

Reduced rate employers' social security contributions on low wages in France, 1993-2009¹

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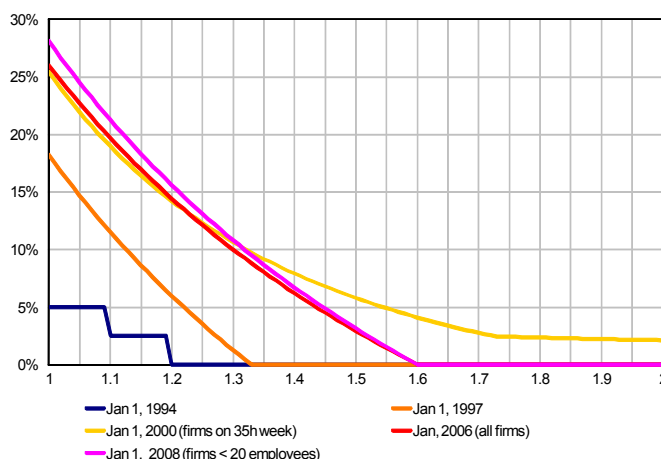
- Reduced rate employers' social security contributions for low-wage workers, first introduced in 1993 and progressively extended since then, are a key component of employment policy in France. Their gross cost to public finances amounted €22.2 billion in 2009 (not including revenues from their positive impact on employment and the resulting lower spending on unemployment benefits). This paper summarises the findings of studies on this scheme and updates the work of Boissinot et al.²
- According to existing studies, this policy has a powerful impact on job creation although its precise extent is controversial. It is highly effective in terms of cost per job created, in present French labour market conditions.
- Its effects on wages are more ambiguous: falling unemployment and the share-out of the surplus between employee and employer can lead to a rise in negotiated wages; conversely, the progressive nature of contribution rates can limit the impact of productivity gains on wages. Existing studies yield no evidence of "low-wage traps".
- The combination of an extension of these reductions with other major economic policy measures, as from 1998, complicates the task of evaluating the effects of this scheme from then on. In particular, the 2003 Fillon reform combined an extension of across-the-board reductions with convergence between the different minimum wages created when the "35-hour" week was introduced. Studies suggest that, in the aggregate, the additional reductions have offset the negative impact of the rise in low wages on employment.

Sources: DARES and DG Trésor.

Interpretation: At January 1, 2008, the reduction was 19.7 contribution points for wages equal to 1.1 times the minimum wage (SMIC) in a firm with 20 employees and more, and 21.3 contribution points for wages equal to 1.1 times the minimum wage in a firm with fewer than 20 employees

NB: At January 1, 2000, the minimum remuneration applicable in firms that had adopted the 35-hour week was the 2^{ème} Garantie Mensuelle de Rémunération (GMR-2nd Guaranteed Monthly Remuneration), corresponding to an hourly wage 8% above the minimum wage; the corresponding scale of reductions shown on the chart is expressed as a multiple of this guaranteed monthly remuneration; for all other cases, the wage referred to is the hourly minimum wage.

Scale of reductions (in "social security contribution points") depending on wage level, expressed in multiples of the minimum remuneration applicable



- (1) This document was prepared in conjunction with the Direction de l'Animation, de la Recherche, des Études et des Statistiques (DARES). The collaboration has also given rise to a more detailed publication by the DARES in its "Documents d'Études" working paper, no. 169.
- (2) J. Boissinot, J. Deroyon, B. Heitz and V. Rémy (2008), "Les allègements de cotisations sociales patronales sur les bas salaires en France de 1993 à 2007" (Reductions in employers' social security contributions on low wages in France, 1993-2007), in *Salaires minimum et bas revenus : comment concilier justice sociale et efficacité économique ?* (Minimum wage and low incomes: How Can Social Justice Be Reconciled with Economic Efficiency?), P. Cahuc, G. Cette and A. Zylberberg, report of the *Conseil d'Analyse Économique*.

1. Birth of the scheme and its economic foundations

The move to across-the-board measures to bring down labour costs occurred in the early 1990s, following studies by the French Planning Commission, with the Charpin and Brunhes reports in 1992 and 1993 respectively. Unemployment had been rising continuously since 1991, affecting more than 10% of the working population by the end of 1993.

The working population had been growing fast, certainly. But, compared with other countries, France was creating fewer jobs for a given level of growth. It was estimated at the time that growth on the order of 2.5% was needed in order to stabilise unemployment. What was needed was either to boost the economy's growth potential, or to "enhance the job content of growth", i.e. create more jobs for a given level of activity.

These reports suggested that, among the industrialised countries, after several years of wage restraint, France no longer suffered any special handicap resulting from excessively high average wage costs. On the other hand, whereas until 1968 the minimum wage had lagged behind the average wage, the gap between the cost of labour at the level of the minimum wage and at the level of the average wage had narrowed sharply between 1970 and 1985. **These years had also witnessed a worsening jobs situation, affecting the low-skilled. The authorities consequently chose to target reductions in labour costs at the level of the minimum wage.**

On this view, the proximity, in France, between the minimum wage and the median wage prevented the wages of the least-skilled workers from adjusting to their productivity, leading to a very high concentration of under-employment among these workers. **Against this background, reducing social security contributions on low wages, by reducing labour costs without lowering employees' pay, helps reduce unemployment for the low-skilled while preserving their purchasing power.** Targeted reductions in employers' social security contributions were accordingly implemented.

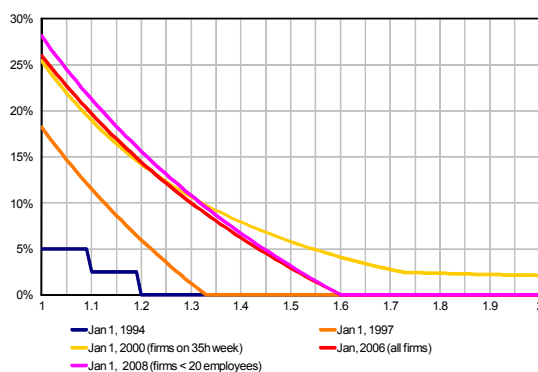
These reductions have been through three main phases (in fact they were modified practically every year):

- Until 1998, policy focused on reducing labour costs in the neighbourhood of the minimum wage (with a cut-off threshold varying between 1.2 and 1.33 times the minimum wage) for all firms (under the so-called "Baladur" and then the "Juppé" reductions);
- Then, between 1998 and 2002, the scope of reductions was extended for companies that reduced their working time (under the so-called "Aubry" reductions), in order to offset the impact of this work time reduction on the cost of labour: at minimum wage level, the reduction was increased from 18.2 to 26 contribution points, falling thereafter to a floor at an annual figure of RRF 4,000 just above 1.7 times the minimum wage;

- Finally, all firms were eligible for the so-called "Fillon" reductions, phased-in between 2003 and 2005, designed to neutralise the impact of the upward convergence of the minimum wage and the "Guaranteed Monthly Remunerations" (GMR), introduced to accompany the implementation of the 35-hour week, and which particularly affected firms still on 39 hours¹.

After the extension of reductions to the smallest firms, introduced on July 1, 2007, the maximum amount was 26 points (respectively, 28.1 points) at the level of the minimum wage in firms with 20 employees and more (respectively, fewer than 20 employees) and the cut-off threshold was set at 1.6 times the minimum wage. In addition, the method used to calculate the exemption rate was modified between 2007 and 2011 so as to no longer penalise recourse to overtime, since the increased wage at which they were paid entailed a reduction in the exemption rate for a given level of wage.

Chart 1: Scale of reductions (in contribution points) depending on wage level, expressed in multiples of the minimum applicable remuneration



Sources: DARES and DG Trésor.

Interpretation: At January 1, 2008, the reduction was 19.7 contribution points (respectively 21.3 contribution points) for a wage equal to 1.1 times the minimum wage (SMIC) in a firm with 20 employees and more (respectively, fewer than 20 employees).

NB: At January 1, 2000, the minimum remuneration applicable in firms that had adopted the 35-hour week was the 2^{me} Garantie Mensuelle de Rémunération (GMR-2nd Guaranteed Monthly Remuneration), corresponding to an hourly wage 8% above the minimum wage; the corresponding scale of reductions shown on the chart is expressed as a multiple of this guaranteed monthly remuneration; for all other cases, the wage referred to is the hourly minimum wage.

This succession of measures has raised the cost to the public finances of these reductions, rising in stages (see chart 2) to €22.2 billion in 2009. Out of this total, it is reckoned that €9.3 billion corresponds to the discounted cost of across-the-board reductions for low wages prior to the working-time reduction². The remainder, namely €12.9 billion, corresponds to the increase in rate cuts accompanying the introduction of the working-time reduction and the ensuing upwards convergence of the SMIC and the Guaranteed Monthly Remunerations (to compensate for the additional hourly cost to firms having reduced their

(1) This reform also modified the method used to calculate reductions, which were then based on the hourly wage.
 (2) Which means that if the working-time reduction (French acronym "RTT") and the consecutive increases in the minimum wage had not taken place and if the pre-"RTT" scale had remained in place, the total figure for across-the-board reductions would currently amount to around €9.4 billion, assuming that the cost of these reductions had risen in line with value added. This scenario is based on three assumptions, namely: in the absence of any change in the scale of reductions, their cost would have risen along with the total wage bill (which presupposes, among others, that the minimum wage and the average wage move more or less in parallel); the total wage bill would have risen in step with value added; and the growth in value added would have been identical to the observed growth rate.

working week, and to compensate for the steep rises in the minimum wage between 2003 and 2005 for the others).

This increase raised the maximum reduction at the level of the minimum wage from 18.2 to 26 points for all firms with more than 20 employees (28.1 points for firms with fewer than 20, from July 1, 2007³). Also, it widened the scope of employees concerned from those paid up to 1.3 times the minimum wage to those on up to 1.6 times the minimum wage.

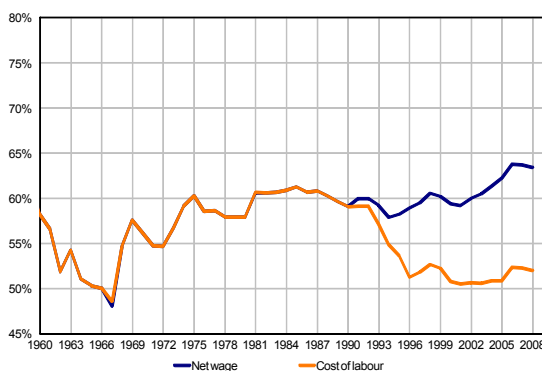
These estimates correspond to gross costs and therefore ignore the return for the public finances associated in particular with the scheme's impact on employment.

Since January 1, 2011, the parameters utilised to determine the amount of the reduction are measured on an annual basis. In addition, the mechanism used to compensate for the impact of overtime pay has been abandoned with effect from January 1, 2012. These measures should help to lower the cost of these reductions.

2. The effects of the reductions on employment

These measures have had a very clear impact on the change in the relative cost of labour at the level of the minimum wage (see chart 3). Up until 1993, the net minimum wage and the cost of labour rose more or less in step, with a pronounced narrowing of the distribution of remuneration and costs between the end of the 1960s and the mid-1980s, followed by a widening until the early-1990s. Thereafter, a rapid rise in the minimum wage led to a further narrowing of disparities in remunerations, with the net minimum wage outpacing the net median wage between 1993 and 2006. With the introduction and increase in reductions of employers' contributions, the cost of labour at the level of the minimum wage, on the other hand, has risen less rapidly than the cost of labour at the level of the median wage, thereby reducing the relative cost of low-skilled labour for employers.

Chart 3: How the minimum wage has moved relative to the median wage

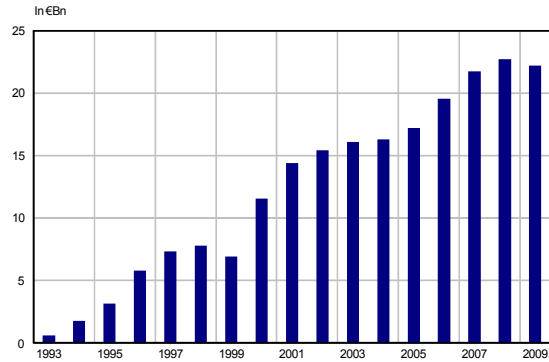


Sources: Insee, DADS, DARES and DG Trésor calculations.

Interpretation: In 2008, the net pay of a full-time worker on the minimum wage represented 63% of the net median wage, whereas the cost of labour represented 52% of the cost at the level of the median wage.

This steep fall in the relative cost of labour at the level of the minimum wage has been accompanied by a stabilisation of

Chart 2: Change in the amount of across-the-board reductions in social security contributions



Sources: Roguet, 2008; Pessoa e Costa and Roguet, 2011; Acof.

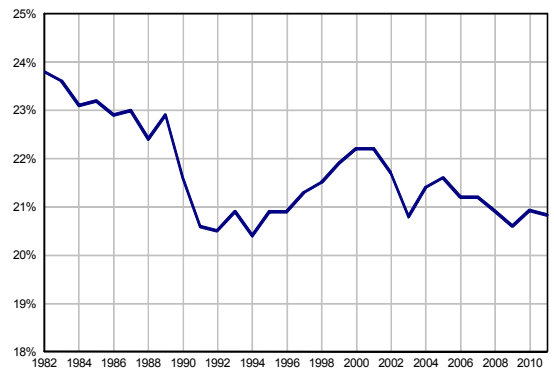
Scope: General social security system, including special funds (Mutualité Sociale Agricole, etc.).

Interpretation: in 1995, spending on across-the-board reductions in social security contributions cost the general system €3.1 billion.

the share of low-skilled labour in total employment (see chart 4), which was previously trending downwards.

Lower social security contributions played a part in this stabilisation of the share of low-skilled labour in total employment. While at the start of the 1990s the level of the cost of low-skilled labour did not lead to under-employment of unskilled workers in France, the first cuts in contributions do appear to have boosted these workers' gross wages significantly, at first (since these reductions stimulated demand for low-skilled labour). Yet this appears only partially to have been the case⁴.

Chart 4: Share of unskilled labour in total employment



Source: Insee, enquête emploi (Employment survey).

Interpretation: Unskilled labour represented 23.8% of total employment in 1982.

Quantitative evaluations suggest that policies to reduce social security contributions are cost-effective.

It is hard to assess the effectiveness of policies to reduce contributions: whereas most employment policy measures target a specific public (based on criteria of age, sector of activity, or employability), reductions in contributions apply to all workers on a given wage level. Consequently it

- (3) The full-year cost of the July 1, 2007 increase in the maximum reduction for workers at the level of the minimum wage in firms with fewer than 20 employees is estimated at €640 million; the introduction, for the purposes of calculating the exemption rate and as from October 1, 2007, of a mechanism to compensate for the impact of overtime pay also contributed significantly to the rise in the figure for across-the-board reductions in 2007 and 2008.
- (4) (See T. Amossé, O. Chardon (2006), "Les travailleurs non qualifiés: une nouvelle classe sociale?" (Unskilled workers: a new social class?), *Économie et Statistiques* no. 393-394.

is difficult to evaluate the effect of reduced contributions on low-wage employment using econometric techniques, since there is no "control" population, properly speaking, to which the measure does not apply.

Box 2 presents the main existing studies, which mainly focus on the reductions in place in 1997 (the so-called "Juppé" reductions). It is harder to assess the impact of the broadening of these reductions at the time of introduction of the working-time reduction and later the Fillon reform, owing to its concomitance with the increase in the minimum wage scales (see Box 3).

Two points emerge from all of these studies:

- **The policy of reduced contributions on low wages has proved its effectiveness.** The reductions decided in the early 1990s, and put in place before the working-time reduction, i.e. between 1993 and 1997, are reckoned to have led to the creation or preservation of between 200,000 and 400,000 jobs. Discounting for growth in value added per worker, in 2009 this represents a gross cost per job created on the order of €20,000-€40,000. The net cost (allowing for the additional social security contributions generated by the jobs thus created, together with lower expenditure on minimum social benefits and unemployment benefits⁵) would represent on the order of €8,000 to €28,000 at 2009 prices per job created, which makes this policy one of the least costly job-creation instruments in the medium term, in the market sector;
- The first wave of reductions in contributions in the early-1990s brought down the cost of labour. The second wave, starting in the late-1990s, served to prevent the working-time reduction and upward convergence of minimum wages from raising the cost of unskilled labour unduly. The transition from the 39-hour to the 35-hour working week was accompanied by a rise in the hourly wage for workers on the minimum wage, designed to maintain their living standards. The distinction sometimes made between "defensive" reductions in social contributions (intended to contain

a rise in the cost of labour) and "offensive" reductions (intended to lower the cost of labour) is unimportant in terms of their effectiveness, since any policy aimed at lowering the cost of labour relative to a given baseline situation has a positive impact on employment by comparison with that baseline situation.

The combination, starting in 1998, of an extension of these reductions and other major economic policy measures (i.e. the working-time reduction, followed by the convergence of the minimum wages and the Guaranteed Monthly Remunerations) complicate attempts to evaluate the effects of the system since that time. Consequently it is hard to estimate precisely how a total abolition of the reductions now in existence would affect employment. One approximate method consists in calculating a cost per job created based on job creations traceable to the reductions, estimated for the period prior to 1998 and in applying this to the total figure for reductions today. As explained above, the gross cost of the early reductions, restated for 2009 values, works out to €20,000-€40,000 per job created. **By applying these values to the total amount of reductions in 2009, i.e. €22.2 billion, we may deduce that between 0.6 million and 1.1 million jobs could be destroyed in the space of just a few years if all of these reductions were to be abolished.** However, this extrapolation rests on strong assumptions: in particular, it takes no account of the scale's significant extension between 1997 and 2009, and therefore assumes "constant returns" in the effects of reduced contributions on employment. This assumption is by no means self-evident. For example, Barlet et al. (2010)⁶ propose a model in which the effects of the reductions on employment may not necessarily be entirely linear; in their simulations, the returns on the reductions apparently halved between the first wave and the second one⁷. **By way of illustration, if we assume that the cost per job created for the second wave of reductions had been multiplied twofold, the estimate of the number of jobs destroyed by their total abolition would shrink to between 400,000 and 800,000.**

Box 1: The mechanisms by which reductions in contributions act on employment

Reducing social security contributions creates or preserves jobs via two channels:

- on the one hand, the fall in the cost of labour allows the firm either to cut its sale prices, or to raise the profitability of its output; if the firm passes on part of the fall in its production costs in its sale price, this will boost demand for labour at all skill levels, thanks to a "volume effect";
- on the other hand, the firm reacts to the fall in the relative cost of unskilled labour by substituting it for skilled labour and capital within its production process.

The first effect does not distinguish qualitatively from any other form of reduction in contributions; the second, on the other hand, has a specific impact on demand for unskilled labour.

Ultimately, this measure clearly stimulates unskilled jobs, and its impact on skilled jobs remains theoretically ambiguous (depending on the respective scale of the "volume" and "substitution" effects).

(5) In 2009, (employers' and employees') social security contributions for a full-time worker on the minimum wage amounted to €6,500 over the year. The figure for the "RSA" (social inclusion benefit) was €454 per month for an unmarried person with no children, or €5,500 per year. This represents an estimated saving in public spending of €12,000, assuming that beneficiaries of jobs created (or preserved) thanks to the across-the-board reductions are paid the minimum wage, and that the benefits they would receive when not in work would have been equal to the social inclusion benefit for an unmarried person with no children only. Needless to say, these assumptions do not cover all possible situations, but they do give an approximation of the reasonable average saving. The net cost is then obtained by deducting €12,000 from the gross cost per job created.

(6) M. Barlet, D. Blanchet, T. Le Barbanchon (2010), "Microsimulation et modèles d'agents: une approche alternative pour l'évaluation des politiques de l'emploi" (Microsimulation and agent models: an alternative approach to the evaluation of employment policies), *Économie et Statistique* no. 429-430.

(7) In this model, this non-linearity of effects stems primarily from the fact that the minimum wage constrains the distribution of wages less and less the more these reductions are extended in scope.

Box 2: Summary of the main studies of the impact on employment

One type of study consists in an *ex ante* evaluation of the policy of contribution reductions, working with more or less sophisticated macroeconomic models. There are three broad families of model, in this regard.

- **Analyses based on a simplified scale model of the labour market.** The findings of these neo-classically inspired studies are valid only in the medium to long-term (to give time for wages to adjust to the new situation). They generally distinguish between "unskilled" labour, which qualifies for reduced contributions, and "skilled" labour, where there is no unemployment because its wages are formed competitively. The effects of reduced contributions on employment can vary sharply, depending on choices made with regard to the production function and its key parameters. Depending on specifications and studies, the gross cost per job created can vary by a factor of four (between €10,000 and €40,000 at 2009 prices^a), due to uncertainty over the possibility of substitution between skilled and unskilled labour.
- **Analyses based on a macro-econometric model.** This Keynesian-inspired class of models is ill suited to evaluating medium to long-term effects, since it does not model supply. The logic here is different: reductions in social security contributions first of all bring down producer and consumer prices (via lower unit production costs), enabling firms to gain market share and boosting consumer purchasing power. This lifts demand, which in turn stimulates jobs. This type of evaluation, which takes no account of the substitution effect between unskilled labour and other production factors, complements those using simplified scale models of the labour market to describe the scaling-up of this type of scheme and quantify its short-term effects.
- **Analyses based on a disaggregated model, particularly by sector.** Estimating parameters remains problematic and can yield implausible results. Nevertheless, these analyses serve to control the size of the aggregation bias inherent in the foregoing macroeconomic approaches, which overlook the heterogeneity between sectors^b or the targeting of reductions. Available results seem to suggest empirically that, with respect to the heterogeneity of sectors, this bias is small, but that it is large for the targeting of reductions; according to this, the gross cost per job created estimated for the Juppé reductions is higher than that obtained using simplified scale models, ranging between €60,000 and €130,000 depending on the study.

A second, less abundant, type of study evaluates the effect of reductions on employment *ex post*. Two approaches can be distinguished here:

- **A first, indirect, approach consists in comparing, at the macroeconomic level, the observed change in employment with employment as simulated with a commonly used equation.** Whatever the specification used, a divergence is consistently observed from 1993 onwards, even allowing for other employment policies such as the growth of part-time working, subsidised contracts, or the working-time reduction. Part of this gap is generally ascribed to the reduction in contributions. However, this indirect method is unsatisfactory, being very simplistic. Besides, the extent of the observed gap is generally greater than the "high" estimates obtained with the other methods. This also points to the conclusion that there has been a break in productivity trends for other reasons; any attempt to assess reductions with this approach depends on the assumptions used regarding shifts in productivity trends over the reduction's phasing-in period.
- **Other *ex post* studies have been based on the econometric analysis of a sample of firms.** As stated above, the across-the-board nature of the measure, which limits variability between observations, does not facilitate the identification of its effects. To get round these difficulties, Crépon and Desplatz^c employ a sophisticated statistical method to estimate the impact in 1997 of the Juppé reductions. This consists in comparing employment trends in firms with similar characteristics, but which differ by how far their labour costs fall as a result of the reduced contributions. This type of study, which dispenses with any kind of theoretical framework, has both the advantage of not depending on any (necessarily debatable) specification of the economy, and the drawback of consequently being unsuited for use in economic policy simulations. According to this study, the estimated effects on employment appear to have been greater than those suggested in the *ex ante* simulations, with between 260,000 and 640,000 jobs created or preserved between 1994 and 1997, for a gross cost of between €11,000 and €28,000 (at 2009 prices) per job created.

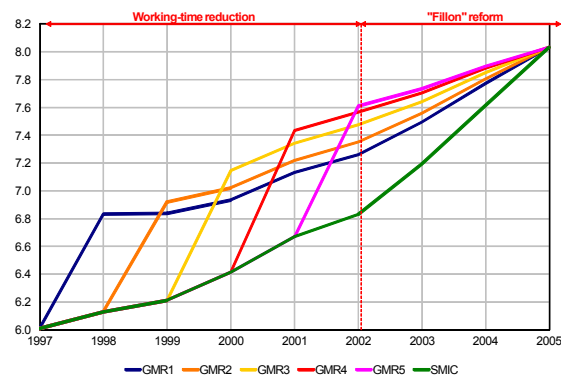
With respect to the relatively wide diversity of results of studies on the subject, it would seem reasonable to opt for a broad range both for the scheme's effects on employment and for its cost-effectiveness: in which case the gross cost per job created comes to between €20,000 and €40,000, for between 200,000 and 400,000 jobs created or preserved.

- a. As elsewhere in this paper, these costs per job created are expressed at 2009 prices; in fact they refer to gross costs per job created at the time of the evaluations, restated for the change in value added per capita between that time and 2009. Conceptually, that comes down to measuring cost-effectiveness by the cost (in 2009) per job created (in 2009). This restatement for the change in value added per capita comes down to assuming no change until 2009 in the structure of the economy (i.e. the proportion of unskilled workers, their relative wages, and the share of wages in value added), once the effects of the first wave of reductions are taken into account. It serves to eliminate the impact, if any, of policies introduced subsequent to this first wave.
- b. The fall in the cost of unskilled labour may boost demand for goods in sectors employing the largest proportion of unskilled workers, and hence modify the relative share of the different sectors in the economy as a whole.
- c. B. Crépon, R. Desplatz (2001), "Une nouvelle évaluation des effets des allègements de charges sociales sur les bas salaires" (A new evaluation of the effects of reductions in social security contributions on low wages), *Économie et Statistiques*, no. 348, p. 1-24, August.

Box 3: The difficulty of evaluating the Fillon reform

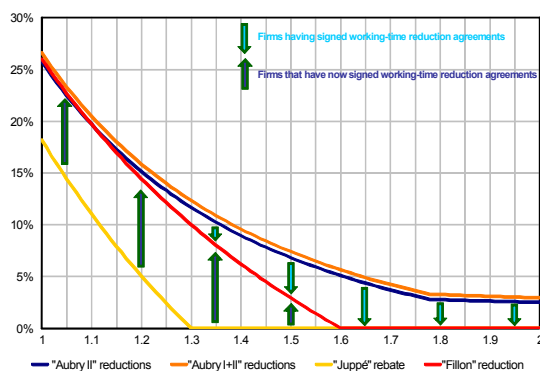
The effects of the Fillon reform on labour costs are complex, the size of the shock depending on the situation in 2003 and on the wage structure. Charts 5 and 6 illustrate the impact of this reform on minimum wage and exemption scales. This heterogeneity can be utilised for the purposes of evaluation. That was the aim of the call for research papers issued by the DARES in 2006, seeking more recent evaluations of these reductions than those available in existing studies.

Chart 5: Minimum wage scales (in €/hour) from the introduction of the working-time reduction until the end of SMIC*/ GMR** convergence decided by the Fillon reform



Sources: DARES and DG Trésor.

Chart 6: Harmonisation of exemption scales during the "Fillon" reform



Sources: DARES and DG Trésor.

Note: Reduction scales are expressed as multiples of the minimum remuneration applicable.

Given the differences between the methods used (structural models, controlled difference models, etc.), the heterogeneity of the data in question, on employment in particular (estimated rates of exit from unemployment, gross job creation flows, number of firm employees, etc.), and the identification of the effects of the reform with the aid of different groups of firms (firms on a 39-hour week versus firms on a 35-hour week, or again firms benefiting from larger or smaller reductions in social security contributions, etc.), it is hard to draw any single major conclusion from these studies. Nevertheless, the three research reports tend to conclude that the Fillon reform has had a limited or globally neutral impact on employment:

- With a methodology close to that used by Crépon and Desplatz, the *Centre d'Études de l'Emploi* research team^a shows that the jobs trend has been more favourable in firms whose labour costs have risen relatively less thanks to the Fillon reform, the majority of them not having signed the working-time reduction agreement; overall, however, the positive effects on employment in these firms is thought to have been offset by the negative effects found in firms whose labour costs have risen over the period as a result of the Fillon reform, most of these being firms that had signed working-time reduction agreements prior to that reform.
- The *Centre d'Économie de la Sorbonne*^b research team, meanwhile, used duration models to study trends in job opportunities for the unemployed over the period 2002-2007 as compared with trends in the cost of hiring low-wage workers in firms regardless of whether these had signed a working-time reduction agreement. The authors consider that the overall effect of harmonisation of the minimum wage scales combined with unification of the different scales used to calculate the reductions in contributions has been a slight increase in the duration of periods of unemployment; from this they conclude that the reductions in employers' contributions combined with the 2003 reform appear to have been insufficient to compensate for the increase in labour costs for firms on the 35-hour week, whereas they do appear to have compensated for this increase in firms that retained the 39-hour week.

- M. Bunel, F. Gilles and Y. L'Horty (2009), "Les effets des allègements de cotisations sociales sur l'emploi et les salaires: une évaluation de la réforme de 2003" (The effects of reductions in social security contributions on employment and wages: an evaluation of the 2003 reform), *Économie et Statistique* no. 429-430, pp. 77-105.
- V. Simonnet and A. Terracol (2010), "Coût du travail et flux d'emploi: l'impact de la réforme de 2003" (Cost of labour and employment flows: the impact of the 2003 reform), *Économie et Statistique* no. 429-430 pp. 107-128.

3. Have the reductions in contributions had an impact on wages and productivity?

From a theoretical standpoint, the effects of the reductions on wages and productivity are ambiguous:

- for a given level of productivity, the reductions have had a positive effect on wages by sharing the surplus between employer and employee and, in the longer run, by strengthening employees' bargaining power thanks to the resultant fall in unemployment;
- on the other hand, the reductions tend to hold back wage increases when productivity rises, since they raise the cost of a wage increase;

- finally, in the medium term, reductions can act as a drag on productivity (and hence on wages), by lowering the incentives to seek training.

These last two potential effects have bred fears that the reductions create "low-wage traps": on the one hand employers may refuse to raise their workers' wages due to the additional cost they would incur (on the question of the desirable degree of targeting of social security contribution reductions, see Box 4); moreover, according to Malinvaud (1998)⁸, low-wage traps may also lead to counter-produc-

(8) E. Malinvaud (1998), "Les cotisations sociales à la charge des employeurs: analyse économique" (Social security contributions paid by employers: an economic analysis), report of the *Conseil d'Analyse Économique*, La Documentation Française.

tive behaviour on the part of workers, since the latter no longer seek further training (this is the third of the above-mentioned effects)⁹.

Several articles have studied trends in the wages of workers affected by these reductions. However, it could be that these trends were shaped by the scale of reductions, and by other factors as well, in particular the rapid pace of increase in the minimum wage. Two studies attempt more specifically to identify and separate the different channels by which reductions can impact wages (i.e. the fall in the average rate of social security contributions, and the rise in the marginal rate). These two studies come to opposite conclusions:

- Lhommeau and Rémy¹⁰ consider that the reductions may have led to a limited though significant slowdown in the wage mobility of low-wage workers already employed in a given firm.
- Lehmann, Marical and Rioux¹¹ find, on the contrary,

that the reductions have no positive impact on wages, but that nor are wage rises hampered by the increase in the marginal contribution rate.

Altogether, empirical studies of the impact of reductions on the distribution of wages and on wage dynamics do not appear to confirm the existence of significant "low-wage traps", even if these cannot be ruled out entirely, either. Moreover, they provide only partial pointers to an answer to the question of wage dynamics. For example, they confine themselves to studying the wage histories of people who stay in employment; they cannot be used to measure the possible impact on wages at the time of hiring. Nor do these studies examine the possible disincentive impact of these reductions on employers' or employees' decisions vis-à-vis vocational training. Finally, the wage history of individuals remaining in work or newly hired are observed only over very short periods, at the time of introduction of the reductions.

Box 4: Degree of targeting of contribution reductions

Concerning the degree of targeting of contribution reductions, three effects need to be taken into account:

- **The effect on demand for labour:** the different studies show that the less skilled the worker, the greater the elasticity of demand for labour to wages. These estimates argue not only in favour of recourse to reductions, but also of targeting them at wages close to the minimum wage^a.
- **The tax-base effect:** the more a given budget for employment policy focuses on a population of low-wage workers, the more effective it will be. That is because the relative fall in the cost of labour brought about by a given amount (in euros) of reductions will be all the greater-hence the number of jobs created will be all the greater-the closer the wage in question is to the minimum wage.
- **Potential "low-wage trap":** because of the progressive nature of the cost of labour resulting from targeting low wages, the labour cost of employing workers increases more than proportionally as wages rise (for example, with the existing scheme, a €1 increase in the gross wage at the level of the minimum wage represents a cost of €1.9 to the employer). This progressivity may hold back increases in the wages of the workers concerned and even, in the worst case, leave them caught in a "low-wage trap", with employers refusing to raise their wages owing to the additional cost to them (the employers). Malinvaud (1998) recommended extending the exemption window to 2 times the minimum wage.

Whereas the first two effects argue in favour of a scheme sharply focused on the lowest-paid workers, the third argues for a less precisely-focused scheme, on the contrary. The existing reduction scheme appears to be a good compromise between these different aspects: (i) the size of the reduction is fairly high at the level of the minimum wage (at present, 90% of the reductions benefit workers earning less than 1.35 times the minimum wage; (ii) the cut-off threshold at 1.6 times the minimum wage reflects a compromise between the concern to limit the risk of "low-wage traps" and the concern to limit the scheme's cost to the budget.

a. See on this subject V. Rémy (2005), "Éléments de bilan sur les travaux évaluant l'efficacité des allègements de cotisations sociales employeurs" (Pointers to an assessment of studies evaluating the effectiveness of reductions in employers' social security contributions), Dares, working paper, no. 101, July.

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(9) (In this case, low-wage traps can prove extremely hard to identify, since in order to measure wage dynamics, one needs to be able to control for trends in workers' skills (better skills being expected, a priori, to lead to higher wages), themselves thought to be impacted by wage dynamics.

(10) B. Lhommeau and V. Rémy (2010), "Les politiques d'allègements ont-elles un effet sur la mobilité salariale des travailleurs à bas salaire?" '(Do reduced social security contributions have an effect on wage mobility of low-wage workers?), *Économie et Statistique*, no. 429-430, pp.21-49.

(11) E. Lehmann, F. Marical and L. Rioux (2011), "Labor Earnings Respond Differently to Income-Tax and Payroll-Tax Reforms", IZA Discussion Papers 6108, Institute for the Study of Labor (IZA).

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