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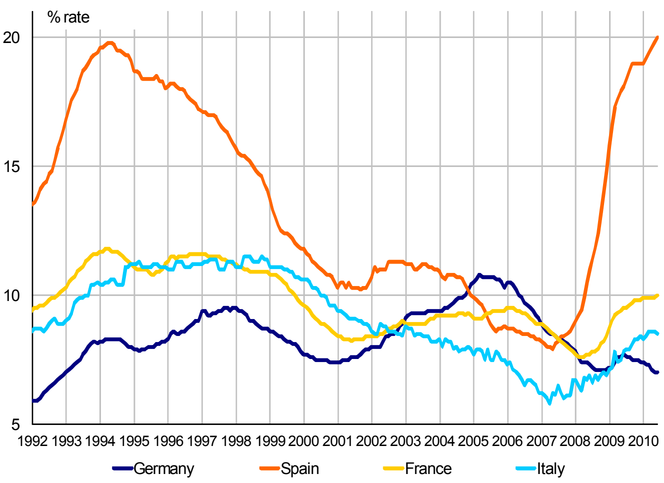
What explains the resilience of employment in Germany?

This study was prepared under the authority of the Directorate General of the Treasury (DG Trésor) and does not necessarily reflect the position of the Ministry for the Economy, Finances and Industry.

- Germany's unemployment rate hardly budged during the crisis: it was 7.3% in 2008 and 7.5% in 2009. This contrasts sharply with what happened in the other large countries of the euro zone - increases from 11.4% to 18.0% in Spain, from 7.8% to 9.4% in France, from 6.8% to 7.8% in Italy - and it occurred even though output in Germany declined by far more than the euro zone average. Three factors shed light on the remarkable resilience of the German labour market. Firstly, the labour market adjusted to the crisis essentially through a decline in hours worked per head (down 2.8% in 2009 compared with 2008). Employment remained virtually stable over the period. Secondly, in spite of this decline in hours worked, stability in employment was maintained at a cost to hourly productivity, which declined sharply during the crisis (down 2.2% in 2009). Lastly, a change in the definition of unemployment at the beginning of 2009 statistically reduced the measured unemployment rate by approximately 0.6 point during the first half of 2010.
- The fact that large numbers of employees were kept in jobs during the downturn is the cyclical result of the structural employment policies put in place since 2003. These policies aim to increase the labour force participation rate and drive up long-term employment. The main motivation behind policies of this kind, and behind companies' willingness to maintain employment during the crisis, is surely related to the worrisome demographic situation in Germany. The country's working-age population has been shrinking: it fell by 2.6% between 1998 and 2009. Given the current low birth rate, the declining trend is set to accelerate over the next ten years as the baby-boomers retire.
- Employers' fear of finding themselves short of skilled labour when growth resumes thus appears to outweigh their concern about a temporary loss of earnings due to reduced hourly productivity. The strong financial positions of German companies would also have made it much easier for them to be flexible in their handling of the crisis.
- The "Hartz" reforms, implemented gradually between 2003 and 2005, had already borne fruit before the crisis struck. The gist of these reforms was to increase labour market flexibility and provide incentives for those in the non-working fringe of the population to join or rejoin the labour force. The success of these reforms is reflected in the 1.8% growth rate of the labour force between 2003 and 2008. Driving this growth was the rise in the participation rate from 77.2 to 79.6, which more than offset the 1.3% decline in the working-age population between 2003 and 2008.
- During the crisis, these long-term policies were accompanied by short-term support policies intended to buttress companies' willingness to keep their employees in jobs. The partial unemployment system was extended, thereby rounding out a set of mechanisms that companies could use to reduce hours worked per head.

Unemployment rates in the euro



Source: Eurostat

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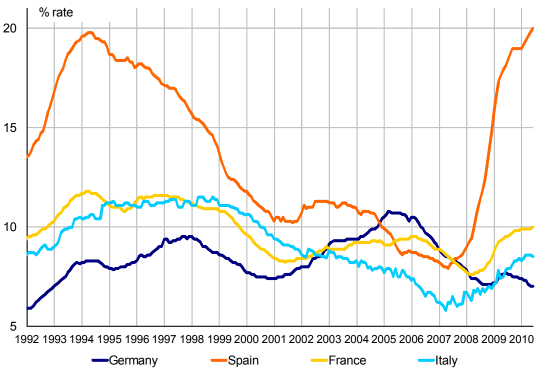
1. Employees and employees shared the cost of labour market adjustment to avoid layoffs

The deepest post-war recession in Germany has not resulted in a significant decline in employment. Although GDP contracted by 4.7% in 2009,[1] the unemployment rate is already lower (6.9% en July 2010) than it was before the crisis (7.1%, stable between August and December 2008). Between this pre-crisis low and its high during the crisis, reached in June 2009, the unemployment rate rose by a mere 0.6 point, to 7.7%.

Chart 1: Unemployment rates in the euro zone

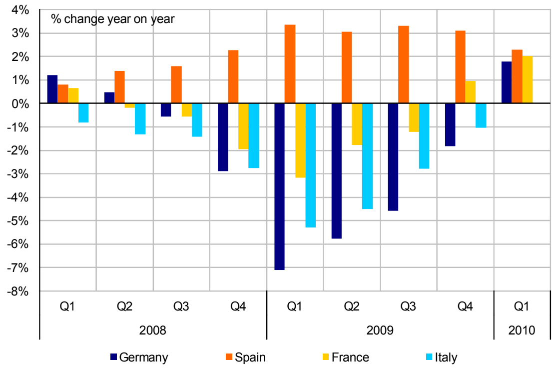


Sources: Eurostat

Comparison with unemployment rates in other euro zone countries reveals what many economists and politicians are now calling the "employment miracle in Germany":[2] in France, Spain and Italy, the 2008-2009 crisis set off rises in unemployment to high levels,[3] whereas in Germany the unemployment rate of over 10% experienced in 2005 was not even approached.

One of the consequences of this "miracle" is that apparent labour productivity weakened significantly more in Germany than in the other euro zone countries during the recession,[4] dropping by 7.1 points between first quarter 2008 and first quarter 2009.

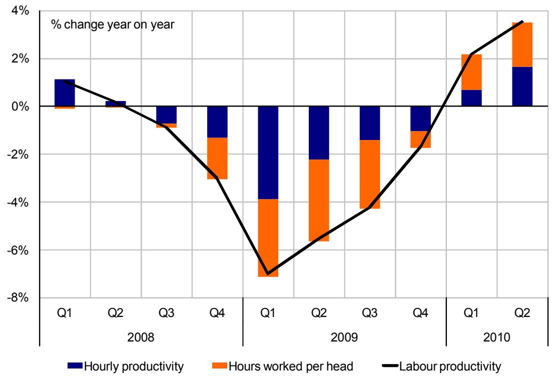
Chart 2: Labour productivity (per employee)



Source: Eurostat

The collapse in apparent labour productivity is of course partly linked to the reduction in the number of hours worked, but not solely to that.

Chart 3: Breakdown of labour productivity in Germany



Source: Destatis, DG Trésor calculation

Changes in labour productivity can be broken down into the change in the hourly productivity of labour and the change in hours worked per person employed. At the steepest point of the adjustment, the decrease in hours worked per head explained only half of the drop in apparent labour productivity; the remaining came from a drop in hourly productivity.

(1) Despite the sharp rise in GDP in first half 2010 (up 0.5% and 2.2% in the first and second quarters respectively) and a carry-over annual growth rate of 2.8% so far in 2010, GDP by volume in second quarter 2010 was still 2.7 points below the peak reached in first quarter 2008.

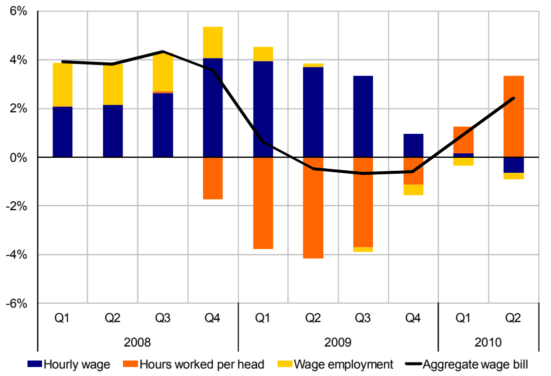
(2) For example, the statement of German economy minister Rainer Brüderle during a speech to the German parliament on 1 July 2010.

(3) As Figure 1 shows, the unemployment rate reached its highest level since at least 1992 in Spain, its highest since 1999 in France and its highest since 2003 in Italy.

(4) In Spain, apparent labour productivity actually increased during the crisis because the adjustment in the labour market was so sharp and so rapid. Spain was hit early on by a domestic crisis in the property sector, before suffering the effects of the decline in world trade.

Thus, management and labour were both making considerable efforts to preserve jobs during the crisis: the companies, by accepting a decline in hourly productivity, and the employees, by accepting a decline in hours worked per head and therefore, inevitably, a decline in income. This observation is an important one: it demonstrates that stabilising employment does not automatically imply absence of adjustment in the labour market. As it was, the aggregate nominal wage bill indeed diminished during the recession, as shown in Graph 4.

Chart 4: Breakdown of the wage bill in Germany

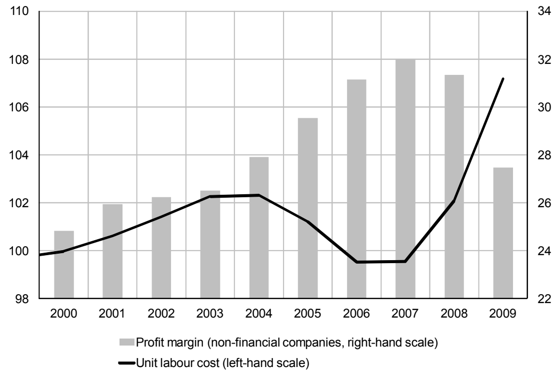


Source: Destatis, breakdown: DG Trésor

This fact goes part of the way towards demythologising the German employment miracle. An adjustment in total hours worked took place (down 3.2% in 2009). However, unlike in other countries, it corresponded not to a decline in employment (stable in 2009), but to a decline in hours worked per head (down 3.2%). It should be noted as well that the negative impact on average weekly earnings per head was cushioned by a significant rise in the hourly wage.[5] Overall, the aggregate wage bill decreased substantially less than GDP,[6] which led to a sharp increase in unit labour cost (ULC)[7] and a marked drop in companies' profit margins.

From the employers' standpoint, the deterioration in these two indicators reflects their willingness to assume a large share of the adverse, but temporary, burden of the crisis in order to avoid massive layoffs. By the same token, it is also the reason that a jobless recovery in economic activity is now expected, as companies will be focused on restoring their margins and productivity rates until late 2011.

Chart 5: Unit labour cost and profit margin in Germany



Source: Destatis, breakdown: DG Trésor

2. The job-preserving mechanisms implemented in Germany during the crisis, by the government and by the private sector as well, are part of a long-term employment policy

2.1 Liberalisation of the labour market via the Hartz reforms

In response to the challenge that Germany's demographic situation represents in the medium term, the government implemented the "Hartz" reforms between 2003 and 2005.[8] This reform is intended to raise the incentives to take a job rather than continue to receive an unemployment benefit (*Arbeitslosengeld*) or a welfare benefit (*Sozialhilfe*). The main thrusts of the reform are the following:

i) reducing the maximum duration of payments of *Arbeitslosengeld I* (standard unemployment benefit) from 32 months to 18 months (24 months since 2008).

ii) combining the long-term unemployed and the jobless welfare recipient (*Sozialhilfe-Empfänger*) categories for a benefit now called *Arbeitslosengeld II*.

iii) setting the level of the *Arbeitslosengeld II* below the previous level of the *Sozialhilfe*. In 2006, the *Arbeitslosengeld II* was €345 per month, whereas the *Sozialhilfe* would have been €448.

iv) empowering the federal employment agency to impose a sanction (reduction or denial of benefit) if

(5) This rise was a consequence of two phenomena: Firstly, it put an end (temporarily) to a long phase of wage moderation during which nominal wages increased more slowly than consumer prices, causing a 2.7% drop in the real hourly wage between 2003 and 2008. Secondly, it was a direct response to the sharp rise in inflation in 2008 attributable to the substantial rise in oil prices. Most of the wage increases in 2009 were negotiated in 2008, under the impact of these price rises and before the recession began.

(6) Note that gross disposable income nevertheless increased in 2009 (up 0.2% compared with 2008) because of a sharp rise in transfer payments (up 8.3%).

(7) Ratio of the aggregate wage bill to GDP by value.

(8) The various chapters of the reforms came into force in stages between 2003 and 2005 (Hartz I and II on 1 January 2003, Hartz III on 1 January 2004 and then Hartz IV on 1 January 2005).

the recipient refuses to accept a "reasonable" job offer, even for a job below his or her skill level.

Besides these controversial reforms, known under the name "Hartz IV", the other chapters (Hartz I, II and III) also change the way the German labour market works, in particular by:

i) subsidising short-term and interim jobs, also known as "atypical" jobs.

ii) simplifying and speeding up hiring procedures.

iii) providing incentives for the unemployed to start their own business.

iv) restructuring the employment and welfare agencies to provide more individualised assistance to the jobless.

When the financial crisis broke out, this set of measures proved to work: the number of unemployed had been reduced from nearly 5.3 million in February 2005 to less than 3 million in November 2008. The unemployment rate as defined by the ILO had fallen from 10.8% to 7.1% over the same period. However, the side effects of this policy, such as a sharp rise in the proportion of low-wage workers and impoverishment of a growing number of employees, could not be avoided. **According to Destatis, the number of employees below the poverty line[9] increased by nearly 58% between 1998 and 2008, to close to two million people in 2008.** This trend is traceable to the explosion of "atypical" jobs (1 million people in 2008, up 129% compared with 1998)[10] and is therefore closely linked to the Hartz IV reforms.

2.2 Multiple components of the decline in hours worked per head in 2009

The adjustment in the German labour market during the crisis followed the same script as the Hartz reforms: maintain the participation rate and job-growth momentum in the medium term and avoid a foreseeable labour shortage in the aftermath of the crisis.

The most emblematic provision of the reforms, and the one that got the most media attention, is the partial activity[11] (*Kurzarbeit*) mechanism, since it stems directly from public jobs policy in Germany. Eligibility for cyclically induced partial unemployment aid was loosened and extended in numerous way in early 2009.

- Terms of access to the system were made easier starting 1 February 2009. Under the new terms, a 10% reduction in activity for a single employee is sufficient to qualify for part-time unemployment aid. Previously, at least one-third of employees had to have had their activity cut back by at least 10% in order for the company to qualify.
- The duration of aid was extended from 12 to 18 months on 1 January 2009 and then to 24 months on 5 June 2009. This period applies collectively to the company (not individually to the employee), and it begins the moment the company starts to make use of the system. A new period can be opened only after three months with no partial unemployment anywhere within the company.
- Since 1 February 2009, the employee's portion of social charges on the hours not worked is borne in full by the federal employment agency. If the employee is taking part in a training programme, all social charges, including the employer's portion, are borne by the agency. Starting with the seventh month of partial unemployment, all social charges are assumed by the agency, even if the employee is not receiving training.

In addition, the federal employment agency subsidises a large number of training programmes for employees on partial activity, by:

- covering all the costs of training in a programme leading to a vocational diploma for unskilled employees,[12] including travel and childcare costs.
- covering 25% to 80% of training costs, depending on the type of training, for skilled employees.[13]

These modifications led companies to make use of the part-time unemployment system on a very large scale. Usage peaked in May 2009 with more than 1.53 million employees in the system and an average reduction in working hours of 31%. Analysis on a "full-time equivalent" basis shows that, other things being equal,[14] use of this system lowered the unemployment rate by more than one point, as illustrated in Graph 6.

(9) 60% of median income.

(10) The proportion of employees on "atypical" job contracts living below the poverty line reached 14.3% in 2008, up from 9.8% in 1998.

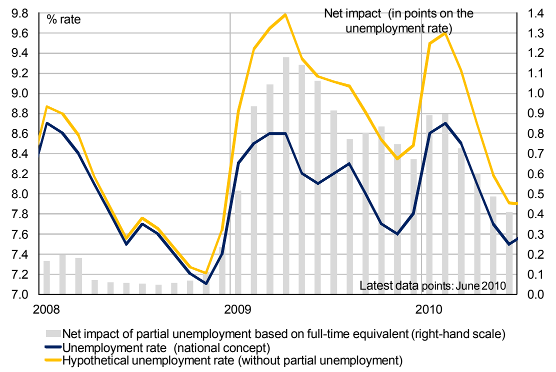
(11) In this article, the terms "partial activity" and "partial unemployment" are used interchangeably.

(12) Unskilled employees are those who have no vocational diploma or those who had previously worked for at least four years in a trade for which they have no diploma.

(13) Skilled employees are those performing work for which they have a vocational diploma.

(14) The counterfactual is a situation without partial unemployment and with an equivalent reduction in the total number of hours worked achieved via layoffs.

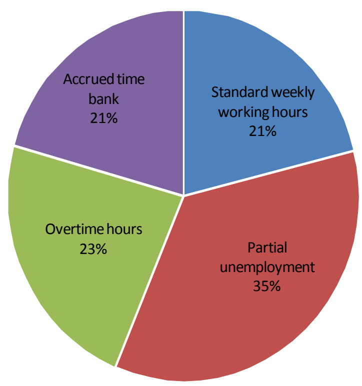
Chart 6: Impact of partial activity measures on the unemployment rate



Source: Bundesagentur für Arbeit, non-seasonally adjusted data

Although the part-time activity system is often taken to be the main source of Germany's "employment miracle", analyses published by IAB, the institute for research on employment, show that it explains only 35% of the 3.2% decrease in hours worked per head between 2008 and 2009 (Graph 7).

Chart 7: Components of the decline in hours worked per head in 2009



Source: IAB

What this illustrates is the consensual nature of job preservation policies in Germany. Although the part-time activity system is first and foremost an initiative of the government, the other mechanisms, in particular the reduction in standard weekly working hours, demonstrate the willingness of the social partners, management and labour, to help achieve an adjustment in the labour market without resorting to massive layoffs.

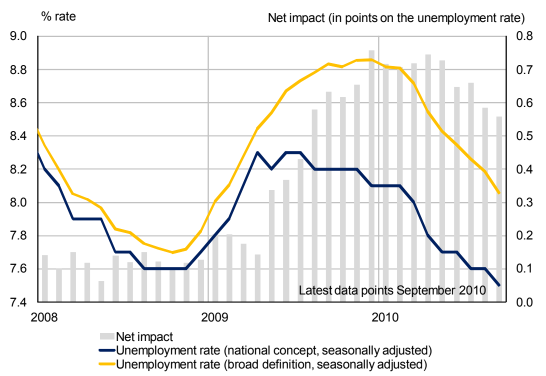
It must be noted, though, that, just as the Hartz reforms have led to a marginal tranche of the population being pushed into poverty, the adjustment of the German labour market via decline in hours worked per head during the recent recession has had undesirable secondary effects by depressing purchasing power among Germans. Average wage earnings per head declined by 0.3% in 2009, despite the 3.2% rise in the hourly wage intended to stabilise purchasing power after the surge in inflation in 2008. Real wage earnings per head declined again in 2009 (down 0.5%), having already eroded by 2.7% since 2002.

2.3 Adding to these factors is a "statistical artefact" that trimmed 0.6 point off the rise in the unemployment rate during the crisis

Beginning 1 January 2009, people over 59 years of age that have been seeking a job without success for at least one year (§53a SGB II), as well as people who are trying to rejoin the labour force through ongoing training, are no longer counted as unemployed (§46 SGB III, but replacing a comparable earlier provision).

As revealed by Graph 8, the gap between the unemployment rate on the broad definition, which does not exclude the job-seekers addressed by §53a SGB II or §46 SGB III, and the official unemployment rate has widened sharply since the official definition of unemployment was changed effective 1 January 2009. Although unemployment in the broad sense was only 0.1 point higher than the official rate before 2009, the difference between the two indicators is now 0.7 point. Thus, without this change and the consequent widening of the gap between the two concepts, the official unemployment rate currently (July 2010) would be 0.6 point higher than it is.

Chart 8: Impact of the change in the definition of unemployment



Source: Bundesagentur für Arbeit (federal employment agency)

3. The "stabilisation" of employment in Germany was made possible by the strong financial position of German companies at the onset of the crisis, in a context of slowing population growth

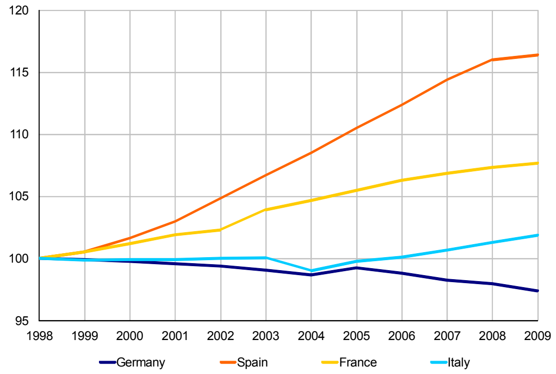
What explains the willingness of German companies to maintain jobs at the cost of a reduction in labour productivity, when no such willingness is found among companies in other euro zone countries? Two characteristics particular to Germany provide partial answers to this question.

- Firstly, the concern that, when the upturn comes, the employer will face a shortage of skilled labour due to the demographic situation in Germany, characterised by an ageing population and a low birth rate.
- Secondly, the strong financial positions of German companies at the onset of the crisis, which enabled them to bear temporary declines in productivity and profit margins.

3.1 The working-age population has been declining for ten years. This trend is set to accelerate over the period out to 2020-2025

Germany's demographic situation stands out from its euro zone partners' in that its working-age population is declining now and has been declining for some ten years (Graph 9).

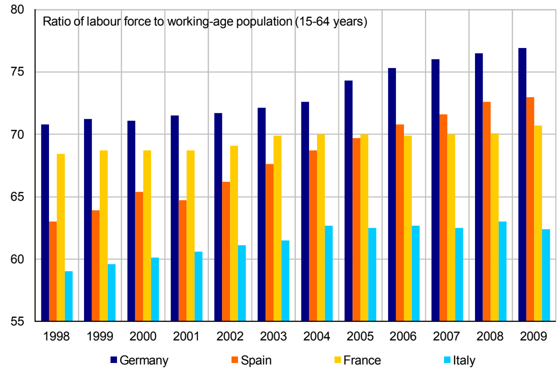
Chart 9: Working-age population (15-64 years)



Source: Eurostat

The objective of Germany's employment policies in recent years, notably the Hartz IV reforms, has been to limit the labour force impact of the decline in the working-age population by gradually increasing the participation rate,[15] and to do so from levels that were already fairly high (Graph 10). In spite of the 2.6% decrease in the working-age population between 1998 and 2009, the labour force grew by 4.5% over the same period.

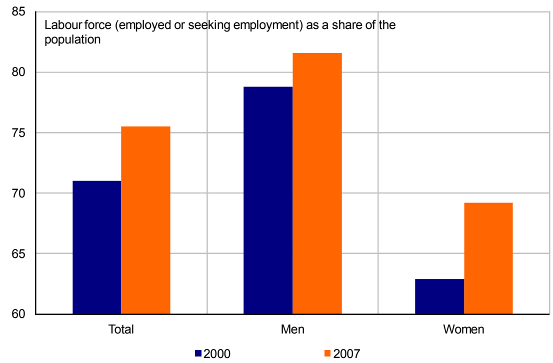
Chart 10: Participation rates in the euro zone



Source: Eurostat

As shown in the charts below, the reforms led to a marked rise in labour force participation among women and older people.

Chart 11: Participation rate by age and sex in Germany



Source: Destatis

NB: Destatis uses the 15-65 bracket to define the working age, whereas internationally the working age is more often defined as 15-64 (e.g., United States).

Chart 12: Participation rate (men) in Germany

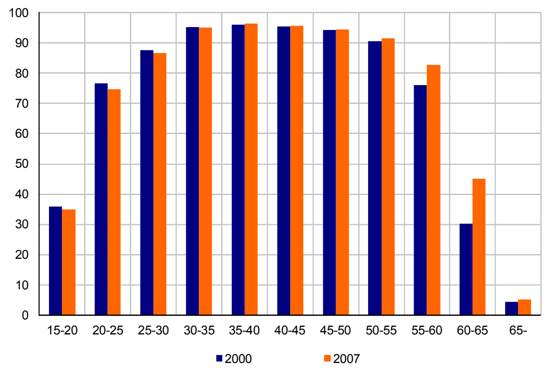
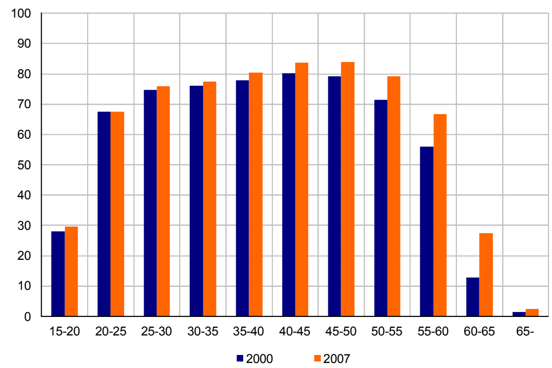


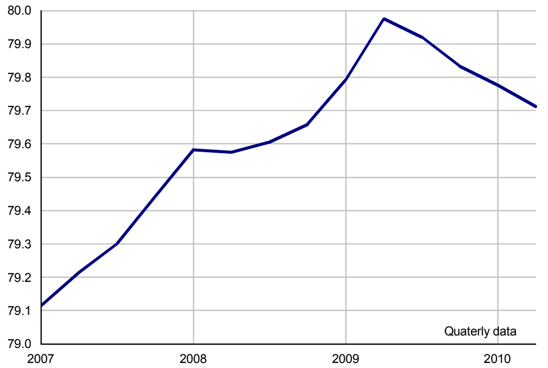
Chart 13: Participation rate (women) in Germany



(15) The decrease in benefits (unemployment benefit and minimum wage) causes a decrease in the reservation wage, which in turn leads, in theory, to an increase in the participation rate (cf. Rogerson, Shimer and Wright, "Search-Theoretic Models of the Labor Market: A survey", *Journal of Economic Literature*, Vol. 43 (4), pp. 959-988, 2005).

The recession of 2008-2009 resulted in an inflection point in the curve of the participation rate, which has been declining since second quarter 2009 (Graph 14) and causing the labour force to shrink (down 0.4% between second quarter 2009 and first quarter 2010).

Chart 14: Participation rate, 2007-present



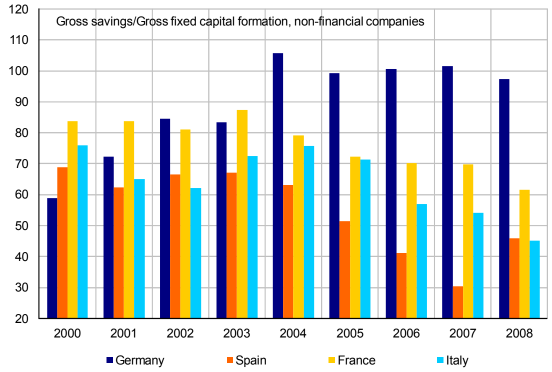
Source: Destatis

Although in the short term this trend automatically brings down the unemployment rate, it intensifies employers' fear of facing a labour shortage when the upturn comes. A recent study by McKinsey[16] finds that between now and 2020, Germany will face an overall supply shortfall of 6.1 million people in the job market and a shortage of 1.2 million university graduates. This is the concern that has induced companies to keep their employees on the job, at the cost of a temporary hit to labour productivity.

3.2 Protected by strong cash positions, companies had room to manoeuvre in their efforts to keep employees in jobs and avoid labour supply constraints when activity picks up again

German companies took advantage of the high-growth phase preceding the crisis to strengthen their balance sheets considerably. Gross disposable income of non-financial companies increased by €55bn a year between 2004 and 2008, against only €3bn a year between 1995 and 2003. Investment, however, accelerated only gradually between 2004 and 2008 (€237bn a year) compared with the 1995-2003 period (€211bn a year). The internal financing ratio consequently rose sharply during the five years preceding the crisis, even temporarily exceeding 100%. In contrast, internal financing ratios in other European countries declined between 2000 and 2008 and were well below 100% when the crisis broke out.

Chart 15: Internal financing ratio



Source: DG Trésor

If it was Germany's demographic situation that made business leaders willing to keep their companies' employees on the payroll during the crisis, it was the companies' financial health that made them able, in practice, to absorb the corresponding shocks to output and smooth out their demand for labour. Facing the risk of a shortage of skilled labour during the recovery, companies invested more in human capital than in physical capital. The subsidising of ongoing training under the part-time activity mechanism can be seen as an element of this policy.[17]

The purpose of this study was to understand why employment in Germany held up so well during the crisis. We identified the demographic situation and the fear of a scarcity of skilled labour stemming from it as a sufficient condition, and companies' robust financial health as a necessary condition for the employment miracle in Germany. We noted also that the willingness to preserve jobs during the crisis reflects long-term employment policy as implemented in the Hartz reforms between 2003 and 2005. Among other goals, these reforms aimed to drive up job growth and increase participation in the labour force to counter the ageing of the population.

Volker ZIEMANN

(16) McKinsey (2008), "Germany 20|20, Future Perspectives for the German Economy".

(17) The relation between birth rates and investment in human capital, for example, has been studied by Becker, Murphy and Tamura, "Human Capital, Fertility and Economic Growth", *Journal of Political Economy*, Vol. 98 (5), 1990. The authors observe that societies with low birth rates invest more in human capital than do societies with high birth rates.

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Direction Générale du Trésor
139, rue de Bercy
75575 Paris CEDEX 12

Publication manager:

Benoit COEURÉ

Editor in chief:

Jean-Philippe VINCENT
+33 (0)1 44 87 18 51
tresor-eco@dgtresor.gouv.fr

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