



**HAL**  
open science

# Exempting Overtime from Taxation: an assessment of the french experiment

Pierre Cahuc, Stéphane Carcillo

► **To cite this version:**

Pierre Cahuc, Stéphane Carcillo. Exempting Overtime from Taxation: an assessment of the french experiment. 2012. halshs-02527106

**HAL Id: halshs-02527106**

**<https://shs.hal.science/halshs-02527106>**

Submitted on 31 Mar 2020

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

## EXEMPTING OVERTIME FROM TAXATION: AN ASSESSMENT OF THE FRENCH EXPERIMENT

IPP Policy Briefs 

n°1 

March 2012 

Pierre Cahuc   
Stéphane Carcillo

[www.ipp.eu](http://www.ipp.eu) 

### Summary

The TEPA law of 1 October 2007 considerably reduced taxation on overtime. Its aim was to reduce labour costs in order to increase the number of hours worked and salaries earned.

This study evaluates the impact of the reform by comparing the change, since the law's introduction, in the number of hours worked by employees who work across the border, with those who live near the border but work in France. The first were not affected by the reform while the second were. The results indicate that exempting overtime from taxation did not fully achieve its objective: while the employees concerned benefitted from increased earnings that did not come from working longer hours. The reform had no significant impact at all on the number of hours worked. It did, however, result in an increase in the overtime declared by skilled employees seeking to maximize the tax benefits it offered without actually working more hours.■

- The 2007 TEPA law proposed a tax reduction on overtime, at an annual cost of 4.5 billion euros.
- The number of overtime hours certainly increased, but...
- ...the law had no significant effect on the number of hours actually worked.
- This confirms the importance of selecting tax bases that can be easily measured and scrutinized by tax authorities.



The Institut des politiques publiques (IPP) is developed through a scientific partnership between the Paris School of Economics and the Centre for Research in Economics and Statistics. The aim of the IPP is to promote quantitative analysis and evaluation of public policy using cutting edge research methods in economics



[www.crest.fr](http://www.crest.fr)



[www.parisschoolofeconomics.eu](http://www.parisschoolofeconomics.eu)

## Exempting overtime from tax

Since 1 October 2007 in France, with the introduction of the law "in favour of work, employment and purchasing power" (called the TEPA law), overtime has been exempt from both income tax and a significant portion of social security contributions. This exemption was intended to revive political debate about the 35-hour working week (whose effects on employment can legitimately be questioned), without changing the legal status of the 35-hour week, which the majority of French seem to support. The TEPA law has resulted in a standardized rate of tax on overtime of 25% regardless of the size of the company<sup>1</sup> and, at the same time, a total decrease in social contributions paid by employers on those overtime hours, which are exonerated completely from income tax and employee social security contributions. For the employees, the potential gain is not negligible: overtime now brings from 30% to 50% more remuneration than it did before the reform, depending on the salary level and the size of the enterprise.

In the eyes of its promoters, the exemption of overtime from taxation, which costs around 4.5 billion euros every year, is an ideal instrument for boosting the French economy by encouraging workers to "work more to earn more".

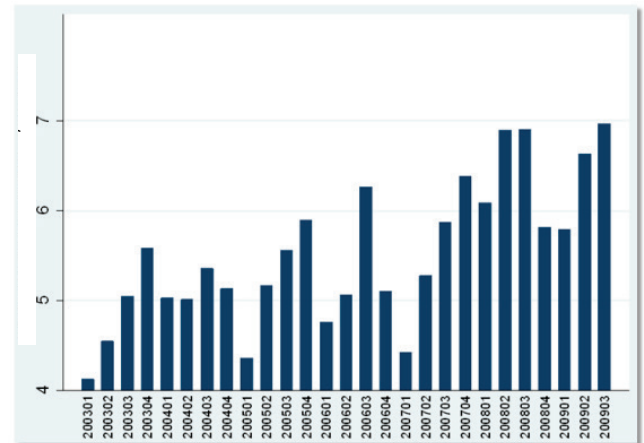
Other European countries have adopted similar reforms. Since 1996 overtime has been tax-exempt in Austria, up to a maximum of 10 hours per month. In Belgium, income tax and social contributions on overtime were reduced in 2005. Italy introduced a similar measure in 2008, though that was reversed at the end of the same year, in the face of an increase in the unemployment rate. And in Luxembourg, hours worked above the standard working week are exempt from both income tax and social security contributions. Although none of these countries has introduced reforms as wide-ranging as those in France, the argument that exempting overtime from tax is an efficient tool for increasing hours worked seems to have convinced a significant number of political decision-makers in Europe.

Economic analysis paints a different picture. It underlines the fact that in order for taxation to be effective, the tax base on which it is imposed must be easily checked by the tax authorities. In most cases, the number of hours worked is not easily verified when employers and employees have an interest in not revealing it. Such is the case with the exemption of overtime: employers and workers have an interest in declaring overtime in order to benefit from the tax reductions.

This problem is now more serious than it was before the TEPA law, when limits to overtime drove a number of employers to remunerate workers for extra hours in the form of bonuses. With the exemption, they may now have an interest in abandoning that practice in favour of paying for hours of overtime, as a way of paying less tax. Exempting overtime from tax can thus create an increase in the stated number of hours worked without actually increasing the number of hours worked. It is not evident, then, that this measure, while expensive, has had any real effect on working hours.

Using results produced in the enquête Emploi by INSEE (the French Labour Force Survey), our study (Cahuc and Carcillo, 2011) shows that paid overtime hours declared by employees have grown since 2007 (see Figure 1). However, this increase is not necessarily linked to the TEPA reform; it could indicate a greater use of overtime by firms that have chosen to cut down on hiring because they anticipate going into recession. Furthermore, even if the growth in paid overtime has been generated by the reform, it is possible that this is not an increase in hours actually worked.

Figure 1: Number of paid overtime hours by trimester of full-time employees in the non-agricultural private sector.



Note: In the third trimester of 2009, the average number of hours of overtime was 7 hours per worker.

Field: Full-time employees in the non-agricultural private sector.

Source: enquête Emploi, Insee, 2003-2009.

This scenario is plausible insofar as a significant proportion of overtime is not explicitly remunerated. In effect, since October 2007, employees whose contracts stipulate a 35-hour week worked on average 37 hours and declared only 0.4 hours paid overtime per week. Were the limits of the 35-hour week properly regulated, there ought to be two paid overtime hours per week, and the correlation between paid overtime and hours worked by employees with 35-hour week contracts ought to be close to 1, since it was equal to 0.39 before October 2007. In essence, paid overtime and the number of hours worked mostly vary independently and it is not at all clear that a growth in paid overtime represents an equivalent increase in the number of hours worked.

*« Exempting overtime from tax can thus create an increase in the stated number of hours worked without actually increasing the number of hours worked »*

1. By definition, each hour worked above the legal limit of 35 hours per week is overtime. Until October 2007, overtime attracted a supplement of between 10% and 50% of an employee's hourly rate, depending on the size of the firm (10% in firms of more than 20 workers, and a minimum of 25% above that), the sectoral agreements already in force (which could include more favourable rates), and the number of hours worked (a minimum 50% increase for overtime hours worked in excess of 8 hours per week).

## Evaluating the Reform: Finding comparable populations

To evaluate the impact of exempting overtime from taxation on the number of overtime hours officially declared and the number of hours actually worked, we compared the changes to paid overtime and hours worked of two groups, one of which was covered by the reform and the other not. The affected group comprises employees who live and work in France; the "control" group comprises employees who are resident in France but work abroad, in neighbouring countries. These cross-border workers are not covered by the 2010 law exempting overtime from taxation<sup>2</sup>.

If the reform has had the expected effects and if other events did not change the relative working hours of the two groups, then the overtime and hours worked of the employees who work in the regions inside France should have increased relative to those who work nearby but outside France, beginning in the first quarter of 2007.

« We compare [...] two groups of individuals, one which is directly affected by the reform, one which is not »

To ensure the relevance of the results obtained, we took into account differences of conditions between countries, the possibility of time trends specific to each country, the evolution of regulatory frameworks on both of these across borders, and differences between the two groups of workers studied. To avoid potential bias caused by changes to the composition of the groups over time, we compared the changes in number of hours worked and overtime among the same workers before and after the reform.

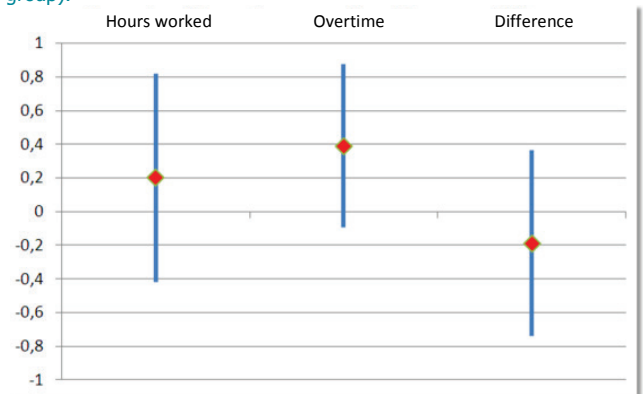
Finally, in order to ensure that the variations in working hours and overtime did not result from changes in the rate of employment in the two groups, we restricted the sample to individuals who remained in employment from the fourth trimester of 2007.

To verify the strength of our findings, we adopted a complementary approach, similar to the one described above, but which consisted of choosing another group of individuals who are not directly affected by the reform: the self-employed. The TEPA law concerns only employees; it does not include the self-employed who do not employ other personnel. If the reform had had a real effect on the number of hours worked, then we should be able to see a growing gap between the number of hours worked by employees and the self-employed, starting in October 2007. In order to compare the evolution of these groups as closely as possible, we compared the self-employed who employ no personnel with those who work in very small enterprises with only one employee.

## The TEPA has not increased the number of hours actually worked

After October 2007, the overtime of employees working in France increased relative to the salaries of those working over the border who are not affected by the tax exemption reform (see Figure 2). However, the difference is not statistically significant.

Figure 2: Estimate of the change in hours before and after October 2007 for the employees working in France near the border (the test group) compared with the employees who work over the border (the control group).



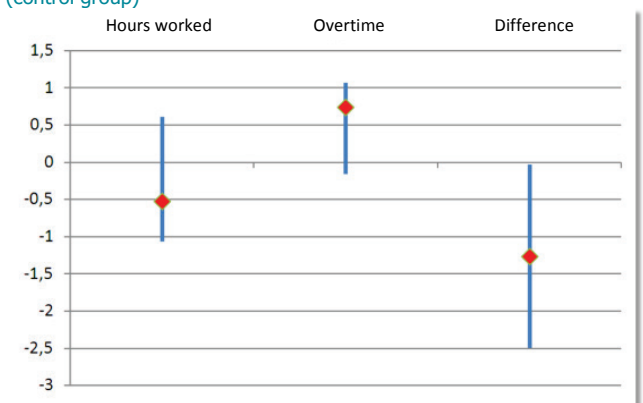
Note: The overtime of employees who benefit from the TEPA law grew by 0.4 hours per week compared with those who are not covered by the law, with a confidence interval of 95%, 0.09 to 0.87.

Field: Full-time employees in the non-agricultural sector, living near the border.

Source: Authors' calculations based on enquête Emploi, INSEE, 2003-2009.

Examination of the changes to hours worked and overtime among the different categories of employees allows us to explain this observation. The changes in hours worked and overtime of the skilled employees (managers, technicians and among intellectual and artistic professionals) are indicated in Figure 3. We see that since October 2007, overtime among employees working in France grew relative to their cross-border counterparts, but that regarding hours worked, the inverse is true.

Figure 3: Estimate of the change in hours before and after October 2007 among the skilled employees working in France near the border (test group) compared with the skilled employees working over the border (control group)



Note: The overtime of employees who benefit from the TEPA law grew by 0.7 hours per week compared with those who are not covered by the law, with a confidence interval of 95%, 0.16 to 1.06.

Field: Full-time employees in the non-agricultural sector, living near the border.

Source: Authors' calculations based on enquête Emploi, INSEE, 2003-2009.

2. « Circulaire Bulletin officiel des Impôts n° 7 », 14 January 2010

Thus, the overtime of employees who benefit from the tax exemption law increased compared with those who do not benefit from the change. But at the same time, the number of hours worked by employees covered by the law decreased compared with hours worked by those not affected by the reform. These changes probably arise from the opportunities to declare fictitious working hours. It is in fact difficult to verify the number of hours worked by employees who have a great deal of autonomy in the organization of their own work, which is often the case for managers, technicians and intellectual/artistic professionals.

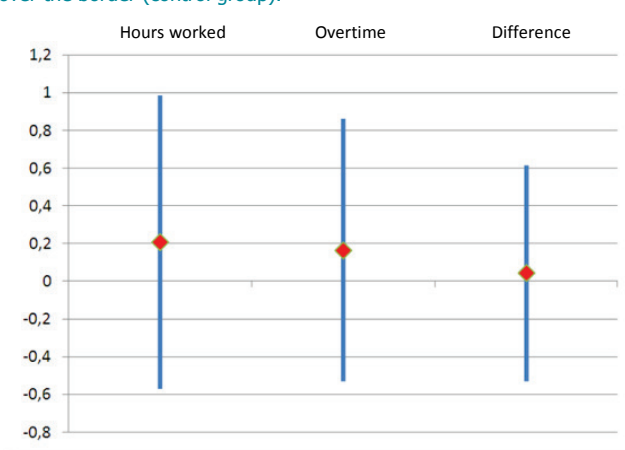
Taxation administrators have great difficulty in checking their real hours of work. In these circumstances, exempting overtime from tax might constitute simply a tax break that allows a decrease in tax independent of hours worked, driving an effective decrease in the number of hours worked.

*« These changes probably arise from the opportunities to declare fictitious working hours »*

This is exactly what we observed among the skilled employees, who can most easily adjust the allocation of their working hours: the reform has had exactly the opposite result of what it was intended to produce. Our analysis suggests that this phenomenon is of quite significant dimensions, because the reform has driven a growth of 1.3 declared overtime hours every week more than the variation in actual hours worked among this group of employees. Moreover, we saw no similar phenomenon in October 2005 or October 2008, which indicates that this is not a regular variation, but rather, one most likely to be due to the TEPA reform.

In contrast to skilled employees, low or unskilled workers generally have more rigidly fixed working hours that are more easily checked by a third party.

Figure 4 : Estimate of the change in hours before and after October 2007 among the low or unskilled employees working in France near the border (test group) compared with low or unskilled employees working over the border (control group).



Note: The overtime of employees who benefit from the TEPA law grew by 0.16 hours per week compared with those who are not covered by the law, with a confidence interval of 95%, 0.53 to 0.86.

Field: Full-time employees in the non-agricultural sector, living near the border.

Source: Authors' calculations based on enquête Emploi, INSEE, 2003-2009.

For this group of employees, the exemption of overtime from taxation has had no statistically significant impact on either hours worked or on overtime (see Figure 4). In particular, we see no difference between changes in hours worked or in overtime for those for whom it is more difficult to avoid tax.

In conclusion, our results indicate that exempting overtime from taxation has not significantly increased the number of hours worked. Furthermore, it has generated an increase in tax avoidance. This observation is confirmed by the comparison of the changes to working hours of employees in very small firms with those of self-employed people who are not directly affected by the reform.

This examination focused on the impact of the 2007 law on the number of hours worked. Other aspects that could be explored include employment and the motivation of employees. The fact that the number of hours worked did not increase after October 2007 suggests, however, that the effects of the reform on employment are probably limited. More generally, our evaluation of the impact of the overtime tax reform underlines that the effectiveness of taxation rests in large part on the definition of a tax base easy for tax administrators to scrutinize and difficult for tax-payers to manipulate.

#### References

Cahuc, P. et Carcillo, S. (2011) : "The Detaxation of Overtime Hours: Lessons from the French Experiment", IZA Discussion Paper No. 5439.

#### Authors

Pierre Cahuc is director of macroeconomics at CREST and professor of economics at the Ecole Polytechnique.

Stéphane Carcillo is senior lecturer at the University of Paris 1 and economist at the OECD.