The energy companies: Green is making them see red

By Sarah Guillou and Evens Salies [1]

Does the common energy market unduly favour renewable energy sources ("renewables")? This is the opinion of the nine energy companies that appeared before the European Parliament in September. According to them, meeting the target of having 20% of final energy consumption in the EU come from renewable sources by 2020 would have a negative impact on the electric energy sector, and in particular could harm both the energy companies' financial results and the security of the electricity supply. There is no denying that since the late 1990s the EU has conducted a very active policy promoting RES in this field. The European Commission (EC) has made numerous suggestions to the Member States about ways to meet the 20% target (see Directive 2009/28/EC), including guaranteed purchase prices for electricity produced from renewable energy sources, tax credits, etc. Moreover, in 2011 this set of measures has enabled the EU-27 to hit a level of 22% of electricity generated from renewables, hydroelectricity included (Eurelectric, 2012) [2].

How does this policy hurt the historical producers or threaten the security of the supply? Let's look at a few stylized facts about the consumption and management of electricity production. Average consumption is lower at night ("base" period) than in the daytime when it experiences a peak or two (periods called "spikes"). As electricity is not storable, the least expensive way to meet the base-to-peak transition is to draw on power plants according to their "order of merit". A producer using several sources of energy then calls on them in order from the least flexible (slow start-up, low marginal cost) to the most flexible (fast start-up, high marginal cost). In theory, the stack is/was: nuclear-coal for the base

period, nuclear-coal-gas for the peak period [3]. It is during peak demand, when the wholesale price can soar, that producers earn the most money. The production of RES plants is in turn contingent on the vagaries of the weather ("intermittent"): these plants produce only when the associated primary resource (wind, sun, etc.) is sufficient; they are then prioritized for meeting electricity consumption.

The integration of RES into the generation fleet changes the merit order. The stack above becomes wind-nuclear-coal for the and wind-nuclear-coal-gas at peak, with wind substituting for some uranium, coal and gas. Given that for RES plants the marginal cost of production is close to zero, their integration in the energy mix, however minimal, reduces the average price on the wholesale markets. As a result, with the integration of RES, fossil fuel plants are less well paid. As for the RES plants, they always enjoy a guaranteed purchase price (in France, 8.2 c€/kWh for wind and between 8 and 32 c€/kWh for solar, etc.) [4]. The loss in earnings is greatest during periods of peak demand. Producers have less incentive to invest in the construction of fossil fuel power plants, whose output is nevertheless needed during these periods. Hence the risk to the security of supply: with the gap between available capacity and peak demand potentially reduced, there is a greater risk that the real gap between output and consumption becomes negative.

One possible solution is the creation of a "market for capacity". In this market, making the output capacity of a power plant available well in advance would be remunerated, even if there is no actual output. The nine energy companies considered this kind of market as interesting, insofar as they are equipped with gas power plants and / or are sellers of gas, which is what is demanded in peak periods. In France, the NOME Law of 2010 provides for the establishment of such a market at the end of 2015.

It is also worth noting that since a substantial share of

fossil fuel plants are not at the end of their physical life, the integration of RES is adding capacity to a European market for electricity that is already characterized by overcapacity. This is now being exacerbated by the economic crisis, which is hitting energy demand. This mainly concerns gas plants that already face stiff competition from coal-fired plants, which have become more profitable since the import of surplus US coal, which has been supplanted by shale gas. The excess supply is, however, helping to contain electricity prices.

In the end, the hearing involving the nine energy providers in the European Parliament reveals two major difficulties facing any energy transition policy. The first is the cost of adjusting to the new energy mix. The energy companies are, like these nine, complaining (rightly) that this cost is jeopardizing their profitability and that in order to cope some of them will be forced to close or even dismantle production sites (**Eon in Germany**). The consumers, for their part, are financing among other things the obligation to buy electricity - in France, through the contribution to the public electricity service (700 million euros in 2010). The cost of adjusting is inevitable and even necessary to the adjustment: it is because the providers have to bear an additional cost that they will change their energy portfolio. The second problem comes down to a single question: how can support for RES be reconciled with a secure supply? While energy policy is contributing to a genuine improvement in air quality, it still seems ineffective in managing the security of supply, which is nevertheless a public good.

The EC is moving toward cooperative solutions. As in the case of the coordinated development of the interconnection of the national transport networks, led by the network managers, it is considering the feasibility of a <u>common market for the exchange of electricity generation capacity</u>. The EC would also like the Member states to coordinate the setting of guaranteed purchase prices. These rates could in practice create a

windfall, especially for equipment makers (see <u>Guillou</u>, <u>S.</u>, <u>2013</u>, <u>Le crépuscule de l'industrie solaire</u>, <u>idole des gouvernements</u>, <u>Note de l'OFCE No. 32</u>) [Guillou, S., 2013, "The twilight of the solar industry, the darling of governments", OFCE *Note* 32]. What remains is to find ways to facilitate the coordinated management of the security of the EU's electricity supply, while making room for RES. The hearing of the energy providers in the European Parliament should lead to a more general consideration of the security of supplies in the EU with respect to all sources of energy.

- [1] We would like to thank Dominique Finon, Céline Hiroux and Sandrine Selosse. Any error is, however, our own responsibility.
- [2] The figure of 20% covers a number of sectors, beyond just the electrical energy sector.
- [3] This principle was especially true before the liberalization of the wholesale markets, at a time when a vertically integrated producer decided which power plants to start to meet national demand.
- [4] Guaranteed purchase prices were introduced so that the technology for producing electricity from renewable energy sources, which was not yet mature, was not put at a disadvantage.

The euro zone quartered

By <u>Céline Antonin</u>, <u>Christophe Blot</u>, Sabine Le Bayon and Danielle Schweisguth

This text summarizes the <u>OFCE's 2013-2014 forecast for the euro zone economy</u>.

After six quarters of decline, GDP in the euro zone has started to grow again in the second quarter of 2013. This upturn in activity is a positive signal that is also being corroborated by business surveys. It shows that the euro zone is no longer sinking into the depths of depression. It would nevertheless be premature to conclude that a recovery is underway, as the level of quarterly growth (0.3%) insufficient to cause any significant reduction unemployment. In October 2013, the unemployment rate stabilized at 12% of the workforce, a record high. Above all, the crisis is leaving scars and creating new imbalances (unemployment, job insecurity and wage deflation) that will act as obstacles to future growth, especially in certain euro zone countries.

Several factors point towards a pick-up in economic activity that can be expected to continue over the coming quarters. Long-term sovereign interest rates have fallen, particularly in Spain and Italy. This reflects that the threat of a breakup of the euro zone is fading, which is due in part to the conditional support announced by the ECB a little over a year ago (see Friends of acronyms: here comes the OMT). Above all, there should be an easing of fiscal austerity, given that the European Commission has granted additional time to several countries, including France, Spain and the Netherlands, to deal with their budget deficits (see here for a summary of the recommendations made by the European Commission). Driven by the same mechanisms that we have already described in our previous forecasts, a little higher growth should follow this

easing of austerity (-0.4 GDP point of fiscal effort in 2013, down from -0.9 point in 2013 and -1.8 in 2012). After two years of recession in 2012 and 2013, growth is expected to come to 1.1% in 2014.

Nevertheless, this growth will not be sufficient to erase the traces left by the widespread austerity measures implemented since 2011, which pushed the euro zone into a new recession. In particular, employment prospects are improving only very slowly because growth is too weak. Since 2008, the euro zone has destroyed 5.5 million jobs, and we do not expect a strong recovery in net job creation. Unemployment could fall in some countries, but this would be due mainly to discouraged jobseekers withdrawing from the workforce. At the same time, less austerity does not mean that there will be no austerity. With the exception of Germany, fiscal consolidation efforts will continue in all the euro zone countries. And whether this is achieved through a reduction in public spending or an increase in the tax burden, households will bear the brunt of the adjustment. At the same time, the persistence of mass unemployment will continue to fuel the deflationary pressures in Spain and Greece. The already at work competitiveness that results in these countries will boost exports, but at the expense of increasingly undermining domestic demand. The impoverishment of the countries of southern Europe is going to be aggravated. Growth in these countries in 2014 will again be lower than in Germany, Austria, Finland and France (Table).

As a consequence, the euro zone will be marked by increasing heterogeneity, which could wind up solidifying public opinion in different countries against the European project and making the governance of the monetary union more difficult as national interests diverge.

In %

	0.00	20	13			20	14	4	2012 2013 20		2014
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2012 2015	2014	
DEU	0,0	0,7	0,2	0,3	0,3	0,4	0,4	0,4	0,9	0,9	1,5
FRA	-0,2	0,5	0,0	0,2	0,3	0,4	0,4	0,4	0,0	0,1	1,3
ITA	-0,6	-0,3	0,0	0,1	0,1	0,2	0,2	0,2	-2,4	-1,8	0,4
ESP	-0,4	-0,1	0,0	0,0	0,2	0,3	0,3	0,3	-1,6	-1,4	0,7
NLD	-0,4	-0,2	0,3	0,3	0,3	0,3	0,4	0,4	-1,3	-1,1	1,1
BEL	0,0	0,2	0,2	0,4	0,4	0,4	0,6	0,6	0,3	0,1	1,6
IRL	-0,6	0,4	0,2	0,3	0,4	0,4	0,4	0,4	0,1	-0,5	1,4
PRT	-0,4	1,1	0,0	0,2	0,2	0,3	0,3	0,3	-3,2	-1,7	1,0
GRC	1,1	9,6	0,5	-1,1	-3,9	1,2	1,3	1,5	-6,4	-4,1	-0,4
AUT	0,1	0,1	0,3	0,3	0,4	0,4	0,4	0,4	0,6	0,4	1,3
FIN	-0,2	0,2	0,3	0,4	0,4	0,5	0,5	0,5	-0,8	-0,9	1,7
EUZ	-0,2	0,3	0,1	0,2	0,3	0,4	0,4	0,4	-0,6	-0,3	1,1

Sources: Eurostat, OFCE calculations and forecasts, October 2013.

The crisis on a plateau

By Xavier Timbeau

This text summarizes the <u>OFCE's 2013-2014 forecast for the world economy</u>.

Six years after the onset of the financial and economic crisis, the acceleration in global growth expected in 2014 (Table 1) could have given hope for an end to the slump. While the sovereign debt crisis in the euro zone is of course over, and represents an important step, nevertheless aside from a few positive figures there is no indication that the crisis is at an end. Economic activity in the euro zone has reached a plateau, and the mechanisms underlying the sovereign debt crisis in the zone —in particular fear of default on public and private debt — could see the economies of the United States, Europe, the United Kingdom, and Japan plunge again at any time.

Table 1. Outlook for global growth

Annual growth rates, %

	Share ¹	Real GDP			
	of the total	2012	2013	2014	
EZ	15,5	-0,5	-0,4	0,9	
GBR	3,2	0,1	1,3	1,7	
USA	20,8	2,8	1,5	2,4	
JPN	6,3	2,0	2,0	1,0	
Developed countries	53,5	1,3	0,9	1,7	
World	100	2,8	2,5	3,1	

1. Weighting based on 2008 GDPs and PPPs, estimated by the IMF.

Sources: IMF, OECD, national sources, OFCE calculations and forecasts, October 2013.

The crisis is global and has features that have been rarely if ever seen in the past. Sovereign interest rates are, for instance, exceptionally low, except in countries where the financial markets are skeptical, but which account for little in the overall mass of public debt. This indicates a situation of a liquidity trap in which conventional monetary policy has reached its limits and where the ability of the monetary institutions to articulate a self-fulfilling future is crucial. However, as in the 1929 crisis, debate is raging about this capacity, raising numerous questions about an exit to the crisis. Monetary policy is at the heart of this uncertainty: are the extraordinary measures being taken stopping the economies from going over the brink? Would it be a good idea to lift these measures? Or is this really just an improvised makeshift with inflationary consequences that will be the source of the next crisis?

Economic activity, as measured by the GDP of the euro zone as a whole, is no longer contracting. Despite this, existing idle capacity is not being re-mobilized. Yet as long as the economies continue to be marked by idle capacity, the impact of the crisis will continue to be felt throughout the society. Wherever you look — GDP per capita, output gaps or unemployment — the indicators describe a plateau that is well below the level of 2007. The persistence of unemployment that is markedly above its equilibrium level is, for instance, swelling the ranks of the long-term unemployed, many without

benefits. The high level of unemployment is undermining social cohesion and threatening societies built on integration through work. The unemployed are thrown onto family or social security benefits, which are themselves subject to fiscal cutbacks. Young people entering the labor market are facing delays in gaining access to employment and will long bear the scars of that initial period of joblessness in their wages and their careers.

But the impact of unemployment extends even further. The fear of losing one's job or seeing one's company close down or be relocated spreads to people with jobs whose salaries wind up being affected or who are forced to accept worse working conditions. Southern Europe for instance is engaged in wage deflation, and through the dynamics of competition, is drawing in its neighbors.

The absence of a recovery is hardly surprising. A widespread massive programme of fiscal consolidation has been conducted in the developed countries. The total fiscal impulses from 2008 to 2013 can be used to make an assessment of the stimulation of the economies during the recession of 2008/09 and then of the fiscal consolidation that followed (Table 2).

Table 2. Fiscal impulses 2008-2014

In GDP points

	2008	2009	2010	2011	2012	2013	2014	2008-14
DEU	0,1	0,6	1,3	-1,1	-1,2	0,2	0,1	0
AUT	-0,2	0,3	0,5	-1,4	-0,3	-0,9	-0,4	-2,4
BEL	0,6	1,9	-0,1	0,1	-0,6	-1,0	-0,5	0,4
ESP	2,4	2,0	-1,4	-1,3	-3,4	-1,6	-1,0	-4,3
FIN	-0,8	0,4	1,3	-0,7	-0,3	-1,4	-0,3	-1,8
FRA	-0,1	2,7	-0,5	-1,8	-1,2	-1,4	-0,7	-3,0
GRC	3,0	3,2	-7,6	-5,5	-3,9	-3,3	-1,7	-15,8
IRL	4,9	2,2	-4,2	-1,5	-2,0	-1,7	-1,7	-4,0
ITA	-0,5	0,9	-0,7	-0,4	-3,0	-1,5	-0,6	-5,8
NLD	-0,4	4,0	-1,1	-0,5	-1,4	-1,5	-1,0	-1,9
PRT	-0,1	5,0	-0,3	-3,7	-3,9	-1,5	-1,5	-6,0
EA (11)	0,3	1,7	-0,3	-1,2	-1,8	-0,9	-0,4	-2,6
USA	3,0	3,8	-0,8	-1,3	-1,4	-1,5	-0,7	1,1
GBR	0,6	2,8	-2,7	-3,2	-0,5	-1,0	-1,0	-5,0
JPN	-0,9	4,8	0,5	0,5	0,5	1,9	-1,3	6,0

Sources: National accounts, OFCE calculations and forecasts, October 2013.

The debate on the fiscal multipliers, using empirical analysis based on structural modeling or the systematic review of historical events, validates the causality that runs from fiscal impulses to output gaps. A large part of the output gap in 2013 is due to fiscal consolidation. There is no permanent impact of the crisis on activity, but there is the consequence of unprecedented fiscal austerity.

The developed countries have undertaken this consolidation effort under pressure from the financial markets, backed by the European authorities. The fear of facing difficulty in financing the public debt (a significant proportion of which is renewed every year and which in the developed countries has a maturity of approximately 10 years) or of even losing access to finance altogether was reflected in higher sovereign yields and did not leave the States many alternatives. To regain credit, an ability to reduce the deficit had to be demonstrated, regardless of the price. The resulting consolidation was taken only as a preventive measure. The examples of Greece, but also Portugal, Spain and Italy,

illustrate the risk of not having the public accounts in order. For some, including the economists of the European Commission, it was the massive consolidation undertaken by the Member States that made it possible to end the euro zone crisis. But there is an alternative explanation, one with heavy implications for the desirability of fiscal consolidation: the role played by the European Central Bank and the implicit commitments to solidarity on the part of the euro zone countries were more compelling than economic policies that prolonged and deepened the recession.

The reduction of public and private debt in the economies is the key to exiting the crisis. This demands a clear and reasonable strategy that combines restoring economic activity and cutting unemployment, while maintaining low sovereign interest rates and conducting fiscal consolidation at a moderate pace. This strategy requires mastery of timing, consistency in the policy adopted, and coordination between the States and between economic agents within the States. In the euro zone, this relies on a credible commitment by the Member states to fiscal consolidation in the medium term and a commitment by the European Central Bank to keep spreads at a minimum. Fiscal discipline by the markets does not work — it has to be opposed by a political commitment to economic stability.

France: less austerity, more growth

By **Eric Heyer**

This text summarizes the OFCE's 2013-2014 forecast for the

French economy.

In 2013, the French economy should experience annual average growth of 0.2%, which means that by the end of the year its level of production should return to the level of six years earlier, at the end of 2007. This mediocre performance is very far from the trajectory that an economy recovering from a crisis should be on.

The French economy did however have great potential for recovery: average spontaneous growth of about 2.6% per annum over the period 2010-2013 was possible and would have allowed France to make up the output gap accumulated in 2008-2009. But this "recovery" has been hampered mainly by the introduction of budget savings plans in France and across Europe. For the single year 2013, this fiscal strategy will cut economic activity in France by 2.4 GDP points.

The understanding that the fiscal multipliers were high came late, and occurred only after the austerity plans had already had a negative impact on growth. At the end of May 2013, this awareness pushed the European authorities to give additional time to six EU countries, including France, to correct their excessive deficits. The easing of the Commission's requirements provided a breath of fresh air that enabled the government to relax the austerity measures set for 2014. According to the budget presented in autumn 2013, the domestic impact of the austerity measures will be reduced by 0.5 GDP points between 2013 and 2014; since our partners are also relaxing their policies, a boost to external demand is also anticipated. Overall, the easing of austerity will mean the addition of almost one point of growth in 2014 compared to 2013, despite the still high fiscal multipliers.

In these conditions, growth should come to 1.3% in 2014 on an annual average. By running at a rate still below its potential, the forecast growth will add to the output gap accumulated since 2008 and will continue to hurt the labour

market. The unemployment rate in metropolitan France will rise slightly, reaching 10.9% by end 2014.

As a result of the easing of austerity, the public deficit will be higher than what was initially planned. It is expected to come to 3.5% of GDP in 2014, after reaching 4.1% in 2013, with gross government debt near 95% of GDP next year.

Is the euro area out of recession?

By Philippe Weil

At its meeting on October 9th, the <u>Euro Area Business Cycle Dating Committee</u> of the <u>Centre for Economic Policy Research</u> (CEPR) in London drew on the OFCE for this thorny issue (for the composition of this committee, which I chair, see <u>here</u>). The Committee's mission is to establish a chronology of recessions and expansions in the euro area, similar to what the National Bureau of Economic Research has done for the United States, <u>dating back to 1854</u>.

This chronology is valuable in two ways.

The first is that it allows economists to examine the characteristics of Europe's economic development. Do recessions tend to be short or long-lasting? Frequent or rare? Deep or mild? Is the euro area evolving in concert with the US economy? Is the slowdown in economic activity caused by the financial crisis unusual (more persistent than usual, sharper)? Without a clear definition of the timing of the ups

and downs in Europe's economic activity and without a sketch of cyclical fluctuations, we cannot provide answers to these relatively basic questions.

The second advantage of this chronology is that establishing it requires an examination of all aspects of economic activity: GDP, of course, but also consumption, investment and especially employment (number of employed persons, number of hours worked). According to the CEPR's dating exercise, an expansion is a period in which every aspect of economic activity is growing significantly. It is not necessarily an episode of at least two consecutive quarters of GDP growth (much less one quarter!). For example, the CEPR Dating Committee has determined that the countries composing the future euro area were in recession during the period from the 3rd quarter of 1980 to the 3rd quarter of 1982, whereas real GDP had risen for several quarters during this time and it was higher at the end of the recession than at the beginning! The culprits were investment and employment, which fell sharply during this period.

To add to the complexity of the dating effort, the harsh reality of the world of economic statistics should not be forgotten: the statistics reach us late and are subsequently sometimes significantly, over time. meteorologists who know the temperature at the top of the Eiffel Tower in real time, economists have no idea, for example, of the level of GDP for the current month or quarter. The first estimates are released only several months later (e.g. the first flash estimate of euro area GDP for the third quarter of 2013 will be published by Eurostat only on 14 November 2013), and it might turn out that growth rates that seem positive based on preliminary estimates wind up after subsequent revisions to be negative - or vice versa. By examining all the determinants of economic activity (including employment), and not just GDP, the Committee is guarding against (so far successfully) the imperfections in this data

so as to avoid, for instance, declaring the existence of a recession which turns out to be a statistical mirage that disappears after further review of the data. Thus, the Committee did not report in September 2003 the existence of a recession between 2001 and 2003 even though the data showed a decrease in GDP during that time (but never, it is true, for two consecutive quarters). It concluded that there had been a prolonged pause during a period of expansion. This was a good move, as subsequent revisions of GDP cancelled these quarters of declining economic activity (see Figure 1). Its diagnosis was thus well advised.

(relative to the previous quarter) Quarter-on-Quarter Percentage changes in Euro Area 2001 Q4 GDP 0.20 0.10 0.00 -0.10 -0.20 20 MARON Source: ECB Monthly Bulletin.

Figure 1. Quarter-on-quarter Percentage Changes in the Euro Area 2001 Q4 GDP

So let's get back to the euro area in the state we see it in October 2013. The area

hit a peak in economic activity in the 3rd quarter of 2011 and, since going into recession at that time, it experienced quarterly growth that was slightly positive in the second quarter of 2013. The first estimate for the third quarter of 2013 will not be known, as mentioned earlier, until 14 November. There are, it is true, several corresponding indexes indicating that the cycle is in an upwards phase and that the macroeconomic outlook for 2014 is more favourable. But on 9 October the Dating Committee noted, nevertheless, that it would be premature at that time to conclude that the euro area was out of recession. Indeed, neither the length nor the strength of the putative recovery in economic activity was sufficient to conclude that the recession was already over. This judgment was not based on the absence at that point of two consecutive quarters of GDP growth because this is not the criterion that

(mechanically) guides the Committee's thinking. Nor does it reflect any pessimism about the economic outlook for 2014, because the Committee is not in the business of making predictions. The Committee's assessment is based simply on a review of all the data available at the time it meets. The Committee has not excluded that the euro area is simply going through a pause in the recession it entered a year ago.

1970 1975 1980 1985 1990 1995 2000 2005 2010 2013Q3
The end of the last recession period has not been determined yet.

Figure 2. CEPR-based Recession Indicator for Euro Area Business Cycles
CEPR based Recession Indicator

Note: The grey bands correspond to periods of recession as evaluated by the CEPR. Whether the latest period of recession is over has not yet been determined.

Higher taxes — a solution to the crisis?

By Mario Amendola, <u>Jean-Luc Gaffard</u> and Fabrizio Patriarca

This question, which may seem provocative, is worth asking provided that consideration is given both to the full dimensions of the crisis, and not just its financial aspects, as well as to the assumptions needed to make this a credible scenario. In the perspective discussed here, if tax hikes are to play a role, it would not be as part of a fiscal adjustment intended to restore public accounts worsened by the crisis, but rather with the aim of maintaining or restoring a level of

productive spending that was altered by increasing inequality. Furthermore, everything would depend on the nature of both the taxation and the government spending.

Everyone agrees today that rising inequality, particularly in the United States, has had an influence on the course of events. The indebtedness of the least affluent households merely delayed a fall in aggregate demand. The realization that these households were insolvent is what triggered the crisis. Furthermore, there is no solution in the medium or long term without deleveraging both households and business. The role of the public authorities is to assist this. But they can do this only by taking decisions that wind up increasing the public debt. Public debt is thus substituted for private debt. The debt-financed public deficit also needs to be stretched out until consumers and business have been able to get back to a balanced financial position enabling them to raise their level of consumption and investment. This scenario is, however, running up against the potential insolvency of the states, a situation that is particularly aggravated in the euro zone. It does not actually explain what are the sources for a recovery in consumption and investment due to a failure to relate this to the implications of rising inequality in regards to the distribution of demand for productive and nonproductive activities.

Recognizing the weight of inequality means, of course, recognizing that there is a problem with demand, but it also requires recognizing the heterogeneity of consumers and the non-homothetic nature of individual preferences. The rise in inequality is most of all changing the structure of demand. Some would say this is at the expense of goods consumed primarily by the mass of workers, to the benefit of luxury goods, while others would say at the expense of productive assets and to the benefit of existing financial and real estate assets.

The following mechanism might be at work. The richest

households have excess savings that they devote, on the one hand, to the purchase of luxury goods and assets on the financial and real estate markets, and, on the other hand, to loans to less affluent households channelled through financial intermediaries. The rise in inequality thus has two combined effects: pushing up the price of assets purchased by the more affluent, and raising the level of indebtedness of the less affluent. The first effect supports the second by allowing the loans granted to rely on the increasing value of the assets pledged (the "collateral").

Based on the assumption that public spending is a productive expenditure — it fuels demand for goods and services from the productive sector — an increase in public debt would support aggregate demand and stem the recession. However, in the medium term, interest charges could make it difficult to sustain the public debt with — and this is key — a need to reduce public spending before there is a significant recovery in private spending. The substitution of public debt for private debt shifts the problem, without solving it.

One possible alternative might be to tax the income of the wealthiest households. Still on the assumption that public spending is directed at the productive sector, this kind of taxation would ensure a redistribution of income, with as a corollary a reconfiguration of the structure of demand in favour of productive activities. Another assumption would also be necessary: that the additional taxes are actually paid by households that use a significant portion of their savings for the purchase of non-productive assets. In this situation, the objective would not be to raise taxes to absorb the public deficit in the hope that an economic recovery would make it possible to reduce them later, but rather to make better use of taxation as a tool for redistribution. While the tax burden would indeed increase, the point is to tax incomes that, in large part, consist of rents that go to unproductive consumption.

The hypotheses used here are somewhat uncertain due to the nature of public expenditure and revenue. Some public expenditure is unproductive, and it is difficult to distinguish what is productive from what isn't. The tax increases would affect different categories of taxpayers without actually discriminating between them according to the structure of their spending.

Furthermore, our purpose here is not to set out a credible solution that can be applied immediately. The point is to highlight the illusory nature of all-embracing solutions, whether this is a matter of generalized austerity, involving tax increases that wind up weighing down household and business spending, or the prolonged maintenance of public debt, which merely replaces private debt without affecting the structure of demand. So, following this analytical digression, this points to the conclusion that the effective implementation of a redistribution mechanism that could lead to an increase in potential output requires a reform of the state that affects both the orientation of public spending and the structure of taxation, all of which requires time and foresight, not to speak of political courage.

... See Amendola, M., J.-L. Gaffard and F. Patriarca (2013), "Inequality, debt and taxation: the perverse relation between the productive and the non-productive assets of the economy", OFCE Working Paper No. 2013-21.

France-Germany: is there a

demographic dividend?

By Vincent Touzé

Thanks to a high birth rate, France is aging less quickly than Germany. According to Eurostat, the French population is expected to exceed the German population by 2045. France could well become a European champion. But to what extent should we be talking about a demographic dividend?

The renewal of generations is of course important. It makes it possible to maintain a workforce that is large enough to meet the social costs (pensions, health care) of senior citizens, who are living longer and longer. In this sense, France should do better than Germany. But population growth also has its share of disadvantages. Indeed, in a context of scarce resources, the size of the population is primarily a factor that splits the amounts available per capita. For example, on a rationed labour market that is struggling to keep up the positions on offer due to problems with outlets and with production costs that are not competitive enough at the global level, growth in the labour force can also be counted in the numbers of unemployed. To avoid this, a more efficient labour market that is rooted in a thriving economy is essential. The demographic dividend depends as much on the productive capacity of new generations of workers as on their size.

The latest *Note of the OFCE* (no. 5, October 11, 2013) compares the relative performance of France and Germany over the period 2001-2012. This study shows how recent economic developments have been distinctly favourable to the German economy. Despite a glorious demographic future, France is mired in weak growth and mass unemployment that is hitting young people very hard. The demographic dividend is slow in coming.

High-impact economists

By <u>Zakaria Babutsidze</u> and <u>Mark J. McCabe</u>

This coming Monday, October 14 2013, as many as three economists will join the elite group of winners of the Sveriges Riksbanks Prize in Economic Sciences in Memory of Alfred Nobel. The Royal Swedish Academy of Sciences is responsible for the selection of the Laureates in Economic Sciences from among the candidates recommended by the Economic Sciences Prize Committee. In early October, the Academy selects the laureates through a majority vote.

Presumably, the main criterion for awarding this prize is the impact that the winner(s) have had on society.[1] Clearly the assessment of such an impact is not an easy and straightforward matter. It involves approaching the problem from a variety of perspectives, some more objective than others. It is probably safe to assume that researchers, whose work has had a large impact on society, have also influenced the discipline of economics.

In this post we report some statistics in order to assess different economists' impact on the discipline. To do this, we use data from 48 peer-reviewed journals in Economics and Finance. Each of these journals has published at least five articles authored by one or more of the prize winners between 1969 and 2012 The data is collected from Thomson Reuters' ISI Web of Science and contains all articles published in these 48 journals starting in 1956 and ending in 2012, and all citations to each of these articles up to (and including) 2012.

The impact of a researcher is often measured by the number of

citations his or her work has generated, e.g. the average annual number of citations to each article, weighted by the number of authors. This measure allows us to compare (albeit imperfectly) articles published at different points in time. However, for the case at hand, we are interested in the long run (or total) impact of the researcher. Therefore, our guiding indicator will be the total number of citations generated by the works of an economist weighted by the number of authors.

[Note: In identifying the pool of researchers eligible for the 2013 Prize, we excluded all past winners and, following the Academy's guidelines, any other scholars who are now deceased.]

To get a sense of the citation impact of individual papers, take a look at Table 1, which lists the top 10 most cited articles in economics not authored by any prior prize winners. Although this provides an incomplete picture of a researcher's total career impact, the Academy normally cites influential papers in the press releases (and explanatory materials) announcing the winners.

Total Cites Authors Year Journal Michael Jensen and William Meckling(+) 7157 1976 Journal of Financial Economics 2 3246 Tim Bollerslev 1986 Journal of Econometrics 3210 Jerry Hausman 1978 Econometrica 4 3202 Soren Johansen 1988 Journal of Economic Dynamics & Control 3121 Whitney Newey and Kenneth West 1987 | Econometrica 6 Paul Romer 3065 1986 Journal of Political Economy 7 2665 1986 American Economic Review Michael Jensen 1972 American Economic Review 8 2664 Armen Alchian(+) and Harold Desmetz 2654 Manuel Arellano and Stephen Bond 1991 Review of Economic Studies 10 2645 Lars Peter Hansen 1982 Econometrica

Table 1. Top 10 most cited articles in economics since 1956

(†) The author is deceased.

Table 1 features 11 economists that are eligible for the prize. Out of these 11 only one, Michael Jensen, has two papers in top 10. The table also demonstrates the large gap between the citation numbers of papers ranked first and second.

In what follows we present a researcher or career-level analysis. We assess the impact in two different ways. One

approach utilizes all of the papers authors have written in their careers up to 2012 (this is a set comprising more than 170,000 papers). Our other approach is to utilize only the highest-impact papers (the top 100 most cited papers ever written).[2]

Before presenting the list of the most cited economists we first attempt to assess the power of the exercise. Namely, we ask what is the chance that people with high impact, as measured by number of citations, actually get awarded the prize? To answer this we take the top 25 most cited researchers according to each of the two criteria defined above (using all articles and the top 100 most cited articles) and see how many of those 25 have actually been awarded the prize. It turns out that in each case 13 out of 25 researchers have already won the prize. [3][4] These results suggest that number of citations received by researchers is a reasonable proxy for impact as defined by the Academy.

Next, the list of top 10 economists that are eligible for the Nobel Prize this year is presented in table 2. Panel A utilizes all articles in our dataset. Panel B of the table presents results using only the top 100 most cited articles. The columns titled Rank report the rank of the economist in the given list. The $Total\ Rank$ columns refer to the rank of the economist in the list of high-impact economists that includes authors who have won the prize and those who are deceased. The Citations columns reports the total number of citations associated with the relevant set of articles by the author, weighted by the number of authors (e.g. if an article, authored by n authors, received z citations, then each listed author is credited with z/n citations).

Table 2. Top 10 most cited economists since 1956

		Α			В				
Rank	Total Rank	Citations	Author	Rank	Total Rank	Citations	Author		
1	1	17931.38	Eugene Fama	1	1	9179.5	Eugene Fama		
2	6	11573.1	Michael Jensen	2	3	7331.5	Michael Jensen		
3	7	11211.83	Robert Barro	3	5	6072.5	Soren Johansen		
4	11	9745.25	Andrei Shleifer	4	10	4496	Paul Romer		
5	14	7014	Soren Johansen	5	15	3277	Robert Barro		
6	15	6875.5	Jerry Hausman	6	16	3246	Tim Bollerslev		
7	22	6426.833	Tim Bollerslev	7	17	3210	Jerry Hausman		
8	23	6079.667	Paul Romer	8	22	2645	Lars Peter Hansen		
9	24	5947.25	Richard Thaler	9	26	2565.5	Stewart Myers		
10	26	5901.833	Robert Vishny	10	29	2140.417	Andrei Shleifer		

As one can see from the table 2, eight economists appear in both of the lists. Five out of this eight are also featured in Table 1. These eight people are outstanding researchers by our measures and will most likely be among the economists considered for the 2013 prize.

The exercise that we have reported here measures the researchers' impact on the discipline. However, the main quiding principle behind the Economic Science Prize is the impact on society. These two do not perfectly correlate. To see this, consider last year's prize winners — Alvin Roth and Lloyd Shapley. They were awarded the prize "for the theory of stable allocations and the practice of market design". Their work has generated significant social benefits. For example, Roth is a co-founder of the New England Program for Kidney Exchange, which enables organ transplantation where it otherwise could not be accomplished. However, if we apply our measures to Roth and Shapley, their performance is not outstanding. None of them have authored an article that enters the list of 100 most cited articles in economics; therefore they do not figure in our rankings using this particular methodology. When we consider all articles, Roth ranks 99^{th} , while Shapley ranks 979th.

Postscript: In the discussion above, our primary intention is

not to predict Monday's winners. Nevertheless, it seems that the Economic Sciences Prize Committee selects a discipline, or a narrow research area to recognize and only after this selects candidates who have contributed to the advancement in that area the most. Recall that we provided an analysis of total citations. We have not performed any breakdown by research areas and have not modeled the Committee's area selection process. In contrast to our work, area selection is an important component of the well-known efforts by the Intellectual Property and Sciences business of Thomson Reuters to predict winners of the Economics Science Prize. This year they predict that one of the following three are likely to be honored b y the Academy: areas microeconometrics, time-series econometrics or regulation theory.[5] In each of these three areas they predict two or three winners. In the table below, without further comment, we provide the list of people they predict to win the Nobel Prize alongside with their ranks in our high-impact economists list.

Table 3. Thomson Reuters' prediction for the winners of the prize 2013

Total Rank	Author	Area
225	Joshua Angrist	Microeconometrics
127	David Card	Microeconometrics
36	Alan Krueger	Microeconometrics
211	David Hendry	Time-series econometrics
123	Hashem Pasaran	Time-series econometrics
39	Peter Phillips	Time-series econometrics
73	Sam Peltzman	Regulation theory
206	Richard Posner	Regulation theory

[1] In selecting a winner for the Economic Science Prize, the Swedish Academy follows the same principle that is used in

awarding the five original Nobel Prizes, namely choosing those individuals, "...who have conferred the greatest benefit to mankind."

- [2] Book chapters and working papers are not included in our dataset.
- [3] However, the identities of the 13 prize winners is somewhat different across the two procedures. When all articles are considered, the 13 winners among the top 25 most highly cited authors are (in decreasing order of importance): Becker, Lucas, Heckman, Stiglitz, Engle, Merton, Kahneman, Solow, Arrow, Granger, Akerlof, Krugman, Williamson. When the set of the top 100 articles is considered, the 13 winners are Engle, Becker, Heckman, Kahneman, Solow, Coase, Akerlof, Lucas, Arrow, Granger, Sharpe, Black and Scholes.
- [4] Note that the lists also include a number of influential economists who died without winning the prize. These include Zvi Griliches, William Meckling, Charles Tiebout, Amos Tversky and Halbert White.
- [5] It is noteworthy that seven of the 10 papers listed in table 1 are in the general area of econometrics.

Why it's necessary to read Robert C. Allen: Global Economy History: A Very Short

Introduction [1]

By Guillaume Daudin (Professor at the University of Paris-Dauphine, Researcher with the OFCE)

Robert C. Allen (born in 1947) has been Professor of Economic History at Oxford University since 2002. He defended his PhD thesis in 1975 at Harvard University. He has worked on a wide variety of topics and has received numerous awards for his publications. In 2009, his The British Industrial Revolution in Global Perspective was named Book of the Year by The Economist and the Times Literary Supplement. His research has focused on many aspects of the economic history of development: real wages, advances in agriculture, the sources of technical progress, the impact of imperialism, and sustainable development. He has been a key figure in the debate over the origin of divergences in development within Europe: he defends a unique position that stresses the importance of the material base (in Marx's sense) and of political choices rather than of the rest of the superstructure (culture, institutions, laws, etc.).

In 2011, he produced a very short book that was part of an English collection which resembles the "Repères" collection. It has already been translated into Italian, and may soon be available in French as part of the "Grands Repères" collection of Editions La Découverte. This book provides an excellent introduction to some of the ongoing debate on the comparative history of development in modern times. It focuses on the mechanisms for the start-up of long-term economic growth in each country.

The book's thesis can be formulated as follows. The British Industrial Revolution can be explained by the exceptional conjuncture of relatively high wages compared to the cost of the island's capital and energy, which was due in part to the British Empire. This situation led entrepreneurs to develop

technical innovations to save labour, even if this meant using production methods that were very capital and energy intensive. The modern economy was born.

The contrasting dissemination of the Industrial Revolution in the nineteenth century reflected the ability of each economy to implement the "standard model of development": the integration of the domestic market; the protection of industry from trade; the development of a banking system; and the promotion of mass education. Western Europe and North America were successful in doing this, other countries less so.

From the late nineteenth century, the technology gap between the rich and poor countries widened. Japan, the Soviet Union and Asia's newly developed countries succeeded only thanks to a determined policy on the part of the State. This involved simultaneously creating all the structures of the modern economy (steel mills, power plants, infrastructure, etc.). None of these investments would have been profitable in isolation. It was therefore necessary that the State ensure their coordination by developing policy simultaneously on every front. This is illustrated by the important role that Japan's Ministry of International Trade and Industry (MITI) played in the country's post-war development, using the example of steel. The MITI ensured that Japanese steel production was taking place on sites large enough to take advantage of increasing economies of scale; that the steelconsuming industries (e.g. the automotive industry) expanded fast enough to absorb the steel output; that Japanese consumers saw their wages rise fast enough to consume the goods produced (thus providing ex post justification for the decision to use capital-intensive production technology); and that foreign markets did not close.

This book undoubtedly provides a somewhat limited perspective on global economic history, since it is focused on industrialization and its dissemination. It therefore leaves out a number of topics: inequality, finance, globalization, etc. It does not go very far back in history, and thus does not address the problems of development over the very long term. More fundamentally, perhaps, it is more a work on the comparative history of the economic development of nations than a work on global history per se. From a methodological viewpoint, it is Eurocentric in that it examines the dissemination of a European model, but this is not so much the case with regard to geographical coverage and documentation. Whole chapters are devoted to Africa and Latin America, continents that are rarely treated seriously in textbooks.

"Textbook" — so now the term is out. This book is indeed a textbook, an introduction to a broad and complex subject, and it must be judged accordingly. It is a short book that is better for not losing its focus. It defends a clear thesis, and the fact that it does not take into account the world in all its complexity has advantages. On the one hand, the thesis can be demonstrated more clearly, and it is easier to understand the dynamics. On the other hand, the reader (ultimately with guidance from the teacher) can more easily develop a perspective on the work and change their view by taking a critical approach.

The book differs from the economic history textbooks on the market in at least three ways:

- As I have already mentioned, it has a truly global geographic coverage, whereas many textbooks focus on French or European history. This is, for instance, the book that introduced me to the adaptation of the techniques of the Japanese textile industry in an environment of low wages during the second half of the nineteenth century. This was also the book that introduced me to the role of Africans, the Krobo people in particular, in the development of cocoa farming in Ghana during this same period;
- The book is well informed about recent advances in economic history. Currently, this field is partly

dominated by Anglo-Saxon economists; their work is very rarely translated, and French historians are not very familiar with it;

Yet it is a very accessible book. It is illustrated by numerous tables and graphs. It is anchored in the concrete thanks to accurate descriptions of events that are unfamiliar even to specialists on the subject, as they concern national stories that to us seem distant. This can only encourage the reader to gain a better knowledge of the field.

I have taught economic history at HEC Paris, the University of Lille, Sciences Po, and now Paris-Dauphine. I wish this book had been available when I started my teaching: it would have helped me a lot. Reading in English is usually not a problem for graduate students, even if it is more difficult for undergraduates. I'm looking forward to a translation so that I can have all my students read it.

[1] The book was published in 2011 by Oxford University Press.

Never on Sunday?*

By <u>Xavier Timbeau</u>

* Note from the editor: This text was initially published on 10 June 2008 on the OFCE site under the heading "Clair & net" [Clear & net] at a time when working on Sundays was a burning issue. As this is once again a hot topic, we are republishing this text by Xavier Timbeau, which has not lost its relevance.

In Jules Dassin's cult film, Ilya, a prostitute working a port near Athens, never works on Sunday. Today, according to the Enquête emploi labour force survey, nearly one-third of French workers say they occasionally work on Sunday and nearly one out of six does so regularly. As in most countries, Sunday work is regulated by a complex and restrictive set of legislation (see here) and is limited to certain sectors (in France, the food trade, the hotel and catering industry, 24/7 non-stop manufacturing, health and safety, transport, certain tourist areas) or is subject to a municipal or prefectural authorization for a limited number of days per year. This legislation, which dates back more than a century, has already been widely adapted to the realities and needs of the times, but is regularly called into question.

The expectations of those who support Sunday work are for more business, more jobs and greater well-being. Practical experience indicates that revenue increases for retailers that are open Sundays. Conforama, Ikea, Leroy Merlin and traders in the Plan de Campagne area in the Bouches du Rhone département all agree. Up to 25% of their turnover is made on Sunday, a little less than Saturday. For these businesses, it seems clear that opening on Sunday leads to a substantial gain in activity. And more business means more jobs, and since there are also significant benefits for consumers, who meet less traffic as they travel to less congested stores, it would seem to be a "win-win" situation that only a few "dinosaurs" want to fight on mere principle.

Nevertheless, some cold water needs to be thrown on the illusions of these traders. Opening one more day brings more business only if the competition is closed at that same time. This is as true for furniture, books, CDs or clothes as it is for baguettes. If all the stores that sell furniture or appliances are open 7 days a week, they will sell the same amount as if they are open 6 days a week. If only one of them is open on Sundays and its competitors are closed, it can then

capture a significant market share. It is easier to purchase washing machines, televisions and furniture on a Sunday than on a weekday. So anyone who opens on their own will benefit greatly. But ultimately consumers buy children's rooms based on how many children they have, their age or the size of their home. They do not buy more just because they can do their shopping on Sunday. It is their income that will have the last word.

It is possible that a marginally larger number of books or furniture are sold through impulse buying on Sunday, if the retailers specializing in these items are open. But consumer budgets cannot really be stretched, so more spending here will be offset by less spending elsewhere. Year after year, new products, new reasons for spending, new commercial stimuli and new forms of distribution emerge, but these changes do not alter the constraints on consumers or their decisions.

In the case of business involving foreign tourists, who are passing through France, opening on Sunday could lead to an increase in sales. Tourists could spend less in another country or after they return home. But this positive impact is largely addressed by existing exemptions.

In 2003, the strict German legislation regulating retailer opening times was relaxed. This did not lead to any change in the population's consumption or savings (Figure 1). Value added, employment and payroll in the retail sector stayed on the same trajectory (relative to the overall economy, see Figure 2). Opening longer does not mean consuming more.

The issue of Sunday opening is a matter of social time and its synchronization as well as consumer convenience and the freedom of the workforce to make real choices about their activities. Sunday work affects many employees, so expanding it is a societal choice, not a matter of economic efficiency.

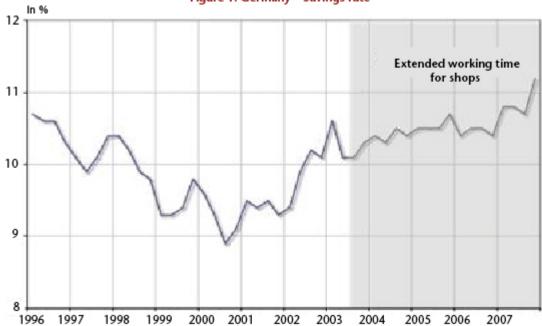
Finally, the complexities of the legislation on Sunday work

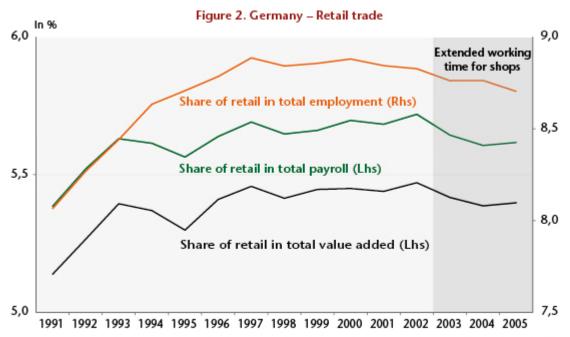
and its unstable character have led economic actors to adopt avoidance strategies. For example, in order to open on Sunday Louis Vuitton installed a bookstore (with travel books!) on the 5th floor of its Champs Elysées store (the other Louis Vuitton stores in Paris are closed on Sundays). Selling luxury bags thus became a cultural activity. Large food stores (which can open on Sunday morning) sell clothing and appliances, thus justifying other ways of working around restrictions by nonfood retailers, who view this as unfair competition. These workarounds render the law unjust and distort competition with a legal bluff as cover.

Any change in the law should pursue the objective of clarification and not introduce new loopholes (as did the recent amendment of December 2007 to the <u>Chatel law of 3 January 2008</u> extending earlier exemptions to include the retail furniture trade).

Homer, a cultured American on a visit to Athens, attempted to save Ilya from her sordid fate by introducing her to art and literature. But Homer was acting on behalf of a pimp from the Athens docks who wanted to put an end to the free-spirited Ilya's subversive influence on the other prostitutes. When Ilya learned of this, she went back to her work: trading herself for money. Her dignity came from never doing it on Sunday.

Figure 1. Germany - Savings rate





Sources: Annual accounts, Statistisches Bundesamt Deutschland. The savings rate is gross savings relative to gross disposable income. In the German classification, retailing is sector WZ-52. Author's calculations.