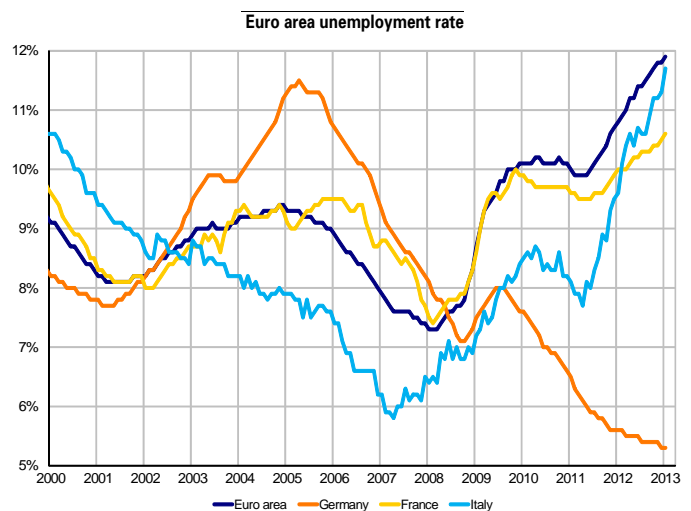


How have the Hartz reforms shaped the German labour market?

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 of Economy and Finance and Ministry of Foreign Trade

- Since 2005, the German economy has created 2.5 million jobs, mostly part-time positions or work on fixed-term or temporary (agency) contracts. This job growth has reduced the unemployment rate by 5 points to the historic low of 5.3% according to the International Labour Office (ILO) definition of unemployment.
- Germany's structural labour market reforms in the early 2000s are frequently cited as one of the explanations for this "German miracle." The reforms were a response to a sluggish economy with sluggish growth, a high unemployment rate (close to 10%), and a shrinking working-age population. In 2002, the Hartz Committee (officially, the Committee for Modern Services in the Labour Market) proposed directions for reform, under the principle of *Fördern und Fordern* (supporting and demanding). The reforms were set out in four laws aimed at strengthening job-search activities, providing incentives for the unemployed to accept a job, and encouraging labour force participation, notably for women and older persons. Additional measures accompanying the Hartz reforms included shortening the period of entitlement to unemployment benefit, ending options for early retirement, and reducing employer social security contributions.
- These reforms have had profound effects on the functioning of the German labour market. The published evaluations of the Hartz reforms conclude on the whole that they have had a significant impact on the labour market, primarily through better matching of labour supply and demand, and greater incentives to work. The combination of several factors (enhanced counselling, the lowering social security contributions on labour, and the reduction in benefit income) is considered to have promoted a return to employment for those furthest from the labour market.
- This performance on the employment front must nonetheless be weighed against greater income inequality and poverty in Germany. The poverty rate increased significantly between 2000 and 2005, from 12.5 to 14.7%. The rise is especially pronounced for persons in employment, and even more, for the unemployed. This is attributable at least in part to structural effects, in that the Hartz reforms put people to work in temporary or part-time jobs, which do not allow them to rise above the poverty line.
- Finally, the fact that the 2008-2009 crisis, despite the severity of the recession in Germany, had a mere impact on the labour market is attributable only in part to the reforms. The resilience is mainly explained by emergency measures taken to increase flexibility in working-time schemes (e.g., short-time working, and running down "time-saving accounts"). Those measures were facilitated by the quality of social dialogue, and by German firms' determination to retain human capital in a tight labour market.



Source: Eurostat, most recent figures: January 2013.

1. The main objective of the Hartz reforms was to reduce the duration of unemployment through active labour market policies

The Committee for Modern Services in the Labour Market (*Kommission für moderne Dienstleistungen am Arbeitsmarkt*), known as the Hartz Committee in the name of its chairman, Peter Hartz, the human resources executive at Volkswagen, was established by Chancellor Gerhard Schröder in March 2002. The economy was in a difficult situation, with activity slowing since 2000, zero growth in 2002, and rising unemployment already higher than the euro area average, and largely made up of the long-term unemployed.

In more structural terms, Germany was also distinguished by significant population aging resulting from its low fertility rate and a working-age population that had been falling slightly since 2000 - at a time when the working-age population was rising in the euro area as a whole.

In this context, the main objectives assigned to the Hartz reforms were to reduce unemployment and to increase incentives to work for the segments of the population furthest removed from the labour market, mainly women and older persons.

The Hartz Committee's remit was to propose changes to labour market institutions and services available to jobseekers. The Committee **focused on reducing**

individuals' duration of unemployment by strengthening incentives to actively search for a job, and on faster, more efficient job placement. Its proposals for reform fell under the principle of *Fördern und Fordern* (supporting and demanding). The Schröder government implemented the recommendations through four laws, which have profoundly changed the functioning of the German labour market (Box 1).

In response to Germany's depressed employment picture in the early 2000s, the Hartz reforms were supplemented by additional labour market reforms, namely:

- January 2002: the Job-AQTIV reform, to enhance qualitative profiling of jobseekers and improve efficiency in the use of active labour market policies;
- February 2006: the maximum number of months of unemployment benefits was reduced from 26 to 12 months for those under 55 years of age, and from 32 to 18 months for those 55 and older;
- January 2007: a 3-point increase in the top VAT rate, offset in part by a reduction in social insurance contributions;
- 2006-2010: phasing-out of early retirement options to encourage older persons to continue working.

Box 1: Principal labour market reforms in the 2000s^a

- **Hartz I (January 2003) facilitated jobseeker training and back-to-work measures for the unemployed**, including the introduction of personal service agencies (*Personal Service Agenturen*, or PSAs), i.e., temporary agencies set up under the public employment service agencies. The law also **overhauled the system of jobseekers' rights and obligations**, including a reversal in the burden of proof for rejected job offers, with the jobseeker now required to prove that an offer was not reasonable. Finally, Hartz I extended **the potential for temporary employment** by eliminating the maximum duration of an assignment (which had been 24 months) and by opening the possibility of exceptions from the obligation of equal treatment and pay between temporary (agency) staff and permanent employees.
- **Hartz II (April 2003) created a new grant to facilitate the transition from unemployment to entrepreneurship** (the *Ich-AG*, or one-person company, which was combined in 2006 with the transition benefit, the *Überbrückungsgeld*, to form a new start-up subsidy, the *Gründungszuschuss*); and **extended the range of so-called marginal jobs** (creating mini-jobs and midi-jobs, see Box 2).
- **Hartz III (January 2004) reformed the public employment service agency**, whose name was changed to *Bundesagentur für Arbeit* (or BA, Federal Employment Agency); it restructured management at the federal level, provided **greater local autonomy**, and restructured the offices to **increase the ratio of counsellors to jobseekers**. Hartz III also merged job creation measures (*Arbeitsbeschaffungsmaßnahmen*, or ABM) with structural adjustment measures (*Strukturanpassungsmaßnahmen*, or SAM), and reduced their maximum duration. Further, **the conditions for unemployment insurance benefits were made stricter**, with the minimum prior-contribution period changed from 12 months in the previous three years, to 12 months in the previous two years.
- Hartz IV (January 2005) amalgamated two forms of assistance into a single benefit. The previous **long-term unemployment benefit** (*Arbeitslosenhilfe*) was intended for those whose unemployment insurance benefits had expired, and was proportional to the reference salary. The other was a **social welfare benefit** intended to provide a minimum income. **When they were combined into the single Hartz IV benefit, called *Arbeitslosengeld II*, eligibility was contingent on signing an integration contract with the Federal Employment Agency or municipal employment office.**^b For those whose unemployment insurance benefits had expired, the financial situation worsened considerably under the new system.^c Hartz IV also created a new programme for insertion in the non-private sector, known as *ein-euro-jobs*, which pay at least one euro an hour for work in the public interest, while the recipient continues to receive *Arbeitslosengeld II* benefit.

a. Kramarz F, A. Spitz-Oener, C. Senfleben and H. Zwiener, (2012), *Les mutations du marché du travail allemand*, Economic Analysis Council (CAE) report no. 102

b. In addition to the contract signed by the claimant, other members of the household who are able to work must register for unemployment and are strongly encouraged to actively seek work.

c. Before the reform, an unemployed person without children, after unemployment insurance benefits had expired, received an allowance equal to 53% of the reference salary (reduced by 3% each year). In 2013, the equivalent Hartz IV *Arbeitslosengeld II* benefit is €382 a month; this does not include the separate housing benefit. *Arbeitslosengeld II* can be combined with some employment income, but the incentive is limited; claimants keep the first 100 euros of monthly wages without deduction, but there is an 80% deduction on wages up to €800, and 90% above that.

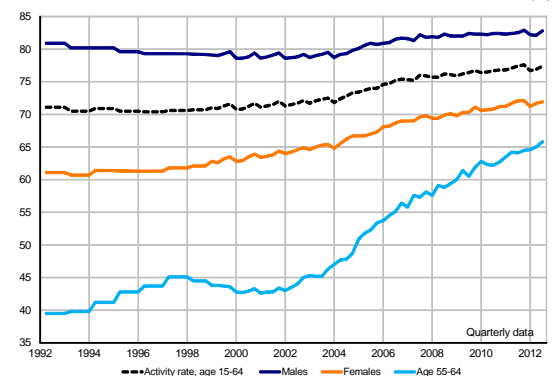
2. The reforms were followed by significant increases in labour market participation and employment, a large decline in unemployment, and an increase in non-standard employment

The **strong increase in the participation rate since the early 2000s** is probably attributable to the fact that spouses or partners of benefit recipients were strongly incentivised to seek work and officially register for unemployment (under Hartz IV). The impact of this policy, combined with the phasing-out of early retirement options, is seen in changes in the economically active population, which increased by 4.9% between 2004 and 2011, despite a 1.3% decline in the working-age population, on the strength of the 4.6-point rise in the participation rate. The increase in participation was particularly high among older persons (16.2 points, see Chart 1) and females, for whom the upward trend gained momentum over the period, rising 6.0 points, while the male participation rate rose by 3.3 points.

The **employment rate¹ has also risen strongly, mainly due to the creation of non-standard jobs.²** Since 2004, the employment rate has increased by over 7 points, from 64.9% to 72.4% in the first half of 2012. The German economy thus created 2.5 million jobs, the majority of them in non-standard employment. Temporary (agency) work, which was not widespread in Germany prior to the 2000s, increased 2.7-fold (from 331,000 persons in 2003 to 882,000 in 2011). Full-time

salaries increased very slightly (by 2.4% between 2004 and 2011) while part-time employment rose by 33%. Germany's part-time employment rate is now the second highest in the euro area, after The Netherlands. Government-sponsored working arrangements (mini-jobs, midi-jobs, and one-euro-jobs, see Box 2) explain only marginally the increase in total employment.

Chart 1: Activity rate by gender and age (as % of working-age population, 15-64)



Source: Eurostat, most recent figures: Q3 2012.

Box 2: Mini-jobs, midi-jobs, and one-euro-jobs

Mini-jobs and midi-jobs refer to low-wage employment contracts for a small number of hours worked. Mini-jobs existed before the Hartz laws; Hartz II raised the monthly salary cap from €325 to €400, and created a higher level, called midi-jobs, which were capped at €800.^a

Mini-jobs are subject to employee social insurance contributions at a reduced or zero rate. Employer contributions for jobs earning less than €400 a month are higher than for a "normal" job, coming to approximately 28% instead of the roughly 20% standard rate for employers. Workers in mini-jobs are not entitled to unemployment insurance benefit, and pension benefits are optional in that workers may opt to pay a pension contribution at a reduced 4.9% rate, which gives them pension rights similar to the standard contributions. A mini-job does not in itself entitle the worker to health insurance insofar as the employer does not pay health insurance contributions. The individual may nevertheless be entitled to health insurance if it is provided under another activity, or if covered through a family member.

Midi-jobs are subject to lower social insurance contributions, which gradually rise to the standard rate when monthly earnings reach €850. Workers in midi-jobs are entitled on the whole to the same benefits as employees subject to social insurance contributions at the full rate.

Since 2004, there has been considerable growth in mini- and midi-jobs, and in one-euro-jobs (a workfare arrangement in the non-private sector established by Hartz IV, under which the claimant continues to receive benefits, in addition to payment of at least one euro an hour for work in the public interest):

- The numbers working in mini-jobs on top of other paid work (who are already counted in the employment figures because of their main job) have grown sharply, by 840,000 persons, rising from 1.69 million in 2004 to 2.53 million in 2011; on the other hand, those working only in a mini-job increased by just 81,000 between 2004 and 2011 (to 4.9 million, 66 percent of whom are women);
- The number in midi-jobs rose from 1.19 million in 2007 to 1.37 million in 2011 (74 percent of whom are women);
- In 2005, their first full year of existence, there were over 200,000 in ein-euro-jobs, which continued to pick up through 2009, when they exceeded 320,000 jobs, before declining sharply in 2011, to 188,000

a. On 1 January 2013, the monthly caps were raised to €450 for mini-jobs and €850 for midi-jobs.

(1) The ratio of the number of persons in employment to the working-age population (aged 15-64).

(2) Part-time employment subject to social insurance contributions, fixed-term and temporary (agency) contracts, mini-jobs and midi-jobs (Box 2).

3. Published studies conclude on the whole that the reforms have had a significant impact on reducing structural unemployment and increasing the incentive to return to work

The Hartz reforms, along with the other structural reforms undertaken in the 2000s, were intended to reduce the structural unemployment rate, i.e., the rate that occurs when the economy is at equilibrium (average capacity utilisation over the cycle).

Based on the available estimates, notably by the international organisations, structural unemployment in Germany has come down since the middle of the 2000s (Chart 2). The analysis is confirmed by the sharp drop in the unemployment rate without any significant increase in the job vacancies rate, as illustrated by the leftward shift of the Beveridge curve (Chart 3), reflecting improved matching between labour supply and demand.

The actual role of the Hartz reforms in these changes, however, remains hard to quantify.

3.1 Macroeconomic evaluations of the Hartz reforms generally find a significant impact on reducing structural unemployment and increasing labour market participation.

Published research indicates that the reforms have had positive effects on the German labour market.

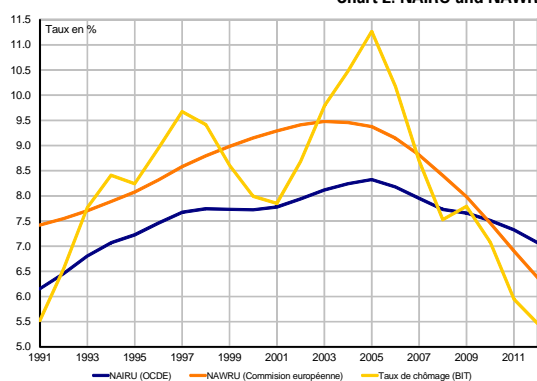
Hertweck and Sigris⁴ find an improvement in matching labour market supply and demand. Since 2005, they claim, unemployment inflows explain only half the changes in the unemployment rate, down from 60% through the start of the 2000s. This indicates both an increase in unemployment outflows, and less cyclical in job losses.

This analysis is corroborated by both Fahr and Sunde,⁵ and Klinger and Rothe.⁶ Estimating labour market matching functions, they indicate that Hartz I, II and III accelerated the worker reallocation process by reducing the average unemployment duration by roughly 20 percent. According to Fahr and Sunde, the impact is stronger in manufacturing; and the reorganisation of the public employment service agency (Hartz III) increases the positive effects of Hartz I and II. Klinger and Rothe report that the Hartz reforms have benefited long-term unemployed persons more than the short-term unemployed: now, being unemployed for more than one year has less of a negative impact on returning to work than before the reforms. They also find that the positive impact on the labour market continued to gain momentum during the crisis, thus contributing to the near-stability of employment during the period (see Part 5, below).

Finally, the Hartz IV reforms of the unemployment benefit system increased incentives to work. The survey by Kettner and Rebien found that unemployed persons increased their jobseeking activity (e.g., unsolicited job applications) and made greater wage concessions during job interviews.⁷ However, changes in unemployment registration behaviour arising from the reform (Box 3) make it difficult to assess Hartz IV. The only available studies are based on ex-ante simulations that suggest the effects on employment would be positive, but of a relatively uncertain size.

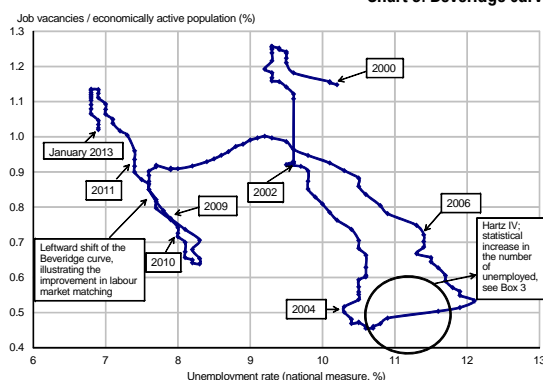
According to the microsimulation model in Franz et al.,⁸ the labour supply changes arising from Hartz IV could lead to the creation of an additional 45,000 jobs, after taking macroeconomic feedback effects into account. In

Chart 2: NAIUR and NAWRU³



Source: OECD, European Commission, Destatis.

Chart 3: Beveridge curve



Source: Bundesagentur für Arbeit, most recent figures: January 2013.

- (3) The NAIUR (Non-Accelerating Inflation Rate of Unemployment) is the unemployment rate that does not increase inflation. The NAWRU (Non-Accelerating Wage Rate of Unemployment) is the unemployment rate that does not lead to an increase in nominal wage inflation. The two concepts are related and both are used as a measure of structural unemployment.
- (4) Hertweck, M. and O. Sigris, (2012), "The Aggregate Effects of the Hartz Reforms in Germany", *Working Paper Series 2012-38*, University of Konstanz, Department of Economics.
- (5) Fahr R. and U. Sunde, (2006), "Did the Hartz Reforms Speed Up Job Creation? A Macro-Evaluation Using Empirical Matching Functions", *IZA Discussion Paper No. 2470*, Bonn.
- (6) Klinger S. and T. Rothe, (2010), "The Impact of Labour Market Reforms and Economic Performance on the Matching of Short-Term and Long-Term Unemployed", *LAB-Discussion Paper, No. 29/2007*, Nuremberg.
- (7) Kettner A. and S. Rebien, (2007), "Hartz IV-Reform: Impulse für den Arbeitsmarkt", *LAB-Kurzbericht No. 19-2007*, Nuremberg.

an international comparison of the generosity of transfers to the unemployed, the OECD⁹ considered that the reform would have far greater effects, in that it should lower the structural unemployment rate by around one half of a percentage point. Finally, Krebs and Scheller,¹⁰ using an incomplete market model with search unemployment calibrated to German data, estimate that the reform has reduced the long-run (nonscyclical) unemployment rate in Germany by 1.4 percentage points.

These analyses fail, however, to measure the quality and duration of the jobs created (see Part 4, below).

3.2 The microeconomic evaluations of the Hartz reforms have shown that enhanced guidance for jobseekers, and government-sponsored working arrangements in the private sector, have significantly contributed to the return to employment.

Hartz III and IV doubled the average time a counsellor devoted to each unemployed person between 2004 and 2009. This accelerated their return to employment, leading to savings that exceeded the additional outlays, according to the Evaluation Report on the Hartz IV reform.¹¹ Integration grants for private-sector jobs (*Eingliederungszuschüsse*) also had a major impact on getting people back to work, at an individual level; Bernhard et al.¹² found that long-term unemployed persons who benefited from this type of contract, that runs from 4 to 6 months, have a 70% probability of being in employment twenty months after starting in the programme, compared with only 30% for jobseekers with similar characteristics but who were not covered by the programme. However, while the impact was significant for individuals, the figures doubtless obscure any windfall effects for employers (who would have hired without the grant) and displacement effects (absent the grant, the employer would have hired someone else).

In-company training programs (*betriebliche Trainingsmassnahmen*) and self-employed start-up grants (*Gründungszuschüsse*) also had a major impact on leaving the benefits system: Jozwiak and Wolff¹³ estimate that in-company training raised the probability of leaving the benefits system by 13 to 19 percentage points, depending on the sub-populations considered; these values were attained rapidly and were relatively stable over time. Nivorozhkin and Wolff¹⁴ estimate the effect of self-employed start-up grants to be 20 percentage points on average, twenty months after entering the programme. The continuing vocational education and training measures (*Förderung der beruflichen Weiterbildung*) can have a significant effect (up to 13 percentage points) but it becomes apparent on average only two and a half years after starting the programme (Bernhard and Kruppe).¹⁵

On the other hand, using private placement agencies, short training programmes (e.g., writing a CV, preparing a job interview, or setting up a company), and the ein-euro-jobs have had disappointing effects (Bernhard and Wolff;¹⁶ Wolff and Jozwiak;¹⁷ Hohmeyer and Wolff).¹⁸ This could be explained by shortcomings in how the schemes are targeted. The schemes were found to have a high positive impact for harder-to-place individuals (older workers, persons without qualifications, immigrants, those unemployed for over two years, and Eastern Germans);¹⁹ persons steered into the programmes are not generally those for whom they could have a significant positive effect (Huber et al.).²⁰

Finally, the Evaluation Report on Hartz I to III submitted to the federal legislature in February 2006 recommended the termination of the temporary agencies (*Personal Service Agenturen*, or PSAs) set up under the public employment service agencies. Despite their high cost, the PSAs failed to speed up the return to employment.

- (8) Franz W., N. Guertzgen, S. Schubert and M. Clauss, (2011), "Assessing the Employment Effects of the German Welfare Reform: An Integrated CGE-Microsimulation Approach", *Applied Economics*, Volume 44, Issue 19, pp. 2403-2421.
- (9) Economic Survey: Germany (2008), OECD, Paris.
- (10) Krebs T. and M. Scheffel, (2013), "Macroeconomic Evaluation of Labour Market Reform in Germany", *IMF Working Paper* WP 13/42.
- (11) See Bundesministerium für Arbeit und Soziales, (2008), "Endbericht zur Evaluation der Experimentierklausel nach §6c SGB II", Berlin, 9 December 2008 and ZEW, IAQ, TNS Emnid, "Abschlussbericht - Untersuchungsfeld 3: Wirkungs- und Effizienzanalyse", Projekt No. 01/06, Mannheim, Gelsenkirchen, Bielefeld, May 2008.
- (12) Bernhard S., M. Brussig, H. Gartner and S. Gesine, (2008), "Eingliederungszuschüsse für ALG-II-Empfänger: Geförderte haben die besseren Arbeitsmarktchancen", *LAB-Kurzbericht*, No. 12-2008, Nuremberg.
- (13) Jozwiak E. and J. Wolff, (2007), "Wirkungsanalyse: Kurz und bundig - Trainingsmassnahmen im SGB II", *LAB-Kurzbericht*, No. 24/2007, Nuremberg.
- (14) Nivorozhkin A. and J. Wolff, (2008), "Start me up: The effectiveness of a self-employment programme for needy unemployed in Germany", *LAB-Discussion Paper*, No. 20/2008, Nuremberg.
- (15) Bernhard, S. and T. Kruppe, (2012), "Effectiveness of further vocational training in Germany", *LAB-Discussion Paper*, No. 10/2012, Nuremberg.
- (16) Bernhard S. and J. Wolff, (2008), "Contracting-out placement services in Germany. Is assignment to private providers effective for needy job-seekers?", *LAB-Discussion Paper*, No. 05/2008, Nuremberg.
- (17) Wolff J. and E. Jozwiak, (2007), "Does short-term training activate means-tested unemployment benefit recipients in Germany?", *LAB-Discussion Paper*, No. 29/2007, Nuremberg.
- (18) Hohmeyer, K., Wolff, J., (2007), A fistful of Euros, "Does One-Euro-Job participation lead means-tested benefit recipients into regular jobs and out of unemployment benefit II receipt?", *LAB Discussion paper*, No. 32/2007, Nuremberg.
- (19) See the review by Heyer, G., S. Koch, G. Stephan, J. Wolff, (2011), "Evaluation der aktiven Arbeitsmarktpolitik" (Evaluation of active labour market programmes: a summary of recent results for the German programme reform 2011, in German), *LAB-Discussion Paper* No. 17/2011, Nuremberg.
- (20) Huber M., M. Lechner, C. Wunsch and T. Walter, (2009), "Do German Welfare-to-Work Programmes Reduce Welfare and Increase Work?", *IZA Discussion Paper* No. 4090, Bonn.

4. This strong performance on the employment front has been accompanied by a rise in inequalities and poverty

While assessing the impact of the Hartz reforms on poverty and inequalities is made relatively difficult by the scarcity of data and research on the topic, insights can be gained from a simple review of Germany's inequality and poverty trends, particularly when seen in a longer time horizon or in comparison with other countries.

Since the start of the 2000s, income inequality among the working-age population has increased markedly in Germany, notably in the first half of the decade, when the bulk of the Hartz reforms was being deployed. The Gini coefficient²¹ for income after redistribution rose by 2.6 points, from 26.2 in 2000 to 28.8 in 2005, and the trend continued with a rise to 29.2 in 2008. The P90/P10 inter-decile ratio²² in Germany rose from 3.2 in the mid-1990s to 3.5 in 2008. Finally, Germany is one of the few OECD countries where median real income stagnated between the mid-1990s and the mid-2000, and where real income for the lowest quintile of households fell during the period (declining at an average annual rate of 0.3%).²³

The poverty rate also increased, notably for persons in employment, especially in the first half of the 2000s. From 2000 to 2005, the poverty rate at

the 60 per cent of median income line rose by 2.2 points, from 12.5% to 14.7%, after hovering around 12% since the 1980s. By increasing the supply of very-low-hour jobs, the Hartz reforms led to a rise in the poverty rate of employed persons, which rose from 4.8% in 2004 to 7.5% in 2006 (Chart 4).

The unemployed experienced the largest hike in the poverty rate, which rose from 41% in 2004 to 68% in 2010 (Chart 5). This probably reflects both a structural effect (with outflows from unemployment more concentrated in households above the poverty line, and a shift from inactivity to unemployment by persons below the poverty line), on the one hand; and the impact of the reduction in replacement income, under Hartz IV, for the long-term unemployed, given that a large percentage of them continue to be very difficult to place.

Thus, out of the 3.34 million *Arbeitslosengeld II* recipients at the end of January 2011, over 40% (1.42 million) had been continuous recipients since 2005. Nearly two thirds had found a job during the period, but the number of hours or the hourly wages were too low to reach the level of *Arbeitslosengeld II*.

Chart 4: Poverty rate of employed persons (%)

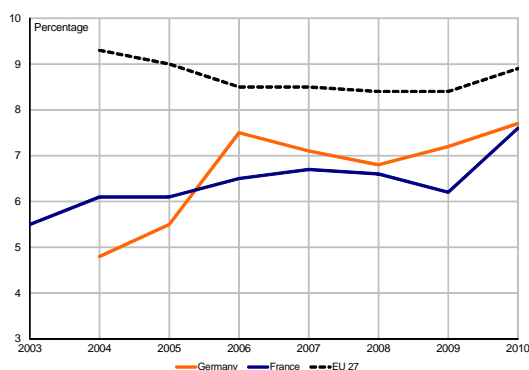
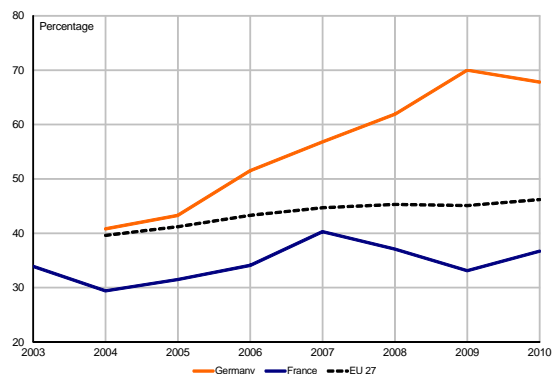


Chart 5: Poverty rate of unemployed persons (%)



Source: EU-SILC (Survey on Income and Living Conditions).

Notes: The poverty rate corresponds to the percentage of people whose income (after redistribution) lies below the poverty line (60% of median income). The data are available for Germany only from 2004. There is a break in the series in 2007 for France.

Interpretation: In Germany in 2010, the poverty rate of employed persons was 7.7%, and the poverty rate of the unemployed was 67.8%.

- (21) The Gini index is an indicator of income distribution with a value from zero to 100. A Gini index of zero represents perfect equality, and an index of 100, in which all income is received by a single individual, perfect inequality.
- (22) The ratio of the lower bound of the top ten percent of incomes to the upper bound of the lowest ten percent.
- (23) OECD, (2008), "Growing Unequal?: Income Distribution and Poverty in OECD Countries"

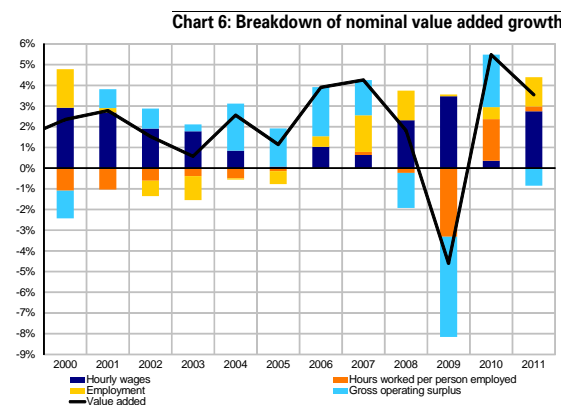
5. The current health of Germany's labour market is traceable both to the reforms undertaken in the 2000s, and to the quality of social dialogue that allowed the development of internal flexibility arrangements

Germany's labour market proved highly resilient during the crisis.²⁴ Unlike what occurred in the other large developed countries, Germany's ILO unemployment rate rose only marginally, from 7.5% in 2008 to 7.8% in 2009, despite the very sharp contraction in the economy (output fell 6.8% between Q1 2008 and Q1 2009), and while the economically active population continued to rise.²⁵ All told, jobs and unemployment were remarkably resilient; this analysis is by no means affected by the statistical changes that contributed to reducing the national measure of unemployment during the crisis (Box 3).

Part of the labour market adjustment was achieved by reducing hours worked per person employed. This was done through different channels, most prominently by the extension of short-time working (*Kurzarbeit*), which accounted for 29% of the decline in hours worked per person employed between 2008 and 2009.²⁶ The other factors involved in reducing hours worked were: running down "time-saving accounts" (21%); working-time corridors, job-preservation agreements, and similar arrangements (25%); and less over-time (25%). Nevertheless, total payrolls held stable in 2009, with job preservation coming at the expense of

company margins (Chart 6), which had risen markedly during the pre-crisis period.

The Hartz reforms may have contributed to the resilience of employment in Germany. In addition to their effects on the efficiency of labour market matching (see Part 3, above), the reforms promoted wage restraint through stricter sanctions and monitoring (Hartz IV), back-to-work incentives (that lower the reservation wage), and the introduction of new active labour market policy instruments (mini-jobs, midi-jobs, ein-euro jobs) exerting downward pressure on wages.



Source: Destatis, DG Trésor calculations.

Box 3: Differences between the two measures of unemployment

There are two measures of unemployment in Germany. The "national concept," or BA unemployment, is based on the number of jobseekers registered with the Federal Employment Agency (, BA). By contrast, unemployment according to the ILO definition is calculated on the basis of the harmonised EU Labour Force Survey (LFS).

The two measures of unemployment may move in different ways for several reasons. The national unemployment rate is dependent on the BA's rules and classifications, whereas ILO unemployment varies only with changes in the labour market. In addition, the concepts differ significantly. Under the national definition, an unemployed person is anyone who (i) is registered with the BA, (ii) works less than 15 hours a week, (iii) and wants to work more. According to the ILO definition, an unemployed person is a working-age individual who (i) did not work, even a single hour, during the reference week, (ii) is able to begin work in a short period of time, (iii) and has actively sought work. Someone counted as unemployed under the ILO definition will not necessarily be registered with the BA, and someone registered with the BA will not necessarily be considered unemployed under the ILO definition.

The BA unemployment statistics, and to a lesser extent the ILO unemployment statistics, were impacted by changes in rules and classifications during the 2000s. The Hartz IV reform immediately led to a sharp increase in the number of jobseekers registered with the BA (a 12.9% increase between December 2004 and January 2005). The change was much commented upon in Germany because it was the first time unemployment exceeded the 5-million mark. It is largely explained by new registration obligations for many recipients of the former social aid recipients, and members of the same household. As this requirement had only a gradual, and far smaller impact on job-seeking behaviour, the ILO unemployment rate did not experience the same increase.

On the other hand, during the crisis, a statistical artifact helped to limit the increase in unemployment according to the national definition: starting on 1 January 2009, the BA no longer counted as unemployed (i) persons over 59 years of age who had been unsuccessfully seeking work for a year or more, and (ii) persons in certain vocational training or aid programmes.

Further, the Labour Force Survey has undergone a series of changes since 2005 to correct the overestimation of the number of unemployed according to the ILO definition: (i) the questionnaire was repeatedly changed between 2005 and 2009 to better account for people with very part time jobs; (ii) it was again changed in 2009 to better capture the active job search criterion. These two changes are considered to have artificially reduced the unemployment rate, the first by roughly 0.2 points over the 2005-2009 period, and the second by roughly 0.1 point in 2009. These effects were modest in size and do not call into question either the major reduction in unemployment since 2005, or the strong resilience of the labour market during the crisis period.

(24) Ziemann, V. (2010), "What explains the resilience of employment in Germany?," *Trésor-Economics* No. 79.

(25) A negative shock to the economy is often matched by a decline in the economically active population, as discouraged workers leave the labour market, at least temporarily; this is the "discouraged worker" (or "flexion") effect.

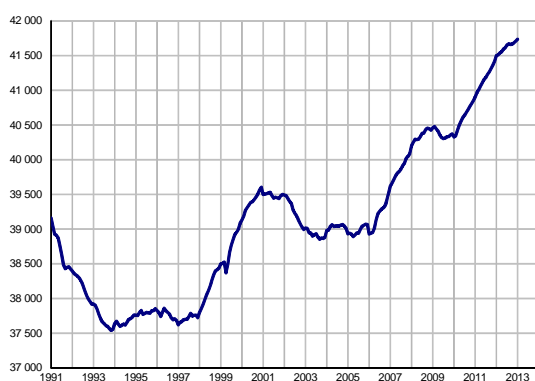
(26) Fréhaut, P. (2012) "Short-time working schemes in France and Germany: how do they differ?" *Trésor-Economics*, No. 107.

Wage restraint was also facilitated by the quality of Germany's "social dialogue" that allowed for flexibility in the collective bargaining agreements, and by the **increased number of employees not covered by collective agreements**. The OECD claims that reforms reducing early retirement options may also have played a role in maintaining employment levels, by making the trade unions less likely than in earlier recessions to accept redundancies.²⁷ For workers aged 55-64, the unemployment rate declined and the employment rate rose during the crisis period.

In 2010-2011, fears of a jobless recovery were rapidly dissipated, primarily because of the strength

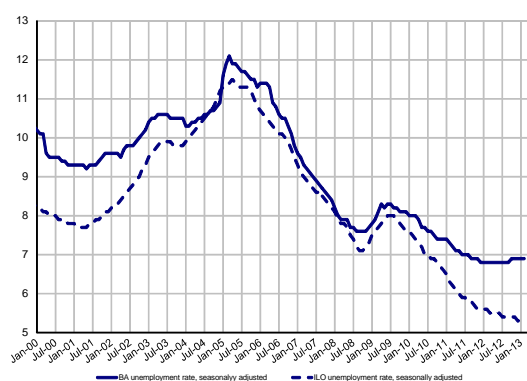
of the upturn. During the 2010 recovery, companies began by restoring hours worked by existing employees, thus initially restraining job growth (which rose by only 0.6% in 2010). In 2011, when the restoration of hours worked was completed, job growth picked up (rising by 1.4%), and employment set a new record with over 41 million (Chart 7). At the same time, **the number of jobseekers resumed its downward trend, falling below 3 million and bringing the unemployment rate to the lowest level since 1992**. In 2012, the economic slowdown resulted in fewer job creations, but the ILO unemployment rate continued to decline (Chart 8).

Chart 7: Total employment (thousands, seasonally adjusted)



Source: Destatis; most recent figures: January 2013.

Chart 8: Unemployment rate (as per BA and ILO definitions, % of active population)



Source: Destatis; most recent figures: February 2013 for B.A (national) rate, January 2013 for ILO rate.

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(27) Hüfner, F. and C.Klein (2012), "The German Labour Market: Preparing for the Future", OECD Economics Department Working Papers, No. 983, OECD Publishing.

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