The « SMIC »

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- History and principles
 - The origin : the « SMIG » in the 1950s
 - The « SMIC » in the 1970s
 - Payroll tax exonerations in the 1990s
 - The 35 hour-week in the late 1990s
- Economic consequences the results of two studies looking at the period before the 35 hourweek
- Conclusions

History and Principles (1)

- The first minimum wage law in France was enacted in 1950
- It created a guaranteed hourly wage rate, called the SMIG (« salaire minimum interprofessionnel garanti », guaranteed interprofessional minimum wage);
- It applied to the Paris region. For all others, it was a fraction of the Paris minimum wage rate.
- It was partially indexed on consumer prices

History and Principles (2)

- Beginning in 1970, the SMIG became the SMIC (« salaire minimum interprofessionnel de croissance », growthbased interprofessional minimum wage);
- The SMIC principles still apply today. SMIC increases each year on July 1st, based on:
 - Increases due to inflation
 - Increases of productivity : half the growth in the averagehourly blue-collar wage rate (TSHO)
 - Increases from « coups de pouce », decided by the government
- Defined at the national level
 - no variation by industry or region
 - but industry-level bargaining agreements can increase it

History and Principles (3)

- ... but the overall labour cost for SMIC-paid workers became too large ...
- Payroll tax exonerations were enacted for lowwage workers over the nineties. They were implemented first in 1994, and quite strongly reinforced in 1996
- Employer-paid payroll taxes at the minimum wage went from 40% at the beginning of the nineties to 21,8% in 1996



Figure : Rules for the reduction in payroll taxes from 1993 to 1998 Source : Crépon et Desplatz

History and Principles (4)

- ... Then came the 35-hour week (Aubry laws)...
- This legislation changed the statutory context for the minimum wage :
 - a new scheme for Smic-paid employees in companies which moved to the 35-hour week :
 - It maintained pay levels through a « guaranteed monthly wage », the GMR
 - So that minimum wage earners moving to the 35-hour week were paid the same as they had been for 39 hours
 - the GMR rate rose more slowly than the SMIC rate
- It also introduced additional payroll tax exonerations for companies implementing working-time reduction

History and Principles (5)

- The outcome was a complicated system, with different minimum wage rates over several years
- Prior to July 1st, 2005, there were 5 different GMRs (guaranteed monthly rates), depending on when firms switched to 35 hour-week :
 - GMR 1 (RTT between 15/06/98 and 30/06/99)
 - GMR 2 (RTT between 01/07/99 and 30/06/00)
 - GMR 3 (RTT between 01/07/00 and 30/06/01)
 - GMR 4 (RTT between 01/07/01 and 30/06/02)
 - GMR 5 (RTT 01/07/02 and after)
- ... and the SMIC in firms that remained on the 39hour week

History and Principles (6)

- The multiple SMIC system led to unequal pay for employees doing the same work
- The « Fillon law » (17 january 2003) organised :
 - the convergence of the various SMIC rates to one level, the highest
 - the convergence of exoneration regimes for all companies



Source : Dares.

Figure : Convergence of the various hourly SMIC and GMR rates Source : Dares.







SMIC / Median wage full time workers (labor cost)



En pourcentage

1987

1990

Figure : Salariés des entreprises du secteur marchand non agricole concernés par les relèvements du Smic ou de la GMR Source : Dares.

Champ : ensemble des salariés, sauf apprentis, Etat et collectivités locales, secteur agricole, intérim et secteur domestique.

Economic Consequences (1)

- Two ex post micro econometric analyses :
 - F. Kramarz & T. Philippon (2001) using employee data ;
 - B. Crépon & R. Desplatz (2003) using matched employer-employee data ;
- Both study the impact of labour cost changes on employment of low-wage workers in France
- They examine the same period (the nineties before the 35-hour week), that saw large changes in these costs

Economic consequences (2) (based on Kramarz-Philippon)

- Look at the impact on the transitions probabilities from employment to non-employment (exit) and from nonemployment to employment (entry)
- Examine the period 1990-1998
- Use the French labour force survey
- Method :
 - compare workers directly affected by the changes (« between workers ») with workers closest in the wage distribution but not affected (« marginal workers »)
 - use the years with an increase in minimum cost and the years with a decrease in minimum cost and compare the outcomes

Statistical model

(based on Kramarz-Philippon)

- Examine the impact on the exit or entry of workers:
 - Exit: compare the gap in employment → non-employment transitions between the two groups (between workers and marginal workers):
 - in the years of increasing minimum cost
 - in the years of decreasing minimum cost
 - Compare both to obtain a difference-in-difference estimate
 - Entry: similarly compare the gap in non-employment → employment transitions between the two groups (between workers and marginal workers):
 - in the years of decreasing minimum cost
 - in the years of increasing minimum cost
 - Compare both to obtain a difference-in-difference estimate

Main results

(based on Kramarz-Philippon)

- The effect of the minimum cost on exit from employment is rather clear :
 - an increase of 1% of the minimum cost implies an increase of 1.5% in the probability of transiting from employment to non employment for the treated workers, the resulting elasticity being -1.5.
- The effect of the minimum cost on entry from non employment is less clear :
 - minimum cost decreases (tax subsidies) have a small and insignificant impact on entry from non employment.

Economic consequences (3) (based on Crépon-Desplatz)

- Evaluate the effect of payroll tax subsidies implemented in France in the middle 90's
- Use an extensive data source providing information about firms (the BRN) and their employees (the DADS)
- Based on the firm's *ex ante* labour cost reduction, which is the difference between :
 - the real 1994 labour costs based on the 1994 payroll tax legislation
 - the fictive 1994 labour costs based on the 1997 payroll tax legislation
- Method : compare the results for firms with different ex ante labour costs reductions, showing similar characteristics

Statistical model (1) (based on Crépon-Desplatz)

- Regress the evolution between 1994 and 1997 of different variables of interest (employment, average labour cost, ...) on the ex ante labour cost reduction and a set of control variables
- Control variables measured at their level in 1994 and in evolution over a past period : past performance, skill structure, competition variables at the sector level, financial variables
- Two parameters of interest :
 - the elasticity of employment to the ex ante labour cost reduction
 - the growth rate of employment due to the tax exonerations
- Strong assumptions : linearity and homogeneity

Variables	Elasticities		Growth rate				
	Manufacturing	Non	Manufacturing	Non			
		Manufacturing		Manufacturing			
Employment ^a	(0.14)	(0.10)	(0.12)	(0.19)			
Average labor cost ^a	-2.3 (0.10)	-2.25 (0.09)	-1.84 (0.09)	-2.96 (0.20)			
Share of unskilled workers	0.38 (0.09)	0.49 (0.07)	0.3 (0.07)	0.65 (0.10)			

Table 2 : Effect of the ex ante reduction in labor cost on some firm variables between 1994and 1997

Note : These results are obtained by the OLS regression of the variable of interest on the ex ante reduction in labor cost and a set of control variables in 1994 and for some of them in evolution over the past period. They are performed on 32,459 observations in manufacturing and 48,930 in non manufacturing. Firms with a zero ex ante reduction in labor costs were discarded. The ^a superscript means that the variable is expressed in logarithm Statistical model (2) (based on Crépon-Desplatz)

- To relax these assumptions, we develop a statistical model, based on the Rubin causal model, but adapted to the continuous treatment case
- We define the parameters of interest
 - the effect of a marginal increase of treatment
 - the effect of the treatment on treated
- We propose a semi-parametric estimation using series estimators

Variables	Manuf	Manufacturing		Non Manufacturing				
Weight	1	Employment	1	Employment				
Effect of a Marginal Increase of Treatment (MIT)								
Employment (log)	2.86	3.38	2.54	3.31				
(0.26)(0.39)(0.19)(0.28)Average Treatment Effect on the Treated (TT)								
Employment	3.59	2.24	2.55	3.15				
(109)	(0.53)	(0.30)	(0.52)	(0.60)				
Note : These figures	are the semi parametric e	stimates of the parameter	$E_3^{\omega} = E(\omega)$	$(y_{i} - y_{i}(0)))$				

Table 5 : Semi parametric estimation of Treatment Effect

and $E_{4}^{\overline{\omega}} = E(\overline{\omega}_{i}\partial y_{i}(t_{i})/\partial t)$

obtained with and without weighting firms by their employment. They are performed on 32.459 observations in manufacturing and 48.930 in non manufacturing. Firms with a zero ex ante reduction in labor costs were discarded.

	Manufa	cturing	Non Manufacturing	
	TT	WTT	TT	WTT
	2.86	3.38	2.54	3.31
Employment	(0.26)	(0.39)	(0.19)	(0.28)
	-2.95	-3.02	-3.34	-4.27
Average Labor Cost	(0.21)	(0.31)	(0.15)	(0.23)
	0.66	0.61	0.52	0.45
Share of unskilled workers	(0.15)	(0.23)	(0.10)	(0.15)
	1.22	1.65	0.92	1.08
Capital	(0.29)	(0.43)	(0.21)	(0.32)
	-1.64	-1.72	-1.62	-2.23
> Capital-labor ratio	(0.33)	(0.51)	(0.24)	(0.39)
	-1.17	-1.25	-1.36	-1.67
Productivity of Capital	(0.33)	(0.50)	(0.22)	(0.34)
	-2.81	-2.97	-2.98	-3.9
Labor Productivity	(0.26)	(0.38)	(0.18)	(0.27)
	0.04	0.4	-0.44	-0.59
Value added	(0.29)	(0.43)	(0.18)	(0.27)
Note : These figures are the semi parametric estimates of the parameter			$E_4^{\varpi} = E(\varpi_i \partial y)$	$_{i}(t_{i})/\partial t$

Table 9 : Semi parametric evaluation of a marginal increase of the ex-ante reduction in labor cost

obtained with and without weighting firms by their employment. They are performed on 32,459 observations in manufacturing and 48,930 in non manufacturing. Firms with a zero ex ante reduction in labor costs were discarded.

Main results (based on Crépon-Desplatz)

- We find strong employment effects of payroll tax exonerations for low wage workers
 - The average growth rate of employment is 2.24% in manufacturing and 3.15% in non manufacturing
 - 420,000 jobs may have been created or safeguarded in the economy over the 1994-1997 period
- That mainly reflects substitution between employee categories as well as between labor and capital

Conclusions

- In France, the minimum wage seems to have a negative effect on employment of low wage workers in France
- But it is important to have new studies over the recent period, from 1998 till today
- However, it is difficult to dissociate the impact of the 35-hour working week and with the impact of payroll tax exonerations over this period