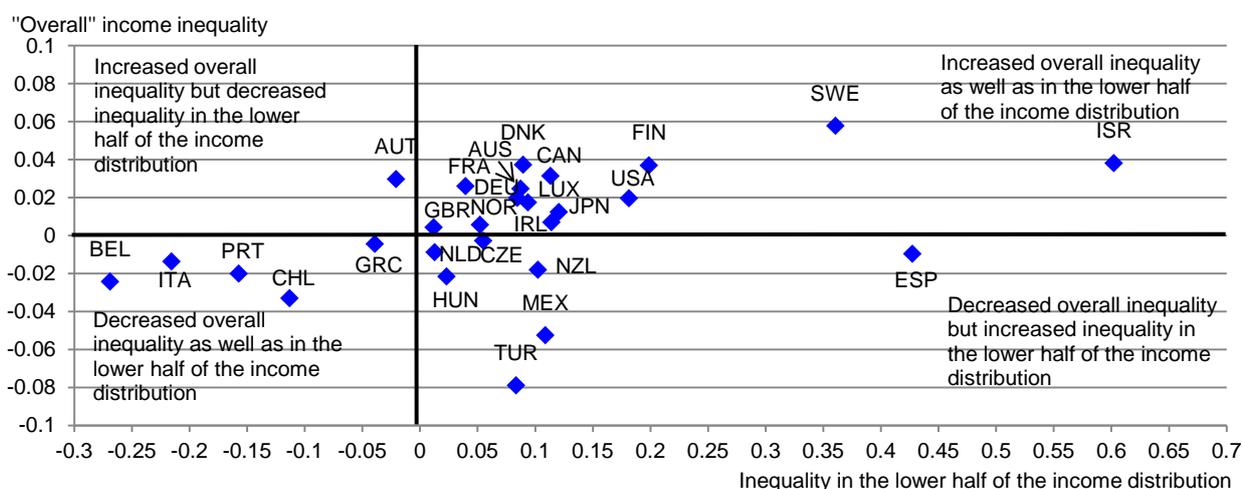
### What effects do growth-enhancing policies have on income inequality?

6. The main upshot from these developments is twofold: first, in a majority of OECD countries, GDP growth over the past two or three decades has been associated with growing income disparities, suggesting that some of the forces driving GDP growth – including policy changes – may have also fuelled inequalities. Second, differences in the sources of the changing income distribution – both within and across countries – means that identifying the key sources of trade-offs between growth and equity is no simple task.

7. To shed light on this issue, the extent to which structural reforms have had differential long-run impacts on GDP per capita and household incomes, on average and at different points of the distribution has been investigated (OECD, 2015; Causa, de Serres and Ruiz, 2014). In principle, domestic production (or income generation) should for the most part “trickle down” to domestic households. This implies that absent measurement and methodological considerations, GDP per capita and average household disposable income should move in parallel, at least over a sufficiently long period. As mentioned above, this has not necessarily been the case for many OECD countries over the last two or three decades. In fact, some reforms may have an impact on household disposable income that is different from that on GDP. This will be the case, for instance, if such reforms also induce income transfers between economic sectors (i.e. household, public and corporate sectors) that persist long enough to create a wedge between GDP per capita and household disposable incomes lasting several decades.

**Figure 3. Most countries have experienced growing income inequality in the lower half of the distribution**

Developments in the lower half of the income distribution and in "overall" inequality (Mid-1990s to late 2000s)



1. Mid 90s refer to 1995 except for Austria for which the data refer to 1993, for Czech Republic, France, Luxembourg and Chile for which the data refer to 1996, for Greece, Ireland, Mexico, Turkey and the United Kingdom for which the data refer to 1994. Late 2000s refer to 2009 except for Australia, Canada, Denmark, France, Germany, Israel, Mexico, the Netherlands, Norway, Sweden, the United Kingdom and the United States for which the last available observation is 2010, for Korea for which it is 2011 and for Switzerland for which it is 2008.

Source: OECD Income Distribution Database

8. One purpose of the analysis is to see whether policies and institutions that have been found to have a favourable impact on the long-term level of GDP per capita, have benefited household disposable incomes in similar proportions. The results suggest that growth-enhancing reforms have generally

benefited the average or median household, but with a magnitude that in several cases differs from the impact on GDP per capita. More specifically:

- Reducing barriers to competition, reducing unemployment benefits across the board and lowering labour taxation are found to lift incomes of the average and/or median household by more than GDP per capita.
- Boosting ICT investment and tightening unemployment benefits for the long-term unemployed are found to lift incomes of the lower middle class by less than GDP per capita – the latter reform is even found to reduce disposable incomes of the lower middle class.

9. Another purpose of the analysis is to identify potential policy trade-offs and synergies between economic efficiency and income inequality. Indications on the effect of growth-enhancing reforms on income distribution can be obtained by comparing the impact of policies on the disposable income of poor households and the lower-middle class relative to that of the average household. Based on the results, reforms can be distinguished according to whether they increase, reduce or have no impact on disposable income inequality:

- Several growth-enhancing reforms are found to deliver stronger income gains for households at the bottom of the distribution compared with the average household, and can thus be viewed as contributing to narrow inequality in disposable incomes. Such is the case for instance of reducing regulatory barriers to domestic competition, trade and inward FDI, as well as stepping-up job-search support and activation programmes.
- Conversely, a tightening of unemployment benefits for the long-term unemployed is found to lift GDP per capita and average household incomes but also to reduce disposable incomes at the bottom of the distribution, an indication that it may raise inequality.
- Finally, a few reforms leading to higher GDP per capita have an impact on household incomes that is not markedly different across the distribution. Examples include measures that raise the average level of education in the working-age population as well as reductions in the marginal tax wedge on labour income.

10. Earlier OECD studies looking at the determinants of income distribution from different angles and using different methodologies have also underscored the difficulty in identifying clear sources of policy trade-offs between growth and income inequality (OECD, 2011; OECD, 2012). One reason is that many reforms designed to stimulate growth have an impact on household income that operate through two offsetting channels: they increase the dispersion of wages among those who are in employment (rising inequality among workers), but they also improve the employment opportunities of those not working (lowering inequality among the working-age population). The net effect on the distribution of household income is often unclear, regardless of whether this is measured before taxes and transfers (market income) or after (disposable income). This is particularly the case with labour market reforms aiming specifically at boosting employment. For most of them, the analysis finds that they either help reducing household income inequality or have no significant effects.

11. One clear source of tensions between growth and income inequality that has been identified in recent studies is technological progress. The finding that trend productivity growth or higher investment in innovation tends to be associated with wider income inequality supports the view that technological progress creates proportionately more high-skill, better-paid jobs. In the results reported above, this is possibly reflected in the finding that the lower-middle class has benefited less on average from the gains in GDP per capita than households in the upper-half of the distribution. Earlier studies have shown that

improving the general skills level through broader access to high-quality education is the best way to offset the inequality impact of technological progress (Braconier, Nicoletti and Westmore, 2014). The findings reported above indicate that promoting product market competition can also contribute to mitigating income inequality while boosting productivity. This is the case regardless of whether competition is encouraged through lower regulatory barriers to firm entry or via stronger exposure to foreign trade and FDI. In fact, one finding that is common to most studies is that once controlling for technological progress, there is little evidence to suggest that globalisation exacerbates income inequality.

### ***How can pro-growth reforms be made more inclusive?***

12. It is noteworthy that many pro-growth policies can be favourable to both economic growth and a narrowing of the income distribution once the employment effect is taken into account. Nevertheless, given the need in many countries to tackle rising inequalities, more attention should be given to policy packages that both reduce income dispersion and boost growth.

13. Increasing in the provision and quality of education and training is an example of reforms that contributes both to economic growth and equity. Particular emphasis should be put on equal access to early, primary and secondary education as well as in evenly-high quality of basic education, in order to prevent the exclusion from labour market of socially or economically disadvantaged groups. Also, broader access to higher education, vocational education and training as well as life-long re-training opportunities mitigate the impact of skills-biased technical change on wage inequality. Access to up-skilling will be an important policy for more inclusiveness in knowledge-based economies.

14. Removing obstacles to the labour participation of women is another reform that enhances growth and reduces income inequality. One priority in this area is to reduce the financial disincentives to return to work after childbirth, including specific features of the tax-benefits system, such as high taxes on second earners and ill-targeted childcare support. Making tax allowances and transfers conditional on second earner's income level rather than on family income level, or expanding childcare support conditional on employment (such as childcare subsidies or paid maternity leave) are likely to reduce such disincentives. Furthermore, expanding the access to affordable childcare services is also likely to encourage women full-time labour participation and reduce inequality.

15. Reducing regulatory barriers to entry and competition in sectors with large potential markets is associated with large employment effect, which is likely to reduce income inequality even in face of wider wage dispersion. A recent OECD study (Criscuolo, Gal and Menon, 2014) found that across 18 OECD and non-OECD countries, small firms that are five years old or less on average contribute to about 42% of job creation whereas they represent only 17% of employment. Such a disproportionately large role by young firms in job creation suggests that reducing barriers to entrepreneurship can contribute significantly to income equality via employment effect.

16. While enhancing income redistribution by raising marginal tax rates can entail non-negligible economic costs,<sup>2</sup> enhancing the efficiency of the tax system, such as cutting back tax expenditures, broadening tax bases and fighting tax evasion involves much smaller costs or even benefits in term of growth. Such reforms usually reduce income inequality especially for those tax expenditures that are mostly benefitting higher-income households, even though some of the regressive tax expenditures may be related to socially valuable activities (such as R&D tax credits).

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2. Beside the difficulty related to the global mobility of skilled workers and firms, a recent OECD study (Andrews and Criscuolo, 2013) found that a higher marginal tax rate is associated with lower intensity in entrepreneurship.

17. Some reforms call for careful implementation that takes into account their potential adverse equity effects. For instance, in reforming unemployment benefits, special attention needs to be given to the long-term unemployed, which comprise more than one-third of all unemployed in OECD area (at the first quarter of 2014). Because of their bleaker employment prospects, tightening benefits for this group can exacerbate poverty unless matched by other forms of social protection or targeted requalification measures. This also implies that unemployment benefits and active labour market policies should be primarily geared toward shortening the unemployment spell.

18. In a similar vein, reforms that tighten access to pension and disability benefits require a careful design of employability assessment. Such reforms may widen income inequality if the prospect of finding jobs that compensate for the loss of social transfer is low. Provisions of activation services and retraining opportunities extended but targeted to those groups (which are currently under-represented in such programmes) become an important policy for enhancing both growth and equity as working lives are progressively extended.

19. Employment protection legislation is another policy area with potentially large effects on income inequality. Reforms of employment protection should focus on reducing the gap in the degree of protection between temporary and regular contracts. Such reforms reduce income inequality through effects on employment and wage dispersion: where excessively strict, an easing of regulatory constraints on the dismissal of workers on regular contracts would encourage more hiring on such contracts, preventing thereby employment to be biased toward temporary workers. Insofar as dismissals entail the loss of wage income, the easing of employment protection legislation should be coupled with a reform of unemployment benefits to provide adequate coverage to all workers. In this regard, shifting protection from jobs to workers brings higher efficiency and equity.

20. Reforms of taxes and transfers have direct consequences on income inequality since they concern the very instruments of redistribution. For instance, reforming the tax structure in a way to lower the weight of direct taxes while relying more on indirect taxes is favourable for growth (Arnold, 2008), but may increase inequality through various channels such as the likely adverse effects of relatively higher consumption taxes on less affluent households (who tend to consume more out of income). However, such impact can be minimised if the tax shift is achieved by lowering the labour tax wedge on low-income households through in-work tax credits and other income-conditional tax allowances. This preserves the redistributive capacity of the tax-benefits system while further enhancing equity by encouraging the labour participation of low income households. Increasing the role of indirect taxes can be made less regressive by strengthening the taxation on immovable properties and inheritance. Even when the reform involves a rise in consumption tax rates, the regressive nature can be mitigated by enlarging the tax allowance targeted at low-income households.

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