

Rationale for the new wage momentum in Germany

- Since the end of the financial crisis, salaries in Germany have increased significantly and real wages are rising faster than productivity.
- The buoyancy of the German labour market explains this shift in wage dynamics compared to previous trends. The unemployment rate is at a twenty-five year low and is forcing wages upwards.
- Following fifteen years of wage restraint, the change also reflects distribution of value-added that is more favourable for workers, especially in sectors exposed to international competition.
- The introduction of a minimum wage in Germany led to substantial wage hikes for the beneficiaries, although the aggregate impact on employment and wages appears mitigated in the short term.
- This wage momentum is helping rebalance competitiveness between euro area countries as German unit labour costs have been rising more rapidly than the euro area average since 2011. This increase has been insufficient to offset the differences in these costs seen in the euro area between 1995 and 2007, however, and has not led to a noteworthy reduction of the German current-account surplus.
- The strong German labour market and wage rises have helped bolster households' purchasing power but, to date, have failed to halt the sharp increase in the poverty rate over the last fifteen years.

Changes in unit labour costs in Germany and in the euro area excluding Germany



Source: Eurostat, 2015 annual accounts; DG Trésor calculations.
Scope: Entire economy.

1. German wage dynamics has shifted since the crisis

Prior to the financial crisis, Germany had a wage restraint policy in place. The goal was to restrict wage growth to tackle unemployment and boost competitiveness. The policy was adopted by the social partners during the mid-1990s¹ and was expanded by the Hartz reforms in the early 2000s.

Since the end of the crisis, the growth rate of German per capita wages has more than doubled compared to average figures between 1995 and 2010 (see table 1). Average salaries have increased owing to the rise in hourly wages and the levelling off of per capita working hours, following the fall due to the strong surge in part-time work before the crisis. At the same time, apparent labour productivity has slowed considerably, causing an increase in the job content of growth. Overall, real wages are now rising faster than productivity.

This sustained wage momentum marks a shift with the past which was tainted by fifteen years of low wage growth, and is contributing to the rise in German unit labour costs². Since 2011, these costs have been increasing faster than the European average and this is helping to gradually and partially realign cost competitiveness between Germany and its European partners. That said, the gap, that appeared as from 1995, between German unit labour costs and those of the remainder of the euro area, is still substantial (see chart 1).

Table1: Wage indices

Average annual growth rate	1995-2010*	2011-2015*
Hourly wage	1.8%	3.0%
Per capita average wages	1.2%	2.8%
Per capita average real wages	0.1%	1.6%
Per capita productivity	1.6%	0.3%

Source: Destatis, Eurostat, 2015 annual accounts; DG Trésor calculations.

Scope: Non-agricultural market sectors.

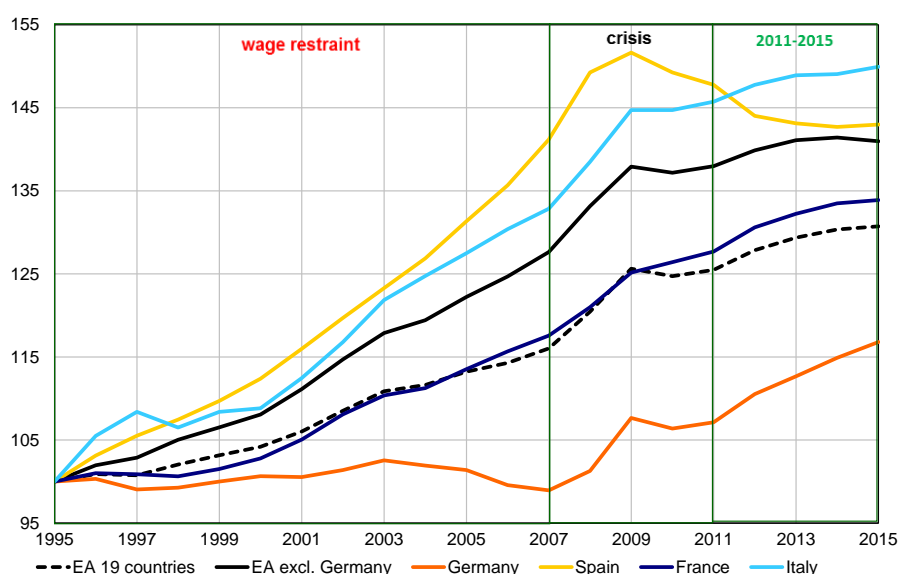
** Average annual growth rate between 1995 and 2010 and between 2011 and 2015.*

NB: Per capita average wages are calculated as the ratio of the total payroll to the number of workers. Real wages are deflated by private consumption prices.

¹ In addition, at the time of reunification, labour costs were much higher in East Germany owing to lower productivity. Subsequently, between 1991 and 1995, large productivity gains in the East closed the majority of this gap. In light of this, this paper focuses on the period starting in 1995.

² Labour cost indicator showing the cost per unit of value-added produced. It represents the ratio of nominal wages to labour productivity.

Chart 1: Changes in unit labour costs in the euro area



Source: Eurostat, 2015 annual accounts; DG Trésor calculations.

Scope: Entire economy; Base 100 = 1995.

How to read this chart: The time spans set out throughout this paper cover three periods: (i) the wage restraint policy conducted between 1995 and 2007, (ii) the crisis during which productivity and nominal wages took a hit and then recovered, (iii) the post-crisis period as from 2011.

2. Rationale for this new wage momentum

2.1 Wage increases in favour of German workers are a reaction to the changes affecting the German labour market...

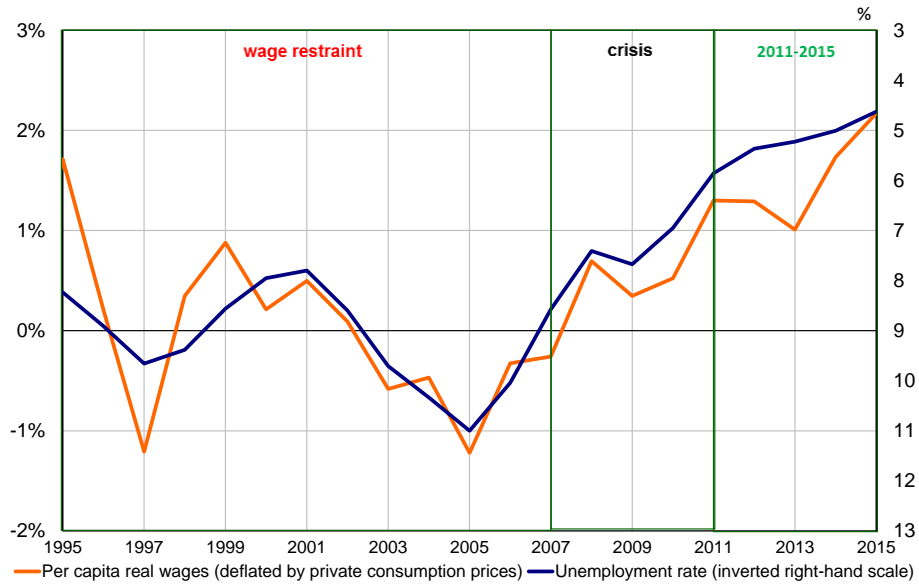
The structural reforms of the labour market during the noughties³ helped reduce the unemployment rate without driving wages upwards. These reforms fostered a fall in structural unemployment, meaning the unemployment rate below which prices pick up, and an increase in labour market participation, which both enabled wage rises to be reined in.

In the aftermath of the crisis, German economic growth and the increase in its job content allowed for strong job creation. According to the OECD, the actual unemployment rate may have fallen below the structural unemployment rate since 2011. Leading to signs of labour market tightness, such as the lack of skilled labour in a number of sectors, this fall has driven wages upwards (see chart 2). The reaction of wages to the situation on the labour market is thought to have been tempered by the flattening of the Phillips curve, however⁴. Moreover, the recent increase of immigration in Germany, especially with the influx of refugees in 2015 and 2016, has led to a rise in the working-age population which could partly rein in the upward pressure on wages.

³ The Hartz reforms together with the gradual phasing out of early retirement options, see Bouvard F., Rambert L., Romanello L., Studer N. (2013), *How have the Hartz reforms shaped the German labour market?* Trésor-Economics no. 110.

⁴ The Phillips curve depicts the short-run trade-off between the unemployment gap (i.e. the distance between the actual and natural unemployment rates) and wage inflation. See Blanchard O., Cerutti E., Summers L. (2015), *Inflation and Activity: Two Explorations and Their Monetary Policy Implications*, NBER Working Paper.

Chart 2: Unemployment and the growth in real wages



Source: Destatis.
Scope: Entire economy.

2.2 ...but they also show that the gap in growth rates for wages and productivity is narrowing

The pre-crisis wage restraint policy helped businesses increase their margins by more than eight percentage points between 1995 and 2007 (see chart 3). This increase reflects a difference between changes to real wages from a corporate standpoint (deflated by value-added prices) and those affecting productivity, mainly in the tradable sector (see box).

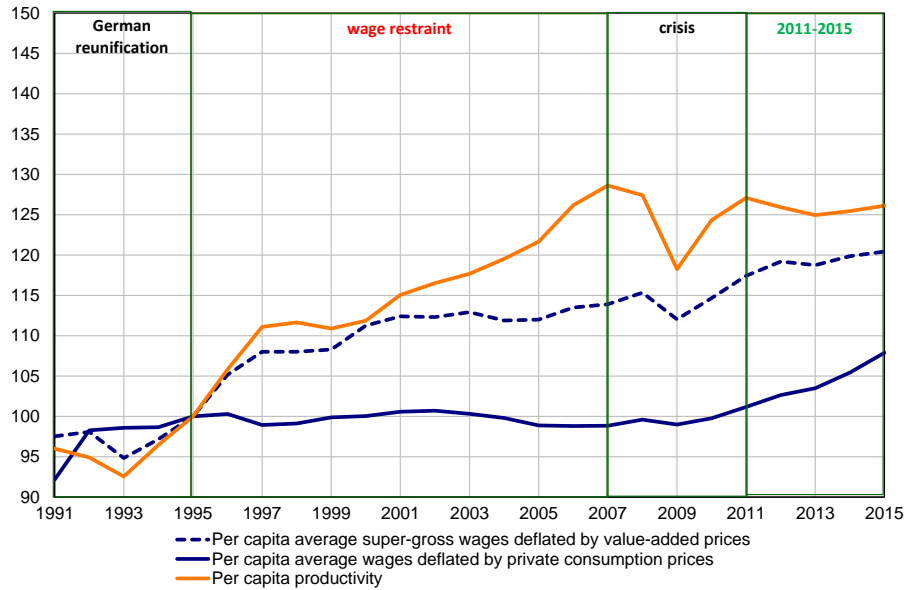
**Chart 3: Margin rates of non-financial companies
(% of value-added)**



Source: Destatis.
Scope: Non-financial companies.

The gap has not closed since 2011 (see chart 4). The fresh growth in real wages (deflated by private consumption prices⁵), reflecting the sharing of companies' value-added which is now more favourable for workers, may be explained by the ability of German firms to cover these wage hikes, which has been bolstered by gains from lower oil prices since 2014. Margin rates have reverted to their 2002 levels and have been almost stable since 2012 following the sharp slump in the wake of the financial crisis and the euro area debt crisis.

Chart 4: Changes in real wages and labour productivity



Source: Destatis, Eurostat, 2015 annual accounts; DG Trésor calculations.
 Scope: Non-agricultural market sectors; Base 100 = 1995.

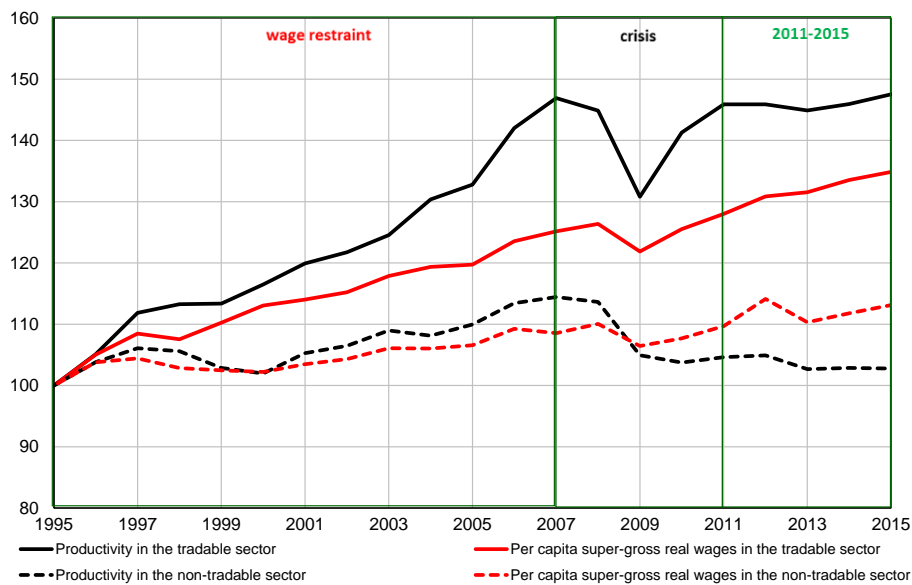
⁵ Since 2011, wages deflated by value-added prices (from a corporate standpoint) have varied in line with productivity and have grown less than wages deflated by consumption prices (from a workers' standpoint) due to different price dynamics. Businesses' cost competitiveness gains from wage restraint policies are reflected in value-added prices (via production prices), and are then passed on to export prices to boost price competitiveness. Consumption prices are not affected by export prices but also reflect imported inflation. Overall, this establishes a difference between consumption prices and value-added prices.

Box : Different wage and productivity trends between businesses in the tradable sector and those in the non-tradable sector

The growth in German firms’ margin rates up to 2007 was mostly due to the increase in the tradable sector⁶, which is exposed to international competition and principally covers industry (accounting for around 45% of total value-added). As real wage hikes were less than those of productivity, there was a sharp fall in unit labour costs. In the non-tradable sector⁷ (excluding real estate, financial and non-market services⁸) which mainly covers the service industries, real wages varied in line with productivity and grew marginally prior to the crisis (allowing the tradable sector to profit from stable domestic input costs and to combine cost competitiveness and the high-end positioning of German industry). The fall in unit labour costs and the increase of margin rates have therefore been much less marked than in the tradable sector.

Since 2011, productivity has levelled off in the tradable sector and has fallen in the non-tradable sector (see chart 5). Besides the global slowdown in productivity, there may be a number of explanations for this situation in Germany: (i) labour hoarding owing to its scarcity in the coming years, (ii) the continuing creation of low-productivity, especially part-time, positions, in the wake of the Hartz reforms, (iii) lack of skilled labour. At the same time, the recent wage rises in both sectors is spurring a sharp increase in unit labour costs. This represents a narrowing of the gap accumulated between productivity and wages in the tradable sector, as well as a fall in productivity gains in the non-tradable sector.

Chart 5: Changes in real wages and productivity per worker in the tradable and non-tradable sectors (excluding real estate, finance and non-market industries)



Source: Eurostat, 2015 annual accounts; DG Trésor calculations; Scope: Entire economy; Base 100 = 1995.
 NB: Real wages are deflated by value-added prices.

⁶ The tradable sector encompasses the following industries: agriculture, forestry and fishing; manufacturing, mining and other similar industries; transportation and storage services; information and communication services.

⁷ The non-tradable sector encompasses the following industries: construction; wholesale and retail trade services; repair services of motor vehicles and motorcycles; accommodation and food services; financial and insurance activities; real estate activities; scientific and technical services; administrative and support services; public administration, education services, human health and social work services; other services.

⁸ It is more difficult to examine productivity in the finance industry (owing to the provision of financial services being measured indirectly), the real estate industry (including owner-occupied imputed rents) and the non-market services (due to the conventional assessment of non-market value-added).

2.3 The minimum wage has led to substantial wage hikes for the beneficiaries, although the macroeconomic repercussions on wages and employment appear minimal for the time being

In 2015, Germany introduced a minimum wage of €8.50 per hour (€8.84 since 1 January 2017), which benefitted around 10.5% of the workforce (four million contracts according to Destatis⁹). It is estimated that it concerns a quarter of small enterprises, a quarter of unskilled workers and is more prevalent in eastern Germany (almost one worker out of five compared to one out of ten in western Germany) and in certain sectors (agriculture, construction, retail, taxis, accommodation and food services).

The minimum wage provided unskilled workers with a substantial short-term hourly wage hike of 7.9% in eastern Germany and 3.5% in western Germany¹⁰. Their total salaries, and those of workers with “mini job” contracts, grew over one and a half times more (by more than 4%) than those of other workers. Hourly labour costs have risen in the most-concerned sectors, whether tradable (transport, mining) or non-tradable (retail, restaurants), and prices have jumped significantly (taxis, delivery of newspapers, restaurants). As regards employment, the existence of the minimum wage has led to a substantial reduction in working hours for its recipients (9% for full-time workers)¹¹, particularly in the most-concerned sectors (accommodation and restaurants). It has also made marginal employment less appealing¹² and brought about a fall in the number of “mini jobs” representing the main activity. According to the institute IAB¹³, these have been replaced by standard part-time contracts.

Nevertheless, despite noticeable effects in a number of sectors, for the time being, the macroeconomic repercussions are minimal. The increase in per capita average wages and changes to underlying prices have remained stable compared to last year. The labour market has continued to be buoyant although, according to initial microeconomic studies, the rise in wage employment may have slowed (according to the institute IAB, 60,000 additional jobs could have been created had the minimum wage not been introduced¹⁴). Overall, the Minimum Wage Commission considers that preliminary estimates do not enable adverse effects on employment and labour costs to be clearly identified.

⁹ The scope covers seasonal workers, the majority of interns and people with “mini job” contracts. Apprentices, young people under 18, certain interns and the long-term unemployed are excluded and would represent 1.5 million additional contracts according to Destatis.

¹⁰ See Minimum Wage Commission (2016), *First evaluation report to the Federal Government pursuant to section 9(4) of the Minimum Wage Act on the effects of the statutory minimum wage*, June.

¹¹ See Statistisches Bundesamt (2016a), *1,9 Millionen Jobs mit Mindestlohn im April 2015*, Press release no. 227 of 29 June.

¹² The introduction of the minimum wage implicitly limits “mini job” working hours (the maximum monthly salary is €450) and the hourly cost becomes more than for standard positions (due to higher employer contributions).

¹³ See Vom Berge P., Kaimer S., Copestake S., Eberle J., Klosterhuber W., Krüger J., Trenkle S., Zakrocki V. (2016), *Arbeitsmarktspiegel. Entwicklungen nach Einführung des Mindestlohns*, IAB Forschungsbericht, no. 1/2016.

¹⁴ See Bossler M., Gerner H.D. (2016), *Employment effects of the new German minimum Wage, evidence from establishment-level micro data*, IAB Discussion paper.

A number of factors can be put forward to explain the minimal short-term macroeconomic repercussions:

- (i) First, the impact on wages was mitigated by the staggered introduction of the minimum wage as a two-year derogation period was allowed for companies covered by sectoral agreements. Destatis estimates that only 1.9 million workers were receiving the minimum wage in April 2015.
- (ii) Second, as mentioned above, businesses altered working hours for low-wage contracts to offset the impact of the minimum wage on the total payroll and to remain under the maximum wage level for “mini jobs”¹⁵. This helps explain the smaller rise in average wages compared to the increase in hourly salaries for the relevant workers.
- (iii) Concurrently, businesses are thought to have forestalled the introduction of the minimum wage by flattening pay scales to offset the impact on the total payroll. In 2014, the wage growth for unskilled workers contracted (+1.2% vs +4.3% for executives) whereas, in 2015, wage growth for the most-skilled workers was reined in (+2.8% for executives vs +4.1% for unskilled workers).
- (iv) Lastly, the impact is mitigated as most sectors now have a negotiated minimum wage of more than €10. As a result, at present, the increase in low wages brought about by the introduction of the minimum wage has not spread across the entire pay scale. On the contrary, the fact that minimum wage raises take place every two years¹⁶ could lead to an uneven profile in wage rise as companies could limit wage increases for the year prior to the raise.

While it is still early to measure the effect of the minimum wage, it does appear to have contributed, in the short term, to narrowing the wage gaps between the *Länder* in eastern and western Germany and between the most- and least-skilled workers. However, from a macroeconomic standpoint, it has not led to a rise in average wages in the short term.

3. Ramifications for the German economy

3.1 Support for German households' purchasing power

Since the end of the financial crisis, increases in German wages have buttressed households' purchasing power following a long period of German growth mainly driven by external demand. Lower inflation due to the oil crisis in 2014 and 2015 has also heightened the impact of higher salaries on purchasing power and household consumption. The average growth of households' real disposable income has almost doubled since 2011 compared to the average increase prior to the financial crisis. In addition, since 2013, private consumption has contributed more to growth than foreign trade.

¹⁵ Working hours may also be under-estimated, spurred by the fact that it may benefit the worker to remain under the “mini job” wage ceiling so that his/her net and gross salaries are the same. This would not be the case with a standard job (subject to social security contributions).

¹⁶ Unlike the French statutory minimum wage (Smic), the German minimum wage is not indexed yearly to inflation. Every two years, an independent commission is tasked with providing the government with a raise proposal (in June to take effect on the following 1 January) taking into account wage developments. In 2017, the proposal was based on changes in negotiated salaries since the introduction of the minimum wage eighteen months previously.

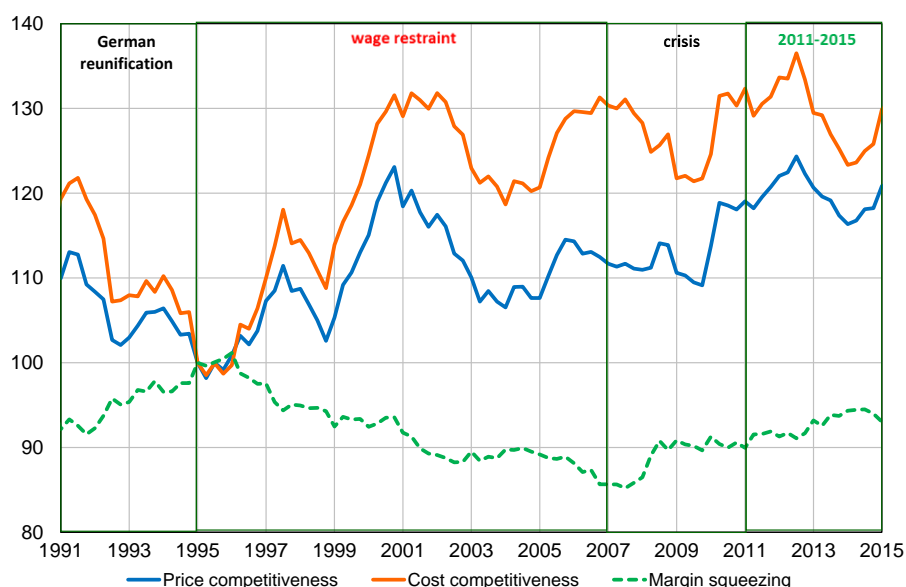
However, there is still a gap between wage and productivity levels, materialised by fairly weak domestic demand and an excess of corporate savings which has an adverse effect on demand for the goods and services of other European countries. Corporate margin rates have been at the same level since 2012 and companies' financing capacity stood at 3.5% of GDP in 2015, higher than the euro area average (1.6% for the euro area excluding Germany in 2015).

3.2 At present, this partial realigning of labour costs does not appear to be weighing on German export figures

Prior to the crisis, the fall in German unit labour costs led to cost competitiveness gains (see chart 6). Most of these gains were used to improve either price competitiveness, via a reduction of German export prices compared to foreign export prices, or margins.

At present, despite having increased faster than the European average over the last four years, German unit labour costs are only 17% higher than their 1995 level whilst those in the euro area have risen by 30%. Moreover, although there has been a slight dip in cost competitiveness, price competitiveness has remained almost stable owing to falling margins. German businesses still have excellent export performance levels and are continuing to generate a substantial balance of trade surplus.

Chart 6: German cost competitiveness and price competitiveness



Source : OECD; DG Trésor calculations.

Scope: Entire economy; Base 100 = Q1 1995.

How to read this chart: A rise in competitiveness indicators reflects an improvement in Germany's position vis-à-vis its competitors. Price competitiveness is the ratio of foreign export prices to domestic export prices. Cost competitiveness is the ratio of foreign unit labour costs (ULCs) to domestic ULCs. Margin squeezing is the ratio of price competitiveness to cost competitiveness. As a result, improved cost competitiveness leads to either improved price competitiveness, or improved margins (less margin squeezing).

3.3 Toward less poverty?

The fall in unemployment in Germany during the noughties did not lead to a corresponding reduction of the poverty rate. Conversely, the poverty rate¹⁷ for the entire population jumped by more than five percentage points between 2000 and 2008. This was due to the combined effect of the growth of low-paid jobs, with wages below the poverty line, and weakened redistribution (tightening of unemployment benefit conditions). This is in stark contrast to France where the poverty rate is lower¹⁸ and has been stable over the last decade (see chart 7).

The structural labour market reforms in the noughties enabled unemployed or inactive people to get back to work. That said, the upward mobility of low-wage workers has decreased¹⁹. Since the crisis, the poverty rate for the entire population has remained stable despite the strong performance of the German labour market and the recent wage momentum. Due to the prevalence of low wages, the gap between the first and last income deciles is now one of the widest in Europe (3.9 compared to 2.9 in France). This meant that, in 2015, the proportion of workers aged over 18 (employed and self-employed) at risk of poverty after social transfers was 9.7% as against 7.5% in France.

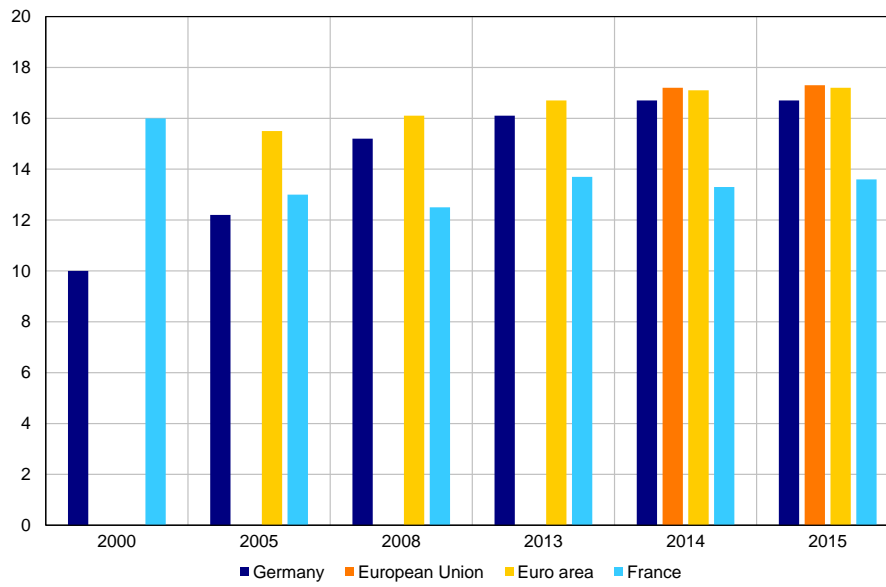
The renewed wage momentum and the introduction of the minimum wage, in favour of the least-skilled workers, should help smooth out some of the imbalances and therefore help reduce the number of working poor. The overall impact will nevertheless be contingent on the number of hours worked and the allocation of increases in the wage distribution scale. In addition, following the major influx of asylum seekers in 2015 and 2016, the gradual integration of mostly unskilled refugees in the labour market constitutes a further challenge for the German authorities as regards training.

¹⁷ The poverty rate is the number of people whose standard of living (disposable income after social transfers, adjusted for household size) is below the poverty line which is set at 60% of the median domestic standard of living.

¹⁸ This is not inconsistent with the similarities between France and Germany identified by the Gini index for income inequality after redistribution. The index documents inequality throughout the income distribution chain whereas the poverty rate index focuses on the lowest incomes.

¹⁹ See Kappeler A. and Fuentes Hutfilter A. (2014), *Making economic growth more socially inclusive in Germany*, OECD Economics Department Working Papers, no. 1175.

Chart 7: Poverty rate after social transfers
(% of the total population)



Source: Eurostat.

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