Policy implications

An individual's earnings may be decomposed into a long- and a short-term component. The long-term component can be thought of as measuring average earnings over time, whereas the short-term component captures earnings fluctuations around this average. This policy brief reviews the available international evidence on trends in short-term variability, concluding that temporary earnings fluctuations have risen noticeably in many countries. There is as yet no clear-cut evidence on the reasons behind this trend which seems most likely to be the result of a combination of factors. While this paucity of evidence precludes a full discussion of how the trend could be counteracted, it is still possible to discuss ways to ameliorate the effects of earnings instability. For instance, to the extent that earnings instability is related to job instability, it would seem necessary to move away from social security solutions that depend on individual jobs and employers. Instead, solutions should be sought that, ideally, encompass the whole labour market. Such policy stands in stark contrast to actual current developments which have been dominated by retrenchment and a concomitant rise in private or bargained solutions.

Worrying about wages

Recent decades have seen dramatic changes for European wage- and salary-earners. Starting with the oil crises in the 1970s, unemployment rose in most European countries. Somewhat later, around the early 1980s, earnings inequality also started to rise in a number of industrialized countries. The extent to which inequality grew differed: whereas France saw only minor changes, the increase in the USA and the UK was dramatic (e.g. Atkinson 2007). While some countries saw a reduction in unemployment (until the crisis struck), inequality has not receded to earlier levels.

The causes and appropriate policy responses to the rise in inequality have been hotly debated, without any consensus emerging. However, little attention has been paid to the fact that inequality may be decomposed into long- and short-term inequality, where the first component can be thought of as average earnings differences and the second as temporary fluctuations around this average. Changes in overall equality may then derive from changes in either of these two separate components. While this basic point was made quite early on by two American economists, Peter Gottschalk and Robert Moffitt (1994), it has gone relatively unnoticed. This is unfortunate, as the evolution of the two components has implications for which type of social policy measure would be the most appropriate in an attempt to mitigate the trend. Whilst changes in long-term inequality direct attention to measures such as education that primarily affect individuals' longer-run earnings potential, changes in short-term inequality point to measures aimed at limiting or accommodating earnings disruptions caused by unemployment and other factors.
Permanent and temporary inequalities

It has long been known that differences between individuals along one dimension at any specific point in time can be decomposed into one component capturing permanent differences between the individuals and another measuring temporary variation around these permanent spreads. A salesperson’s earnings may thus vary markedly from one year to another depending on how successful they are, yet on average their earnings would presumably lie above those of a janitor. An increase in the average earnings difference would obviously mean greater overall earnings inequality, yet so would an increase in the year-to-year earnings fluctuations. To see this, consider two persons with average annual earnings of 20,000 euros (this example is adapted from Gottschalk and Moffitt 2009). Leaving average earnings unchanged, imagine one person suffering a 5000 euro drop in one year and an identical increase in the subsequent year and the other person going through the opposite experience. This would imply larger earnings inequality in each of the two years compared to a situation in which earnings showed no variability over time. The simple point is that the rise in inequality observed in many industrialized countries could have been caused by either a surge in permanent inequality and/or a jump in temporary variability.

The temporary variations in earnings may of course come about in many different ways. An important distinction is that between earnings fluctuations brought about by voluntary decisions and those triggered by external events. People may voluntarily decide to change their level of employment for a number of reasons, for instance in relation to childbirth or to pursue further education and training. Although such decisions may have long-term consequences, whether negative or positive, that may not have been fully taken into consideration at the time, they are nevertheless examples of people shaping their lives in the way they think desirable. Furthermore, a temporary change in earnings may involve a pay increase, something which presumably would be welcome even if it were only for a limited period. More problematic, and the reason for our concern with earnings fluctuations, is a drop in earnings. These are most often attributable to external events, to something by definition not initiated by employees. The example that most immediately comes to mind is clearly layoffs, but this is just one example of a termination of a job contract or reduction in hours or wages not induced by the employee.

Job loss may affect both the permanent and the temporary earnings components, all depending on whether earnings return to their previous level or not. Layoffs leading to a permanent reduction of earnings, in the form of long-term unemployment or re-employment in a job on a lower rung on the pay scale, would thus be incorporated into the permanent component. Earnings reductions due to unemployment of a more short-term nature, or temporary re-employment in a low-paying job, would instead be captured by the temporary component. The crucial aspect is thus not whether the initial event is in itself short, but whether earnings eventually return to their initial level and how long it takes to for them to do so.

Without some sort of insurance mechanism, such as unemployment compensation, few people have the economic resources to handle a substantial drop in earnings without an adjustment of living standards. In less dramatic cases, it may be sufficient to put off the acquisition of more expensive capital goods for the time being. A larger, or longer, reduction in earnings would of course necessitate more serious reductions of consumption. Thus even if an increase in permanent inequality may be more undesirable than an increase in earnings fluctuations, an increase in short-term variability is clearly something to be taken seriously.

Trends in earnings fluctuations

While there is no systematic comparative analysis of the evolution of permanent and temporary earnings inequality similar to the analyses of the development of overall earnings differences, there are nevertheless a number of country-specific analyses. The studies encompass roughly the period 1980 to 2000, and pertain to Canada (e.g. Ostrovsky 2010; Baker and Solon 2003), Italy (Cappellari 2004), Sweden (Hälstén et al. 2010; Gustavsson 2008, 2007), UK (Ramos 2003; Dickens 2000), and USA (e.g. Gottschalk and Moffitt 2009; Moffitt and Gottschalk 2008; Haider 2001; Gottschalk and Moffitt 1994). These countries all share the dubious distinction of having experienced rather sizeable increases in earnings inequality during this period, which makes them particularly interesting from our point of view.

Before discussing the results, it should be pointed out that, although the studies share an interest in the decomposition of inequality and use similar approaches, the specifics of the statistical models and of the data sets employed differ. In the context of this brief we therefore focus on broad trends, accepting some uncertainty regarding particulars. Another point to note is that the results discussed below all pertain to males between ages 25 to 55, and that they also are based on analyses from which those with extremely high or extremely low earnings have been excluded. This is important in that it implies that the results refer to a relatively stable group of employees, as women, the young and the old, as well as those at the upper and lower ends of the earnings distribution, generally display greater earnings fluctuations.1 In relation to the labour market as a whole, the studies thus almost certainly underestimate overall variability.

The analyses concur in a number of respects. They indicate that escalating permanent inequality is the main contributor to growth in overall inequality, but also that temporary inequality often plays a non-negligible role. In the USA, for instance, Gottschalk and Moffitt (2009) found that the growth in earnings inequality occurring up until 1990 was caused in roughly equal measure by a rise in the two components. Since then, permanent inequality has continued to grow while the

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1 Although some analyses have looked at other groups as well, this brief focuses on prime-aged males because this group has been examined in all the studies conducted.
Temporary component remained relatively stable (see Figure 1). Over the period 1974-2000, these authors estimate that the temporary component of income (approximated as the square root of the temporary variance shown in Figure 1) increased from roughly 30 to around 40 percent.

Fluctuations are, according to Gangl (2005), also an important part of inequality in many European countries. Focusing on income rather than earnings, and thus incorporating public transfers such as unemployment compensation and sick pay, this author found that in almost all the countries studied temporary variability accounted for approximately 20% of total income inequality. In other words, even after the income smoothing generated by social insurance programmes, variability is an important aspect of living conditions.

Piecing together the results from different studies from each of the five countries produces the following very rough picture of the evolution of the temporary component over time (see Table 2 for a summary). The analyses from the USA show a rise in variability in the late 1970s that continues at a slower pace during the 1980s and levels off thereafter. The Canadian pattern is more varied, with relative stability during the late 1970s, a rise during the early 1980s, stability or slight decline during the rest of the 1980s, and finally a rise in the early 1990s continuing at a slower pace throughout the rest of the decade.

Table 1 Total income inequality and temporary income variability

<table>
<thead>
<tr>
<th>Country</th>
<th>Total income inequality</th>
<th>Temporary income variability</th>
<th>Income variability share, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>0.120</td>
<td>0.029</td>
<td>24</td>
</tr>
<tr>
<td>Germany</td>
<td>0.209</td>
<td>0.036</td>
<td>17</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.308</td>
<td>0.037</td>
<td>12</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.251</td>
<td>0.062</td>
<td>25</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.238</td>
<td>0.063</td>
<td>26</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.365</td>
<td>0.065</td>
<td>18</td>
</tr>
<tr>
<td>France</td>
<td>0.300</td>
<td>0.067</td>
<td>22</td>
</tr>
<tr>
<td>Portugal</td>
<td>0.573</td>
<td>0.087</td>
<td>15</td>
</tr>
<tr>
<td>Greece</td>
<td>0.453</td>
<td>0.109</td>
<td>24</td>
</tr>
<tr>
<td>Italy</td>
<td>0.512</td>
<td>0.121</td>
<td>24</td>
</tr>
<tr>
<td>United States</td>
<td>0.608</td>
<td>0.127</td>
<td>21</td>
</tr>
<tr>
<td>Spain</td>
<td>0.575</td>
<td>0.152</td>
<td>26</td>
</tr>
</tbody>
</table>

Note: Total income inequality indicates total variance of log income, temporary income variability denotes estimated transitory variance of income. Source: Gangl (2005), Table 2.
and into the new millennium. The results for the UK and for Sweden are broadly similar to one another, indicating stability or decline during the 1970s and early 1980s followed by a relatively continuous increase throughout the rest of the period. However, the rise during the 1990s appears more pronounced in the UK than in Sweden. Italy, finally, deviates from all the other patterns. While there was, as in the UK and Sweden, a decline in temporary fluctuation during the late 1970s and early 1980s, in Italy it remained stable until the end of the study in 1995. Altogether, while the starting levels may have been different, as was the timing of the ups and downs in earnings fluctuations over the 20 or so years examined, an overall tendency seems to be that earnings variability is on the rise.

### Possible explanations

Even given the well-known increase in earnings inequality that has occurred in some countries, this trend is in some ways still quite surprising. The period covered by the studies was also a period in which macro-economic fluctuations decreased. In many countries, variability in variables such as GDP, industrial production, employment and unemployment dropped noticeably. The last two decades of the 20th century came to be known as the “Great Moderation”, and some commentators hailed the disappearance of the business cycle. Yet individual-level earnings fluctuations increased.

What could explain this trend? On this question very little is known, as most studies have been limited to documenting the trend rather than examining specific causes. At the most general level, fluctuations in earnings from employment may arise from either changes in employment, including unemployment as well as working hours, or changes in wages. Nonetheless, a quick look at factors that could have influenced these components yields no clear-cut conclusions.

Unemployment is for instance often mentioned in connection with earnings fluctuations, and it is not surprising that studies looking at the role of unemployment find temporary variability closely connected to the business cycle (e.g. Beach et al. 2006). Yet the two do not move completely in tandem; earnings fluctuations for instance refused to drop during the long boom in the USA and UK in the 1990s. On a similar note, it often is claimed that international competition and outsourcing make earnings and employment less stable. However, Hällsten et al. (2010) found no support for this claim, as a rise in variability was observed both in the globalized manufacturing sector and in non-globalized sectors of the economy such as public services. In fact, the increase in the latter often surpassed the increase in manufacturing. Moreover, although male job stability has fallen in both the USA (Farber 2008) and the UK (Gregg and Wadsworth 2002), there seems to have been no general drop in job stability (Auer and Cazes 2003).

Two other factors often pointed to are a relaxation of employment protection legislation and declining unionization. Although the studies surveyed here cover only a small selection of countries, they do encompass alternative institutional settings. This should enable us to gain some provisional insight into the importance of the institutional setup for the trends observed. Starting with employment protection legislation, the OECD’s EPL index shows unchanged levels of legislative strictness in Canada, UK, and the US, and a relaxation in Italy, apparently contradicting the country trends in earnings fluctuations.

Turning to unionization, union density was relatively stable in Canada and Sweden during the 1980s and 1990s, at 35 and 80% respectively. By contrast, union density dropped in the other three countries, in Italy and the UK from around 50 to 30% and in the US from 25 to 15%, so that any de-unionization effect would be more likely in the latter three countries. The fact that Sweden experienced a rise in fluctuations despite stable unionization, and that Italy handled a loss in union density without an increase in fluctuations indicates at least that there is no simple direct relationship between the two. In Sweden this could perhaps be explained instead by the successive decentralization of wage bargaining that has taken place, and yet no corresponding recentralization appears to have occurred in Italy.

As is evident from this discussion, there does not seem to be one single cause underlying the trend towards increasing earnings fluctuations. Rather, it seems likely that these are the result of a set of factors, probably extending beyond those just mentioned, all working in direction of increased fluctuations, . The importance of each individual factor may have varied over time and across countries, leading to the variable trend towards increasing earnings fluctuation that has been observed.

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### Table 2 Summary of country specific trends in temporary earnings variability

<table>
<thead>
<tr>
<th>Period</th>
<th>USA</th>
<th>Canada</th>
<th>UK</th>
<th>Sweden</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975-1979</td>
<td>+</td>
<td>0</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1980-1984</td>
<td>+</td>
<td>+</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1985-1989</td>
<td>+</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>1990-1994</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+/0</td>
</tr>
<tr>
<td>1995-1999</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+/0</td>
</tr>
<tr>
<td>2000-2005</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Note: + signifies increase, 0 stability, and — a decrease in temporary earnings variability. No cross-country comparisons of the size of the changes are possible.
Policy implications

Although there are still many open questions with regard to the factors underlying the rise in instability, some general points are nonetheless possible from a policy perspective.

Social policy involves both a redistribution of resources between individuals as well as over an individual’s life course. Childcare, education, elderly care and pensions are examples of the latter, whereas traditional forms of social protection illustrate the former. Social protection in the form of social insurance, and in particular unemployment compensation, is the first aspect one thinks of in connection with mitigating earnings fluctuations. These insurance programmes were of course initially created to protect the living standards of wage-earners in the face of the vagaries of the labour market.

Against this background, it is remarkable that the period of rising earnings variability is also one of social insurance retrenchment. Many countries, including those discussed here, have tightened eligibility requirements and reduced benefit generosity since the 1980s. Policy has turned to what some call pro- rather than reactive social policy, especially a focus on the expansion of education, including in some cases childcare and pre-school. A general need for a highly educated labour force in the globalized information age is often given as the reason. While education expansion is laudable for a number of reasons, and not only in relation to the labour market, it is clear that this will primarily affect the permanent component of the inequality decomposition. Although there are clear educational differences in the risk of unemployment, the principal effect of education is to raise an individual’s long-term earnings potential. There is little reason to believe that a general expansion of education will limit earnings variability. Mitigating the negative effects of increasing earnings fluctuations requires other measures, and, given the lack of knowledge regarding what has caused the rise in temporary earnings fluctuations, these will have to focus on softening the consequences of a fall in earnings.

As noted above, there are clear links between business cycle and earnings fluctuations, and upgrading unemployment compensation may seem to be the most obvious policy reform to be pursued. Indeed, the retrenchment in unemployment compensation will tend to increase fluctuations if it pushes the unemployed to accept unstable low-paying jobs. However, other types of policy may also be considered. The focus on male earnings in the literature should for instance not obscure the fact that women experience greater earnings fluctuations. Though earnings variability among women may have decreased as their labour force participation has grown, nonetheless women still experience greater fluctuations than men. Part of this is attributable to women’s involvement in childbirth and childcare, and this is an aspect that could be the target of reform. Enabling women to return to their former job after childbirth would simplify labour force re-entry, and presumably minimize any earnings fluctuations, as would the provision of childcare sufficient to allow mothers and fathers to work close to full-time if they so wish. The responsibility for the care of elderly family members is also something that tends to fall upon women, and offering support in the area of elderly care would also reduce the need for unwanted hours and earnings reductions.

Other reform considerations are of a more general nature. The tightening of eligibility criteria mentioned above has also had the effect of making those most exposed to earnings fluctuations less likely to receive various forms of social insurance. Workers on short-term, temporary, contracts will, almost by definition, experience greater earnings variability than others, and the precariousness of their employment will also make them less likely to have the employment records generally required to obtain social insurance benefits. Policy can seek to reverse this.

Another conclusion with respect to eligibility is that social protection should not be organised at the level of a single employer. Universal benefits available to everyone irrespective of place of work would be the best way to guarantee that a shift from one job to another does not involve the loss of rights to social protection. Countries here differ drastically in their reform trajectories, and there may also be differences within countries with regard to different areas of social insurance. One example of a positive development is the German health insurance reform of 1996. The reform introduced free choice of health insurance schemes, in essence opening up previously closed company or occupational health insurance schemes to non-employees. Access to health insurance providers thus became less dependent on one’s occupation and job, a move that, against the backdrop of rising instability, should be applauded.

However, the dominant pattern is likely to have been one in which the cutbacks in general insurance schemes have led to a growth in private or bargained alternatives. One such example is the increasing importance of bargained unemployment insurance in Sweden, a direct consequence of retrenchment in the general unemployment benefits during the 1990s. Although the bargained agreements still cover large parts of the labour force, as they are the outcome of agreements between employer and trade union confederations, their conclusion is nevertheless clearly a step in the wrong direction in terms of mitigating earnings instability. Such sectoral solutions are common in many countries, and often encompass not only unemployment and health benefits but also pensions. While bargained agreements covering large sections of the labour market are of course preferable to insurance provided by a single employer, public policy reform and increased labour market turbulence may force workers to move from, for instance, the public to the private sector, thereby initiating a change in insurance coverage. The rise in labour market instability is likely to have made this type of forced change in insurance coverage much more common, and this is happening at a time when a marked growth in earnings volatility has drastically increased the need for stable insurance solutions.

References


