

Box 5

RECENT DEVELOPMENTS IN TOTAL HOURS WORKED IN THE EURO AREA

In recent years a number of structural changes have affected the euro area labour market. Some of these relate to the increased use of part-time work, but there has also been greater flexibility in the working hours of full-time workers. These changes should help to increase labour market participation rates, raise the level of potential growth and help the euro area economy to adjust more flexibly to shocks. However, the analysis of labour market trends has become more complicated following these structural changes, as an assessment of changes in labour input needs to take account not only of changes in employment, but also of changes in working hours. As a result, total hours worked are the preferred measure of labour input. By definition, developments in the total number of hours worked reflect changes in employment and in actual hours worked per person employed.

These two components of labour input might also behave quite differently over the business cycle. In particular, if labour turnover is costly and a downturn (or upturn) is expected to be short-lived, firms might prefer to adjust their labour input by adjusting hours worked, rather than employment, in order to match developments in product demand. Such adjustments can also include shifts from full-time to part-time employment or vice versa. The purpose of this box is to discuss euro area evidence on the recent developments in total hours worked.

An estimate of total hours worked can be constructed using annual data from the European Labour Force Survey (LFS) on hours worked per person in full-time or part-time employment, multiplied by the number of full-time and part-time employees (ascertained by combining data on employment from the national accounts with LFS information about the part-time/full-time ratio).¹ It should be noted that the resultant estimate may be affected by working day effects.² Nonetheless, the estimate is sufficiently robust for trend analysis. Developments in the estimate for total hours worked thus reflect changes in the number of persons employed full-time or part-time and the actual hours worked by persons working full-time or part-time.³

- 1 See also Box 1, entitled "Developments in total hours worked in the euro area", in the October 2004 issue of the Monthly Bulletin.
- 2 Prior to 2005 the "annual" LFS data for the euro area are data collected in the second quarter with the exception of data for France and Austria, which relate to the first quarter. From 2005 onwards the LFS data are true yearly averages, with data collected continuously throughout the year. The pre-2005 data are therefore more likely to be affected by working day effects, as Easter holidays may or may not be included in the data collection period.
- 3 Actual hours do not take into account absences owing to annual leave or sickness, while they do include information on overtime hours.

Developments in total hours worked, employment and average hours worked per person

Chart A shows developments in total hours worked in the euro area over the period 1996-2005. Total hours worked increased strongly during the second half of the 1990s, but decreased during the period of weak economic activity in 2002 and 2003 (with growth rates of -0.5% and -0.7% respectively in those two years). As the economy gradually recovered, total hours moved in parallel with GDP, increasing again in 2004 and 2005, by 0.6% and 0.7% respectively. Employment growth displays a somewhat less pronounced cyclical pattern during this period. It too slowed in response to the slowdown in economic activity, but remained positive – with annual employment growth never falling below 0.4%. In addition, it appears to have picked up again only gradually during the recent recovery.

The more pronounced cyclical reaction of total hours worked is due to substantial changes in average hours worked per person, which fell by 1.1% on average during 2002 and 2003, followed by a slight increase during 2004 and 2005. This increase is exceptional, given the well-documented trend decline observed over longer horizons in average hours worked.⁴ This deviation from the trend could be explained by increasing reutilisation of “hoarded labour” after a temporary slowdown in economic activity. To the extent that this is true, the growth rate of total hours worked can be expected to fall back below the level of employment growth as growth in average hours worked returns to its trend level. However, it is important to note that it is difficult to distinguish clearly between recent cyclical movements and other factors affecting average working hours.⁵

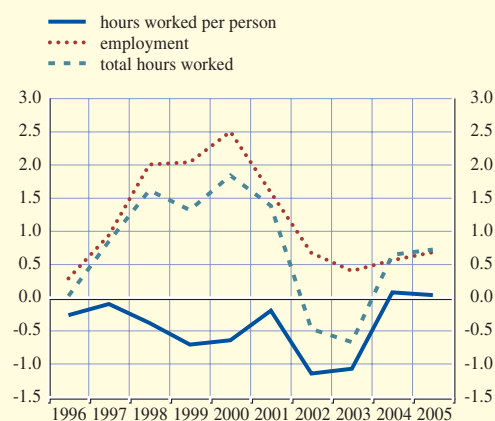
Contributions to changes in total hours worked

Changes in total hours worked can be investigated further by studying the contributions from changes in employment and average hours broken down into part-time and full-time data. The year-on-year change in total hours can be decomposed into four separate components reflecting changes in part-time and full-time employment and changes in average hours worked by full-time and part-time employees.

Chart B indicates the overall change in total hours worked (the dashed line) together with the contributions to the annual change in total hours (the bars). For each year, the bar represents the contributions (in million hours) of the respective components. The sum of all the bars corresponds to the overall change in total hours worked.

Chart A Total hours worked, employment and hours worked per person employed

(annual percentage changes)



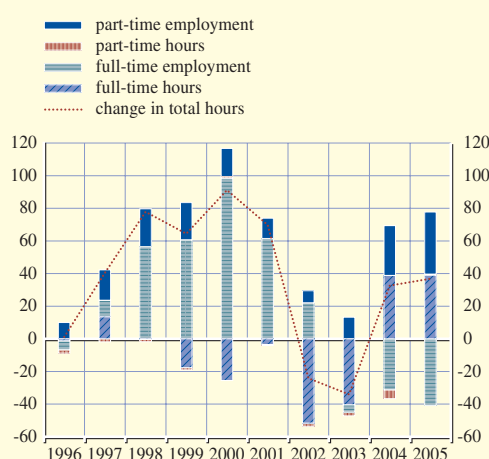
Sources: Eurostat and ECB calculations.

4 See also N. Leiner-Killinger, C. Madaschi and M. Ward-Warmedinger, “Trends and patterns in working time across euro area countries 1970-2004: causes and consequences”, ECB Occasional Paper No 41, December 2005.

5 Legal changes such as the introduction of the 35-hour week in France in February 2000 naturally have a key influence on working hours. The main conclusions of the analysis are, however, not affected qualitatively by this particular change in legislation.

Chart B Contributions to change in total hours worked

(million hours)



Sources: Eurostat and ECB calculations.

The chart reveals that the strong growth of total hours in the late 1990s was mainly driven by an increase in full-time employment. The chart shows that pro-cyclical changes in total hours since 2000 have to a large extent been driven by changes in average hours worked, while the contributions from employment have remained positive but small. Most interestingly, the observed increase in employment during the recent recovery seems to be characterised by a shift from full-time to part-time employment. In fact, full-time employment has decreased, thereby contributing negatively to growth in total hours. However, since 2003 this negative contribution has been more than offset by a strong positive contribution from part-time employment.

These developments do, of course, reflect both cyclical and structural changes. It appears that firms have made use of the possibilities provided by the institutional framework to minimise hiring and firing costs by adjusting hours worked by full-time employees to match product demand over the business cycle.⁶ Recent developments in the estimate of average hours worked support this interpretation. Moreover, institutional changes may have affected the shape of the recent increase in employment, leading to the stronger creation of part-time employment. The share of part-time employment in the euro area has increased recently, from 16.9% in 2003 to 19% in 2005. This strong increase probably reflects the impact of labour market reforms in the euro area (such as the “Hartz reform” introducing one-euro jobs in Germany). However, statistical and methodological changes implemented in some euro area countries may also have played a role.⁷

Overall, developments in total hours worked in the euro area indicate that firms responded to the most recent slowdown by means of a pronounced downward adjustment of average hours. This was followed by an increase in average hours and somewhat stronger growth in employment during the subsequent recovery. However, the recent increase in total hours worked appears to have been driven entirely by growth in average hours worked by full-time employees and increasing part-time employment, while changes in full-time employment have contributed negatively to the growth of total hours worked in the euro area.

Looking ahead, the above-trend growth of hours worked by full-time employees can be expected to end at some point in time, which may leave scope for a pick-up in euro area employment growth, particularly as the economic environment is expected to remain favourable.

⁶ The institutional framework for annual hours worked in the euro area allows for agreements on details of specific work schemes at the company level. These agreements concern changes in weekly or annual working hours and the introduction of additional leave. Moreover, agreements such as allowing working time to be calculated and scheduled flexibly over the year are becoming more widely used.

⁷ For Spain and Italy, these changes resulted in discontinuities in the evolution of the share of part-time employment. The key conclusions, however, remain qualitatively unchanged, even if Spain and Italy are excluded. For an overview of recent labour market reforms and both statistical and methodological changes, see Box 5, entitled “Some country-specific factors behind recent euro area employment developments”, in the January 2006 issue of the Monthly Bulletin.