

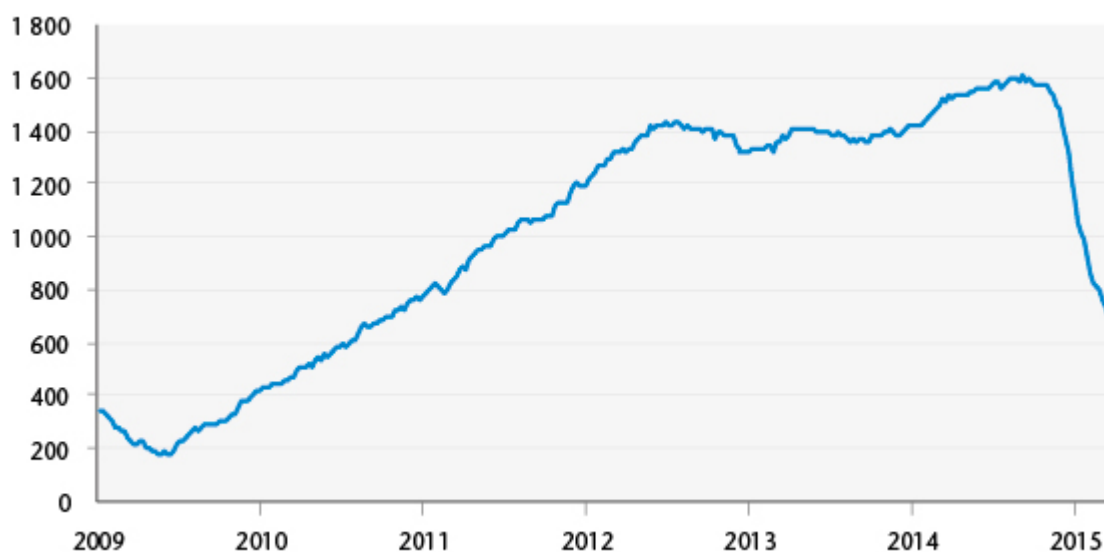
# The US economy at a standstill in Q1 2015: the impact of shale oil

By Aurélien Saussay ([@aureliensaussay](#))

The US Bureau of Economic Analysis has just released its estimate of US growth in the first quarter of 2015: at an annual pace of 0.2%, the figure is well below the consensus of the leading American institutes, who had agreed on a forecast of just above 1% – well below the 3% hoped for in early March.

While it is still too early to know the exact reasons for this setback, one factor seems to be emerging: in the United States, the shale oil “revolution” seems to be on the verge of imploding. The sharp fall in crude prices in the second half of 2014 caused a collapse in mining activity: the number of oil rigs operating in the US fell by 56% from November 2014 to April 2015, returning to the level of October 2010 (see chart). The speed of this downturn underscores the fragility of the shale oil boom and its dependence on high oil prices.

**Figure. Oil drilling rig count in the continental US**



Source : Baker Hughes.

Given the very short lifetime of shale oil wells, *i.e.* less than 2 years, the sharp decline in the pace of drilling should result in an equally rapid decline in production in the coming months: in fact, for the month of May the US Energy Information Agency (US EIA) has forecast that shale oil production will fall for the first time since the start-up of operations in 2010.

This rapid contraction of the shale oil industry could have significant consequences for the US economy. There are two main components to the macroeconomic impact this will have: the business of drilling and completing wells, and the gains in the trade balance from substituting domestic production for imported oil.

In 2013, the hydrocarbons mining industry and mining-related services accounted for 2.1% of the US economy, up from 1.6% four years earlier. At a first order, a decline in the drilling rate could therefore cut US growth by 0.3 GDP point. The Fed's manufacturing indicator already shows just such a decline: American industrial output is down by 1% on an annual basis in first quarter 2015, a first since the second quarter of 2009. The mining sector seems to be the leading contributor to this decline, with activity falling off by 4% during the quarter.

However, this figure neglects the ripple effect from the sector onto the rest of the economy – which goes beyond the impact simply on upstream industries: for example, in the regions affected, shale oil operations were accompanied by a real estate boom generated by the influx of workers into the shale fields. Texas and North Dakota, for example, which concentrate 90% of the total production of shale oil, contributed over 23% of US growth from 2010 to 2013, whereas they accounted for only 8% of the economy in 2010. The negative impact of the collapse of the oil industry could thus be more important than the size of the oil sector alone might suggest.

The rise in US production of over 4 million barrels per day in 2014 also led to an improvement in the trade balance, contributing an additional 0.7 GDP point to growth. If the reduction in the number of wells is followed by an equivalent decrease in production starting in the second half-year, and oil prices stay at around USD 60, US domestic production would now contribute only about 0.2 GDP point, half a percentage point less than in 2014.

Finally, the rapid exploitation of shale oil deposits was mainly due to the so-called independent producers who specialized in this activity, and who are therefore particularly vulnerable to the volatility in international prices. This is a very capital-intensive activity: the independents made use of bonded debt to finance their operations – for a total of USD 285 billion as of 1 March 2015, including USD 119 billion in high-yield bonds<sup>[1]</sup>. The impact of the fall in oil prices has been particularly important for this last segment: the share of “junk bonds” rose from 1.6% in March 2014 to 42% in March 2015<sup>[2]</sup>, *i.e.* 50 billion dollars. It should be noted that this increase has resulted mainly from the deterioration of existing bonds, even though new bond issues have also contributed. If this trend continues, it could lead to a crisis in the high-yield segment of the US bond market, which would hurt US corporate financing conditions this year at a time when the Fed wishes to begin to tighten monetary policy.

The implosion of the shale oil industry will test the strength of the recovery in the US: if it turns out to be weaker than expected, the shock of the sharp slowdown in the production of shale oil could be enough to bring the American economy to near stagnation in 2015.

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[1] Yozzo & Carroll, 2015, "The New Energy Crisis: Too Much of a Good Thing (Debt, That Is)", *American Bankruptcy Institute Journal*.

[2] Source: Standard & Poor's.

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# Does Price Stability entail Financial Stability?

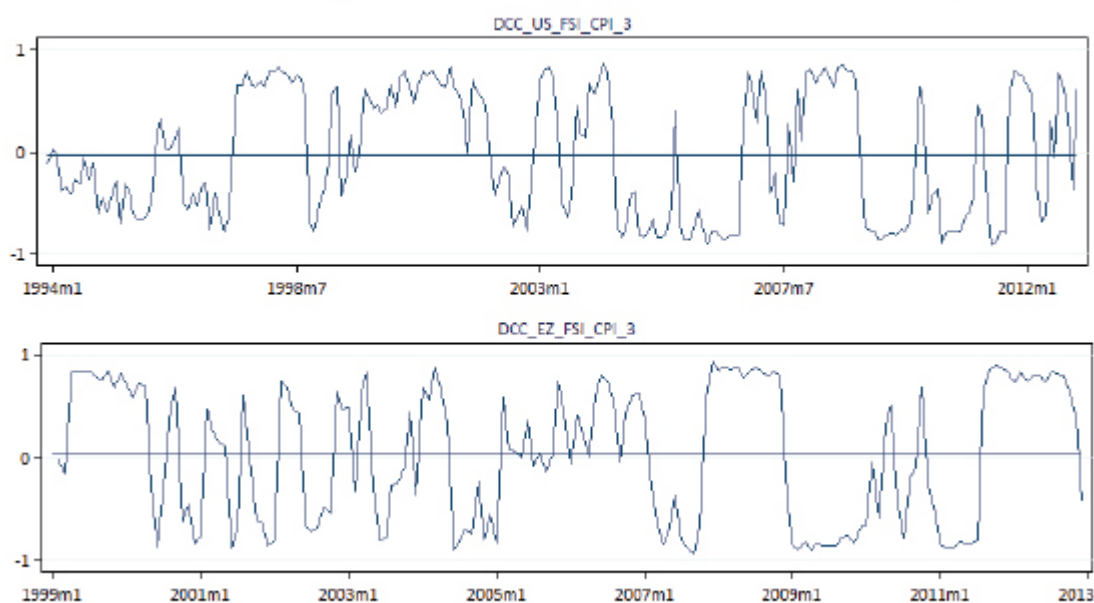
by [Paul Hubert](#) and [Francesco Saraceno \(@fsaraceno\)](#)

[Paul Krugman](#) raises the very important issue of the impact of monetary policy on financial stability. He starts with the well-known observation that, contrary to the predictions of some, expansionary monetary policy did not lead to inflation during the current crisis. He then continues arguing that tighter monetary policy would not necessarily guarantee financial stability either. If the Fed were to revert to a more standard Taylor rule, financial stability would not follow. As Krugman aptly argues, *"That rule was devised to produce stable inflation; it would be a miracle, a benefaction from the gods, if that rule just happened to also be exactly what we need to avoid bubbles."*

Krugman in fact takes position against the "conventional wisdom", which has been widespread in academic and policy circles alike, that a link exists between financial and price stability; therefore the central bank can always keep in check financial instability by setting an appropriate inflation target.

The global financial crisis is a clear example of the fallacy of this conventional wisdom, as financial instability built up in a period of great moderation. A [recent analysis](#) by Christophe Blot, Jérôme Creel, Paul Hubert, Fabien Labondance and Francesco Saraceno shows that the crisis is no exception, as over the past few decades, in the US and the Eurozone, the link between price and financial stability has been unclear and moreover unstable over time, as shown on the following figure.

**Figure. Coefficient of correlation between consumer price index and financial stability index for the US (top) and the Euro area (bottom)**



Source: Authors' computations. For more details on data and methodology, please refer to: <https://ideas.repec.org/a/eee/flinsta/v16y2015icp71-88.html>

We therefore subscribe to Krugman's view that financial stability should be targeted by combining macro- and micro-prudential policies, and that inflation targeting is largely insufficient. In another [work](#), Christophe Blot, Jérôme Creel, Paul Hubert and Fabien Labondance argue that the ECB should be endowed with a triple mandate for financial and macroeconomic stability, along with price stability. They further argue that the ECB should be given the instruments to effectively pursue these three, sometimes conflicting objectives.

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# The ECB's quantitative easing exercise: you're never too young to start

By [Christophe Blot](#), [Jérôme Creel](#), [Paul Hubert](#) and Fabien Labondance

The ECB decision to launch a quantitative easing (QE) programme was widely anticipated. Indeed, on several occasions in the second half of 2014 Mario Draghi had reiterated that the Governing Council was unanimous in its commitment to take the steps needed, in accordance with its mandate, to fight against the risk of a prolonged slowdown in inflation. Both the scale and the characteristics of the ECB plan announced on 22 January 2014 sent a strong, though perhaps belated signal of the Bank's commitment to fight the risk of deflation, which has been spreading in the euro zone, as can be seen in particular in inflation expectations over a two-year horizon (Figure 1). In a [special study entitled, "Que peut-on attendre du l'assouplissement quantitatif de la BCE?"](#) ["What can we expect from the ECB's quantitative easing?"], we clarify the implications of this new strategy by explaining the mechanisms for the transmission of quantitative easing, drawing on the numerous empirical studies on previous such programmes in the US, the UK and Japan.

Figure. Inflation expectations in the euro



Source : ECB (Survey of Professional Forecasters).

The terms of the quantitative easing decided by the ECB are indeed similar to those adopted by other central banks, especially by the US Federal Reserve and the Bank of England, which make comparisons legitimate. It appears from the American, British and Japanese experience that the measures implemented have led to a decline in sovereign interest rates and more generally to an improvement in the financial conditions of the overall economy[1]. This has been the result of sending a signal about the present and future stance of monetary policy and a reallocation of investors' portfolios. Some studies [2] also show that the US QE caused a depreciation of the dollar. The transmission of QE from the ECB to this variable could be critical in the case of the euro zone. An analysis using VAR models shows that the monetary policy measures taken by the ECB will have a significant impact on the euro but also on inflation and inflationary expectations. It is likely that the effects of the depreciation of the euro on European economic activity will be positive (cf. [Bruno Ducoudré and Eric Heyer](#)), which would make it easier for Mario Draghi to bring inflation back on target. The measure would therefore have the positive effects

expected; however, it might be regrettable that it was not implemented earlier, when the euro zone was mired in recession. Inflation in the euro zone has fallen constantly since late 2011, reflecting a gathering deflationary risk month after month. In fact, the implementation of QE from March 2015 will consolidate and strengthen a recovery that would undoubtedly have occurred anyway. Better late than never!

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[1] The final impact on the real economy is, however, less certain, in particular because the demand for credit has remained stagnant.

[2] Gagnon, J., Raskin, M., Remache, J. and Sack, B. (2011). "The financial market effects of the Federal Reserve's large-scale asset purchases," *International Journal of Central Banking*, vol. 7(10), pp. 3-43.

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## **Which companies are investing in France?**

By [Sarah Guillou](#)

At a time when investment has become a priority for the [European Union](#), [the IMF](#) and [France](#), at a time when the French government is preparing legislation to boost business



investment, it is urgent to look into who is actually investing in France's physical capital[\[1\]](#).

Physical investment in France's commercial sector is concentrated in certain sectors: manufacturing, trade, transport, real estate, information and communication, along with the generation of electricity and gas. These "big contributors" totalled 72% of all tangible investment in 1997, and 70% in 2011. This temporal stability obscures two major changes: the manufacturing and real estate sectors saw their contribution to investment change dramatically. The decline in manufacturing's share of GDP has resulted in a decline in the share of investment in machinery and tools. However, this type of investment includes investments in automation and computerization, which are major vectors for boosting productivity. Nor was this decline offset by investment in the information and communication sector, which also invests heavily in machine tools.

The steep rise in real estate and construction prices inflated construction's share of investment. It is particularly noteworthy that the increase in construction prices has captured a large share of business spending on capital investment, thereby diverting financial capital from productive destinations. While this dynamic growth in investment in construction has indeed positively influenced investment trends in physical assets, it mainly explains the dynamics of investment in the property sector. Construction prices have not fallen since the crisis, even though the volume of investment has fallen sharply.

The resilience of the investment rate France's non-financial companies is due in part to investment in construction, but this holds true especially for the real estate sector and the transport sector.

The highest investment rates are on the part of the big corporations and firms with the highest profit rates.

Furthermore, the rate of investment is positively correlated with the debt ratio, exporter status, export intensity and R&D intensity. In contrast, human capital indicators such as labour productivity or average hourly earnings tend to be negatively correlated with the investment rate.

The continuation of deindustrialization and the outsourcing of manufacturing could accelerate the decline in investment in machine tools and equipment. The development of information and communication technology and of this sector more generally could offset the decline in manufacturing. Given that investment in machine tools is a source of higher productivity, maintaining a solid level of activity in the manufacturing sector and the information and communications sector is imperative.

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[\[1\] Note de l'OFCE no. 50 of 22 April 2015 \[in French\]](#) characterizes the sectors and companies that invest in France.

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## France: Recovery ... at last!

By [Mathieu Plane](#), [Bruno Ducoudré](#), [Pierre Madec](#), Hervé Péléraux and Raul Sampognaro

[\*\*The OFCE's forecast for the French economy in 2015-2016 is now available.\*\*](#)

Not since the beginning of the subprime crisis has the French economy been in such a favourable situation for a recovery.

The fall in oil prices, the ECB's proactive and innovative policy, the easing of fiscal consolidation in France and the euro zone, the gathering impact of the CICE tax and the implementation of the Responsibility Pact (representing a tax transfer to business of 23 billion euros in 2015 and nearly 33 billion in 2016) all point in the same direction. The main obstacles that have held back French activity over the last four years (over-calibrated fiscal austerity, a strong euro, tight financial conditions, and high oil prices) should all be out of the way in 2015 and 2016, with pent-up growth finally released. The supply policy being pushed by the government, whose impact on business is still pending, will be all the more effective thanks to the positive demand shock from foreign trade, which will allow the economic rebalancing that was lacking up to now.

French GDP will grow by 1.4% in 2015, with the pace accelerating in the course of the year (to 2% yoy). The second half of 2015 will mark the turning point in the recovery, with the corporate investment rate picking up and the unemployment rate beginning to fall, ending the year at 9.8% (after 10% in late 2014). 2016 will then be the year of recovery, with GDP growth of 2.1%, a 4% increase in productive investment and the creation of nearly 200,000 private sector jobs, pushing the unemployment rate down to 9.5% by end 2016. In this positive context, the public deficit will fall significantly, and is expected to be 3.1% of GDP in 2016 (after 3.7% in 2015).

Obviously this virtuous cycle will only take effect if the macroeconomic environment remains favourable (low oil prices, a competitive euro, no new financial tensions in the euro zone, etc.) and if the government limits itself to the budget savings already announced.

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# On Thomas Piketty's Capital in the Twenty-First Century

Presentation by [G rard Cornilleau](#)

In 2014, the world of social science publications was marked by the appearance of Thomas Piketty's book, *Capital in the Twenty-First Century*. The book's global success, which is rare for a rather difficult work originally published in French, led to renewed debate on the distribution of wealth and income. Contrary to the widespread view that economic growth diminishes inequality and sooner or later leads to a balanced society with a large middle class (Kuznets' hypothesis), Thomas Piketty uses long-term historical data, some of it new, to show that the norm is instead a widening gap between the rich and everyone else. Periods of falling inequality appear conversely to be related to accidents of political and social history (war, ideological upheaval, etc.). Therefore, and unless another countervailing accident were to occur, Western society seems doomed to suffer an increasingly severe imbalance in the distribution of wealth. Piketty believes that structural changes in taxation could contain this tendency, which is unsustainable in the long-term.

It is hardly surprising that this analysis has upset the applecart of the received wisdom and occasionally provoked strong reactions, and even denial that inequality is real – in other words, criticism that Piketty's analysis is overly pessimistic. It was obvious that the OFCE needed to participate in this public debate. Several OFCE researchers have contributed by offering additional insights to Piketty's arguments or critical analysis. These contributions can be found in a special dossier in [issue 137 of the Revue de](#)

[l'OFCE on Le capital au XXI<sup>e</sup> siècle](#) [in French]. Jean-Luc Gaffard's observations focus on issues related to the nature of capital and the relationship between its productive component, its remuneration and the regulation of the system as a whole, which could affect pessimistic conclusions about the long-term difference between the rate of profit and the rate of growth in output. Guillaume Allègre and Xavier Timbeau seek to deepen the analysis of the nature of capital, focussing on the rise in the compensation of property rights, which has led to the emergence of a new type of technological *rentier*. They also analyse the contribution of housing wealth before concluding, as does Piketty himself, that it is a key factor in inequality.

Thomas Piketty agreed to participate in this discussion by writing a response for the [Revue de l'OFCE](#), in which he clarifies his thinking about a number of issues, such as the hybrid nature of capital, which mixes productive capital, housing wealth and intellectual property rights, whose yield has more to do with a process of social construction than with a simple technical relationship between capital and production.

[This dossier](#) also reflects the OFCE's commitment to promote scientific debate around key issues in economics. Our thanks go to the authors who contributed to this discussion, and to Thomas Piketty who has engaged in this process of constructive criticism. Finally, we hope that this dossier will help give readers a better understanding of the importance of the issue of inequality and the role it plays in long-term social cohesion.

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# Shale gas: recovering a mirage?

By Aurélien Saussay

A report posted online on April 7 by [Le Figaro](#) assesses the gains that could be expected from the exploitation of shale gas in France: the report concludes that this is an opportunity to revive the French economy and cut France's energy costs by substituting domestic production for our imports of gas. It estimates that the macroeconomic impact would be substantial: in the "likely" scenario, more than 200,000 jobs would be created, with an additional 1.7 points of GDP on average over a 30-year period.

The magnitude of these figures stems directly from the assumptions used in the report, especially in terms of geology. The production costs for a shale gas field and the volumes that could be extracted depend on the field's physical characteristics (depth, permeability, ductility of the rock, etc.). However, without carrying out any experimental fracking, it is very difficult to make a future estimate of all of these parameters, and hence of the final production cost.

It is nevertheless possible to see how these parameters are distributed in the only territory that has extensively exploited shale gas up to now: the United States. By reviewing the production data for the US deposits accumulated over more than ten years, a realistic distribution of production costs can be modelled. This is the approach adopted to develop the SHERPA model, which is described in an OFCE working paper published today, [Can the U.S. shale revolution be duplicated in Europe?](#)

More than 60 shale gas deposits have been explored in the

United States since it first began to be exploited in the early 2000s. But only 30 have been put into commercial production, and six of these account for over 90% of the total US output of shale gas. Based on the geological assumptions corresponding to the median of the six best deposits, the Net Present Value (NPV) of France's gas resources comes to 15 billion euros – 15 times less than the 224 billion estimated in the aforementioned report. To reach this latter figure, it must be assumed both that the cost of drilling and well completion will be similar in France and the United States, and that the French deposits are comparable to the best American field, around Haynesville, Louisiana ... but the characteristics of that field are exceptional: the average output of its gas wells is nearly four times the average of the five other main deposits. While it is of course impossible *a priori* to exclude that this latter assumption would hold, it is very unlikely.

This uncertainty emphasizes the need to carry out experimental drilling to guard against overly optimistic scenarios. The case of Poland is instructive: the projections of the US Energy Information Agency (EIA) pointed to very large shale gas reserves in a country that is heavily dependent on imports of Russian gas. The Polish government, keen to strengthen its energy independence, decided to try to speed up domestic production, offering up to a third of its territory for operating concessions. The first wells were disappointing: it turned out that the rocks in the Polish deposit contained too much clay, making them too ductile and impeding good fracturing of the rock – an essential step for exploiting shale gas, regardless of which technology is used. After the trials, Poland's substantial reserves, touted as the largest in Europe, proved to be unworkable.

This kind of evaluation should be made in a way that is public and transparent. Professional prospectors, whose main activity is to assess the geological reality of a hydrocarbon deposit

previously estimated on paper, in fact have an interest in overestimating the pre-drilling assessments in order to sell their services. An example from abroad once again shows the extent of the problem: in May 2014, the US EIA reported that the estimate of the exploitable volume of shale oil in the US Monterey deposit, hitherto regarded as one of the most promising, was being slashed by 96%. After a review, it was clear that the first estimate, made two years earlier, had been based entirely on the calculations of private independent prospectors, without the intervention of the governmental services of the US Geological Survey.

To ensure a realistic assessment of France's resources of shale gas, experimental drilling needs to be entrusted to a public body, with fully transparent results and methodology. Only an approach like this can ensure that future scenarios are objective and not unduly optimistic.

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## **The erosion of France's productive base: causes and remedies**

[Xavier Ragot](#), President of the OFCE and the CNRS

The deindustrialization of France, and more generally the difficulties facing sectors exposed to international competition, reflects trends that have been at work in France and in Europe for more than a decade. Indeed, while the strictly financial moment when the crisis struck in 2007 was the result of the bursting of the American real estate bubble,



the scale of its impact on Europe's economy cannot be understood without looking at vulnerabilities that have previously been neglected.

In "Érosion du tissu productif en France: Causes et remèdes", [\*OFCE working document no. 2015-04\*](#), Michel Aglietta and I offer a summary of both the microeconomic and macroeconomic factors behind this productive drift. Such a synthesis is essential. Before proposing any policy changes for France, it is necessary to make a coherent diagnosis of major trends in international trade as well as of the real situation of France's productive fabric.

### ***European divergences***

The starting point is the surprising divergence seen in Europe. The euro zone's two largest countries, Germany and France, have diverged in an unprecedented way since the mid-1990s. While property prices remained stable in Germany, in France they increased by a factor of 2.5, hitting the country with two negative consequences: a high cost of living for its employees, and a collapse in property investment by its businesses. Wages in Germany are now 20% lower than in France due to the wage moderation implemented to manage the former's reunification process. Furthermore, until the crisis, real short-term interest rates (which take into account inflation differentials) were about 1 percentage point lower in France and Spain than in Germany. This change in the price of the production factors (higher real interest rates and lower wages in Germany than in France) did not give rise to a greater substitution of capital for labour in France. There was little difference between the two countries in the investment rate, which was relatively stable in both. Other indicators, such as the number of robots, indicate on the contrary that there was less modernization of France's productive fabric. These changes in factor prices have not therefore translated into an adjustment in the productive fabric, but have instead led to an unsustainable divergence in

the current accounts.

Current account balances are crucial concepts for measuring disequilibria within Europe. A positive current account means that a country is lending to the rest of the world, while a negative current account means that it is borrowing from the rest of the world. While European rules have focused attention on the public deficit alone, the proper measure of a country's indebtedness is the current account, the sum of public and private debt. On this measure, Germany's current account is one of the most positive in the world, meaning that it is lending heavily to other countries. While over the last three years the differences between European current accounts have been narrowing, this is the result more of a contraction in activity due to austerity measures than of a modernization of the productive base in countries with negative current accounts. The European framework for analysing macroeconomic imbalances does of course have numerous indicators, including the current account. However, in practice the multiplicity of indicators gives a crucial role to the numerical public deficit targets. So while the framework for European surveillance seems very general in its assessment of economic imbalances, it is the short-term budgetary aspect alone that dominates analysis. Don't forget that Spain's public debt was less than 40% of GDP in 2007, but over 90% of GDP in 2013. Low public debts are not therefore a sufficient condition for macroeconomic stability, just as public debts that are temporarily high are not necessarily a sign of structural problems.

### ***The fragility of France's productive base***

In this sense, corporate data can be used to gain insight into trends in the French economy. French companies did of course experience a fall in margins, but this has mainly affected sectors exposed to international competition. Corporate profitability (which finances the payment of dividends and interest and contributes to investment) fell from 6.2% in 2000

to less than 5% in 2012. Despite this decline, the investment rate held steady in all business categories during the period, in part funded by corporate savings, which declined from a rate of 16% in 2000 to 13% in 2012. The result has been a substantial rise in corporate debt, although up to now this has not led by higher debt costs due to the fall in interest rates. All these factors are inevitably fuelling concern about the health of our productive fabric: France's businesses have responded to economic difficulties, not by innovation, but by financializing their balance sheets and taking on debt.

### ***Towards partnership in governance***

To innovate, invest and upscale, France's companies must make efforts over the long term – this is the only way there will be a process of reconvergence in Europe. The point is not to maximize short-term financial returns, through for example excessive dividend payments, but rather to invest over horizons that are typically considered (too) long by companies. As a result, making improvements to France's productive fabric will require shifting corporate governance towards a model based on stronger partnerships and a more long-term vision in order to invest in employees' skills and qualifications, in intangible assets, and in new technologies. Social dialogue is not just about income distribution and tax reform but is also essential within companies in order to ensure the mobilization of our only productive wealth, men and women who are putting their all into their work.

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## **Concerning the Macron law “to**

# promote growth, activity and equal economic opportunity”

By [Henri Sterdyniak](#)

The Macron Law is certainly not the “law of the century”. It is a patchwork of about 240 provisions of varying importance. It is not some “great turn to the free market” nor does it represent a uniquely French strategy. It does nevertheless raise interesting questions about France’s economic strategy and the way the legislature works.

The latest issue of the [Note de l’OFCE \(no. 43 of 13 March 2015\)](#) examines the law’s major provisions, which oscillate between free market liberalization (let competition and the market do their work), social liberalism (certain categories of the population must be protected), economic interventionism (the state must regulate the functioning of the markets), and social democracy (the social partners must play an important role), without a clear victory for any of these. It is a compromise text that by definition cannot really satisfy anyone.

In our view, despite its title, there are few provisions in the law that will promote activity or that are beneficial to industry, to “Made in France”, to urban renewal, to the habitat, to the production of sustainable recyclable goods, or to greater employee participation in the decision-making process in their business. The law is instead in line with the myth of an economy driven by innovative start-ups, and ignores the need for industrial restructuring and an ecological transition.

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# Women's employment and unemployment: decreasing inequality?

By [Françoise Milewski](#)

The deterioration of the labour market since the start of the crisis has hit men and women differently. Recent trends show that adjustments are being made in different ways. Gender inequalities are producing differentiated trends in employment and unemployment, which is leading in turn to specific forms of inequality.

Since spring 2008, category A job searches [\[1\]](#) have increased for both men and women, but much more for the former (93% against 60%). The trend was more uneven for men under the influence of the business and public policy cycles, especially partial unemployment measures.

Men jobseekers have outnumbered women jobseekers since November 2008. In December 2014, men represented 52.9% of jobseekers. But this breakdown is close to their respective shares in the labour force and in employment. It is the previously existing situation that was abnormal: women, a minority on the labour market, had been a majority in category A unemployment.

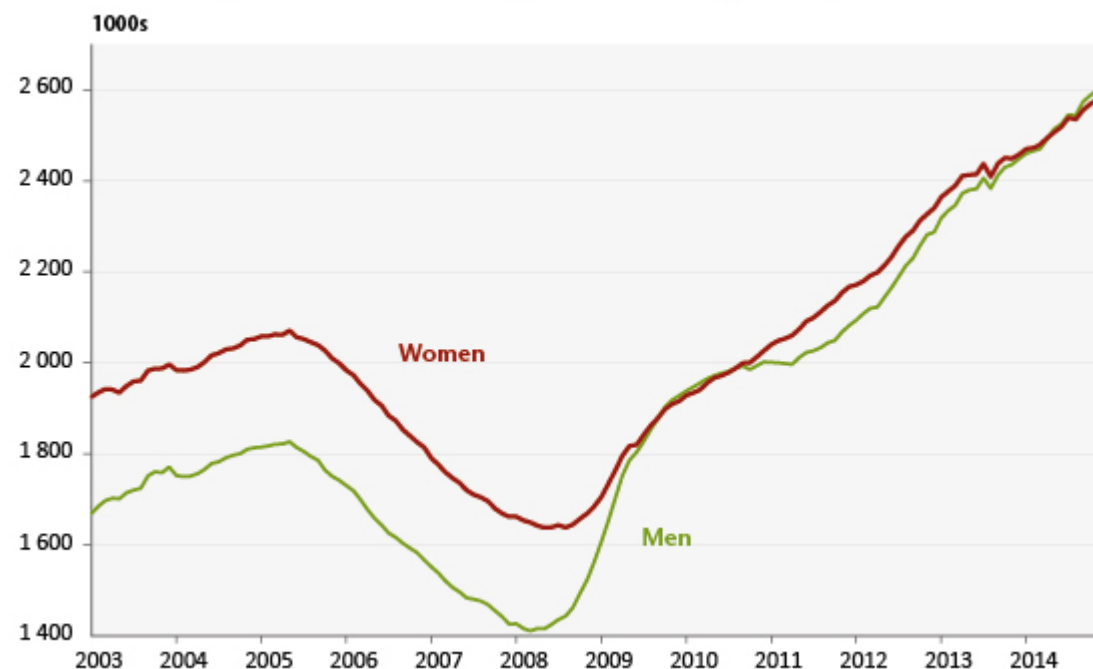
Despite this, job searches by those on low hours [\[2\]](#), that is to say, people who have a part-time job but are registered at the job centre because they want to work more, are mostly by women (55.4%); this proportion has not changed much from before the crisis. Women are also over-represented in category B, short-term low-hours jobs. The increase in job applications

from those on low hours was slower and less uneven than those in category A. It was also less differentiated by gender.

Overall, if we take into account demands for jobs from categories A, B and C, there have been slightly more men jobseekers than women since summer 2014 (50.2% in December 2014). This is a new feature of the labour market (Figure 1).

This characteristic holds true for those who are under age 25 and age 25 to 49. In contrast, more women over the age of 50 are unemployed than men, due to the high level of job applications from those working low hours.

**Figure 1. Demands for jobs from Categories A, B and C**



Source: DARES.

### **The impact of the lack of gender diversity of professions and employment sectors**

These trends are due to changes in employment. Women are concentrated in the service sector, and men more in industry and construction. But the greatest job losses have occurred in industry and construction. The services, which are traditionally less cyclical, have seen fewer job losses, and even some job creation in a few years (from 2010 to 2012 and then in 2014) if interim work is reassigned to the user

sectors. This job creation has been on a small scale, but women's employment has suffered less from the crisis, or at least in a different way. It fell in 2009, then increased slightly, and then stabilized. This is of course a break in the trends for growth rates in the 1980s, 1990s and 2000s, but there is a clear difference with men's employment, which fell significantly in 2009 and again in 2012 and 2013. The 1980s and 1990s were already not favourable years for men's employment.

Single-sex trades result from the gender-biased school experience and job training, and reinforce this in return. This explains why there are such great differences in job opportunities between sectors. Service jobs, particularly personal services, are the preserve of women: their supposedly "innate" skills lead them to do in the commercial sphere what they are already doing in the family sphere: upbringing, educating, caring for others, cleaning, etc.

Inequalities in career guidance thus have a "positive" counterpart in employment, at least if we confine ourselves to the volume of jobs. But the poor quality of certain jobs and their under-valuation also stems from this.

### **A trend in employment rates favouring women**

The participation and employment rates can be linked with the unemployment rate (according to the ILO [\[31\]](#)) in order to clarify both the differences between women and men and the profound differences by age group.

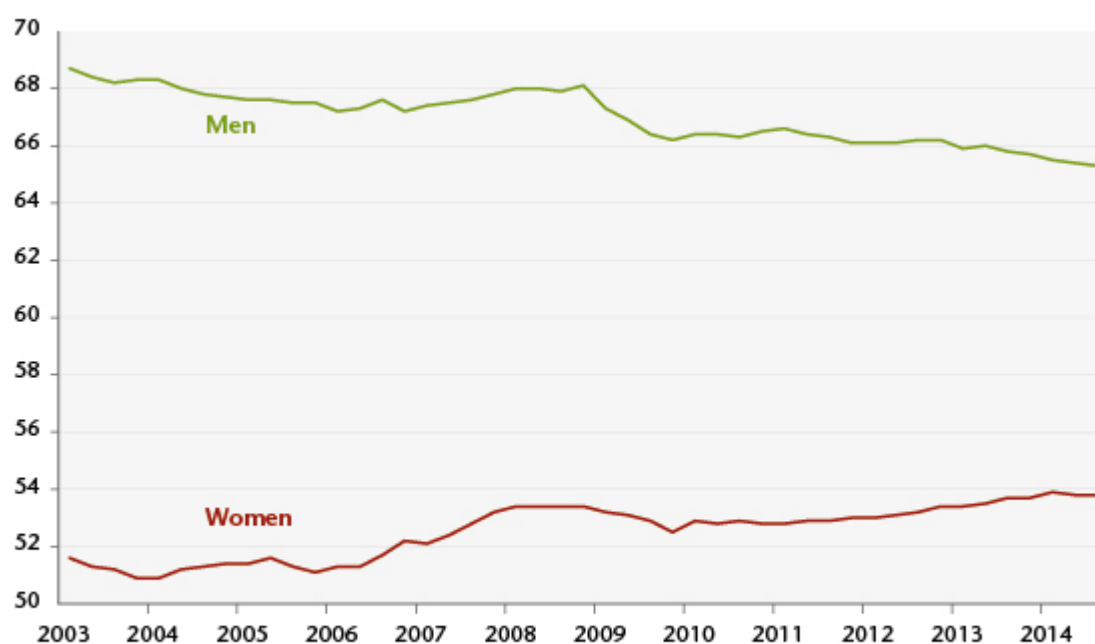
Taking all ages combined, women have increased their labour force participation rates over the period 2008-2014 (2.3 points). Their employment rate fell between 2008 and 2010 and then recovered to exceed its pre-crisis level. The unemployment rate thus rose sharply in the initial period of the crisis, then stabilized before rising again since early 2012, with the increase in the employment rate remaining lower

than in the participation rate. The full-time employment rate at first declined and then stabilized, while the rate of part-time employment rose slightly. The share of part-time employment is up from early 2008, but only by 1 point.

With respect to men, the participation rate increased very slightly (+0.6 point) while the employment rate decreased significantly (-2.1 points), resulting in the greater increase in unemployment. The decline in men's employment rate is associated essentially with full-time employment. As the level of part-time employment is still very low, its increase has had little impact on the overall picture. The share of part-time employment for men did, however, rise from 5.5% in spring 2008 to 8% in the third quarter of 2014.

The employment rate in full-time equivalents is therefore diverging: the rate for men fell over the period, while women's rate, following a decline at the start of the crisis, has been picking up at a moderate but steady pace since 2011 (Figure 2).

**Figure 2. Employment rate in full-time equivalents**



The employment rate in full-time equivalents is the ratio of the labour force (in jobs in full-time equivalents) to the total population.

Source: INSEE, job surveys, over age 15.



The “halo” around unemployment [\[4\]](#) has grown, particularly among men (+37.4% compared with +8.8%), but women are still over-represented in it (56.9% of the total at end 2014).

However, these averages reflect trends that differ greatly by age group. The stabilization of the male participation rate is the result of a decline for both young people and those aged 25-49 together with a rise for those over age 50. But the rise in the employment rate of older workers has not been sufficient to offset the decline in other categories. For women, only the participation rate for those aged 15-24 has been declining, and the higher employment rates of those over 50 has offset the decline in the rates for both young people and, more moderately, for those age 25-49.

### **Older employees have been especially affected**

The labour force participation, employment and unemployment of older workers are atypical because this age group’s position has been weakened by the impact of the later retirement age. The trends in unemployment rates have been similar for both genders, including in terms of volume. The participation rate has risen steeply since 2009: for men, this follows a long period of decline until 1995, then a rise due to the 1993 pension reform, followed by a renewed decline (moderate) between 2003 and 2008. The rise since 2009 petered out in 2013 and 2014 (due to the end-of-work measures affecting workers age 60 with lengthy careers, which in practice mainly affected men). For women, the increase has been continuous since 1990: after plateauing between 2005 and 2008, the rise picked up pace, without the tapering-off seen at the end of this period for men. The steadier increase for women reflected the rise of the participation rates of the younger generation in previous decades. The employment rates have not risen as steeply as the participation rates, as unemployment has increased for both sexes. The difficulty of finding a job has also pushed up part-time employment rates, especially for women. The share of part-time employment reached 10.2% for men at the end of the

period (still significantly below women's rate: 33.4%).

The unemployment rate of 25-49 year-olds increased for both sexes, especially for men, leading to a convergence in rates since end 2012. However, men's activity rate declined slightly since the beginning of the crisis, in contrast to women's rate, which on average stabilized over the period. The fall in employment rates was very marked for men (-5.2 points), and less so for women (-1.7). This was also the case for full-time employment rates. The share of part-time employment has been increasing a little for men, but is still very low (just over 5%), while it has stabilized for women. The employment rates in full-time equivalents have changed very differently: the rate has fallen steeply for men, but only a little for women. The deterioration in the volume of employment is thus hitting men in particular. But the levels are still very different.

### **Young women do not benefit as much from their education**

The unemployment rates for men and women under age 25 converged in the early 2000s, in contrast to other age groups. Since then, they have tended to evolve similarly. The level of the labour force participation rates differs significantly, with women's rate still about 7 percentage points below that of men. The participation rates have declined in tandem since the crisis began, as have employment rates. Young people who are unable to find jobs are prolonging their education.

It is the rate of full-time employment that has declined the most, especially for young men. The part-time employment rate failed to offset this decline: it remained stable for men, except since the end of 2012, when it rose slightly, while it decreased for women (but only moderately).

It is striking to see the large difference in the respective levels of part-time employment even at this age (about 4 points). But the cause is not parental duties! The reason needs to be sought instead in the nature of the jobs

associated with different professions and industrial sectors. Part-time work as a share of all employment came to nearly 35% for women at year-end, against 17% for men. This, however, is up sharply over the last six quarters. It is too early to say that this represents a rupture with previous trends, with the crisis leading young men to take jobs that they previously refused, or that they are shifting more towards service sector work that hasn't been hit as hard.

The level of training is to the advantage of women. Yet it is clear, first, that a diploma offers protection against unemployment and the crisis (the highest unemployment rates are among those with few or no qualifications), and second, that girls do better in school and on average graduate more frequently. How then is it possible to explain that the unemployment rate is equivalent for men and women? An INSEE study on career starts was conducted in 2010 over the period 1984 to 2008 [\[5\]](#). It showed that in the early 1980s significantly more women were unemployed relative to men during the initial five years of working life, but that the gap has narrowed, with the unemployment rates converging in 2002. In 2007 and 2008, the female unemployment rate had fallen even lower than that of men at career start, thanks to the rise in their educational level. For the same level of training, young men usually fare better on the labour market: young women still tend to have higher unemployment rates and lower salaries because of the educational specialties they have chosen. The INSEE estimated that for identical degrees, specialties and job lengths, women's risk of unemployment was 7% higher than for men during their initial years of work.

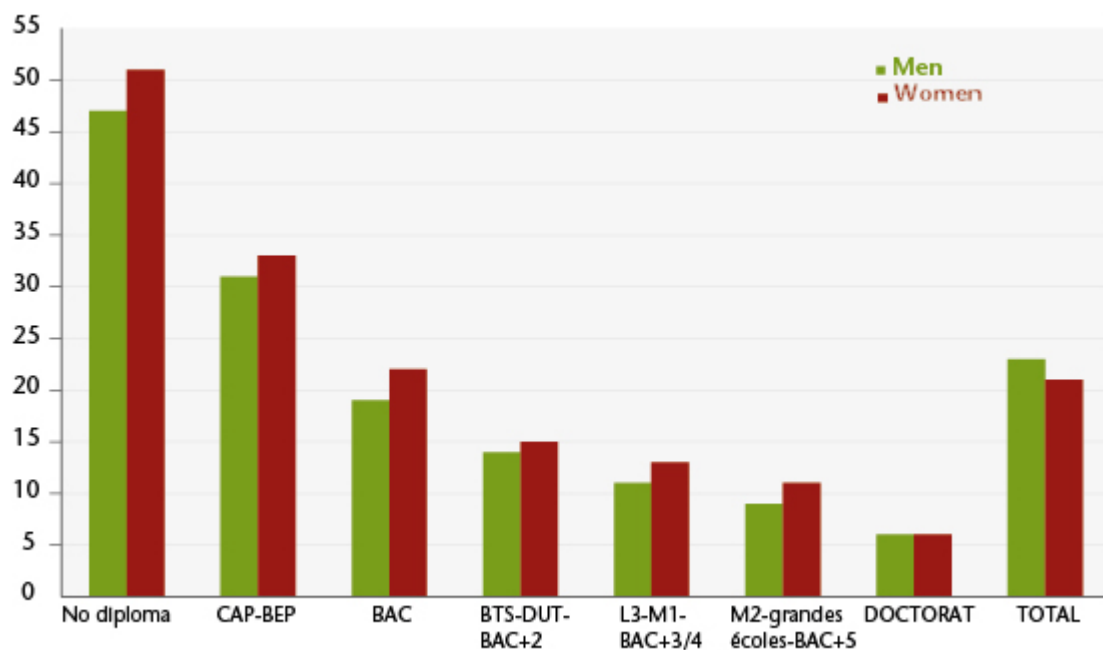
What about since the crisis? The CEREQ conducts work surveys on the future of young people leaving the education system. The last of these "Generation surveys" was conducted in 2013 on the 2010 generation [\[6\]](#). It shows a worsening situation due to the crisis and very sharp differences by degree level. In 2013, three years after leaving school, 22% of young people

were still hunting for work. This is the highest level ever seen in the CEREQ surveys. The increase over the 2004 generation was 16 points for young people without degrees and 3 points for long-term higher education graduates.

Better-educated women are standing up to the crisis better. For the 2010 generation (contrary to the 2004 generation), the employment rate for men decreased so as to match women's rate, and the unemployment rate for women is lower than that for men. Young men are more exposed to long-term unemployment. Women's relative advantage is due to their higher level of schooling, which has risen more than that for men.

But there are persistent inequalities in the labour market, to the disadvantage of women: for comparable schooling at any level (from non-graduates to high school diploma +5 years, except the PhD level), the unemployment rate for women is higher than for men (Figure 3). Thus, women's lower level of unemployment is due only to their higher level of education, which does not have a full impact.

**Figure 3. Unemployment rate at 3 years for the 2010 generation**



Source: CEREQ.

## **A reconfiguration of inequality**

The inequalities between women and men are shifting, but persistent. Unemployment has increased less among women during the crisis than among men. This is due, first, to the sectoral distribution of their jobs (especially in the service sector) and to single-sex trades. Second, raising the average level of education has enabled women to withstand the crisis better, but the magnitude of this effect is lower than it should be. It is therefore not enough to wait for time to do its work: even among the young generations, there is still discrimination in hiring and in the initial years of working life. Unless, of course, we await a time (hypothetical and hardly desirable) when generations of highly skilled women will exist side by side with generations of unskilled men, and labour market inequalities finally diminish...

Job quality is also a real challenge: part-time work is spreading among men, especially the older and younger age groups, but it is still particularly widespread among women, who continue to assume most parental duties. But part-time work is also more common among women under age 25 who are not yet in this situation.

Service jobs, particularly personal services, offer opportunities for the less skilled, but often part-time. Do we really want women to more readily accept "poor" jobs?

What is taking place is, therefore, a reconfiguration: women are improving their educational level, and the increasing numbers of them with higher qualifications are becoming a stable part of the workforce. However, they benefit less from their training, not only in terms of their salary and career progression, but even when they first begin their working lives, including in terms of employment and unemployment. Less-qualified women are at a particular disadvantage and form the core of the "precarariat", which is growing. Deregulating the labour market tends to amplify inequalities by forcing those in a weaker position on the labour market to accept part-time work with reduced hours on a large scale. So it is

not enough to wait for inequalities to disappear or even diminish.

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[1] Category A: Job seekers registered at the French Pôle emploi job centre who are unemployed and required to conduct a positive job search.

[2] Job seekers registered at the French Pôle emploi job centre who are required to conduct a positive job search and have worked fewer hours (78 hours or less during the month) for category B, or more hours but less than full time (more than 78 hours in the month) for category C.

[3] An unemployed person within the meaning of the International Labour Office (ILO) is a person of working age (15 or older) who has not worked, even for one hour, during the given week, is available for work within two weeks, and has begun an active job search in the previous month (or found a job that starts within three months). The unemployment rate is the ratio between the number of unemployed and the number of people in employment (employed or unemployed).

[4] The halo around unemployment includes people who do not have jobs and want to work but who are not considered unemployed by ILO standards as they are not available to work within two weeks and / or are not seeking work.

[5] “Femmes et hommes en début de carrière. Les femmes commencent à tirer profit de leur réussite scolaire” [Women and men at the start of the career. Women are beginning to benefit from their success at school], Alice Mainguené and Daniel Martinelli, *Insee Première*, no. 1284, February 2010, [http://www.insee.fr/fr/themes/document.asp?ref\\_id=ip1284](http://www.insee.fr/fr/themes/document.asp?ref_id=ip1284).

[6] “Face à la crise, le fossé se creuse entre niveaux de diplôme” [In the face of the crisis, the gap is increasing between diploma levels], Christophe Barret, Florence Ryk,

Noémie Volle, *Bref CEREQ* no. 319, March 2014,  
<http://www.cereq.fr/index.php/publications/Bref/Enquete-2013-a-upres-de-la-Generation-2010-Face-a-la-crise-le-fosse-se-creuse-entre-niveaux-de-diplome>.