The « Le SMIC »

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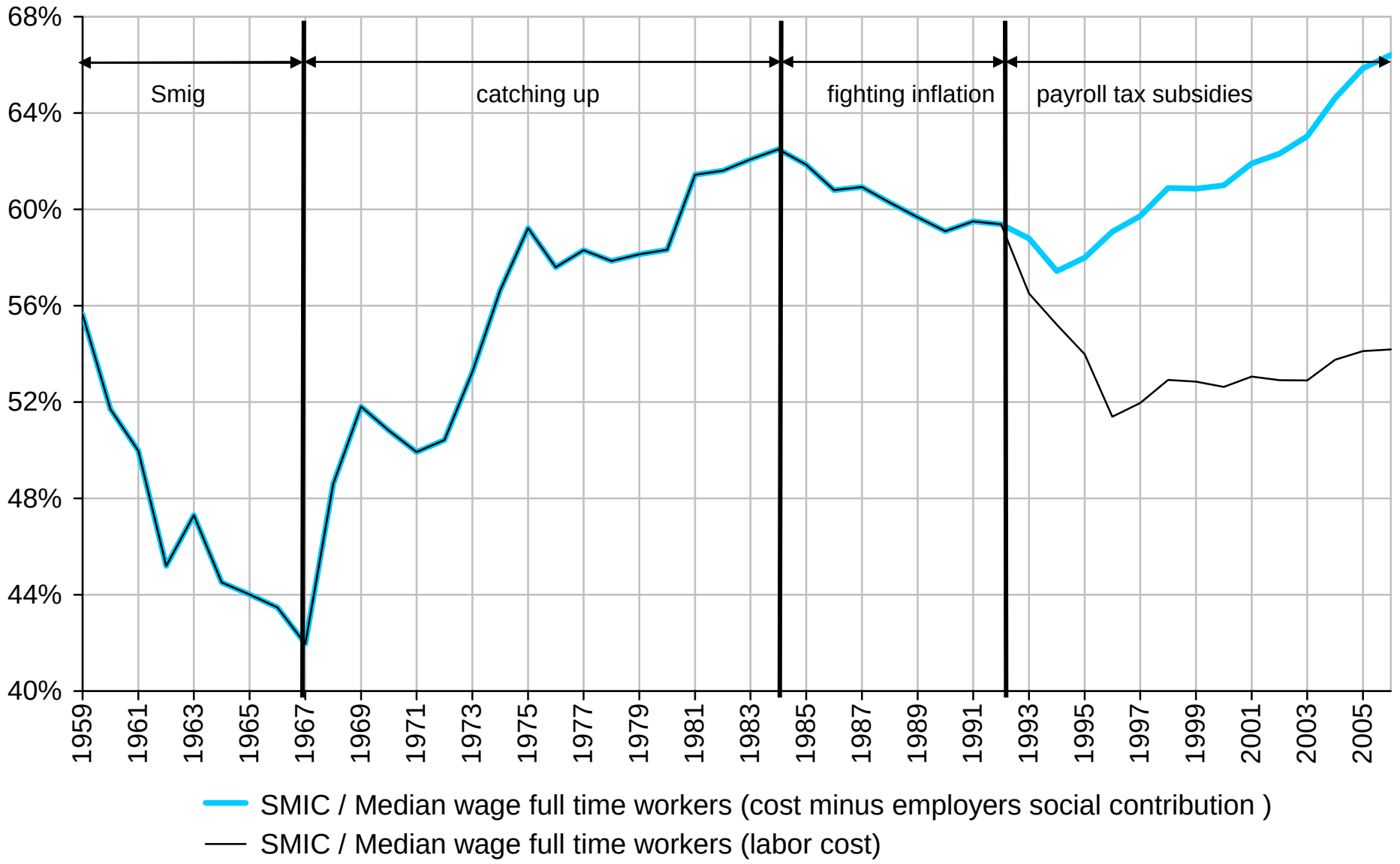
History and Principles (1)

- After WWII, wages set by Ministry of labor
- In 1950, free bargaining of wages, together with a SMIG (salaire minimum interprofessionnel garanti); a commission of employers and unions is unable to set the level of the SMIG; the government comes in and sets it.
- It applies to the Paris region. For all others, it is a fraction of the Paris one.
- In 1953, it is indexed on prices (if 5% or more inflation)
- Because productivity increases during the period (les 30 glorieuses), the difference between the SMIG and average wage increases…


68%
64%
60%
56%
52%
48%
44%
40%
Smig
catching up
fighting inflation
payroll tax subsidies
1959
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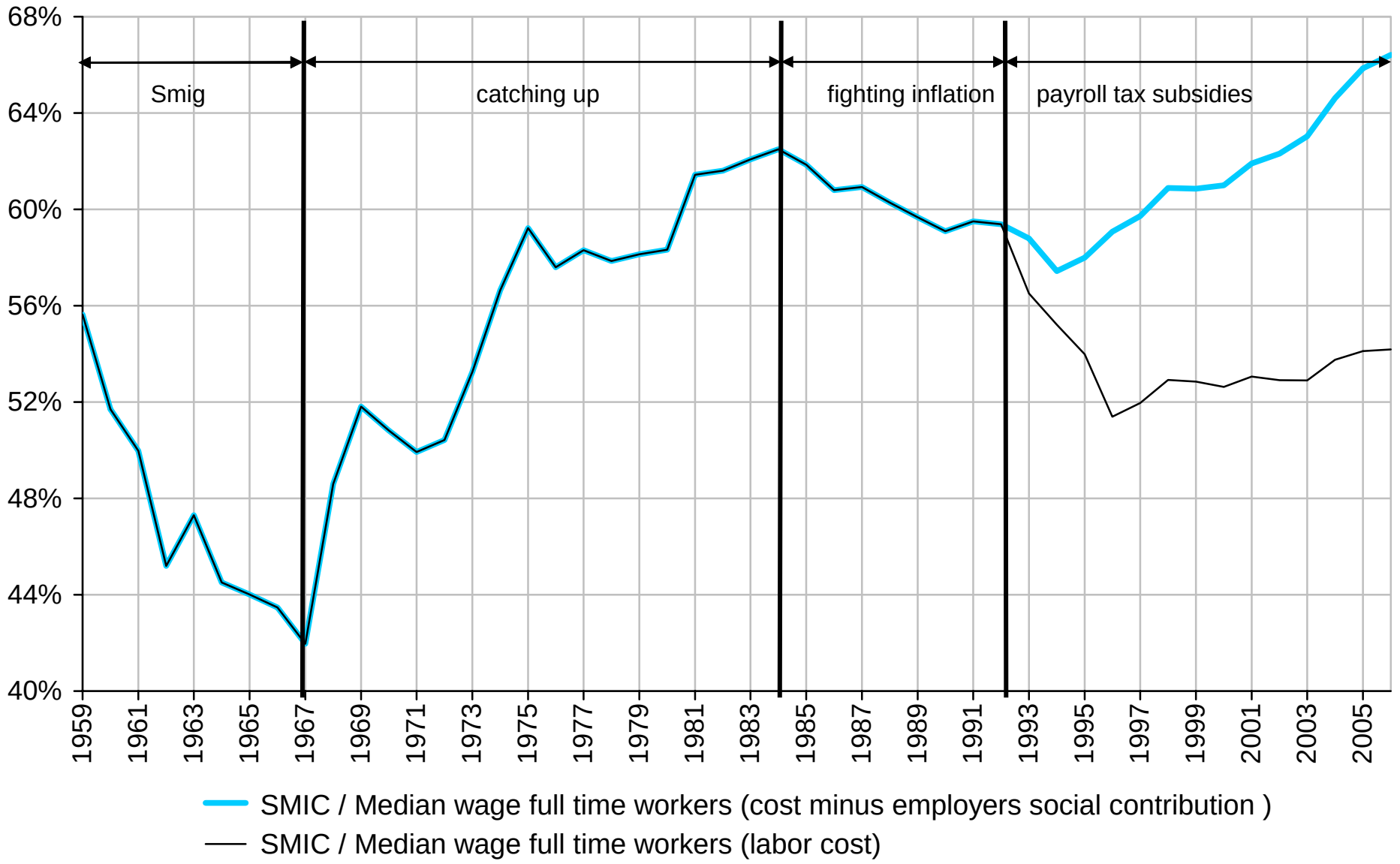
2001
2003
2005
SMIC / Median wage full time workers (cost minus employers social contribution)
SMIC / Median wage full time workers (labor cost)

History and Principles (2)

- …but May 1968 takes its toll and…
- The minimum wage is increased by 35%...
- The SMIG becomes the SMIC (salaire minimum interprofessionnel de croissance) with principles that still apply with:
  - Increases due to inflation (as soon as it is at least 2%, or as the nation-wide CPI)
  - Increases from « productivity »: ½ the growth of the TSHO (taux de salaire horaire ouvrier)
  - Increases from « coups de pouce »: from the politicians
  - National level, no variation by industry or region
  - Industry-level Bargaining agreements can only increase it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History and Principles (3)

- …but the labor cost at the SMIC becomes too large…
- Payroll tax subsidies are implemented first in 1994, and quite strongly in 1996, decreasing by half employer-paid payroll taxes at the minimum wage…

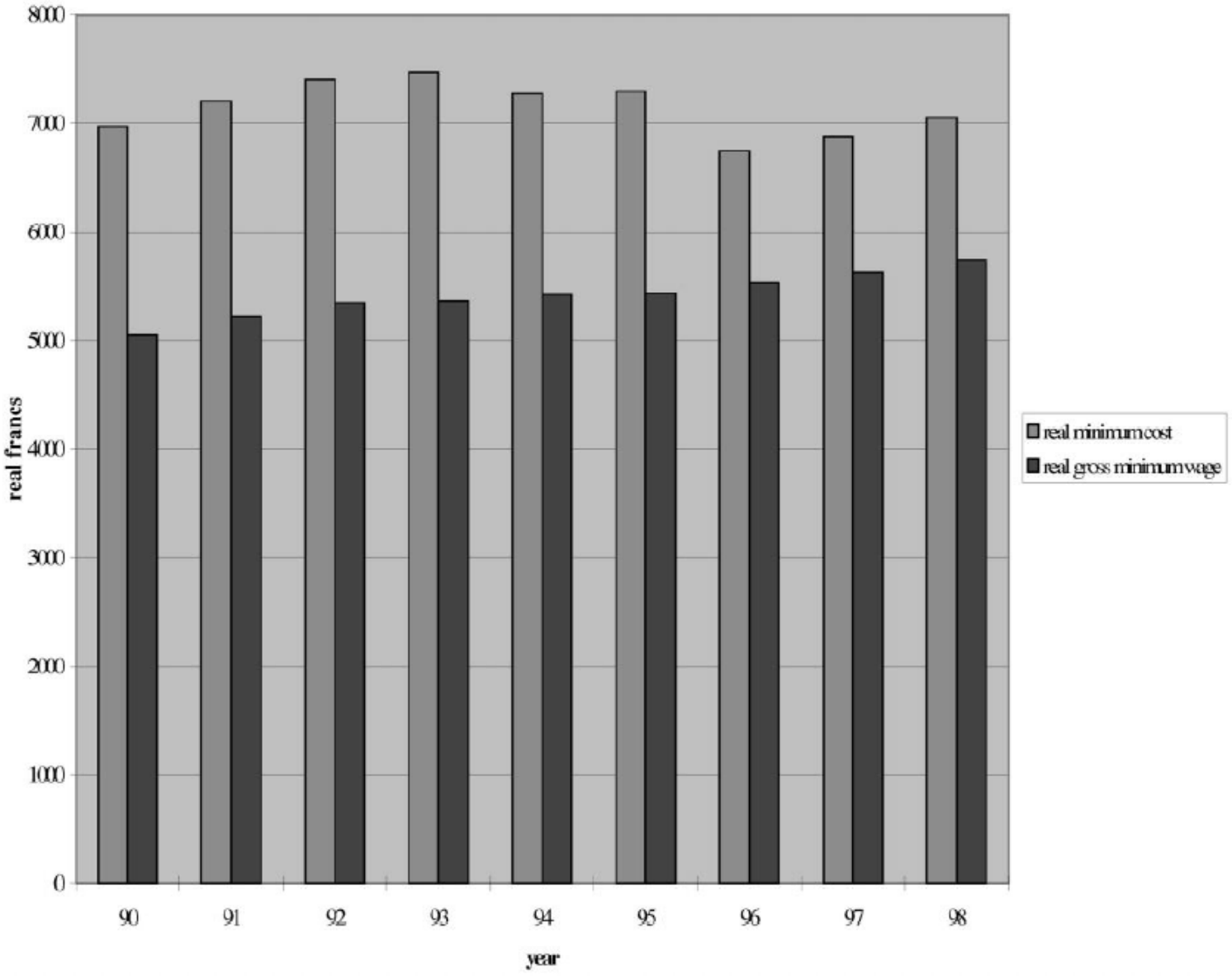
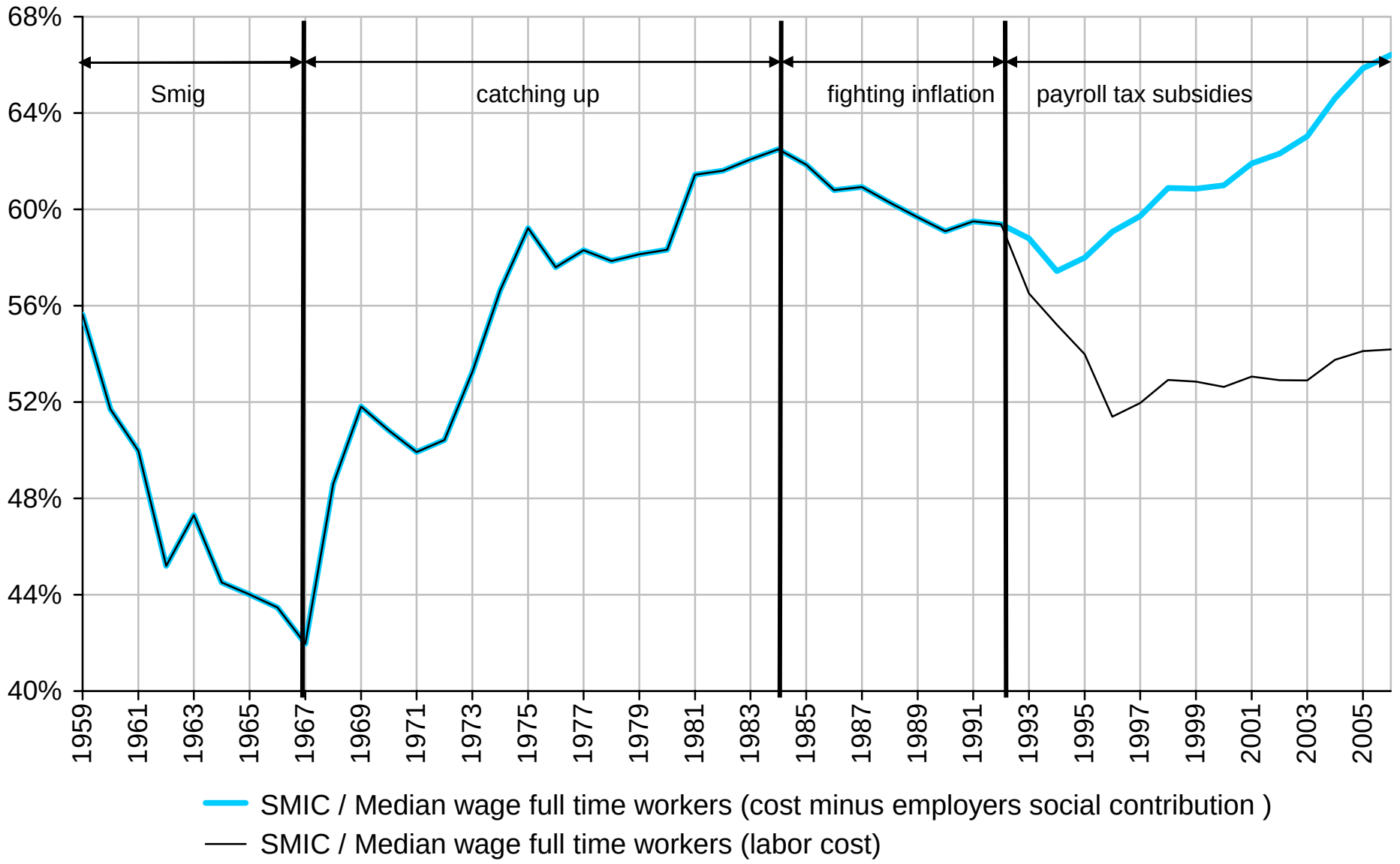


Fig. 1. Changes in the real minimum cost and the real minimum wage. Sources: Dares (various years), Insee (various years).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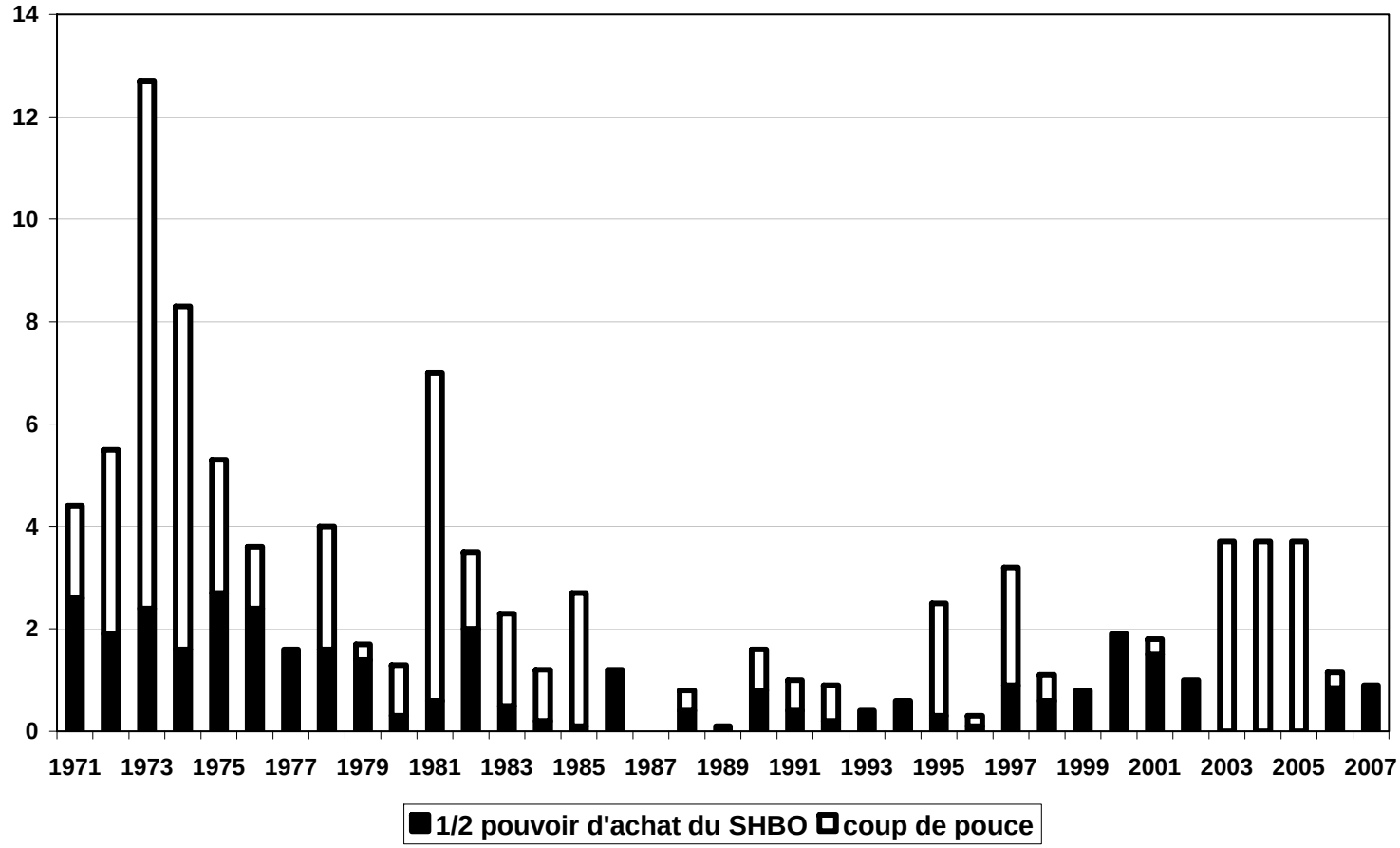


Figure 1 : Revalorisations du SMIC horaire brut au-delà de l'indexation sur l'indice de prix de référence (sur les 3 années 2003 à 2005, l'indexation du SMIC sur la moitié des gains de pouvoir d'achat du SHBO à été suspendue).
Source : DARES.

History and Principles (4)

- …Then comes the 35 hours workweek…
- which generalizes the use of payroll tax exemptions at all levels
- and imposes « GMR » (garantie mensuelles de rémunération) for all those at the SMIC
- Implying different levels of SMIC depending on the moment the firm went to 35…
- and a final convergence to one level, the highest, in 2005

History and Principles (5)

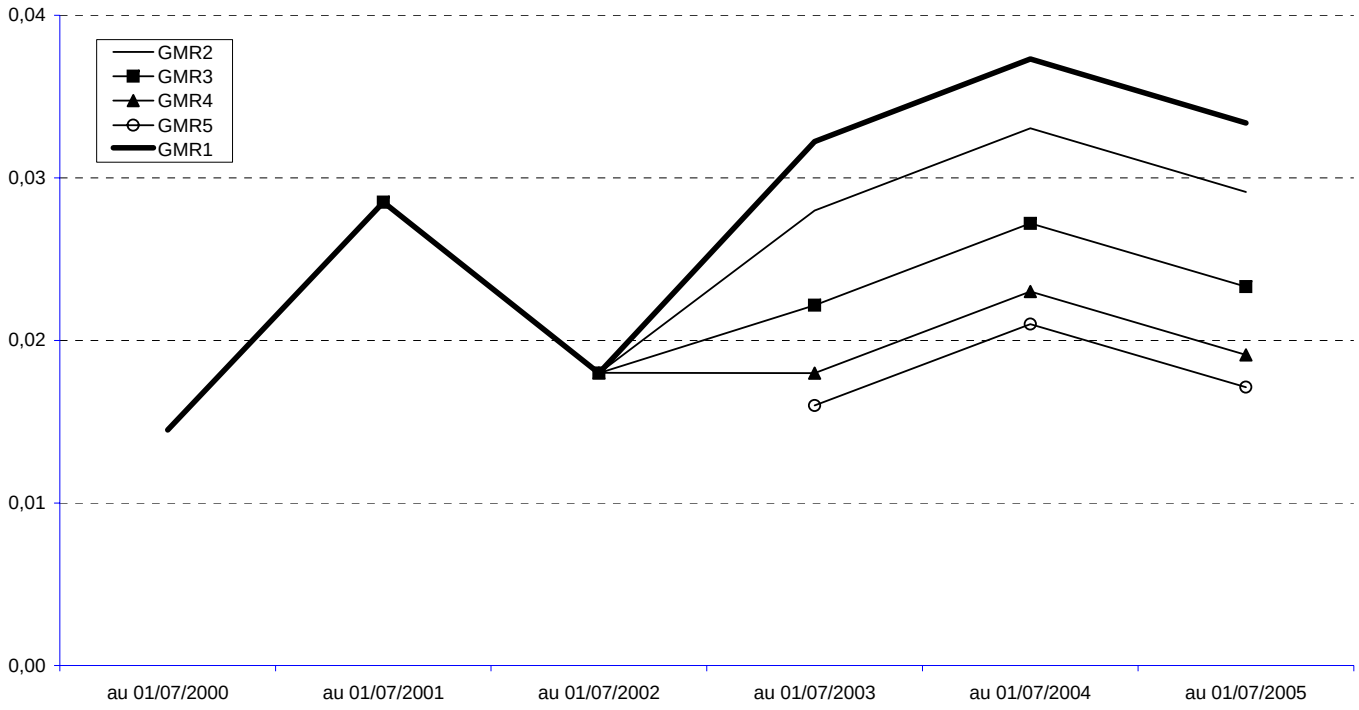
- Loi Fillon: Convergence of SMICs:
  - GMR 1 (RTT between 15/06/98 and 30/06/99)
  - GMR 2 (RTT between 01/07/99 and 30/06/00)
  - GMR 3 (RTT between 01/07/00 and 30/06/01)
  - GMR 4 (RTT between 01/07/01 and 30/06/02)
  - GMR 5 (RTT 01/07/02 and after)
  - SMIC of non-35 hours firms

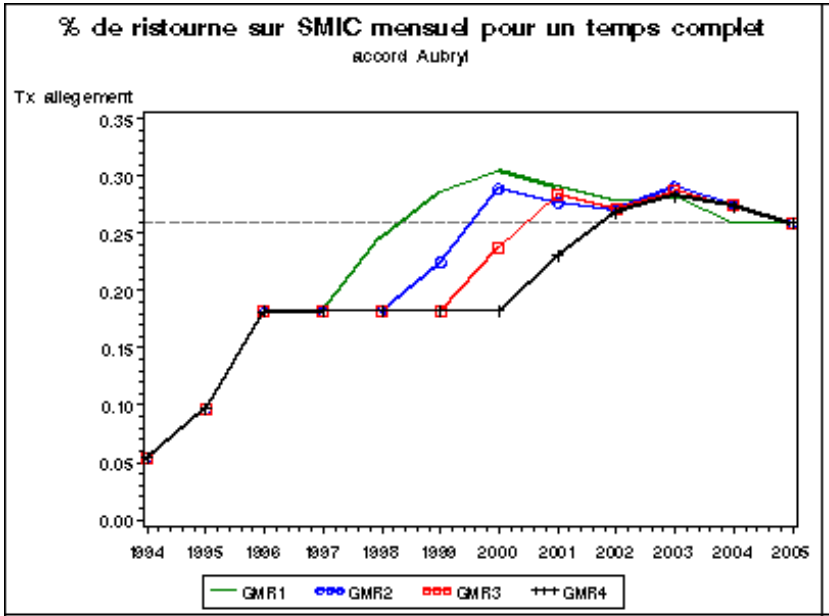
All Increase

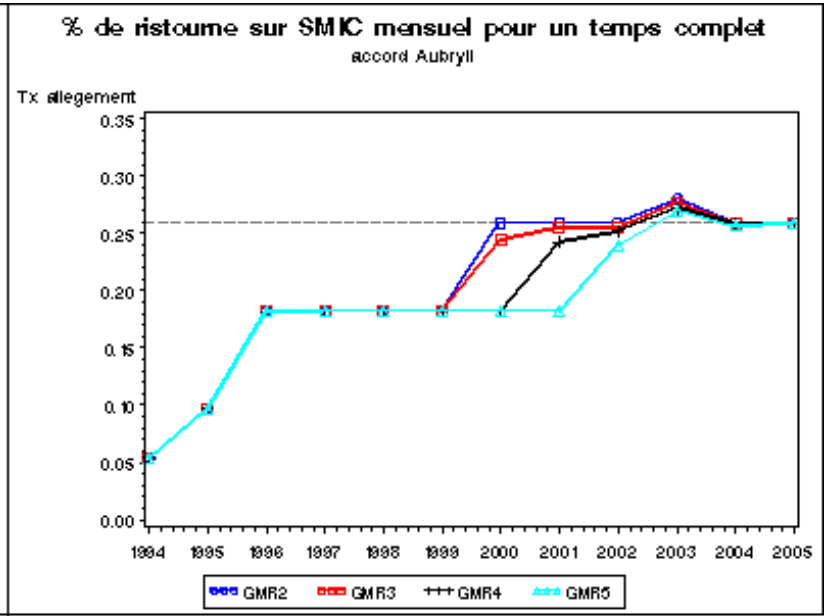
- Uniformisation of exemptions regimes
- Convergence of exemption rates

*In 2005, it becomes 26% at the level of the Smic and decreases until 1.7*Smic (to zero)*

Evolution des garanties mensuelles de rémunération entre 2000 et 2005




% de ristourne sur SMIC mensuel pour un temps complet
accord Aubryl
Tx allegement
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005
GMR1
GMR2
GMR3
GMR4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0.35
0.30
0.25
0.20
0.15
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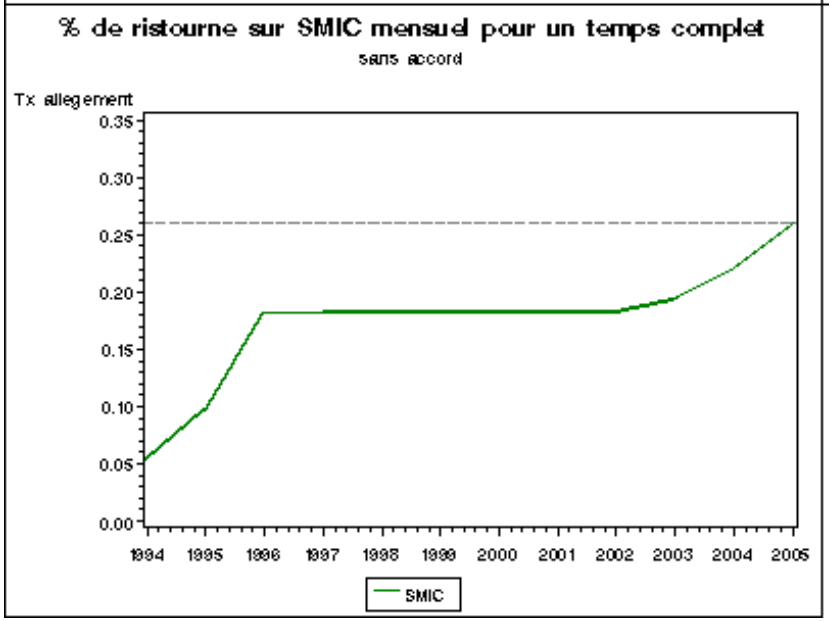
0.05
0.00
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005
GMR2
GMR3
GMR4
GMR5


% de ristourne sur SMIC mensuel pour un temps complet
sans accord
Tx allegement
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005
SMIC

Hourly Cost at the SMIC
full-time worker

	Change due to convergence of SMIC (2003-2005)	Change of the subsidy rate			Change hourly cost		
		Aubry I	SMIC	Aubry II	Aubry I	SMIC	Aubry II
GMR1	7,2%	-2,0%			9,2%		
GMR2	6,3%	-3,0%		-2,0%	9,3%		8,3%
GMR3	5,1%	-2,7%		-1,6%	7,8%		6,7%
GMR4	4,3%	-2,0%		-1,0%	6,3%		5,3%
GMR5	3,8%			-1,0%			4,8%
SMIC	11,7%		6,4%			5,3%	

Reading: For a full time worker, paid at the SMIC, between 2003 et 2005, despite an increase of 11.7% of her hourly gross compensation, an increase of 6.4% of employer-paid payroll tax subsidies induced a 5.3% increase of the hourly cost.

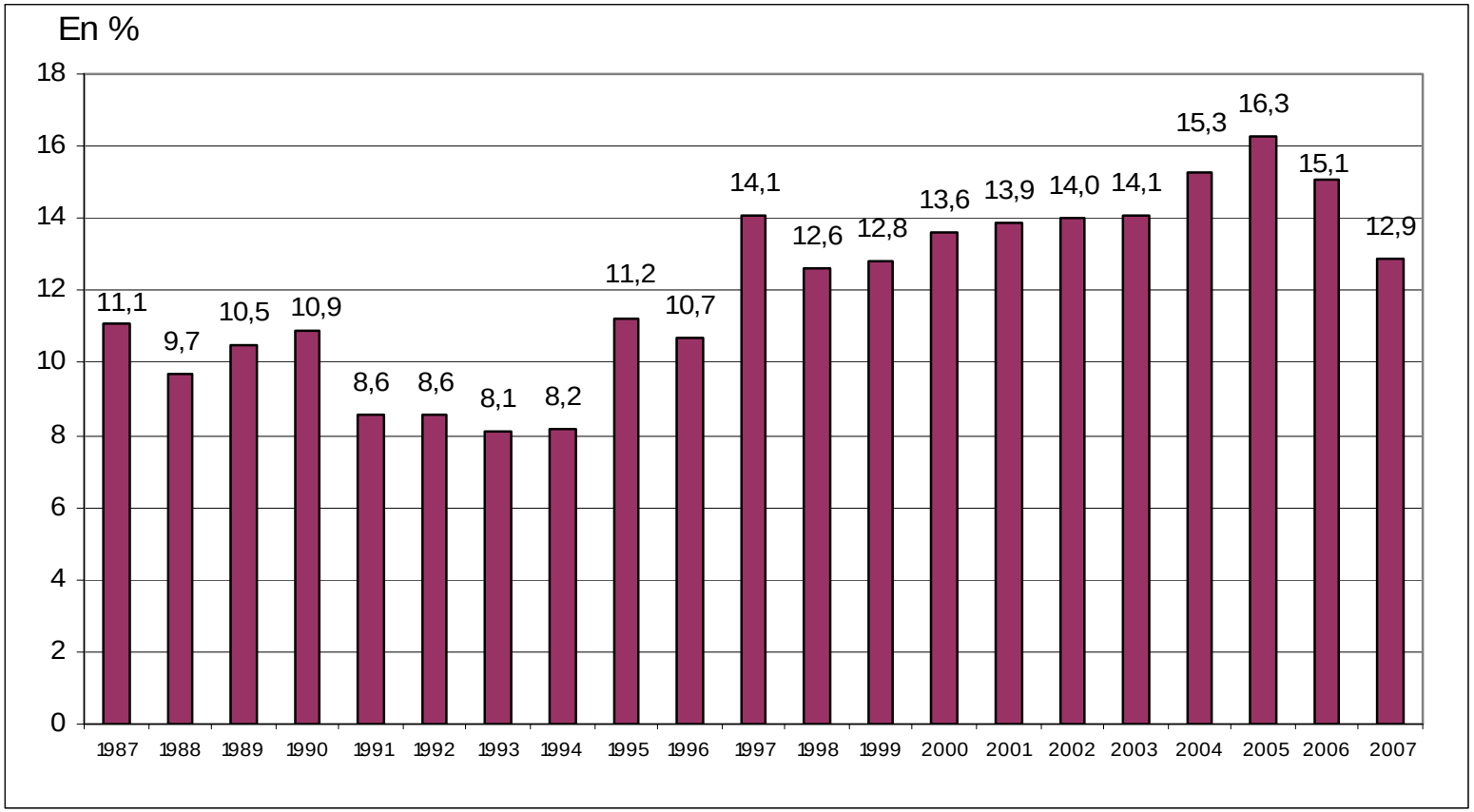


Figure 1 : Salariés des entreprises du secteur marchand non agricole concernés par les relèvements du SMIC ou de la GMR de 1987 à 2007

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

Source : Berry (2008), Graphique 1, p. 2.

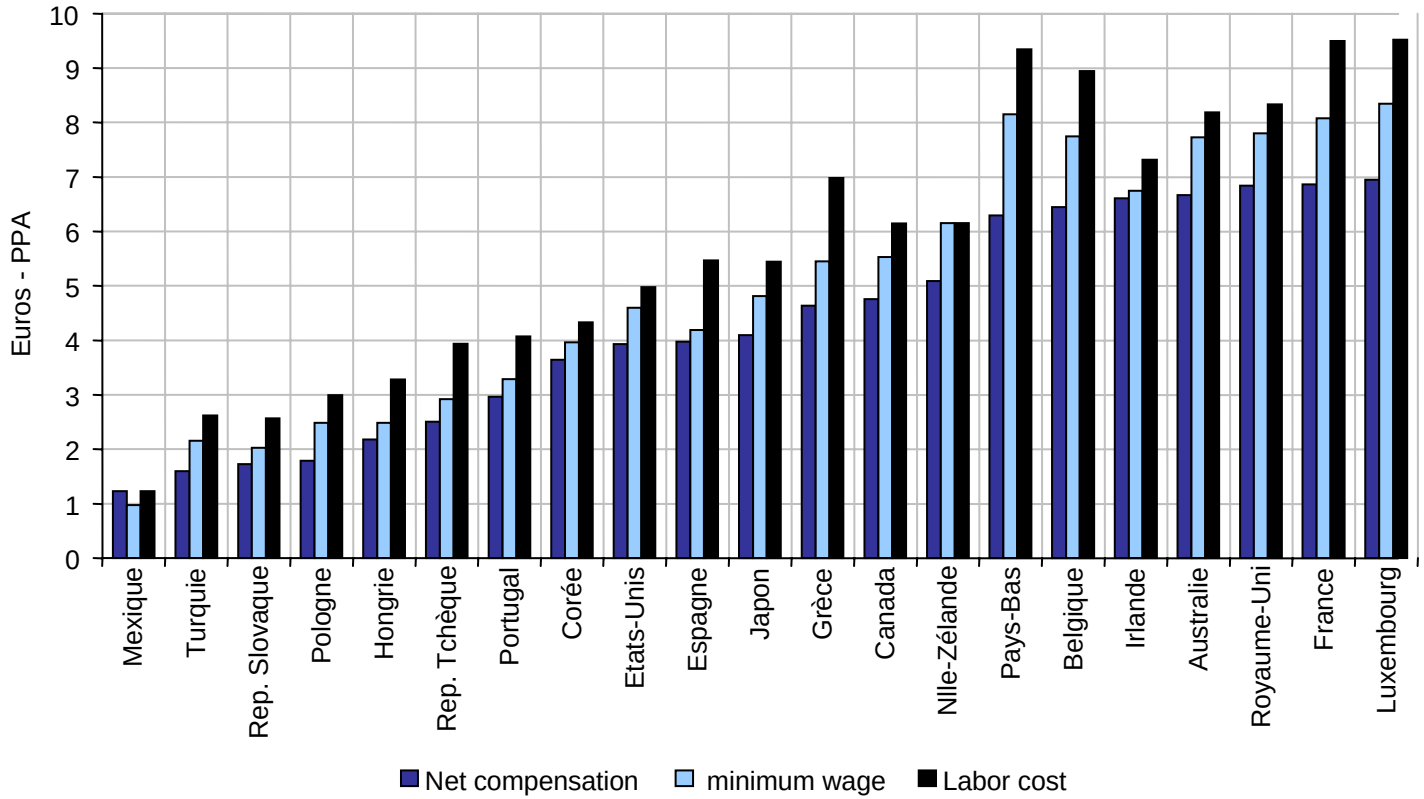


Figure 1 : Minimum wage, net compensation and labor cost in 2006 .
By hour of work, in euro at PPA.

Source : OCDE (2007) –

Economic Consequences (1)

- Use the years with an increase in minimum cost
- and the years with a decrease in minimum costs (in particular, 1996)
- And contrast the outcomes…

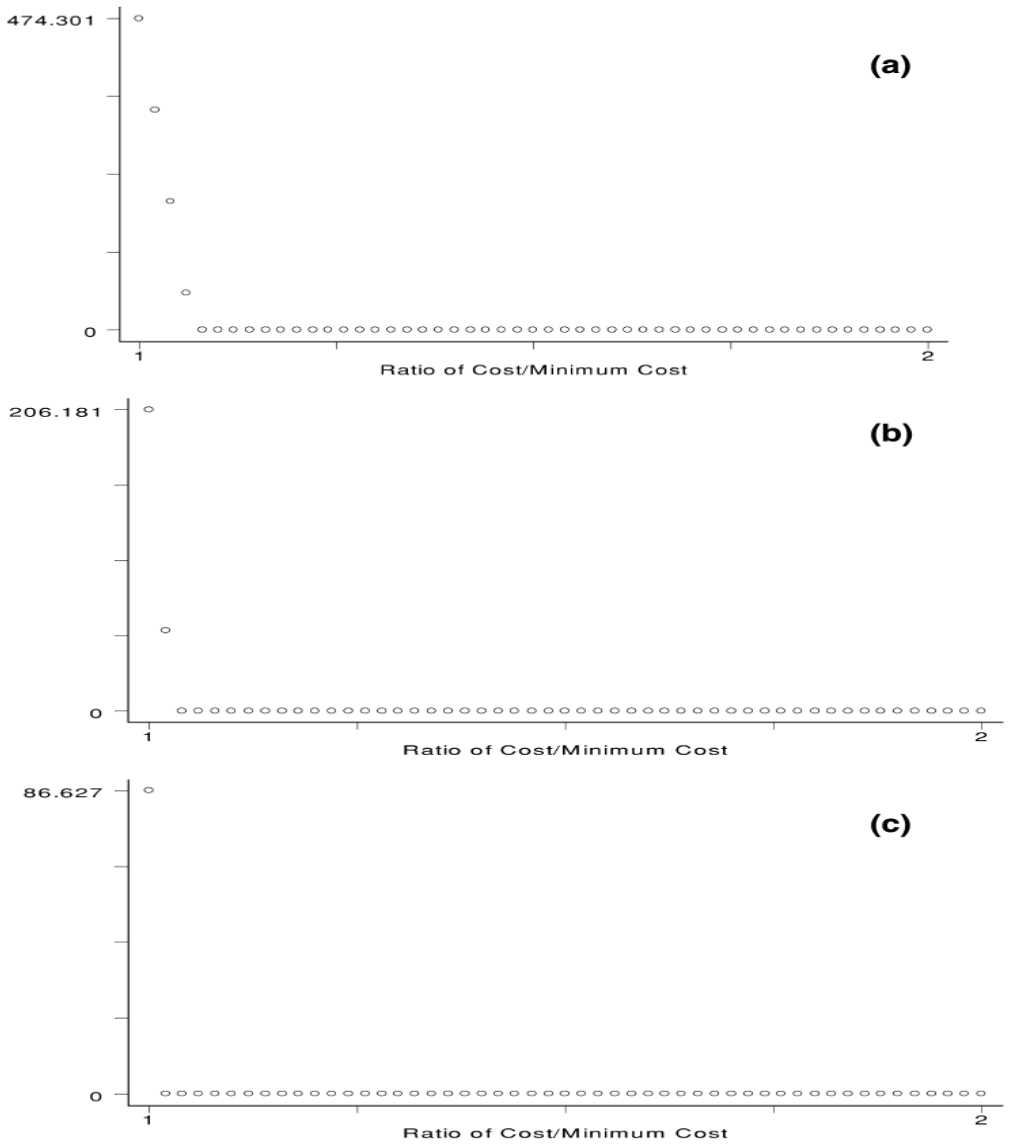
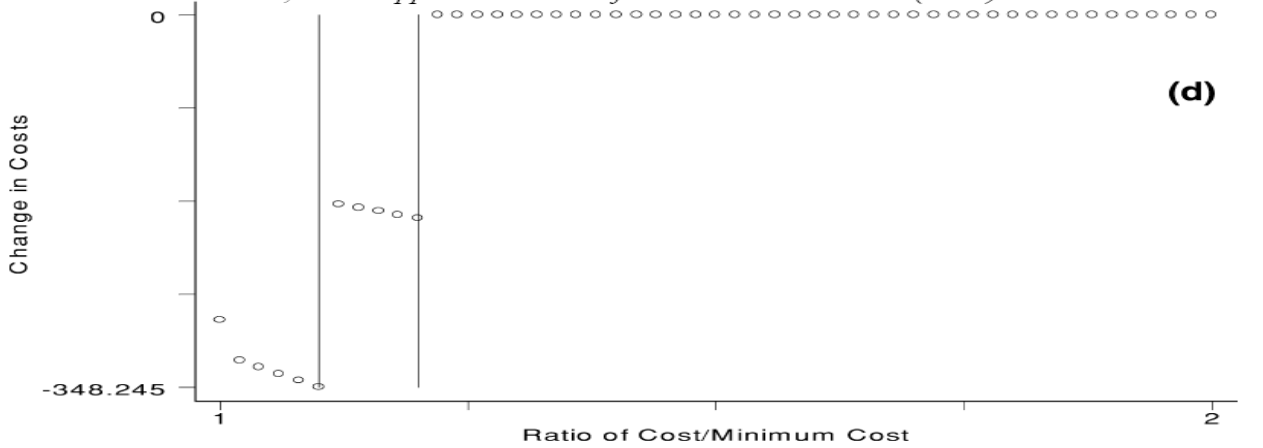
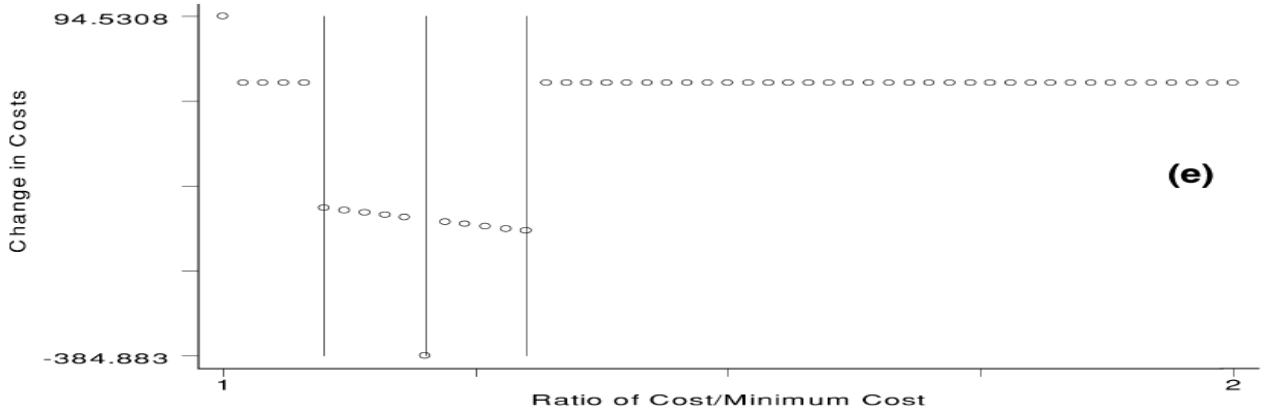


Fig. 3. (a) Changes in costs, 1990–1991, (b) Changes in costs, 1991–1992, (c) Changes in costs, 1992–1993, (d) Changes in costs, 1993–1994, (e) Changes in costs, 1994–1995, (f) Changes in costs, 1995–1996, (g) Changes in costs, 1996–1997 and (h) Changes in costs, 1997–1998.





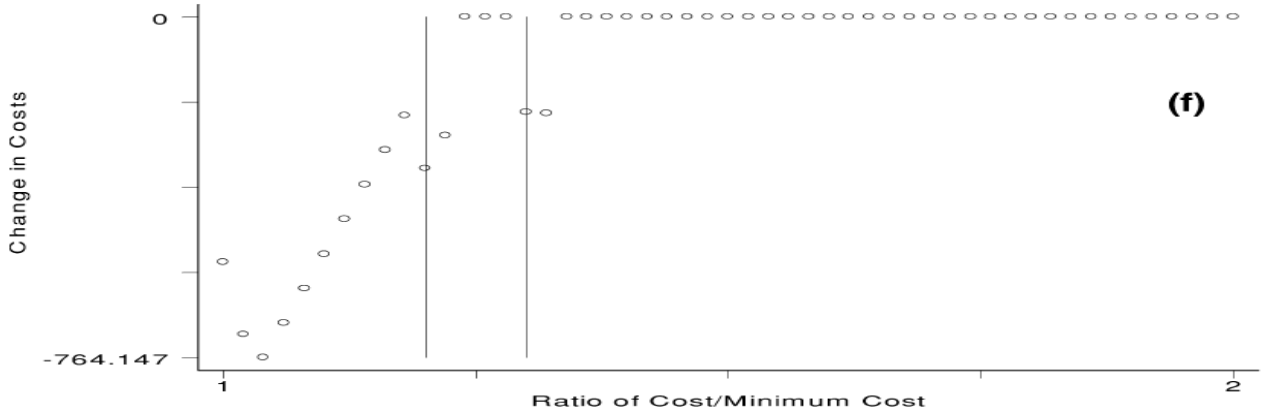
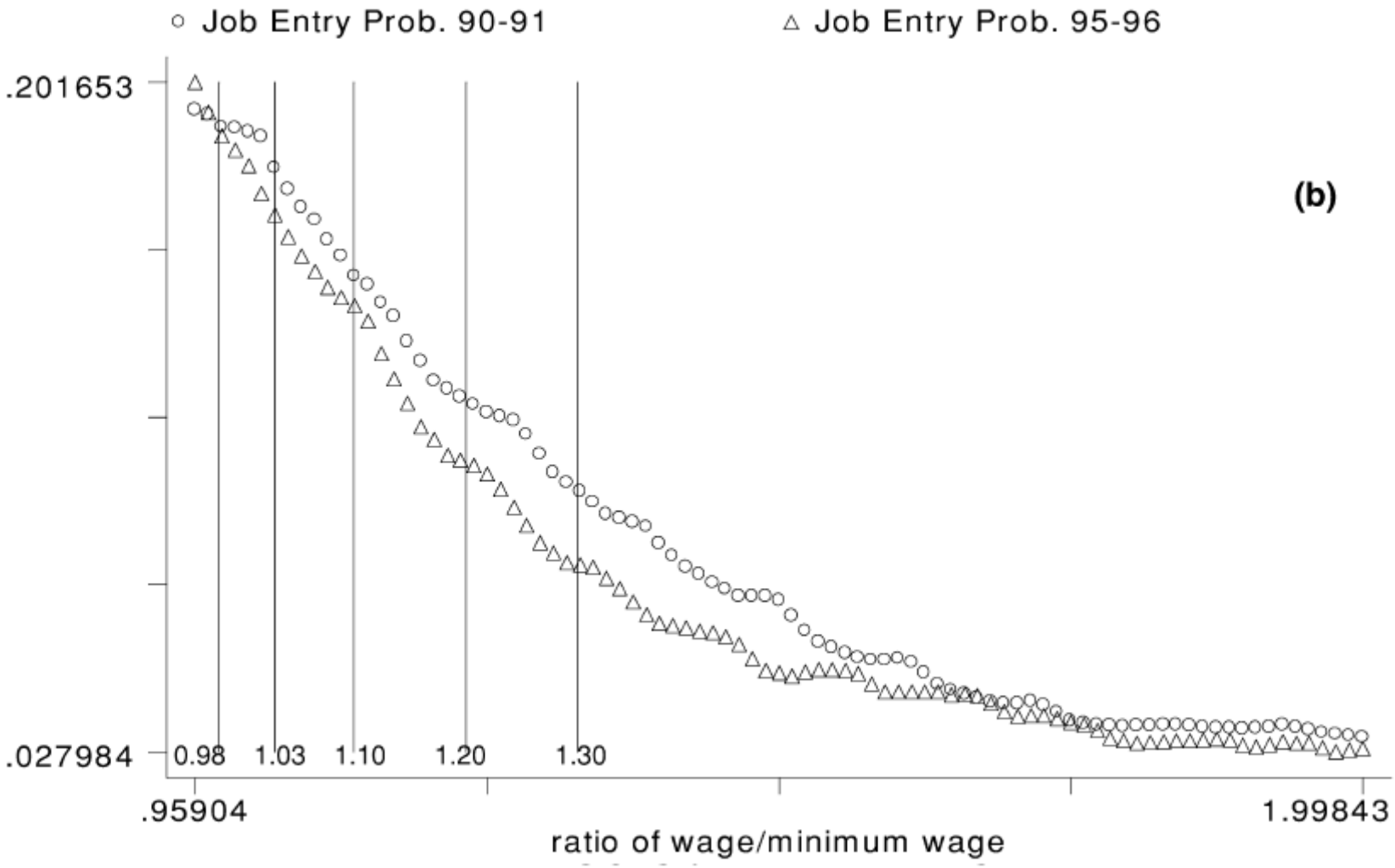


Fig. 3. (*continued*)


Job Loss Prob. 90-91
Job Loss Prob. 95-96
(a)
.153525
.031982
0.98
1.03
1.10
1.20
1.30
.95904
1.99843
ratio of wage/minimum wage


Job Entry Prob. 90-91
Job Entry Prob. 95-96
.201653
.027984
(b)
0.98
1.03
1.10
1.20
1.30
.95904
1.99843
ratio of wage/minimum wage

Statistical Model (exit, 1)

- Compare two groups:
  - Those caught up by the increase with those just above
- …when the cost increases

$$\Pr[e_{t+1} = 1 | e_t = 1] = \mathrm{F}\begin{pmatrix} x_t\beta + b\mathrm{I}(rmic_t \le rc_t \le rmic_{t+1}) \times (rmic_{t+1} - rmic_t) \\ + m\mathrm{I}(rmic_{t+1} < rc_t \le (rmic_{t+1} \times 1.1)) \times (rmic_{t+1} - rmic_t) \end{pmatrix} \quad (1)$$

Statistical Model (exit, 2)

- And two equivalent groups:
  - Those between 0.98 and 1.05 times the initial minimum wage with those above
- …when the cost decreases

$$\Pr[e_{t+1}=1 \mid e_t=1] = \mathrm{F}\begin{pmatrix} x_t\beta + b\mathrm{I}(0.98 \times rmic_t \le rc_t < 1.05 \times rmic_t) \times |rmic_{t+1} - rmic_t| \\ + m\mathrm{I}(1.05 \times rmic_{t+1} \le rc_t < 1.15 \times rmic_t) \times |rmic_{t+1} - rmic_t| \end{pmatrix} \quad (2)$$

- To obtain a difference-in-difference estimate

Statistical Model (entry)

- A similar analysis to examine entry when the minimum cost decreases:

$$\Pr[e_t = 1 | e_{t+1} = 1] = \mathrm{F}\begin{pmatrix} x_{t+1}\beta + b\mathrm{I}(rmic_{t+1} \le rc_{t+1} \le rmic_t) \times (rmic_t - rmic_{t+1}) \\ + m\mathrm{I}(rmic_t < rc_{t+1} \le (rmic_t \times 1.1)) \times (rmic_t - rmic_{t+1}) \end{pmatrix} \quad (5)$$

Table 1
Estimated effects of real minimum cost increases and decreases on subsequent employment probability: 1990–1992 and 1995[a]

Categories	Coefficient	Std error	$P(\text{emp}_{t+1}=0)$	Share in total employed population at t	Elasticity	Differential elasticity (with following category)
Years (t): 1990–1992 (*increasing minimum cost*):						
Between* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (b)	−16.17	2.65	0.16	0.03	−2.59	−1.64
Marginal* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (m)	−7.86	2.18	0.12	0.07	−0.94	
Year (t): 1995 (*decreasing minimum cost*):						
Between* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (b)	−1.95	1.46	0.14	0.04	−0.27	0.05
Marginal* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (m)	−2.69	1.16	0.12	0.08	−0.32	
Differential Effect	*Coefficient*	*Std error*				
$b-m$ (for t from 1990 to 1992)	−8.31	3.11				
$b-m$ (for $t=1995$)	0.73	1.64				

[a] Notes: Number of observations: 60,470 for years 1990–1992; 21,695 for year 1995. Exclude workers on special youth employment contracts, civil-servants, workers employed in public firms, and workers with a wage below $0.95\times$SMIC. Estimation of logistic model (1) for years 1990–1992, model (2) for year 1995 by maximum-likelihood. Other variables are the wage (with its square and cube), education (six categories), seniority (and square), age (eight categories), indicator for short-term contracts, indicator for temporary work, indicator for male, and year dummies.

Table 2
Estimated effects of real minimum cost increases and decreases on subsequent employment probability: Pooled estimates[a]

Categories	Coefficient	Std Error	$P(\text{emp}_{t+1}=0)$	Share in total employed population at t	Elasticity	Differential elasticity (with following category)
Years (t): 1990–1992, 1997 (*increasing min. cost*), 1993, *and* 1995 (*decreasing min.cost*)						
Between* (Δ min. cost, t–$t+1$) (b)	−2.31	1.13	0.15	0.03	−0.35	−0.38
Marginal* (Δ min. cost, t–$t+1$) (m)	0.32	0.91	0.12	0.07	0.04	
Differential Effect	*Coefficient*	*Std error*				
$b-m$ (for t=1990–1993, 1995, 1997)	−2.63	1.37				

[a] Notes: Number of observations: 124,689 for years 1990–1993, 1995, and 1997. Estimation of model (3). Includes an indicator for the between group and an indicator for the marginal group. All other notes as in Table 1.

Table 3
Estimated effects of real minimum cost increases and decreases on subsequent employment probability: Pooled estimates, asymmetric effects[a]

Categories	Coefficient	Std error	$P(\text{emp}_{t+1}=0)$	Share in total employed population at t	Elasticity	Differential elasticity (with following category)
Years (t): 1990–1992, 1997 (*increasing min. cost*), 1993, *and* 1995 (*decreasing min. cost*)						
Between* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (for t with increasing min.cost): b_i	−14.39	3.53	0.16	0.02	−2.30	−1.56
Marginal* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (for t with increasing min.cost): m_i	−6.19	3.36	0.12	0.04	−0.74	
Between* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (for t with decreasing min.cost): b_d	−2.68	1.71	0.14	0.01	−0.38	−0.03
Marginal* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (for t with decreasing min.cost): m_d	−2.85	1.53	0.12	0.03	−0.34	
Differential Effect	**Coefficient**	**Std Error**				
b_i-m_i (for t=1990–1992, 1997)	−8.20	2.75				
b_d-m_d (for t=1993, 1995)	0.17	1.53				
$b_i-m_i-(b_d-m_d)$ (for t=1990–1993, 1995, 1997)	−8.37	3.14				

[a] Notes: As in Table 2.

Table 4
Estimated effects of real minimum cost decreases and increases on prior employment probability: 1991–1993, 1994, 1996, and 1998[a]

Categories	Coefficient	Std error	$P(\text{emp}_t=0)$	Share in total employed population at $t+1$	Elasticity	Differential elasticity (with following category)
Years $(t+1)$: 1991–1993 (*increasing minimum cost*):						
Between* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (*b*)	−7.44	2.61	0.19	0.04	−1.41	−0.92
Marginal* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (*m*)	−3.26	2.26	0.15	0.08	−0.49	
Year $(t+1)$: 1994 (*decreasing minimum cost*):						
Between* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (*b*)	−10.86	5.33	0.20	0.02	−2.17	−0.94
Marginal* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (*m*)	−7.70	3.70	0.16	0.07	−1.23	
Year $(t+1)$: 1996 (*decreasing minimum cost*):						
Between* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (*b*)	−2.72	1.31	0.20	0.06	−0.54	−0.43
Marginal* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (*m*)	−0.91	1.52	0.13	0.05	−0.12	
Years $(t+1)$: 1998 (*increasing minimum cost*):						
Between* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (*b*)	2.90	5.56	0.10	0.09	0.29	0.36
Marginal* $\lvert\Delta$ min. cost, $t-t+1\rvert$ (*m*)	−0.85	5.50	0.08	0.09	−0.07	

Differential effect	*Coefficient*	*Std error*
$b-m$ (for $t+1$ from 1991 to 1993)	−4.18	2.99
$b-m$ (for $t+1=1994$)	−3.16	5.78
$b-m$ (for $t+1=1996$)	−1.81	1.73
$b-m$ (for $t+1=1998$)	3.76	6.43

[a] Notes: Number of observations: 60,428 for years $(t+1)$ 1991–1993; 21,465 for 1994; 21,707 for 1996; 16,379 for 1998. All other notes as in Table 1.

And what about firms?

(based on Crépon-Desplatz)

- Examines the same episode
- Uses matched employer-employee data
- Looks at the impact of the « ex-ante » reduction in costs on
  - Employment
  - Skills
  - Productivity…

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

Variables	Elasticities		Growth rate	
	Manufacturing	Non Manufacturing	Manufacturing	Non Manufacturing
Employment[a]	1.6	1.79	1.28	2.34
	(0.14)	(0.10)	(0.12)	(0.19)
Average labor cost[a]	-2.3	-2.25	-1.84	-2.96
	(0.10)	(0.09)	(0.09)	(0.20)
Share of unskilled workers	0.38	0.49	0.3	0.65
	(0.09)	(0.07)	(0.07)	(0.10)

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*

Table 5 : Semi parametric estimation of Treatment Effect

Variables	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 (log)	3.59	2.24	2.55	3.15
	(0.53)	(0.30)	(0.52)	(0.60)

Note ***: These figures are the semi parametric estimates of the parameter*** $E_3^{\varpi} = E(\varpi_i (y_i - y_i(0)))$ ***and*** $E_4^{\varpi} = E(\varpi_i \partial y_i(t_i)/\partial t)$ ***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.***

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

	Manufacturing		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 $E_4^{\varpi} = E(\varpi_i \partial y_i(t_i)/\partial t)$ *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.*

Conclusions

- ***If*** you want a minimum wage, do not copy France
- Politicians will capture the program
- It will prevent firms from having a wage-mobility policy directed towards the low-wage earners (if it is too high)
- It will destroy incentives for a relatively large fraction of the population
- It will not help with poverty
- To fight monopsony, *if they exist at all,* there are other solutions