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ANNEX 6.4

Low-skilled Jobs: The French Strategy

Henri Sterdyniak, OFCE¹

Abstract:

Since 1995, French governments implemented a specific strategy aiming at lowering unemployment or inactivity of so called *unskilled workers*, in fact of *low wage workers*. This strategy used two tools: cuts in employers' social contributions reduce companies' costs for hiring low-wage workers; the *Prime Pour l'Emploi, PPE*, raises low-wage workers' incomes, and increases the gap between wage and assistance benefits in order to increase incentives for low-wage workers to take a job. The paper provides a description of the situation of unskilled workers in France. It describes the history of measures lowering employers' contributions on low wages, presents and discusses the studies that have tried to assess the impact of such measures on employment. These cuts cost approximately 18 billion euros in 2007. An average estimate of about 550,000 jobs created would have an *ex post* cost of 9 billion euro, *i.e.* 176,000 euros per created job. The history and the structure of the PPE are presented. According to existing studies, the PPE would not have a significant effect on labour supply. Should it be concluded from it that there is not inactivity trap? Or, on the contrary, that the trap is very deep? The current debate on the appropriateness to maintain employers' contribution and PPE or to reform them is addressed.

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1. Introduction

France is the sixth country in the world in terms of GDP, but seems unable to tackle mass unemployment. The French unemployment rate rose from 2.8% to 10% from 1974 to 1986 and declined below 9% only in 2000-2001 and since July 2006. Over the last thirty years, policies aiming at reducing the unemployment rate have been central in the French economic policy.

They have consisted in:

- macroeconomic strategies to raise GDP growth (like in 1981),
- wage moderation (called in France: ‘competitive disinflation’),
- public employment policies,
- subsidies in the market sector for some workers’ categories (the young, the long-term unemployed),
- measures to reduce labour supply (early retirement, allowance for non-working-mothers, 35-hour working week),
- reforms of unemployment benefits,
- reforms of labour law (like the CNE-*Contrat Nouvelle Embauché*).

The French governments also implemented a specific strategy aiming at lowering unemployment or inactivity of so called *unskilled workers*, in fact of *low wage workers*. This strategy used two tools:

- 1) Cuts in employers’ social contributions reduce companies’ costs for hiring low-wage workers.
- 2) *The Prime Pour l’Emploi, PPE* (working tax credit) raises low-wage workers’ incomes, and increases the gap between wage and assistance benefits in order to increase incentives for low-wage workers to take a job.

As the government has a control over minimum wages (SMIC) and minimum income (RMI), it may use four instruments for three objectives: reducing the unskilled workers’ wage bill for companies, ensuring a purchasing power for unskilled workers, ensuring a purchasing power for people without job.

Nevertheless, this strategy suffers from some contradictions:

- Social contributions’ cuts are costly in terms of public finances and weaken the funding of the Social Security System.
- Companies have an incentive to create specific jobs paid at the SMIC level, *i.e.* low wage jobs with no prospect in terms of individual careers.
- These jobs bring downwards medium wages.
- Part-time jobs financial incentives both for companies and workers lead to an increase in the number of part-time jobs and hence of poor workers.
- Maintaining a significant gap between labour income and assistance benefits puts a downward pressure on the latter.

The French system has high social security contributions and unemployment benefits, which means that a measure increasing employment can have *ex post* a relatively low cost in terms of public finances. But a number of effects need to be assessed precisely: windfall effects (the measures subsidizes jobs that would have been created anyway), trade-off effects (companies create subsidised jobs instead of non-subsidised ones), effects of microeconomic substitution

(the measure allows the development of low-wage firms at the expense of the other firms) and macroeconomic substitution (if the measure is financed by a rise in another tax).

Section 2 provides a description of the situation of unskilled workers in France and of the reasons behind the specific strategy in favour of unskilled work. Section 3 describes the history of measures lowering employers' contributions on low wages, presents and discusses the studies that have tried to assess the impact of such measures on employment. The current debate on the appropriateness to maintain existing measures or to reform them is addressed. Section 4 does the same job for PPE.

2. The case for an unskilled workers employment strategy

The analyses and debates on the strategy of social security contributions cuts on low-wage employees mix three different concepts:

- *Low-wage workers*. Initially workers paid at the SMIC level were concerned. Then, in order to avoid low-wage traps, contributions cuts were extended to employees paid up to 1.3, then 1.6 times the SMIC. It is the concept effectively used.

- *Non graduate workers*, but they can take relatively skilled or well-paid jobs, because of their experience or some specific qualities. Conversely, some graduate workers may be obliged to accept unskilled or low-wage jobs.

- *Unskilled jobs*. Their definition varies according to studies. INSEE definition retains farm workers, unskilled industrial workers, watchman, services to households employees and employees in the retail trade sector (see Chardon, 2001).

Most French economists have advocated a specific strategy for unskilled low-wage workers employment², for five reasons:

- 1) Unskilled workers face a specific unemployment issue: competition from low wage emerging countries, technical progress and capital/labour substitution lead unskilled jobs to disappear in industrial sectors and more and more often in some service sectors. The existence of a minimum wage prevents their wages from falling sufficiently. On the contrary, skilled employees are close to full employment. Higher GDP growth would be constrained by skilled workers shortage before a satisfactory level of global employment can be reached.

However, the French situation as concerns unskilled workers is not particularly bad relative to major OECD countries. If we consider employment rates according to education levels (see Tables 1 and 2):

- In 1994: France was ranking 6 over the 13 major OECD countries. So, the non-employment of unskilled workers was not particularly bad in France already in 1994
- In 2004: France ranked 3 behind Japan and Sweden. Perhaps because of policy measures, France ranks among the less 'bad' performers today.

1. Activity and unemployment rates by educational attainment, 2004

	Less than upper secondary education	Upper secondary education	Tertiary education
US	63.1/10.5	77.6/ 5.6	84.7/3.3
Germany	61.1/20.5	78.2/11.2	87.5/5.5
France	67.8/12.1	81.5/7.6	87.1/6.2

² For instance, CGP (1993); Maarek (2004); Drèze, Malinvaud *et alii* (1994); de Foucauld (1994); Sneessens et Shadman-Mehta (1995); Laffargue (1996 et 1997); Pisani (2000).

UK	56.8/6.6	82.4/3.7	89.6/2.2
Sweden	71.6/6.5	85.7/5.8	92.2/2.8
European Union 15	63.1/9.0	79.8/6.2	88.1/4.3

Source: OECD (2006), *Employment Outlook*.

2 Difference between employment ratios for tertiary education and less than upper secondary education

	1994	2004
Japan	n.a.	12.5
US	34.0	25.5
Germany	34.4	34.1
Austria	32.8	30.3
Belgium	34.0	34.7
Denmark	28.4	24.5
Spain	28.5	23.7
Finland	28.3	27.5
France	29.4	22.1
Italy	32.7	30.7
Netherlands	30.6	25.5
UK	30.3	33.8
Sweden	10.6	18.4

Source: OECD (2006), *Employment Outlook*.

The education level of the population, especially for the young, is on a rising trend while some young graduate people are unemployed or take a job requesting a lower educational attainment (see Nauze-Fichet and Tomasini, 2002). According to “employment surveys” of INSEE, the share of graduates among unskilled workers rose from 2% in 1982, to 8% in 1992 and 21% in 2004. So, educational levels may be a reason for disparities in unemployment rates. In a mass unemployment situation, graduate workers apply for jobs for which they are over-skilled. Having the choice, companies will hire them in priority, the education level giving a signal of ability to work and non-graduate people will not find jobs. In this context, the priority is not to increase unskilled labour supply. On the contrary, it would be necessary to increase employment at all levels of the hierarchy, which will make jobs available for the unskilled. A tighter labour market would lead employers to be less demanding when hiring people.

2) The high levels of the minimum wage (SMIC) and minimum income (RMI) would be a major reason for French unemployment, because it would maintain unskilled workers’ wages at an excessive level. Many unskilled workers would have a labour productivity at below the SMIC costs including social contributions, and could be hired only at below the minimum wage. Cuts in employers’ social contributions at average or higher wages could possibly generate increases in gross wages. But since the SMIC is controlled, a cut in employers’ contributions translates necessarily in lower wage costs at that level.

This strategy of contributions employers’ cuts is equivalent to that recommended by liberals: the market would cause wage levels to fall but their impact on employees’ living standards could be possibly offset by a negative tax. This is more socially acceptable since unskilled workers do not see a fall in their wages and do not have the impression they live basically on welfare transfers.

Social contributions exemptions offset the relatively high level of minimum wages in France: in 2005, the SMIC was roughly half the average wage; 16% of workers earned the SMIC (see Table 3).

3. Minimum wages in Europe and in the US

	In Euros, in 2005	% employees at the minimum wage level, 2004	% average workers' wage 2005
Luxembourg	1467	18.0	43.5
Netherlands	1265	2.1	40.2
Belgium	1210	n.a.	39.9
UK	1197	1.4	50.3
France	1197	15.6	47.5
Ireland	1183	3.1	44.8
Greece	668	n.a.	43.8
US	666	1.4	25.2
Spain	599	0.8	29.8
Czech republic	240	2.0	38.7
Hungary	232	8.0	38.9
Poland	205	4.5	33.0

Source : Eurostat.

According to the mainstream theoretical view, an un-employed worker is less productive than those who work. Falls in labour costs allow some unemployed people to become employable. The impact depends on skills distribution. However, the concept of workers' individual productivity can be criticised: do unskilled workers have a productivity in value independent of wages level? But why is an unskilled worker paid more in France than in India? According to another view, the productivity in value is social and historical; unskilled workers benefit from technical progress made in the whole economy; there are a large number of relatively similar unskilled workers; their employment is constrained by labour demand from companies; the impact of lower labour costs depends on the elasticity of labour demand to its cost.

3) A targeted measure is more efficient than a global measure in terms of job creation to budget costs ratios. It is less costly to create low wage jobs than higher wage jobs. This higher efficiency is amplified if demand for unskilled work is more sensitive to wage costs than demand for skilled work.

4) Lowering the cost of unskilled jobs would allow to create jobs in the *services to people* sector (domestic care, shops, hotels-cafes-restaurants) that are currently underdeveloped in France due to the excessive cost of unskilled work.

5) Because of the minimum income (RMI), the gap between wage and insurance benefits incomes is very small for unskilled workers, especially when only part-time jobs are available. Thus, unskilled workers can fall into an "inactivity trap".

So, in the last 10 years, three view points have been opposed in France:

- Keynesian: unemployment results mainly from insufficient demand. For a given demand level, fall in labour costs may be an incentive for companies to use more labour.
- Classical: unemployment results from insufficient flexibility in the French labour market; unemployment benefits should be reduced; wage and employment legislation should be made more flexible

- ‘Socio-liberal’: unskilled labour costs should be reduced, via a) social contributions’ cuts since the SMIC purchasing power cannot be reduced and b) a working tax credit (PPE) increasing work incentives.

Social contributions’ cuts aim at reducing the high level of employers’ social contributions in France. In 2004, employers’ social contributions amounted to 11% of GDP in France, in comparison to 7.3% at the EU-15 level; wage taxes amounted to 1.1% (0.3% at the EU-15 level). But employees’ contributions were amounting only to 4% of GDP in France, similar to the EU-15 level (3.9%).

At the average wage level, social contributions (incl. CSG-CRDS) amount to more than 65 percentage point for a gross wage of 100: the employer pays 144, the worker gets 79. There is a wide gap between labour costs paid by the company (144) and labour income for the employee (44, accounting for the fact that unemployment allowances amount on average to 35)

4. Social contributions rates, January 2006, gross wage = 100

	Employer	Employee
CSG-CRDS (8%*97%)		7.76
Social security :		
• Maternity-sickness	12.80	0.75
• Old age (under ceiling)	9.90	6.75
<i>Old age (above ceiling)</i>	<i>1.60</i>	<i>0.0</i>
• Family	5.40	
Injuries at work (average rate)	2.30	
Complementary pension (under ceiling)	5.70	3.80
Complementary pension (<i>over ceiling</i>)	<i>13.90</i>	<i>8.60</i>
Unemployment	4.39	2.44
Incapacity	0.30	
Other	3.05	
Total	43.84	21.50
	<i>43.74</i>	<i>19.55</i>
Wage costs and net wages	143.84	78.50
	<i>143.74</i>	<i>80.45</i>

The financing by contributions is socially and economically logic for all replacement benefits (unemployment, old age, sickness allowances) which are differed wages and which, according to the principle of the Social Security, depend on contributions paid. On the other hand, family and health benefits, which are now universal in France, should not be financed by contributions on activity incomes but by general taxes. The operation was done for the employees contributions by the creation of the CSG; remain to be done for the 18,2 points of employers contributions, family and health.

Three strategies may be implemented and have been discussed in France since 1975 (see Sterdyniak and Villa, 1998).

a) A gradual substitution of employers’ contributions by CSG points so that a single tax is levied on households to finance all universal benefits, which would be socially logical. But this would mean to increase gradually the CSG by 11 points. This would represent a transfer from households to companies which is not desirable since companies’ financial situation has been satisfactory since 1987 (the reform should have been implemented between 1975 and 1985). Offsetting measures would be needed, like gross wages’ increases: in this case, the

measure could be neutral for firms and could support employees at the expense of pensioners and capital incomes holders. But it is difficult to reduce further the relative income of pensioners. Measures would be needed to compensate pensioners' incomes losses and then the measure would be almost neutral.

b) Some politicians and economists have suggested the introduction of a *social* VAT replacing employers' contributions. The idea is that this social VAT would not weigh on labour income but on imports; this would make it possible to have our social protection paid by foreign producers. This is a mistake from an economic point of view. Since the VAT does not weigh on capital goods, such a substitution would not reduce the relative cost of labour compared to capital and would not support labour-intensive sectors. The VAT is levied on imports and is refunded on exports, contrary to social security contributions. So such a substitution would give some competitiveness gains to French firms like currency devaluation. But these gains would materialise only if the increase in the prices of imported consumer goods, resulting from the rise in VAT, did not have any impact on wages, in other words if employees accepted a fall of their purchasing power. If workers obtained the rise of the wages necessary to compensate for this loss, the spiral price-wages would continue until the rise of the prices made disappeared the competitiveness gains. This is not tax reform miracle which provides competitiveness gains without loss of purchasing power of the workers.

c) A few economists have suggested a tax on firms' value added (like in Italy with IRAP) bearing also on exports and investment. This reform would support labour-intensive sectors and would be an incentive for companies to use more labour and less capital, but the French government refused it. The fear of the government was that the introduction of a new tax on profits would generate excessive transfers between companies, harm the capital intensive and supposed to be more innovative sectors induce capital moving abroad. The situation is thus blocked. Governments unable to lower all employers' contributions concentrate on falls in low wages.

3. Social contributions cuts on low wages

3.1 A history

The French social protection system was initially a Bismarkian one: social protection is linked with employment. Traditionally, benefits were entitled only to salaries and funded by employers and employees contributions, with a ceiling (which is nearly twice the average wage). This system evolved in different ways depending on benefits. Family and health benefits have become universal. As concerns unemployment, a system of benefits and contributions was set up for the part of wages ranging from 1 to 4 ceilings. For retirement pensions, a supplementary system was introduced to cover on the one hand the part of wages under the ceiling; on the other hand, the part of wages beyond the ceiling.

The ceiling on health contributions was progressively dismantled between 1967 and 1984, and the ceiling on family contributions was abolished in 1989. This allowed to limit between 1980 and 1993 the rise in the rate of employers' social contributions to the part of wages below the ceiling (which increased from 36.3% to 36.6%) while making the effort bear on the part of wages above the ceiling (at a rate increasing from 13.7% to 34.9%).

Social contributions' cuts on low wages have been progressively implemented since July 1993 (see Table 5 and chart 1), with the explicit aim view to reduce capital/labour substitution and foreign relocation, to support labour intensive firms and the "services to persons" sector.

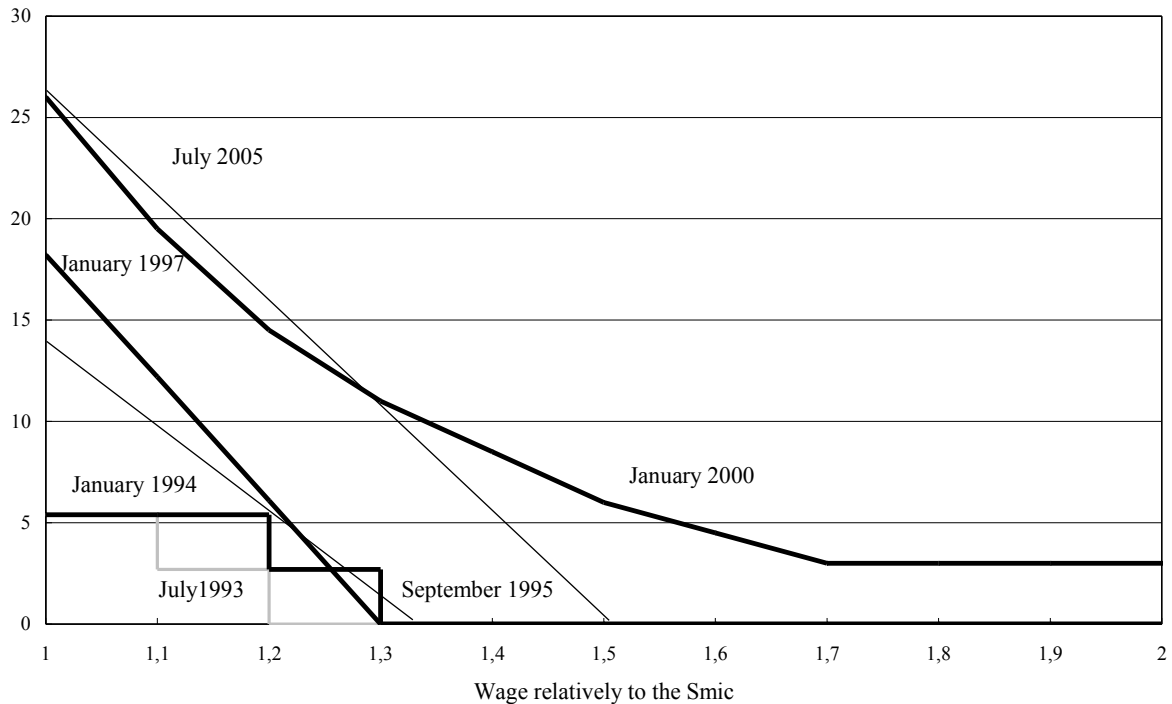
Cuts applied first to family contributions (5.4 percentage points from 1993 to 1995); then to health contributions (from 1995 to 1997). Starting from June 1996, specific social contributions exemptions were introduced for companies implementing working-time reduction while creating jobs (*Loi Robien*, June 1996, *Loi Aubry 1*, June 1998). In January 2000, all companies having signed an agreement on the 35-hour week were given contributions' exemptions. The objective was to compensate partly for the rises in wage costs resulting from lower working time. From 2003, the exemption was no more linked to the 35-hour working week: it became 'unique' and decreasing between 1 to 1.7 (and later 1.6 SMIC). In 2005, the measure was benefiting 10.5 million employees.

Two obstacles will make the assessment of the impact of the cuts difficult. First, the contributions' cuts have been modified over time; they are still criticised which means that companies may doubt about the permanence of the measures. Second, it is difficult to disentangle the impacts of the 35 hour working week and the employers' contributions cuts in the 1998-2003 period. The increase in part time jobs may also disturb the analysis.

5. Social contributions cuts on low wages

Time Period	Measures	Cuts at SMIC level
From 1/07/93 to 31/12/94	Abolition of family contributions between 1 and 1.1 SMIC. 50% cut, up to 1.2 SMIC.	5.4%
From 1/1/95 to 31/8/95	Abolition of family contributions between 1 to 1.2 SMIC. 50% cut, up to 1.3 SMIC.	5.4%
From 1/9/95 to 30/6/96	Abolition of family contributions between 1 to 1.2 SMIC. 50% up to 1.3 SMIC + Rebate on health contributions: 800FF per month at the SMIC level, decreasing until 1.33 SMIC.	18.2%
From 1/10/96 to 31/12/97	Decreasing single rebate from 1 to 1.33 SMIC	18.2%
From 1/1/97 to 31/12/02	Decreasing single rebate from 1 to 1.3 SMIC	18.2%
From 1/1/00 to 21/12/02	For "35 hour" firms, decreasing rebate: from 21 500 FF per year at SMIC level to 4000 FF from 1.8 SMIC	26%
From 01/01/03 to 1/1/05	Progressive transition to a decreasing single rebate between 1 and 1.7 SMIC	26%
From 1/7/05	Rebate from 1 to 1.6 SMIC	26%

Chart 1: Employers Social Contributions cuts (in point)



In 2006, contributions' cuts decrease with wages: from 26% of monthly gross wage at the SMIC level to 0% for 1.6 SMIC, according to the formula:

$$(0.26/0.6) \times \{1.6 \times [(smic \times \text{hours worked})/\text{monthly gross wage}] - 1\}$$

where smic is the hourly minimum wage rate, i.e. 8.27 euros.

The cut is maximal at the SMIC level: it amounts to 326 euros for a gross wage of 1254 euros. Then, the cut decreases (within 1 and 1.6 SMIC): for a 1 euro rise in the wage, the cut is reduced by 43 cents. The progressiveness of the measure has the disadvantage of making very expensive wage rises at SMIC level a 10% wage rise for a worker at the SMIC level (+ 125 euros) costs 271 euros to the employer and increases by 22 euros the worker take-home income (accounting for the PPE, house benefits, income tax).

Other measures of a smaller size apply to specific groups of people (the young, the long-term unemployed), to certain geographical areas and finally to domestic services. On the whole, contributions cuts amounted to 23.6 billion euro in 2006 (3.3% of wage costs).

6. Contributions' cuts in 2006

	Total	Reimbursed by the State	Non-Reimbursed
Low wages	18.2	18.2	
Specific groups	2.3	1.4	0.9
Specific areas	1.3	1.3	
Domestic services	1.7	0.3	1.4
Total	23.6	21.3	2.3

7. Evolution of general contribution cuts (in billion euros)

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0.6	1.8	3.0	5.9	6.9	6.3	6.9	11.0	13.2	14.2	15.0	15.8	16.4	17.8

3.2 SMIC and average wage

Contributions' cuts on low wages will be an incentive for low skilled jobs at the condition that cuts effectively reduce labour costs and do not generate a rise in the SMIC. Since 1993, the SMIC increased more rapidly than average wages (0.5% per year on average). The total effect can be estimated at 6.5%. This rise comes from rises in the SMIC at the time of the implementation of the 35 hour-working week.

8. Rises in the SMIC and average wages (hourly)

	SMIC	Average wage	Prices
1994	2.1	2.0	1.6
1995	4.0	2.4	1.8
1996	2.5	2.6	2.0
1997	4.0	2.7	1.2
1998	2.0	2.1	0.7
1999	1.2	1.9	0.5
2000	3.2	5.2	1.7
2001	4.0	4.2	1.4
2002	2.4	3.6	2.0
2003	5.3	2.8	2.1
2004	5.9	2.9	2.1
2005	5.5	3.0	1.8
2006	3.0	3.1	1.9
Purchasing power	1.85	1.35	

3.3 Social contributions' cuts on low wages: what does empirical research say?

A large variety of analyses have addressed the economic impact of social contributions' cuts.

Employers' social contributions cut's play through 7 channels:

- Substitution effects at the company level: each company has an incentive to use more unskilled work and less skilled work and capital for a given level of output.
- Substitution effects between firms and sectors: firms or sectors with many low wages have an advantage as compared to the others.
- In these two cases, there is *a priori* no positive impact on output. There is a positive impact if unskilled labour is in a situation of under-employment while skilled labour is at full employment. Skilled workers wages will increase, which will reduce the impact of the measure.
- If the market for unskilled workers is in a situation of classical equilibrium, then cuts in real wages will make it pay to hire unskilled workers. This will allow for a rise in output and hence for hiring more skilled workers.
- The reduction in costs allows companies to cut their selling prices, which leads output to rise. But this will occur only if the social contributions cuts are not financed through the rise in another tax.
- Some studies find that the employer cut has such a high effect that it is self-financing. Other studies find that the effect is weaker so that some public deficit remains. The impact of the measure depends also of the impact of the taxes which are supposed to be increased to equilibrate the public balance. These are often social contributions on high-wage workers, which may reduce their employment or their wages.

Unskilled jobs will increase in any case, but skilled jobs will either decrease or increase.

Boxes 1 to 3 give some examples of simple models used to justify the cut. The first one is based on the assumption that the employment/wage elasticity is higher for low wages than for higher wages. The second model assumes also that wages are more rigid at low-wage levels. The third shows that firms may be the winners of the cut.

Four arguments against the progressiveness of social contributions can be found in the literature:

- The measure is costly because it generates windfall effects either to companies that would anyway hire unskilled workers or to these workers themselves if they see a rise in their wages. The cost would bear on skilled workers who would see a fall in their number of jobs. On the whole, the impact on employment and on output could be negative. But this is true only if the measure has a low efficiency and if skilled employment is very sensitive to wages.
- The measure would deteriorate the quality of available jobs in rising the number of unskilled jobs at the expense of skilled jobs and this would be detrimental to long-term growth (Garnier and Nys, 1996)
- The measure would be a disincentive for unskilled workers to acquire skills through vocational training, which would reduce potential output (Oskamp and Snower, 2006). But a rising unskilled unemployment and increasing wage inequalities are *a priori* a strong incentive for employees or the young to get skilled. It may also be thought that the unskilled acquire skills more easily when they have a job than if they remain unemployed.
- Windfall effects would be smaller if the measure focused on the unskilled who really cannot take a job. This means that the unskilled are a heterogeneous group. For instance, Brown *et al.* (2006) have suggested restricting subsidies to the long-term unemployed and unskilled. But this measure has a much smaller scope. The incentive for companies to create unskilled jobs may disappear and instead companies would hire long-term unemployed workers: the unemployment rate would not be lowered, but would affect different groups of workers.

3.3.1 Some statistical facts

The ratio of unskilled jobs to total employment was 28% in 1982, decreased to 23% in 1992 and has remained roughly stable since the introduction of social contributions' cuts on low wages: 24% in 2002.

This may suggest that contributions' cuts allowed for maintaining a number of unskilled jobs, amounting to 4% of total employment (580 000 jobs). But it may also suggest that companies created unskilled instead of skilled jobs.

Contributions' cuts benefit mainly small companies. The apparent cut to wage costs is 5.9% for companies with less than 10 employees; 4% for companies with 50 to 99 employees; 3.1% for companies with 250 to 499 employees, 1.3% for companies with more than 500 employees.

The apparent ratio is 4.6 % on average, but 11% for hotels-restaurants, 9.8% for retail trade, 8.3% in services to companies.

Kramarz and Philippon (2001) use "Labour Force survey" microeconomic data. They find that an increase in minimum wage costs increases slightly the probability of being fired for minimum wage workers, but that tax subsidies do not have significant effect on entry from non-employment.

BOX 1: A first simple model

Let us consider the impact of employers' contributions cuts in a simple model. Contributions cuts are 26 percentage points at the SMIC level and decrease in a linear way until they become nil at 1.6 times SMIC. The cuts apply to all employees in the private sector, i.e. 14.5 million in full-time equivalent. 10 categories of employees are considered, depending on wage levels. Let us assume that employment/wage elasticity vary from 1.0 at lower wages to 0.2 at higher wages and that there is a substitution elasticity between employees' categories, with an elasticity of 0.2 for two adjoining groups. Gross wages are assumed to be fixed.

The current measure would cost on average 1500 euros per employee in FTE (125 euros per month); 21.75 billions euros. It would have created 626 400 jobs (4.3%), i.e 34 720 euro per job. Accounting for employers' contributions (rate: 42%), employees' contributions (rate: 21%), and employment benefits (rate: 31%), these jobs would bring 8,69 billion euros in terms of Social Security funding. The net cost of the measure would then be: 13.06 billion euros, i.e. 20 849 euros per job. Under the same assumption, job creation at the SMIC level initiated by the cut has a cost of 21370 euros *ex ante*, but 6621 euros *ex post*. The measure remains costly. To equilibrate the financial effect of the measure, all social contribution rates can be risen by 4 percentage points; the measure will increase employment only by 3.4% (493 000 people) and the GDP by 1.7%.

9. Impact of contributions' cuts in 2006

Deciles/employment-wage elasticity	Gross monthly wage, in Euros	Without financing...			With financing..	
		Cut, in % of labour cost	In Euros	Employment effect	Cut, in % of the labour cost	Employment effect
d1/1,0	15 000	18	3 900	18.7	15.5	16.5
d2/0,8	16 200	16	3 750	13.4	13.4	11.0
d3/0,6	18 200	12	3 150	7.1	9.0	5.0
d4/0,5	20 000	9	2 600	4.8	6.3	3.0
d5/0,4	22 200	5	1 600	0.2	2.0	1.5
d6/0,2	24 700	0	0	-1.0	-2.8	-0.7
d7/0,2	27 950	0	0		-2.8	-0.55
d8/0,2	33 000	0	0		-2.8	-0.55
d9/0,2	41 500	0	0		-2.8	-0.55
d10/0,2	74 000	0	0		-2.8	-0.55
	29 175		1 500	+ 4.3 %		+3.4%

BOX 2: Social contributions on low-skilled and skilled workers

Let us consider a world with two kinds of workers, the low-skilled L, and the skilled, S. The production function exhibits constant scale according to labour. The wage of L workers is k the average wage, when L employment is % of global employment. The wage bill received by L workers is then k % of global wage bill. The model is:

- wage formation : $w_l = \mu_l n_l$ $w_s = \mu_s n_s$
- substitution : $n_s = n_l + \sigma (w_l + t_l - w_s - t_s)$
- *ex ante* budgetary constraint : $\alpha k t_l + (1 - \alpha k) t_s = 0$

We consider a contribution cut on L wages of 1 percentage point of GDP; which means that t_l decreases by $1/\delta\alpha k$ %, where δ is the wage share in GDP. We first make the assumption that this cut is offset by a rise in social contributions on S workers.

In a Keynesian regime, output is determined by demand, so: $\alpha k n_l + (1 - \alpha k) n_s = 0$
Employment varies according to:

$$n = \sigma \frac{1-k}{\delta k} \frac{1}{(1-\alpha k)(\alpha k(1+\sigma\mu_s) + (1-\alpha k)(1+\sigma\mu_l))}$$

The effect is positive as soon as $k > 1$. Let us take $k = 0.6$ $a = 0.3$ $\delta = 0.7$ $\sigma = 1$
With rigid wages, $\mu_l = \mu_s = 0$, the effect is : $n = 1.16\%$ with $n_l = 7.94\%$ $n_s = -1.74\%$
If skilled workers wages increase with their employment, $\mu_s = 1$, the effect is $n = 0.98\%$ with $n_n = 6.73\%$ $n_q = -0.85\%$. The effect is weaker as the fall in S wages decreases *ex post* the substitution effects.

In a classical regime, companies set their price as: $\alpha k (w_l + t_l) + (1 - \alpha k) (w_s + t_s) = 0$

The effect of a funding measure is:

$$n = \frac{\sigma (1 - \alpha k) \mu_s - k(1 - \alpha) \mu_l}{\delta k (1 - \alpha k) (\alpha k (1 + \sigma \mu_s) \mu_n + (1 - \alpha k) (1 + \sigma \mu_l) \sigma \mu_s)}$$

with $\mu_q = 1$, $\mu_n = 0$, the impact is $n = 2.90\%$ avec $n_n = 9.68\%$ $n_q = 0\%$ $y = 1.74\%$

The effect is higher than in a Keynesian regime because the fall in unskilled labour rises output.

In the classical regime, let us consider a fall in social contributions on L wages, without compensation. The effects are:

$$n_s = -\frac{-\alpha k}{\mu_s (1 - \alpha k)} t_l \text{ and } n_l = -\frac{\alpha k + \sigma \mu_s}{\mu_s (1 - \alpha k)} t_l \text{ So, } n_q = -0.22 t_n ; n_n = -1.44 t_n ; y = 0.43 t_n$$

The impact on public finances can then be positive due to social contribution on new workers and decreases in unemployment benefits.

10% cut of low-skilled labour cost

	Initial situation	Final situation
L wage (including contribution)	0.6	0.54
L employment	30	34.32
S wage (including contribution)	1.17	1.20
S employment	70	71.54
Output	100	104.3
Social contributions	28.6	28.1
Unemployment benefit		-0.9
Public balance		0.4

BOX 3: A third simple model

Let us consider that the economy is in a classical unemployment situation: companies' output is not constrained by demand but by the real wage level.

In order to cut the wage bill by 10%, the government cuts the employees social contribution rate down from 42 to 28. This leads companies to increase the number of their workers by $\epsilon \cdot 10\%$, where ϵ is the elasticity of employment to cost. Companies benefit from a windfall on the workers they would have hired anyway. The total cost for public finances is $14 - 9.8 \cdot \epsilon$. The cut will have a positive impact on public finances as soon as ϵ is higher than 1.4. The cut must be financed otherwise. Table 10 shows also that the cut benefits mainly to firms, but this result comes partly from the assumption that wages are rigid.

10. Impact of employers' social contributions cuts in a situation of classical unemployment

	$t_{CSE} = 42\%$	$t_{CSE} = 28\%$			
Employment/wage elasticity:		0	0,6	1	1,5
Output	159	159	168.5	174.2	181.8
Employment	100	100	106	110	115
VAT	17	17	18	18.6	19.4
Gross wages	100	100	106	110	115
Employers' social contributions	42	28	29.7	30.8	32.2
Employees' social contributions	21	21	22.3	23.1	24.1
Unemployment benefits*			- 2.1	- 3.5	- 5.2
Households' incomes		0	+ 2.6	+ 4.4	+ 6.7
Companies profit		+ 14	+ 14.8	+ 14.8	+ 15.2
Government budget		- 14	- 7.9	- 4.0	+ 0.9

*Unemployment benefits assumed to be on average 35% of gross wages.

3.3.2. A comparison of empirical studies on the impact of social contribution cuts

We will distinguish the *ex ante* modelling, the *ex ante* and *ex post* microeconomic analysis, the *ex post* macroeconomic studies.

The ex ante modelling

The CSERC's study (1996) supposes that the is higher for low wages than for higher wages (from 0.7 to 0.3). There exists moreover a substitution between workers of different level wages. These elasticities are not postulated. The Dares study (1997) postulates that the employment/wage elasticity is 0,6 on the level of the unskilled workers.

Malinvaud (1997) builds an analytical model. The market of the unskilled workers is supposed in disequilibrium due to a too strong level of the minimal wage. The employment/wage elasticity is supposed 1.2 at the SMIC level. But, the channels are hardly clarified. The cut in place in 1997 should allow the creation of 350.000 jobs in 10 years, of 500.000 jobs in the long run.

Laffargue (1996 and 2000) built a Computable General Equilibrium Model (CGEM) with three factors of production: the unskilled labour (whose real wages are rigid), skilled labour and capital. Skilled labour work and capital are complementary; unskilled work is substitutable (with an elasticity of substitution of 2.5). With this value, the model predict the creation of 560,000 unskilled employments and the destruction of 32.000 skilled employment for a reduction of 10 point of the contributions employers on unskilled labour.

Salanié (2000) as Auric *and al.* (2000) build a model, which supposes the market of unskilled workers is in classical unemployment (due to the SMIC level) when the skilled labour is in equilibrium (by wages adjustment). Unskilled worker accounts for 16% of the working population. Capital and skilled labour are complementary and their aggregate is substitutable with unskilled work, with an elasticity of substitution of 0.7. A cut of 10 points of the employers social contributions on unskilled workers allows the creation of 120.000 jobs and a rise of the production (0.3%), which strongly reduces the *ex post* cost of the measure. But, the functioning of their CGEM is not confronted with the facts. Can we explain the evolution of un-skilled jobs only by the real minimum wage, without impact of demand conditions? Does unemployment only strike unskilled people?

L'Horty (2000) built a similar model with skilled and unskilled worker, with an elasticity of substitution of 1 between these two types of workers.

Doisy *and al.* (2004) build a calibrated CGEM which has the specificity to differentiate three types of workers: unskilled (paid at the SMIC level, 18% of the workforce), the insiders (which negotiate their wages, 48% of the workforce) and the upper-skilled (of which wages balances their market, 34% of the workforce). The cut in place in rebate of 1997 creates 318.000 jobs in 2000 : 176.000 unskilled workers and 143.000 insiders, the GDP increases by 1,5%, the wages of the insiders by 0,3%, the wages of upper-skilled by 2%. The *ex post* cost of the measure is only 15% of the *ex ante* cost because of the rise of wages, and then of soial contributions.

Giuliani (2005) built a calibrated CGEM, where unskilled worker accounts for 61% of the working population. The results strongly depend on the values of the parameters. The number of jobs created by the cuts in place in 2005 goes from 3.775.000 to 250.000. In the central scenario, the figure is 575.000, with a rise of 3.6% of unskilled employment, of 0.3% of skilled employment and a rise of 1.1% of the GDP.

These works is based on calibrated models. Parameters are not estimated. The functioning of the French economy is postulated: the demand for unskilled labour is constrained by the level

of the SMIC. Skilled workers are at full employment, due to wage adjustment. So the measure increases unskilled employment, with no impact on skilled ones.

An ex ante microeconomic analysis

Laroque and Salanié (2000) use a microeconomic simulation model. They assume that wages are equal to marginal labour productivity, itself depending on the worker's characteristics.

The employers' contributions cut as in place in 1997 has two consequences: people with a productivity standing between 87% of the SMIC and the SMIC become employable; workers paid at 1 to 1.33 SMIC benefit from a wage rise (companies refund them the employers contributions cuts to them) from 14.7% to 0.

The authors estimate that 430 000 people are in the first category of recipients (all workers with wages within the SMIC and 1.33 SMIC). In addition, the wage rises resulting from the contributions' cuts would have attracted 60.000 people on the labour market. The effect of the 1997 cut is thus of 490.000 jobs.

This model lacks realism (Sterdyniak, 2000): firms did not increase wages at the SMIC level by 14.7%; a 5% rise in the SMIC does not lead people with wages between 1 and 1.05 times SMIC to be fired: firms always need cashiers and shopkeepers. The concept of individual productivity does not have any meaning: if a shop needs a cashier, it will have to pay a wage of 1000 euros a month (if the SMIC is 1000 euros); 1100 (if the SMIC is 1100 euros) even if on the whole the increase of the SMIC may induce some losses of unskilled jobs. Last, the estimate cannot be precise: the unskilled unemployed have roughly the same characteristics as the unskilled employed. Does this mean that a small decrease in wage costs would be sufficient to have them offered a job? Or that the problem lies in an insufficient number of available jobs?

An ex post microeconomic analysis

Crépon and Desplatz (2001) make microeconomic comparison of companies' behaviours depending on the benefit provided by contribution cuts implemented between 1995 and 1997. They conclude that these cuts would have created 460,000 jobs.

Cuts would have played without delay, contrary to one could expect, but the authors claim that cuts would have in fact slowed down jobs destruction.

However, the results can be questioned (Sterdyniak, 2002):

- the rise in employment results from a big rise in output and a strong fall in prices and not from substitution effects;
- Almost as many skilled (220,000) as unskilled jobs would have been created;
- The micro-macro transition rough: 460,000 jobs are the difference between the number of jobs created by firms having benefited from the cuts and the number of jobs created by firms that did not benefit from the cuts. However, the latter group of companies must have suffered from the cuts if they translated in lower prices in the firms benefiting from the cuts.
- The authors estimate that the measure increased GDP by 0.65% per annum and employment by 0.7% between 1994 and 1997. In that period, GDP rose by 2.05% per annum in the EU-12 and by 1.55% in France. According to the authors, French GDP would have grown by a mere 0.9% in the absence of this cut, which does not seem very credible.

Macroeconomique ex post analysis

Beffy and Fourcade (2004) estimates that the cuts of employers contributions in place in 2002 led to a relative fall of 8,3% of the cost of unskilled labour compared to that of skilled

one. They estimate an equation of employment where the elasticity of employment at its cost is 0.22%, but where the elasticity of employment to the relative cost unskilled/skilled workers is 0.37.

$$\log(\textit{employment}) - \log(\textit{PIB}) = -1.8 - \underset{(26,5)}{0.005 * \textit{time}} + \underset{(3,2)}{0.001 * \textit{time} * \textit{dum92Q3}} - \underset{(3,0)}{0.22 * \log(w/p)} \\ - \underset{(4,2)}{0.37 * \log(w_{US} - w_S)} - \underset{(4,9)}{0.6 * \textit{workingtime}}$$

Thus the cut would have induced the creation of $0.37 * 86.5 * 14.5$ millions = 330 000 employment in 2000 (and of 450.000 in 2002). The equation takes into account the specificity of a cut centred on the low-wages; it is badly specified since intervenes the labour cost and not the capital relative cost capital/labour; finally, the labour productivity gains are represented by a trend, with a rupture in 92-Q3.

Hennion and Loisy (2006) evaluate that the social contributions cuts in 2003 involve a fall of 1.95% of the labour cost. From an estimation of an employment equation, they evaluate that the elasticity of total employment at its cost is 0.9.

$$\log(\textit{employment}) - \log(\textit{GDP}) = -1.8 - \underset{(2,0)}{0.002 * \textit{time}} - \underset{(3,3)}{0.9 * \log(w/p)} + \underset{(2,8)}{0.03 * \textit{RED}}$$

where RED is the working-time reduction.

Thus the cut would have induced the creation of $0.9 * 1.95 * 14.5$ millions = 250 000 employments. But, the equation does not take into account the specificity of a measure centred on the low-wages; it is badly specified since intervenes the labour cost and not the capital relative cost capital/labour; finally, autonomous labour productivity gains are represented by a trend, whereas the division between technical progress and real wage effects is difficult to establish.

Gafsi *et al.* (2004) use information at industry level. The production function combines three factors: skilled labour, unskilled labour, capital. Skilled and unskilled labour appear substitutable, with an elasticity of 2. Wages are endogenous. Unfortunately, the authors suppose that workers consider social security contributions as differed wages and so they claim for wage increases to compensate for the falls in employers' contributions. But, obviously, this mechanism does not play for compensated cuts, without impact on benefits. On the whole, the 1999 cut would have created 118,000 unskilled jobs, but 51,000 skilled jobs would have been destructed, with the total impact of the measure being 70.000 only.

Jamet (2005) presents also an analysis at industry level. It shows that the revival of unskilled employment intervenes especially in the services and the construction, and not in manufacturing. In fact it is the services sector which profited the most from social contributions cuts. Its modelling supposes that the skilled workers are in full employment, but it takes account of heterogeneities between the sectors and of the fact that the sectors which strongly profit from the contributions cuts reductions lower their prices and gain some shares of market. The article gives three estimates of the effect of the cut in place in 97 according to the elasticity of un-skilled employment to its cost. In its higher estimation (1.2), the cut increases unskilled employment by 164.000.

Table 11 compares the result of 15 studies on the effects of employers' social contributions cuts. Last column shows job creation for 10 billion euro, which was the amount of contributions' cuts in 1997 (before the introduction of the 35-hour week) and half of today's measures. Most of these studies estimate that 300 000 jobs are created for an *ex ante* 10 billion cut in social contributions. There are four exceptions: Laroque-Salanie (2000) and Crépon-Desplat find much more; Gafsi-L'Horty-Mihoubi (2004) and Jamet (2005) much less.

11. Studies on the impact of social contribution cuts

	Type of analysis	Measure analysed	Ex ante/ex post costs billions*	Impact on employment	Employment /10 billion
CSREC (1997)	Small model with calibrated parameters	10 billion FF according to 1997 cut	2.25	48 000/ 71 000	265 000
Dares (1997)	Small model with calibrated parameters	10 billion FF according to 1997 cut	2.25	60 000	265 000
Malinvaud (1997)	Small model with calibrated parameters	1997 cut	9	350 000 (10 years); 500 000 (at term)	390 000
Laffargue (1996. 2000)	General equilibrium model with calibrated parameters	10 point of contribution on low-wage	8.6 /7.3	528 000	613 000
Salanié (2000) Audric <i>et al.</i> (2000)	Small model with calibrated parameters	10 point of contribution on low-wage	4.1 /0.7	120 000	290 000
L'Horty (2000)	Small model with calibrated parameters	10 point of contribution on low-wage	2.25	70 000	310 000
Laroque-Salanie (2000)	Simulation on household data	1997 cut	2.8 /-3.5	490 000	1 750 000
Crepon-Desplatz (2001)	Microeconomic study on firm data	1997 cut	6.5 /-1.5	460 000	708 000
Lerais (2001)	Econometric on macro data	1999 cut	8	170 000	212 000
Beffy-Fourcade (2005)	Econometric on macro data	2000 cut	12	330 000	275 000
Doisy <i>et al.</i> (2004)	General equilibrium model with calibrated parameters	2000 cut	8 /1.2	320 000	400 000
Hennion-Loisy (2006)	Econometric on macro data	2003 cut	12	250 000	208 000
Gafsi <i>et al.</i> (2005)	Econometric on sector data	1999 cut	9	70 000	78 000
Jamet (2005)	Econometric on sector data	1997 cut	9.8	164 000	167 000
Guiliani (2005)	Small model with calibrated parameters	2005 cut	21.4	575 000	268 000

* Estimation in 2006 euros (HS)

3.4 The state of the debate

Social security contributions cuts on low wages cost approximately 18 billion euros today, i.e. 1% of GDP. They are often questioned, especially because their impact on employment is difficult to assess.

An average estimate of about 550,000 jobs created would have an *ex post* cost of 9 billion euro, i.e. 176,000 euros per created job, which is quite a lot.

Some, like Cahuc (2003) consider higher numbers of jobs created and recommend to extend the measure (up to a 0 rate for employees and employers' social contributions at the SMIC level versus 30 percentage points currently); without extending it beyond 1.6 times SMIC; possibly financing it by a rise in contributions on higher wage employees. *But what is the social justification for over-taxing some workers and not capital income? Is it necessary to widen the low-wage trap? Is it necessary to concentrate all measures on unskilled jobs?*

According to DARES and DGTPE (2006), abolishing existing cuts and rebates would destroy 800,000 jobs. But this impact is obtained by rule of three based on an evaluation of 300,000 jobs created in 1997. The gross cost of job creation would be 22,500 euros (i.e. roughly the SMIC); the net cost 7,300 euros.

According to the *Cour des comptes report* (2006):

- Social contributions cuts are not very useful in the industrial sector, where priority should be to develop high value-added activities rather than protect low wage sectors. *But are we sure that these high-value added sectors can create the required employment level? One can think that it is socially expensive to accept the closing of companies in sectors or areas in difficulty, knowing that their workers will remain with unemployment until their retirement.*
- They hardly influenced employment policies in hypermarkets albeit allowing them to increase their margins.
- In “hotel-coffee-restaurant” sectors, cuts would have been an incentive for companies to create more low-paid jobs without any positive effect on total employment.

The *Cour des Comptes* recommends on the one hand policies to increase innovation, on the other hand active policies for the unemployed (training programmes). It recommends either to reduce the contributions cuts' threshold to 1.3 down from 1.6 SMIC (gain: 7 billion euros for public finances), or to restrict them only to companies with less than 20 salaries (gain: 9.5 billion euros). Should employment policy take that risk? We do not think so.

4. The Working Tax Credit (PPE)

In the early 2000's, the social and economic debate was focused in France on the high rate of unemployment of unskilled labour (11.8 % in 2002). The rise of short-term contracts and involuntary part-time jobs generated a strong rise in the number of 'poor workers' families. There was little financial incentive for unskilled workers, entitled to the minimum income, to take a part-time job at the minimum wage level, and even sometimes a full-time job. So these workers could be tempted to remain unemployed, caught in an unemployment trap. The Socialist government headed by Prime minister Lionel Jospin introduced a refundable working tax credit (*Prime pour l'emploi, PPE*) in February 2001 with a view to increase the living standards of unskilled workers and to make their work pay. Its rules have been modified by the right-wing governments of Jean-Pierre Raffarin in 2003 and of Dominique Villepin in 2006. We will discuss first the appropriateness of the PPE. We will then examine how it works and how it modifies the gain for work. Then, we will present and discuss

empirical work on the PPE's impact on employment. Finally, criticisms made about the PPE and the possible ways of reform will be discussed.

4.1 In face of unemployed unskilled labour...

French economists are divided into three groups. Some believe that France has a negative employment gap at all skills levels. The high unemployment rate of unskilled labour is parallel with the 'de-qualification' of skilled labour. In a situation of high unemployment, companies hire over-skilled labour instead of unskilled labour which raises the unemployment rate of the latter. Raising economic growth is the only thing to be done. Hence, rapid economic growth generated 2 million jobs between 1997 and 2001 (9% of total employment). There is no need to introduce specific measures in favour of unskilled employment.

Other economists argue that demand for unskilled jobs is too weak in France: the minimum wage (SMIC) is too high for social reasons, while demand for unskilled jobs declines due to technological progress, capital-labour trade-off and competition from low-wage emerging countries. The best solution would be to allow everyone to be able to take skilled jobs, through higher education and vocational training. Since this is long-term process, low-skilled labour costs have to be cut through lower social contributions. As we have already seen, this strategy has been implemented at a large scale in France since 1993.

In 1987, the Rocard government introduced a minimum income: the '*Revenu Minimum d'Insertion*' (RMI). The RMI is a differential benefit, which ensures a minimum income to the unemployed who are not entitled to unemployment allowances accounting for their family situation. In principle, the RMI is entitled only to people who make efforts to be back on employment, but this restriction does not apply in practice. As the SMIC aims at ensuring a minimum living standard for low-wage workers, the RMI cannot be significantly lower. In recent years, firms have offered a growing number of unskilled part-time jobs, which allow for greater flexibility of work organisation. Due to the labour market situation, companies could easily hire workers who would have otherwise remained unemployed. But a worker married and earning 0.5 SMIC has a lower income than the RMI: work does not pay for this worker. So a third group of economists consider that this unemployment trap is one of the reasons for the high rate of unemployment in France. A majority of RMI earners prefer to receive this benefit than search for a job that will provide them a very small marginal income. Wage earnings (at the SMIC level, or even at $\frac{1}{2}$ SMIC) must remain significantly higher than the RMI to bring unemployed people back to work. It is not only an incentive to work, it is also fair: from a social viewpoint, it is desirable that work be always rewarded. Two options are then possible: abolishing the RMI, but this has never been suggested, because of the serious social issues it would raise in a context of high unemployment; introducing a specific subsidy for low skilled jobs.

However, the small gap between the RMI and the SMIC does not seem to prevent RMI earners from taking a job at the SMIC level. The huge success of SMIC paid part-time jobs (saleswomen or cashiers) illustrates that the problem is on the demand side and not on labour supply. A large majority of unskilled unemployed do not succeed to find a job and it is not their first choice to live on the RMI. Workers prefer to have a low-paid job, giving them a social status and entitlement to old-age pension, to be 'socially inserted' in the society and to have career prospects rather than stay on benefits. There are of course exceptions, but in a context of high unemployment, these exceptions do not have an impact on total employment. Who cares if Paul does not want to take the job Jeanne will be happy to take? From 1997 to 2001, when there was rapid growth in France there were labour shortages only for very specific skilled jobs but not for SMIC workers. If the French economy suffers from skilled labour shortages, trying to bring back to work unskilled workers will not help.

4.2 The PPE rules: a history

In 1998 a first measure aiming at making work pay on a transitory basis was introduced: the RMI incentive (the *intéressement*). This system entitled a RMI earner to continue to benefit from part of the RMI in the first year after starting a job, as only half of wage earnings were taken into account for the calculation of the RMI. Let us consider the example of a couple with two children. If they do not work, they get the RMI: 767 euros; a job paid at 0.5 SMIC (621 euros) will not pay. Owing to the incentive system, they will still benefit from a RMI of 399 euros; the job will increase their income by 250 euros. This measure makes a part-time job always pay more than staying on the RMI and slightly raises the gains of taking a full-time job. But it plays on a temporarily basis only: after one year, no RMI is paid anymore, the family income falls; it is then necessary to be back fully on the RMI to be entitled to the incentive later again. The system is not satisfactory.

In 2001, the Jospin government introduced several measures in order to make work pay more. Housing allowances, dwellings taxation, income taxation were modified to allow low-wage workers to be entitled to benefits previously entitled to RMI earners only. The PPE was then introduced. It is a refundable tax credit paid to low-wage workers. The PPE is calculated on the basis of the wages of year t , but paid in October of year $t+1$ (when taxpayers pay their income taxes). The legislation of the PPE is very complex.

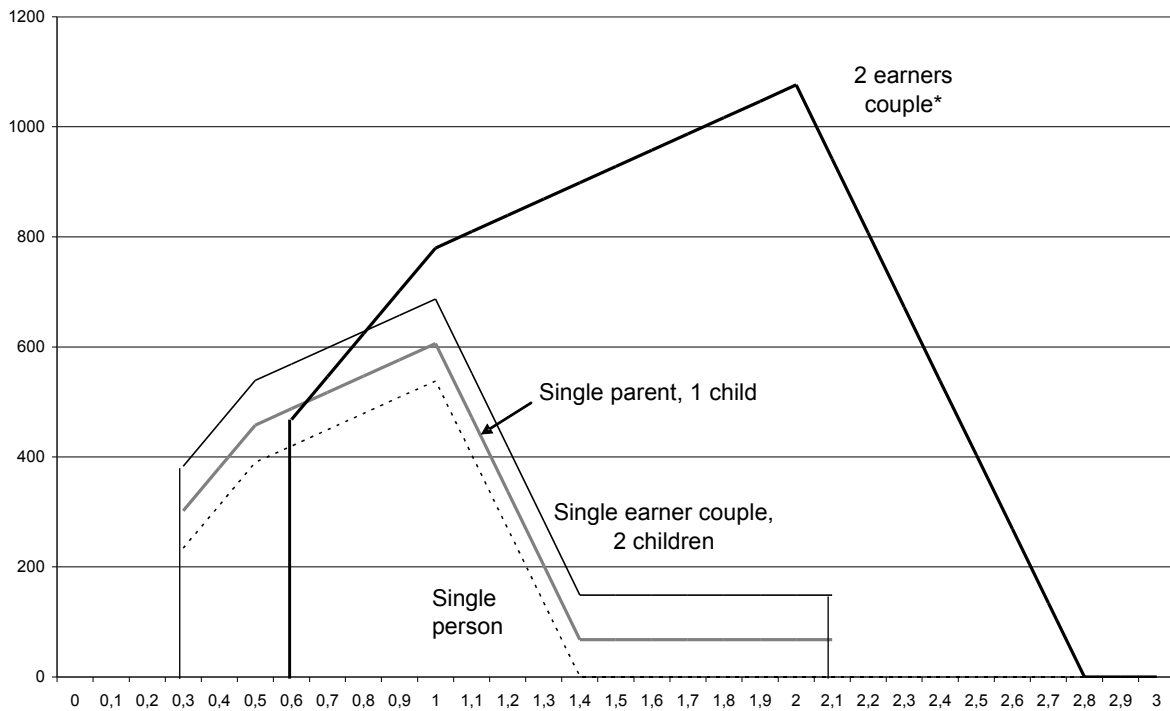
In 2004, a full-time worker paid at the SMIC (11689 euros per year) was entitled to a tax credit of 4.6% of its wages, i.e. a maximum of 538 euros. The PPE is cut by 11% of the part of the wage above 11689 euros. The PPE therefore equals 0 at a wage level of 16364 euros, i.e. 1.4 SMIC. For part-time jobs, the PPE is calculated on the basis of a full-time equivalent. The wage is first considered on a full-time basis which serves of a basis for calculating the PPE that will then be paid in proportion of time worked. Following the 2003 reform, the amount of the PPE has been increased by 45% for part-time workers (see Chart 2). The credit is not paid for a working time of less than 30% of the full time.

The PPE is calculated per individual. However, a ceiling applies on family incomes: 2.6 SMIC for a couple, 3.3 SMIC for a family with two children. It mainly affects women earning low wages with their husband earning a relatively high wage. In terms of incentives, there is no reason for paying a tax credit to the 2nd worker in a couple, since he/she is not in an activity trap (see Table 13).

There are also family elements, but their amounts are small and arbitrary: 82 euros a year for a non-working spouse, 36 euros per child, 72 euros for the first child of a single person. This is because the constitutional council (*Conseil constitutionnel*) requires that all direct taxes take account of the family situation. But this requirement has been fulfilled on a minimum basis.

The PPE rates increased from 2.2 % of wages in 2000 to 7.7% in 2006 for full-time workers paid at the SMIC; it increased from 2.2% to 12.2% for half-time workers as the SMIC level (see Table 12). Since 2003, the bonus for part-time has increased to encourage inactive people to take part-time jobs.

Chart 2: PPE's allowance (in euros, per year, in 2005, 2004 income.)



* The two earners of the couple are assumed to have similar incomes.

12. Evolution of PPE rates

Wages in ...	SMIC level	0.5 SMIC level
2000	2.2% (announced) ; 4.4% in fact	2.2% (announced); 4.4% in fact
2001	4.4%	4.4%
2002	4.4%	4.4%
2003	4.6%	6.7%
2004	4.6%	6.7%
2005	6.0%	9.8%
2006	7.7%	12.2%

Table 13 shows the monthly gains resulting from taking a job in 2005. Due to the complexity of the system, especially because RMI's rules are not consistent with those of family allowances, these monthly gains vary significantly from one case to another. The gains are always very limited for the 1st worker of the family, weak for a single and significant for the 2nd worker of the family. Due to its low value, the PPE does not alter this situation much. Leaving the RMI for a SMIC paid job does not really pay for the 1st worker of the family. A job paid at 0.5 SMIC will not really pay for the 1st worker of the family; it will slightly pay for a single. The job (half-time or full time) will always pay for the 2nd worker of the family. The PPE helps leaving inactivity for a full-time job, but not for part-time jobs. It also benefits people who have no real incentive, like couples earning 2 SMIC.

13. Gains from taking a work in 2005 (in euros, per month)

	From RMI to ½ SMIC			From RMI to SMIC		
	Before PPE	With PPE	With <i>Int.</i>	Before PPE	With PPE	With <i>Int.</i>
Single, 0 child	72	103	281	409	446	446
Single, 1 child	51	87	289	422	464	464
Single, 2 children	143	183	293	520	566	566
Couple, 0 child; NW	0	38	291	266	310	549
Couple, 1 child; NW	0	41	294	224	271	554
Couple, 2 children; NW	0	44	297	234	284	556
Couple, 3 children; NW	0	42	316	387	439	557
Couple, 0 child; SMIC	364	388	149	806	836	597
Couple, 1 child; SMIC	320	344	61	731	761	478
Couple, 2 children; SMIC	339	363	92	679	709	438
Couple, 3 children; SMIC	369	389	272	727	757	639

Note: In **bold**, the cases where taking a half-time job entails a gain of less than 200 euros and the cases where taking a full-time job entails a gain of less than 400 euros. NW: non worker spouse; SMIC: the spouse already works and earn the SMIC; Int : with *intéressement* or with the ACR.

In 2005, PPE has an annual cost of 2.5 billion euros and benefited 9.4 million households, mainly at 2nd, 3rd and 4th income deciles. For 2007, the cost is estimated to reach 3.7 billion euros. The first decile, which includes the unemployed, does not benefit much of the system. The PPE does not account for the distributional principle of taxation, since the tax credit increase for wages ranging from 0.3 to 1 SMIC. There is no justification for that in a period of high unemployment where being unemployed is not a deliberate choice. Why should a tax credit increase income disparities between unskilled workers who have a full-time job and those who have no choice but take a part-time job, or those who do not find a job? Let us consider Peter and Paul who both have a SMIC paid job. Paul is fired and does not find a new job. Is this a reason for giving a tax credit to Peter who has been lucky to keep his job? Besides, as the PPE focuses on the gap between the RMI and the SMIC, the government does not wish to raise the RMI. More precisely, it does not want the RMI to increase in line with the SMIC but to stay indexed on consumer prices.

The small amounts of PPE's elements for children are not a good substitute for the needed reform of family allowances, which are weak in France, especially for families with one or two children. They should be raised and a Family Supplement for poor income families should be introduced (the Family Supplement currently benefits only poor families with at least three children).

The PPE is not a strong incentive. It is paid on an annual basis while wages are paid on a monthly basis: someone finding a job in January 2005 will receive the tax credit in October 2006 only. Calculating its amount is very complicate. The PPE adds to the existing complexity of the French tax system. It does not improve the difficult situation of workers who evolve between RMI and 'small jobs', with incomes being affected for unclear reasons by the fluctuation of the incentive RMI and of the housing benefits. More important, the allowance is small in comparison with foreign similar tax credits: a couple with two children

will receive a maximum of 1132 euros per year, while they could receive up to 4200 dollars in the US and 6240 pounds in the UK (i.e. 10000 euros).

However, even if the PPE does not have important incentive effects, one may consider that it has satisfactory redistributive effects since it makes it possible to improve somewhat the situation of 'poor workers', although in this case it should better account for the family situation.

4.3 The PPE's impact on employment

Assessing the impact of PPE on employment requires using models explaining households' labour supply. Such models are particularly difficult to build because of the complexity of the French tax and benefit system and of the labour market situation.

In the French system, most taxes and benefits are calculated on a family basis. So activity decisions of the two members of the couple must be modelled simultaneously. Many works avoid this difficulty in studying only women participation, men being supposed not to modify their labour supply.

The models have many difficulties in predicting individual behaviours. The way they are build means they will necessarily explain labour market participation by variables of employment gains without taking account of the labour market situation. From 1997 to 2002, the employment rate of women aged 25 to 55 rose from 67.4 to 71.6%: is this because it paid more for women to work and leave their "inactivity trap" or because more jobs were offered by companies in a period of rapid growth?

Most models assume that workers choose freely their working time. In fact, around 30% of women who work part-time would like to work full-time. In general, the models explain very badly part-time work.

It is necessary to evaluate the income of households with only one adult working. But this is extremely difficult. These households may be entitled to several assistance benefits, some of which provided by local authorities and therefore difficult to measure (see Anne and L'Horty, 2000). Some households are entitled to unemployment benefits, but these are difficult to measure and to take into account (since they are temporary). Last, the PPE is added to the "intéressement" of the RMI, already assumed to be a work incentive. None of these models account for the "intéressement" which may lead to overestimate the importance of inactivity traps because "intéressement" increases work incomes as compared to those of inactivity.

The PPE increases the marginal gain to work for workers at the SMIC level, but the income effect plays in the opposite direction. The work incentive may be reduced in some cases for married women, if their decision to take a job will mean their husband will be no more entitled to the PPE.

To our knowledge (see Stancanelli and Sterdyniak, 2004), four studies have provided an *ex ante* estimate of the PPE's impact on labour supply and only two studies *ex post* estimates. No exhaustive study has been released despite the expansion of the PPE in the last two years because of the complexity of the topic: how to account for all potential workers, describe working time choices and accounting for involuntary unemployment and involuntary part-time...

a) The analysis made with the model INES (Fugazza and *al.*, 2003) deals exclusively with women labour supply, either in couple, or alone. In the model, women can choose their working time (10, 20, 30 or 39 hours per week). The model does not describe involuntary part time. Part time work, discouraged activity and involuntary unemployment are poorly explained. The authors study the impact of the PPE in 2003. According to their estimates (see

Table 14), the effect on women activity would be positive but weak (+ 0.25%). Employment would increase by 17,000 at an *ex post* cost of 416 million euros.

14. PPE's impact in 2003

	Women in couple	Alone women.
Impact on employment	0.26%	0.20%
Women increasing their working time	0.03 %	0.04%
Women reducing their working time	-0.04%	0.0
Impact on hours worked	0.26%	0.22%

Source : Fugazza and *al.*, 2003.

b) **Choné (2002)** models a joint decision of the two members of the couples, supposed to choose between participation of the two, of the husband only, of the wife only, or of none of them. Like Laroque and Salanié (2000b), the author classifies the inactive as classical unemployed or voluntary unemployed or other non-employed. However, part-time workers are left out of the sample and individuals are assumed to have the choice only between full-time employment and inactivity. This weakens the relevance of the model in terms of assessing the impact of the PPE. Choné (2002) finds that the PPE (in the 2003 version) has a positive but small impact: it would raise the female employment rate from 47.3 to 47.5% and male employment rate from 84.6 to 84.9%. This would mean a 0.4% rise in employment at an *ex post* cost of 0.87 billion euros.

c) **Laroque and Salanié (2002)** consider the case of women, single or in couple, aged 25 to 49. The modelling of part time is particularly detailed. First, the authors make the assumption that the constraint of the SMIC is softened for part-time jobs (firms being able to hire workers at the SMIC level and to make them work longer than the official and paid hours): this allows some workers with a productivity below the SMIC to find a job (because the authors believe that wages equal labour productivity). Second, in order to account for the fact that part time is often involuntary, the authors consider the possibility that part-time work can be taken by women who would have preferred to work full time. The probability of taking a part-time job as a second choice instead of a full time job is very high for non-graduate women and very low for graduate women.

The authors compare 2 measures: the PPE (2003 version) and the ACR (*Allocation compensatrice de revenu*), a benefit which would guarantee any Rmiste who find a job to see a rise in its disposable income of at least 60% of its wage earnings). The two measures have different *ex ante* costs: 2.6 billion euros for the ACR, 1.2 billion for the PPE. The ACR has strong negative impact on full-time work and increases non-employment. It is an incentive for single women, or married women with a husband who does not have a job, to take a job. But these women are less numerous than married women with a husband having a job and who are have an incentive to work less. The PPE-2003 has a positive but small impact on employment (+ 0.3% in full time equivalent).

15. Effect of employment incentives measures

In thousands	Effectif	ACR	PPE 2003
Unemployment	2 297	22	- 9
Part time	494	18	5
Full time	2 238	- 40	5

Source : Laroque and Salanié, 2002.

d) **Bargain (2004)** uses the SYSIFF 98 micro-simulation model. It studies the case of women living in couple only. Men labour supply is assumed to be constant. Women can choose between non-activity, part time or full time. Women declaring to be unemployed but looking for a job are left out of the sample, so that the author can consider that non-activity is always a choice in the sample.

Part time is taken into account by assuming that some women face a specific cost to find a full-time job, but this formalisation is artificial. The model is far from precise, in particular for part time: in 100 women working part time, 35 should be inactive according to the model, 13 part time, 52 full time. For 100 non-participating women, 38 should work full time, 12 part time.

The article analyses the effects of the PPE 2003, the ACR and the reform of the housing benefit of 2001. On the studied sample, the first two measures would cost 0.32 billion euros; the third one 0.4 billion. On the whole, the PPE 2003 would have a very weak effect on employment and especially on full-time employment (see Table 16). On the contrary, the ACR would have a little work incentive and would encourage some women to leave their job. The reform housing benefits would have had the same effect. In full time equivalent, the PPE 2003 would increase women in couple participation by 0.6% whereas the ACR would induce a fall by 1.9% and housing-benefit reforms would have induced a fall in 0.8%.

These results do not take account of single women; who will have the weakest gain to take a job and for whom the ACR is *a priori* the most effective measure (see Table 16). In the sample, only 1.7% of women do not work when their husband does not work, and are thus potentially in the “inactivity trap”, which is the case where the ACR is the most appropriate measure. The same problem arises for the reform of housing-benefit.

16. Women participation rates

In %	Initial situation	PPE 2003	ACR	Housing benefit
Non-employed	31.8	31.4	33.1	32.3
Part time	11.3	11.4	11.1	11.4
Full time	56.9	57.2	55.8	56.3

Source : Bargain, 2004.

e) **Stancanelli (2004)** does the first *ex post* analysis of the PPE. The analysis applies only to women in 2002. The paper uses the method of “difference-in-differences”, considering women who can be entitled to the PPE, and as control groups: women who are not entitled to it, either because their wages are a little too high, or because their husband earns a too high income. The only significant result is that the PPE would have reduced employment of married women by 0.5 to 1.3% (i.e. by 20,000 to 50,000). No favourable effect appears on single women.

f) **The study by Arnaud and al. (2005)** uses a similar method, but on the whole population. It proposes also an alternative method which integrates information on the fact that the individual receives the PPE. The PPE would have a small positive effect on activity, hardly significant. The number of additional jobs would be 65,000 at best. Unfortunately, the study has not been updated since the PPE has increased.

17. Evolution of participation rates

2001/2000	Traitement Group	Control Group	Difference in differences
<i>ex ante</i> Data	+ 1.77 %	+ 0.93 %	+ 0.84 % (0.43)
<i>ex post</i> Data	+ 1.68 %	+ 1.21 %	+ 0.47 % (0.53)

According to these studies, none of the existing measures would have a significant effect on female labour supply. Should it be concluded from it that there is not inactivity trap? Or, on the contrary, that the trap is very deep?

4.4 The debate about the PPE

The PPE is too complex and not a real incentive to work. Some economists have suggested focusing the PPE primarily on low earnings, by giving the same allowance to half-time and full-time jobs and lowering the ceiling on the household's total income. But this would increase some of the unsatisfactory impacts of the PPE: incentive to take a part-time job and disincentive to take a job for married women.

The simplest way to reform the PPE would be to turn the PPE into a low-wage subsidy, which would rely only on the hourly wage, being maximal at the SMIC level and become equal to 0 for a 1.4 SMIC hourly wage. The PPE could then be paid monthly together with wages. The PPE would be only an incentive to bring back to work unskilled people without any distributional goals. It would benefit spouses at low hourly wages, without considering the husband earnings. However, such an option suffers from three limits. An allowance on the wage bill could exert downward pressures on wages. The allowance would not be a significant incentive to take a part-time job. Last, the allowance would be similar with the existing employers' contributions rebates: a subsidy for unskilled labour of 6% is equivalent to a 6% rise in the SMIC decided simultaneously with a 6% rise in the employers' contributions rebate.

Another suggested reform would be to make the '*intéressement*' permanent, as an income allowance (IA³). This allowance would be based on the household's total income, such as: $IA = RMI - 50\% * WE - OI$, where IA is the allowance, RMI is the allowance paid to a family without resources, WE the wage earnings and OI the other incomes. Hence, a worker would always retain 50% of his wages. The IA could be paid monthly by the administration services paying family allowances. These services would keep aware of the situation of low-wage families (as they already do for the RMI and for housing benefits). The gain from taking work would always be significant, even for part-time jobs (see table). This allowance would raise the poor working families' incomes. It would have two drawbacks: making part-time jobs acceptable and hence favouring their development. It could also have a negative impact on spouses' work in low-skilled couples. The choice is not an easy one.

A tentative conclusion

Measures focusing on employers' social contributions rebates as well as on allowances for unskilled workers allow for disconnecting unskilled labour costs for firms (SMIC less contributions rebates) and workers' incomes (SMIC plus the PPE). Low paid workers get a subsidy to work; their employers get a subsidy to hire them. Firms get a strong incentive to create such jobs. There is a risk of creating a new type of low paid workers with no

³ Named : *Allocation Compensatrice de Revenu* (ACR) or *Revenu de solidarité active* (RSA)

expectations for pay rises since raising their wages will be very costly for the employer and not very profitable for the worker : ‘a low wage trap’.

A French employee, single and at paid at the SMIC level:

- costs his company (for a 35-hour working week) 1 477 euros,
- pays 440 euros in unemployment and pensions contributions, representing differed wages;
- receives a net transfer of 110 euros (PPE + housing allowance - CSG – Income tax - health and family contributions), and so has 1127 euros of disposable income,
- So there is no net fiscal and social burden for workers at the SMIC level; health insurance is free for them. Their living standard is disconnected from their labour costs.

But contribution cuts, in theory refunded by the State, weaken the financing of the Social security. Companies are given an incentive to create specific unskilled jobs, without prospects in terms of career, trapped in low wages, since rising wages is very costly for the employer and not very rewarding for the employee: a 10% rise in wages for a SMIC worker (+125 euros) costs the company 271 euros and provides 22 euros to the employee.

Jobs created do not match the rising education level of the young. So one day this set of measures will need to be changed.

Part-time work incentives lead companies to have more and more part-time unskilled jobs. This provides greater flexibility to companies. But unskilled workers (women in 80% of cases) cannot find full-time jobs any more. They have to live with one or two part-time jobs, flexible hours, without any career prospect. Families with one or two unskilled workers, working part-time become ‘poor worker’ families and this category is rising in France.

The work incentive strategy is based on maintaining a significant gap between the RMI and the SMIC. There is a risk is that this gap is obtained through downward pressure on the RMI level. In the last 13 years, the RMI was increased by 4.5% in terms of purchasing power, losing between 10 and 23% relative to the SMIC for 35 or 39 hour working weeks.

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