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HEALTH REFORM IN COLOMBIA: SOME GOOD AND BAD IMPACTS ON THE POOR

XII Meetings of the LACEA/IADB/WB/UNDP: Research Network on Inequality and Poverty (NIP)

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1. Health Reform in Colombia
2. Some Good Impacts
3. Some Bad Impacts
4. Concluding remarks

1. Health Reform in Colombia

2. Some Good Impacts

3. Some Bad Impacts

4. Concluding remarks

Situation before Law 100

- Around 1991 only 30% of the population had health insurance
- The remaining 70% received medical attention in public hospitals that obtained resources in an inefficient way
- 12% of the hospitalizations and 20% of surgeries offered for poor people were received by rich people
- There was no solidarity
- Low quality of service (including perception)

The Reform established three goals to improve health and well-being of Colombians:

1. Universal access
2. Equity in health service
3. Improve service quality

Instruments introduced by the reform to achieve the main objectives

To achieve these goals the following instruments were created:

- Insurance
  - Contributive Regime (CR)
  - Subsidized Regime (SR)
- Solidarity
  - Between CR and SR (financing)
  - Within the CR (risk and wage profile)
- Competition between EPS and IPS
  - Better efficiency and quality
- Demand financing
  - Separation between insurance, hospitals and public health

How does the system work?

- The main sources of financing are:
  - General taxes
  - Payroll contributions
  - Other sources (Regional Taxes)
- Reforms made to Law 100:
  - Law 715 of 2001
    - Created the General Participation System (GPS), which is constituted with national resources transferred to territorial entities in order to finance health services, among other
      - The national Government designs public policies
      - Departments manage supply subsidies
      - Municipalities manage the SR
      - Every agent has functions in public health
  - Law 1122 of 2007
    - Health Regulatory Commission is created, modifying the existing regulatory schemes (replacing the CNSSS)

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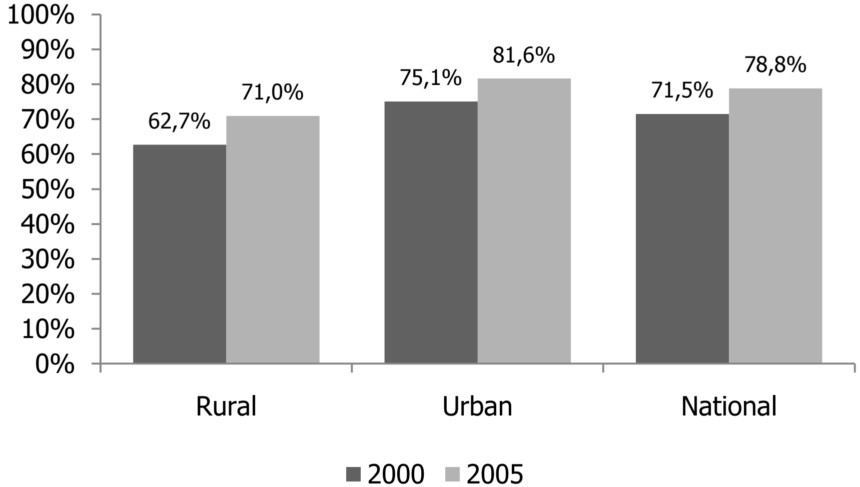
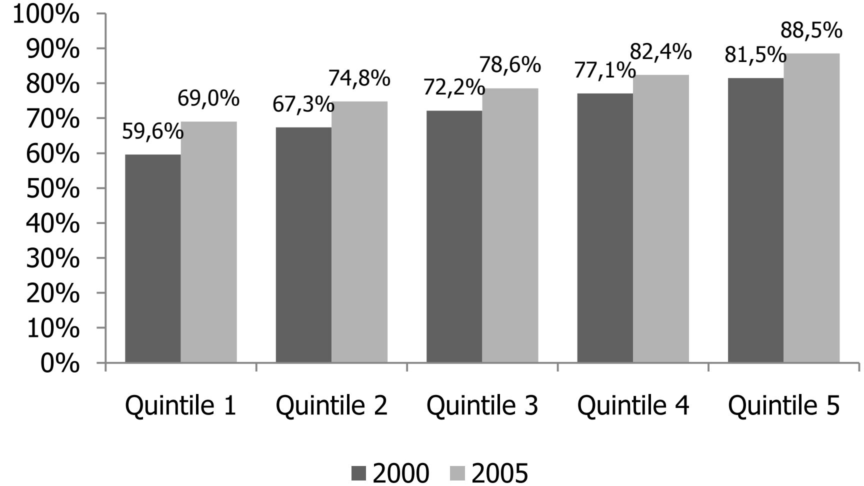
Subjective state of health improved but inequality still remains



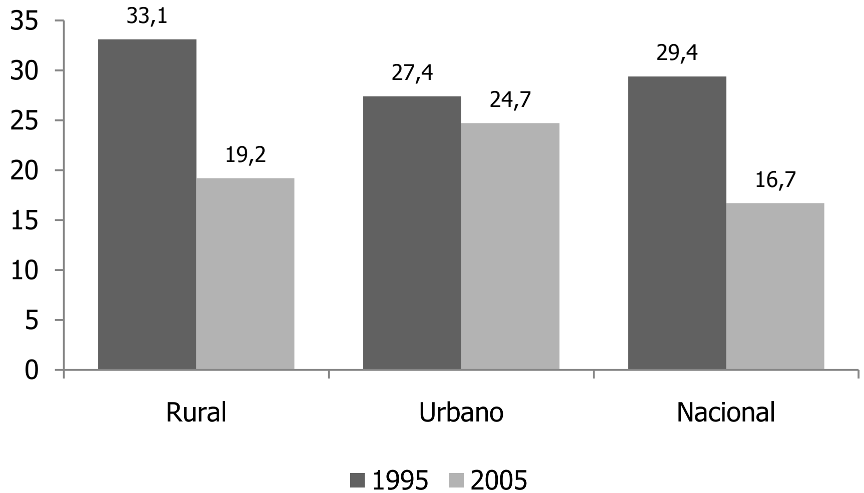
Rural / Urban

National: by quintiles



Source: Santa María et al. (2008). NDHS (2000 & 2005).

Although infant mortality has fallen drastically, especially in rural sectors, inequality is even more evident

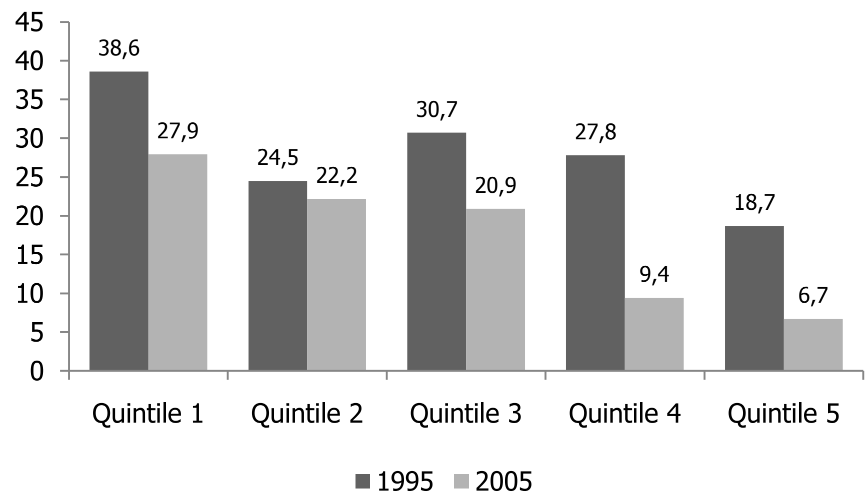


Deaths per 1,000 born

Rural / Urban

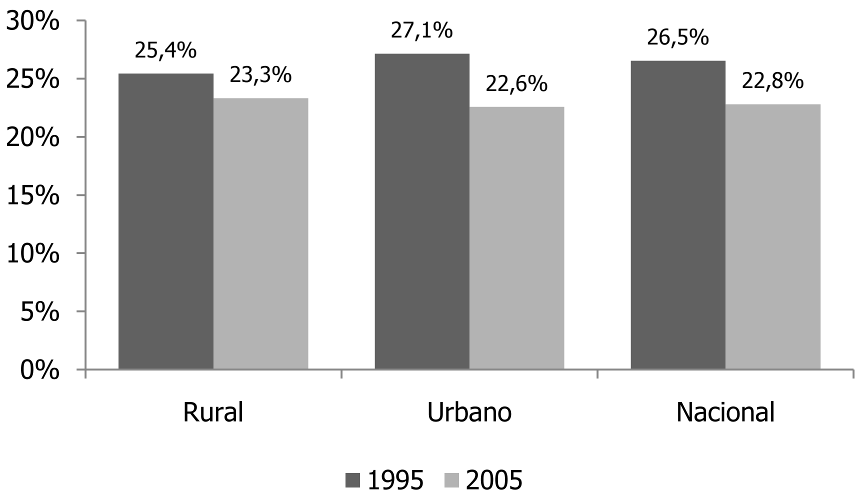
Deaths per 1,000 born

National: by quintiles



Source: Santa María et al. (2008). NDHS (1995 & 2005).

Disease's prevalence decreased among children, but not significantly

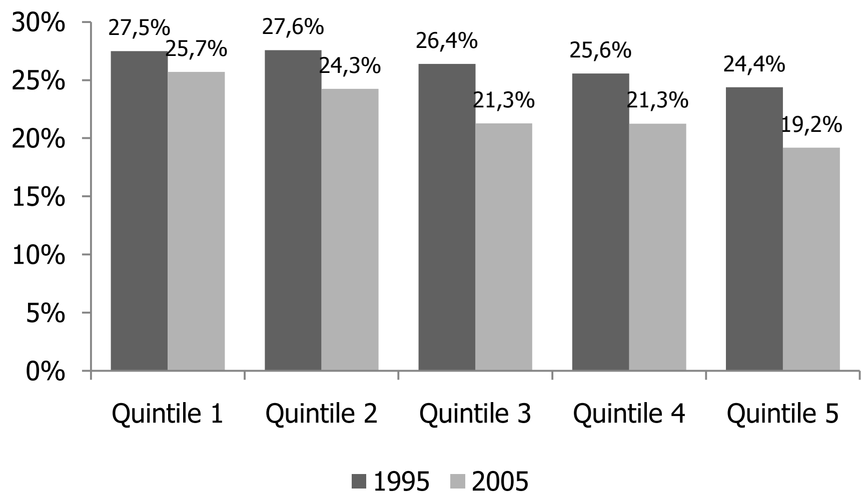


Children with at least 2 diseases

Rural / Urban

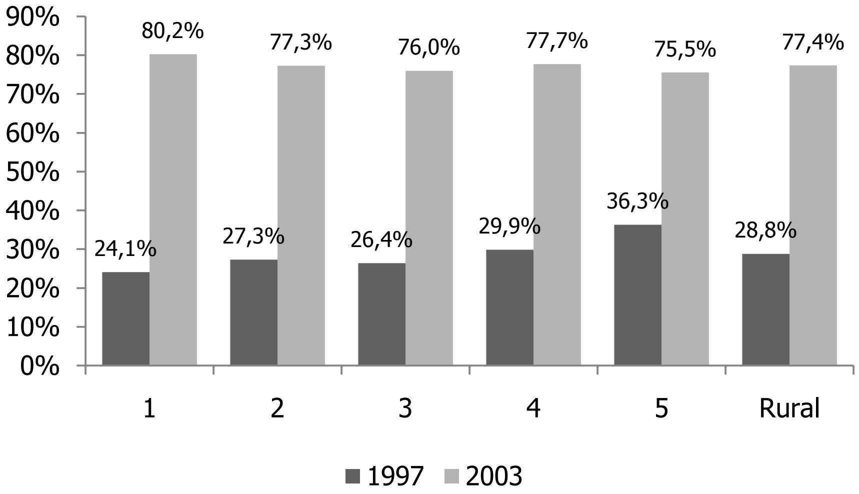
Children with at least 2 diseases

National: by quintiles



Source: Santa María et al. (2008). NDHS (1995 & 2005).

Inequality disappeared in terms of prevention

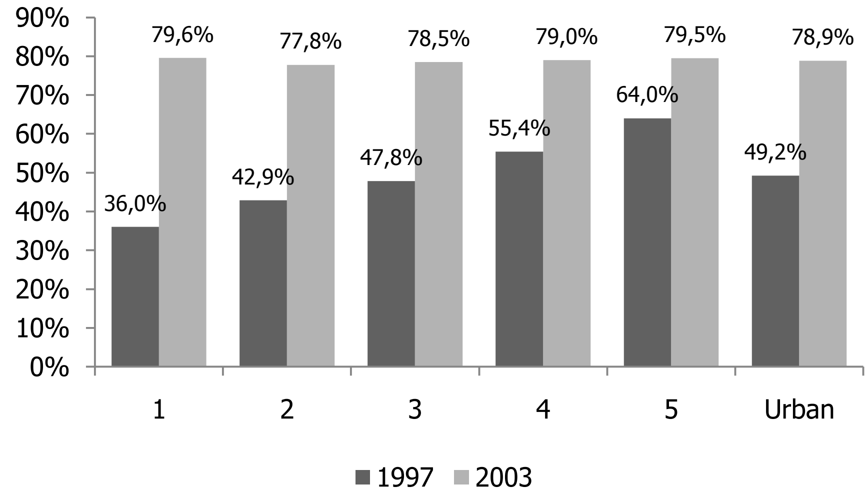


People that assisted to preventive check-ups

Rural: by quintiles

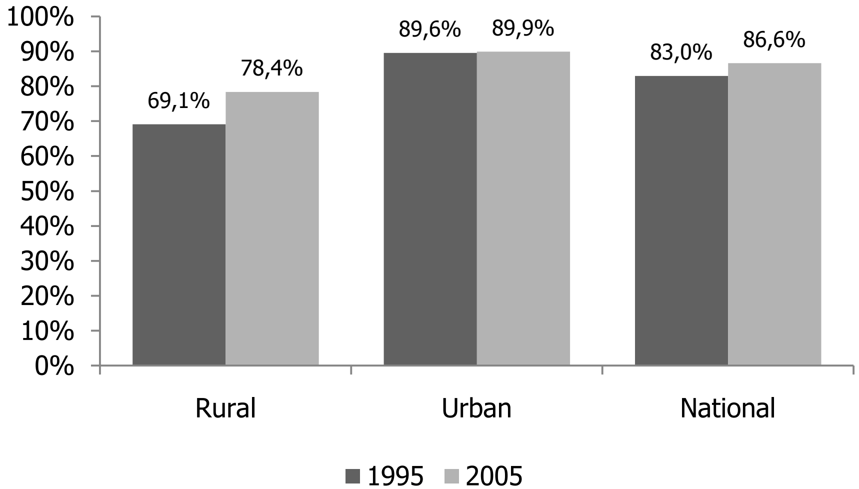
People that assisted to preventive check-ups

Urban: by quintiles



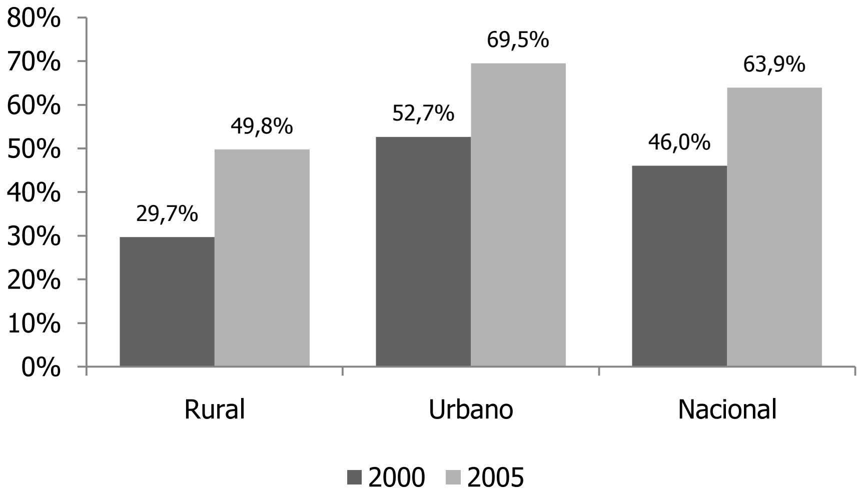
Source: Santa María et al. (2008). LQS (1997 & 2003).

Prenatal and especially postnatal controls increased, in particular in rural areas



Percentage of mothers that received prenatal control, 1995-2005

Percentage of mothers that received postnatal control, 2000-2005



Source: Santa María et al. (2008). NDHS (1995, 2000 & 2005).

But, are these effects explained by the presence of the Subsidized Regime (SR)?

Methodology used to evaluate the impact of Law 100:
Difference in Differences

	Treatment Group	Control Group	Difference by groups
Before the Reform $(t=0)$	$Y_{t=0}^{T}$	$Y_{t=0}^{C}$	$D_0 = Y_{t=0}^{T} - Y_{t=0}^{C}$
After the Reform $(t=1)$	$Y_{t=1}^{T}$	$Y_{t=1}^{C}$	$D_1 = Y_{t=1}^{T} - Y_{t=1}^{C}$
Difference in time	$D^T = Y_{t=1}^{T} - Y_{t=0}^{T}$	$D^C = Y_{t=1}^{C} - Y_{t=0}^{C}$	$DD = D^T - D^C = D_1 - D_0$

$$Y_t^{T,C} = \beta_0 + \beta_1 t + \beta_2 T + \beta_3 (t * T) + \beta_4 X + \varepsilon_t^{T,C}$$

Methodology

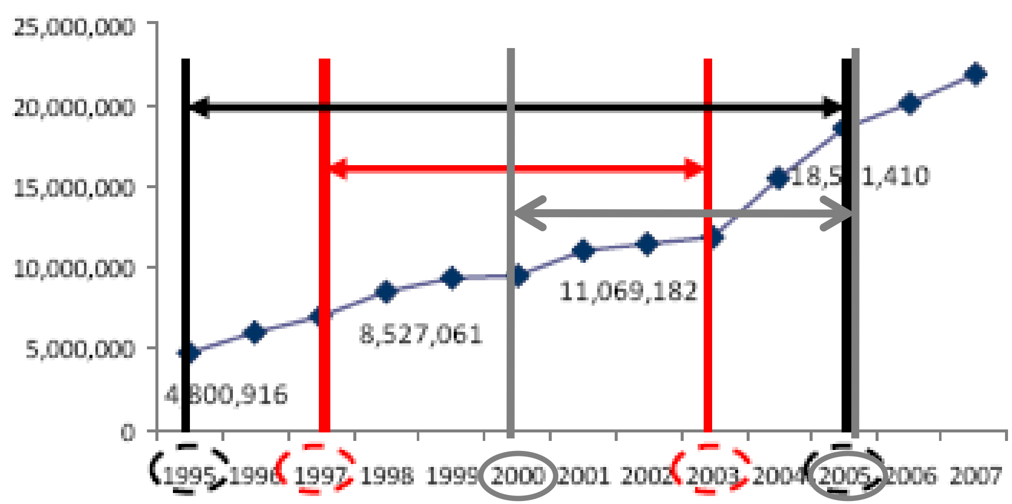
	First Difference	Second Difference
1	Time	Affiliation to the SR
2	Poverty status	Affiliation to the SR

*Note: Every estimation is restricted to poor population (sisben 1 and 2 or sisben 1)

*Note: Periods: (1997 – 2003), (1995 – 2005), (2000 – 2005)

Methodology used to evaluate the impact of Law 100

People affiliated to the SR



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There are positive effects on the extremely poor population in rural areas in terms of vaccination and infant health

Results using the NDHS (1995-2005)

Variable	**URBAN**				**RURAL**			
	Pooled		**SR**		**Pooled**		**SR**	
	Poor	**Extremely Poor**	**Poor**	**Extremely Poor**	**Poor**	**Extremely Poor**	**Poor**	**Extremely Poor**
Complete vaccination scheme	NS	NS	NO	NO	NS	**YES**** 0.12**	NS	NS
Prenatal control	NS	NS	NS	**YES***** 0.152**	NS	NS	NS	**YES* 0.07**
Nutrition	NS	**YES** 85.45**	**YES**** -0.02**	NS	NS	NS	**YES**** -0.01**	NS
Prevalence of at least 1 disease	NO	NS	NS	NS	NS	NS	NS	NS
Prevalence of at least 2 diseases	NO	NS	NS	NS	NS	NS	NS	NS
Prevalence of at least 3 diseases	NO	NS	NS	NS	NS	**YES*** -0.03**	NS	NS
Infant mortality (less than 1 year)	NS	NO	NS	NS	NS	NS	NS	NS
Child mortality (less than 5 years)	NS	NO	NS	NS	NS	NS	NS	NS

Note: ***** Significant at 1%, **** Significant at 5%, *** Significant at 10%, ** Significant at 15% y * Significant at 20%.

Source: Santa María et al. (2008). NDHS (1995 & 2005).

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There are effects in the reduction of hospitalization expenses and in the use of the system services in urban areas

Results using the LQS (1997-2003)

Variable	URBAN				RURAL			
	Pooled		SR		Pooled		SR	
	Poor	Extremely Poor	Poor	Extremely Poor	Poor	Extremely Poor	Poor	Extremely Poor
Subjective assessment	NS	NO	YES***** 0.183	YES***** 0.24	NS	NS	YES***** 0.14	YES***** 0.122
Preventive appointments	NO	NO	YES***** 0.27	YES***** 0.27	NS	YES**** 0.05	YES***** 0.21	YES***** 0.25
Medicines given by the system	YES***** 0.2	YES***** 0.23	YES***** 0.8	YES***** 0.73	YES** 0.11	NS	YES***** 0.68	YES***** 0.6
Consult a doctor when is sick	NS	YES*** 0.07	YES***** 0.3	YES***** 0.73	NS	NO	YES***** 0.68	YES***** 0.44
Had a problem that required hospitalization	NS	NS	NO	NS	NS	NS	NS	NS
Hospitalization expenses	YES**** -1.29	NS	YES***** -5.21	YES***** -4.01	NS	YES** -1.113	YES***** -1.79	NS
Good service quality	YES* 0.08	NS	NS	NO	NS	NS	NS	NS
Did not consult a doctor due to problems in the system	YES* -0.14	NS	NO	NS	YES**** -0.23	NS	NS	NS

Note: ***** Significant at 1%, **** Significant at 5%, *** Significant at 10%, ** Significant at 15% y * Significant at 20%.

Source: Santa María et al. (2008). LQS (1997 & 2003).

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Positive effects in rural areas in terms of vaccination and a reduction of the days of incapacity

Results using the NHS (2007)

Variable	URBAN				RURAL			
	Pooled		RS		Pooled		RS	
	Poor	Extremely Poor	Poor	Extremely Poor	Poor	Extremely Poor	Poor	Extremely Poor
Subjective assessment	NS	NS	NS	NS	YES** 0.236	NS	YES* 0.24	NS
Health problems in the last 30 days	NS	NS	NO	NO	NO	YES**** -0.16	NO	NO
Disease inflicted incapacity (last 30 days)	NO	YES***** -0.304	NO	NO	YES***** -2.149	YES***** -0.766	YES**** -0.105	YES***** -0.199
Dental disease inflicted incapacity (last 30 days)	NS	YES***** -0.66	YES***** -0.836	YES***** -1.054	NS	NS	NO	NO
Health problem: physical or mental illness	NS	NS	YES**** -0.027	YES*** -0.020	NS	NS	NS	NS
Medical service covered by health insurance	NS	NS	YES***** 0.347	YES***** 0.35	YES***** 0.501	NS	YES***** 0.392	YES***** 0.4
Time spent going to the health service	NS	NS	NS	NS	NS	NS	NS	NS
Medicine costs	YES***** -3.18	YES***** -3.52	YES***** -2.45	YES***** -0.85	NS	YES***** -2.105	YES***** -3.111	YES***** -3.49
Presence of problems in the system	NS	NS	NO	NO	NO	YES**** -0.159	NO	NO
Sees a doctor when sick	NS	NS	YES***** 0.06	YES***** 0.05	YES* 0.05	NS	YES***** 0.07	YES***** 0.077
Children: has received one vaccine sometime	NS	YES*** 0.022	NS	NS	NS	NS	NS	NS
Children: all vaccines required for that age	YES***** 0.32	NS	YES***** 0.001	NS	YES** 0.062	NS	YES** 0.062	YES**** 0.08
Children: All DPT required for that age	NS	NS	NS	NS	YES**** 0.115	NS	YES*** 0.11	YES**** 0.138

Note: ***** Significant at 1%, **** Significant at 5%, *** Significant at 10%, ** Significant at 15% y * Significant at 20%.

Source: Santa María et al. (2008). NHS (2007).

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Summarizing…

	Direct	Intermediate	Indirect
Short term	Medicines ✓ Expenditures in hospitalization ✓ Prenatal controls ✓ Postnatal controls ✓ Preventive check-ups ? utilization of the services provided by the system in the event of illness ✓ Treatment of chronic diseases ✓	Subjective state of health ?	Complete immunization scheme ✓
Medium term	Appropriate care in hospitals ✗ System's quality ✗ Refuse to use the system due to its problems ✗	Prevalence of diseases in children ✓ 3 Prevalence of chronic diseases ? Nutrition ✓	
Long term		Events of hospitalization ✗ Events of disease ✓	Infant mortality ✗ Child mortality ✗

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There is a design problem in the way that social policy is financed

- The problem resides in the fact that social protection and other social services are financed through payroll taxes and contributions.

- This generates two problems:

  1. By definition the system generates exclusion (social security linked to employment)
  2. This design makes the creation of formal jobs costly: affecting formality by exclusion (associated with the costs assumed by the employer), or by exit (associated with the costs that the employee perceives).

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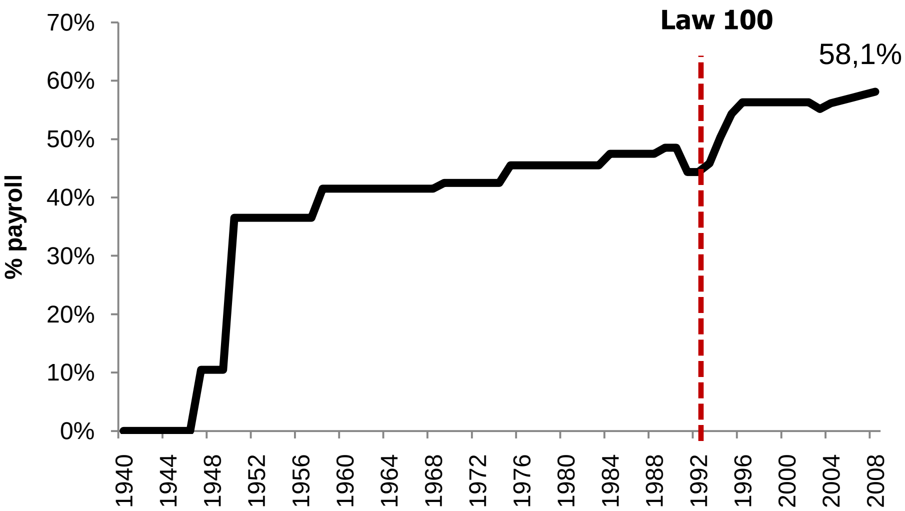
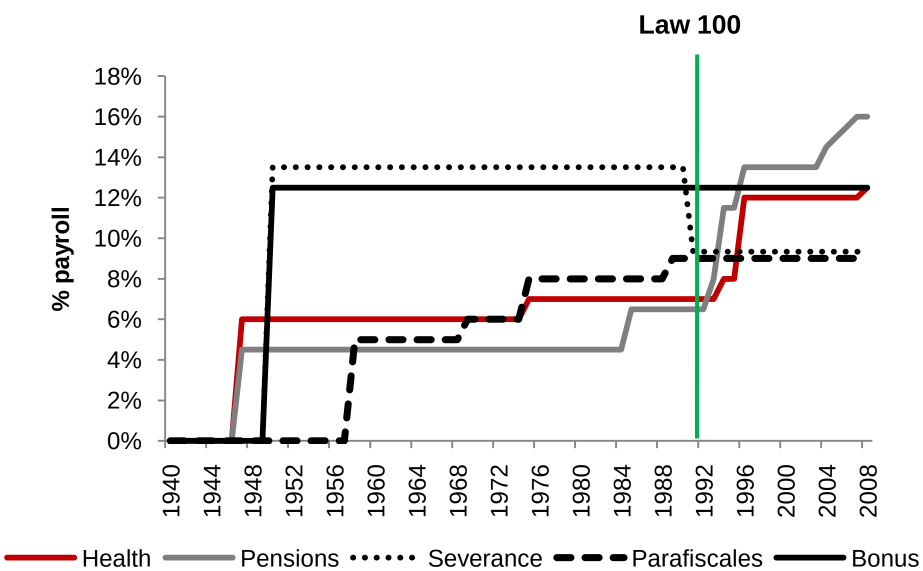
Non-wage costs have experienced significant growth and represent a large percentage of wages (nearly 60%)



Non-wage costs, 1940-2008

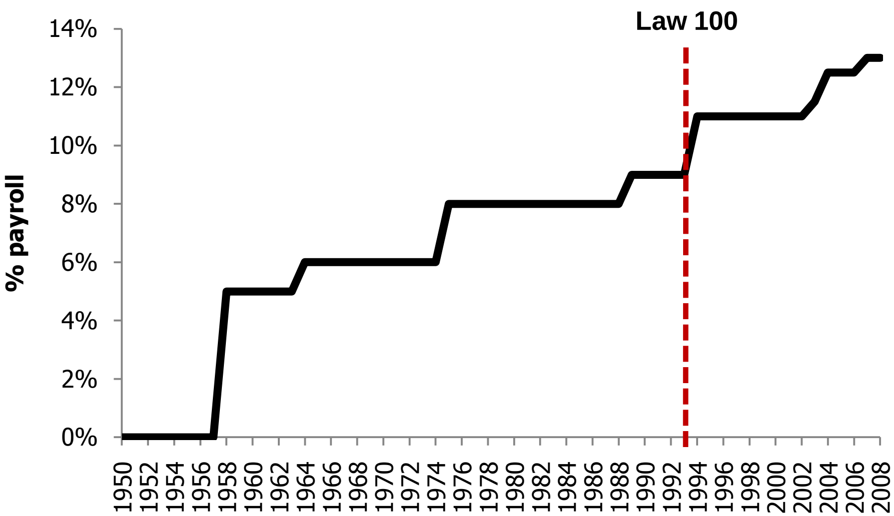
Total

By component



Source: Santa María et al. (2009).

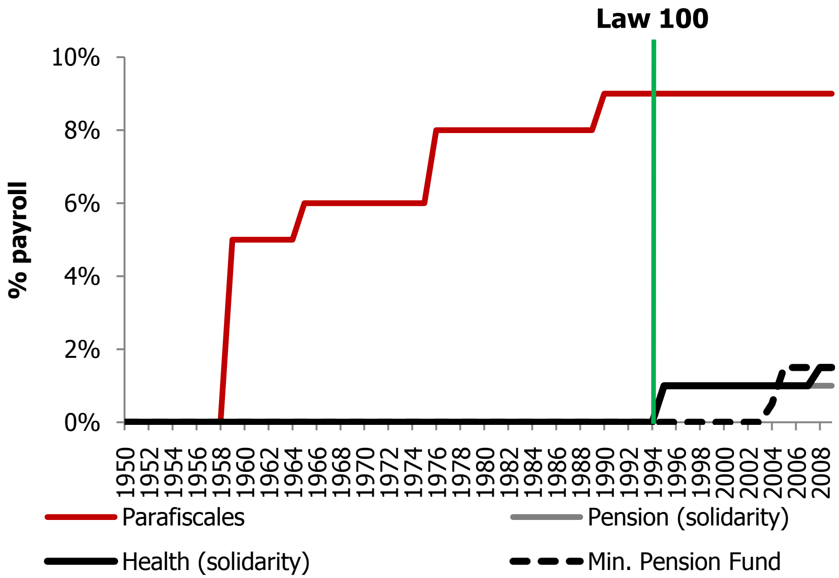
Those which are considered a “pure tax” have also increased substantially: their main component is the so called “parafiscales”



Pure tax, 1950-2008

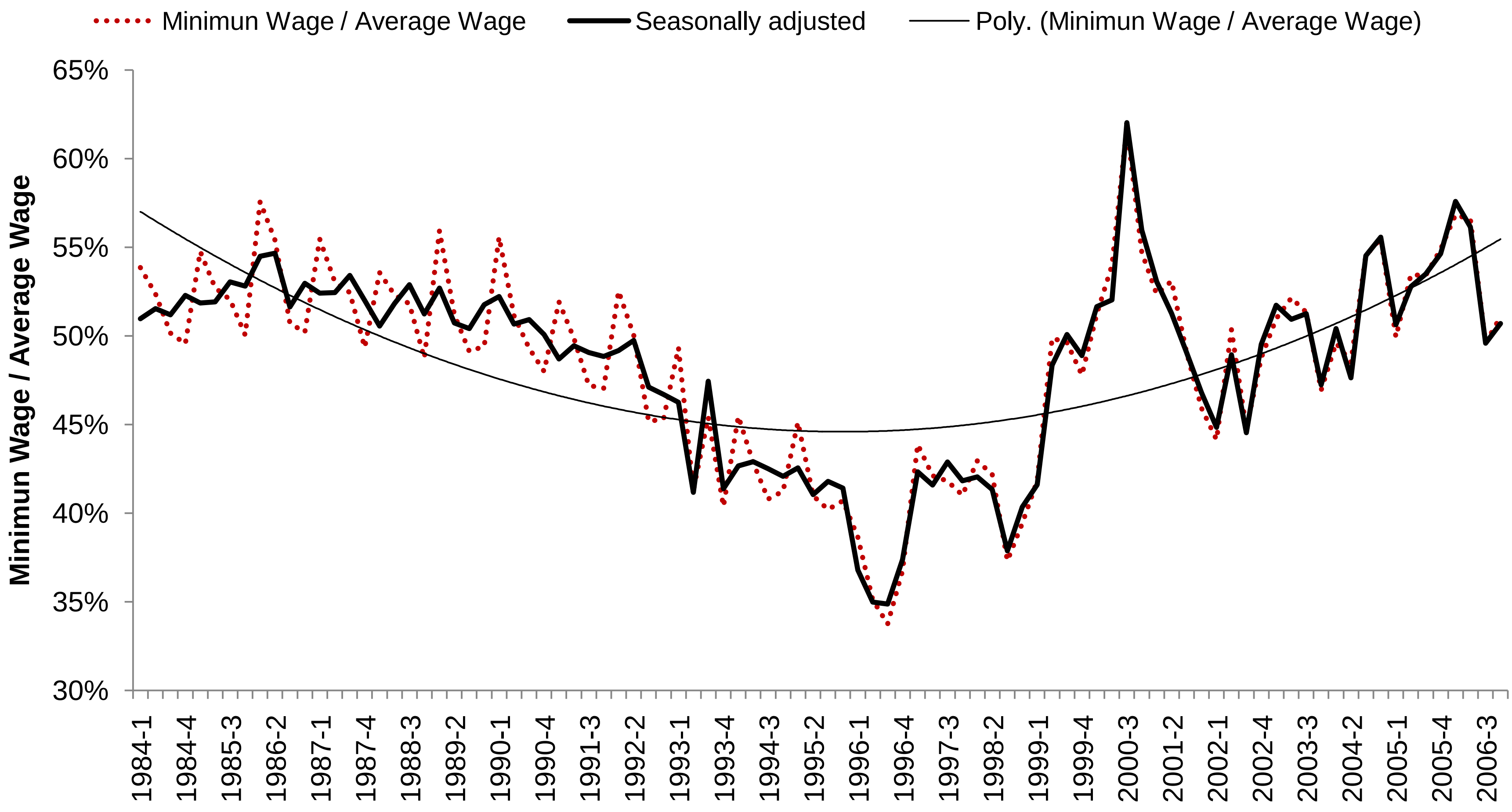
Total

By component



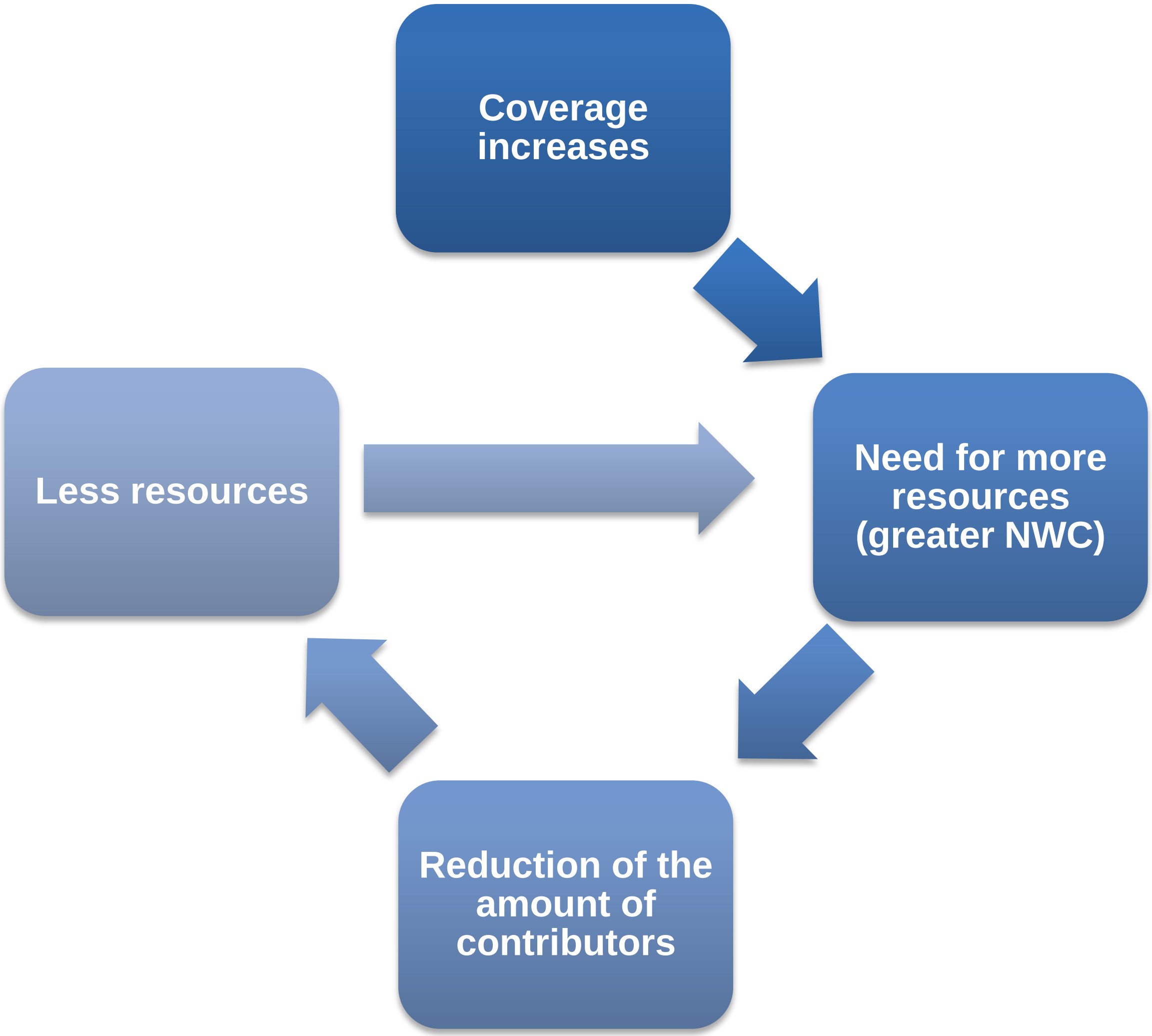
Source: Santa María et al. (2009).

Nominal rigidities have increased during the past years

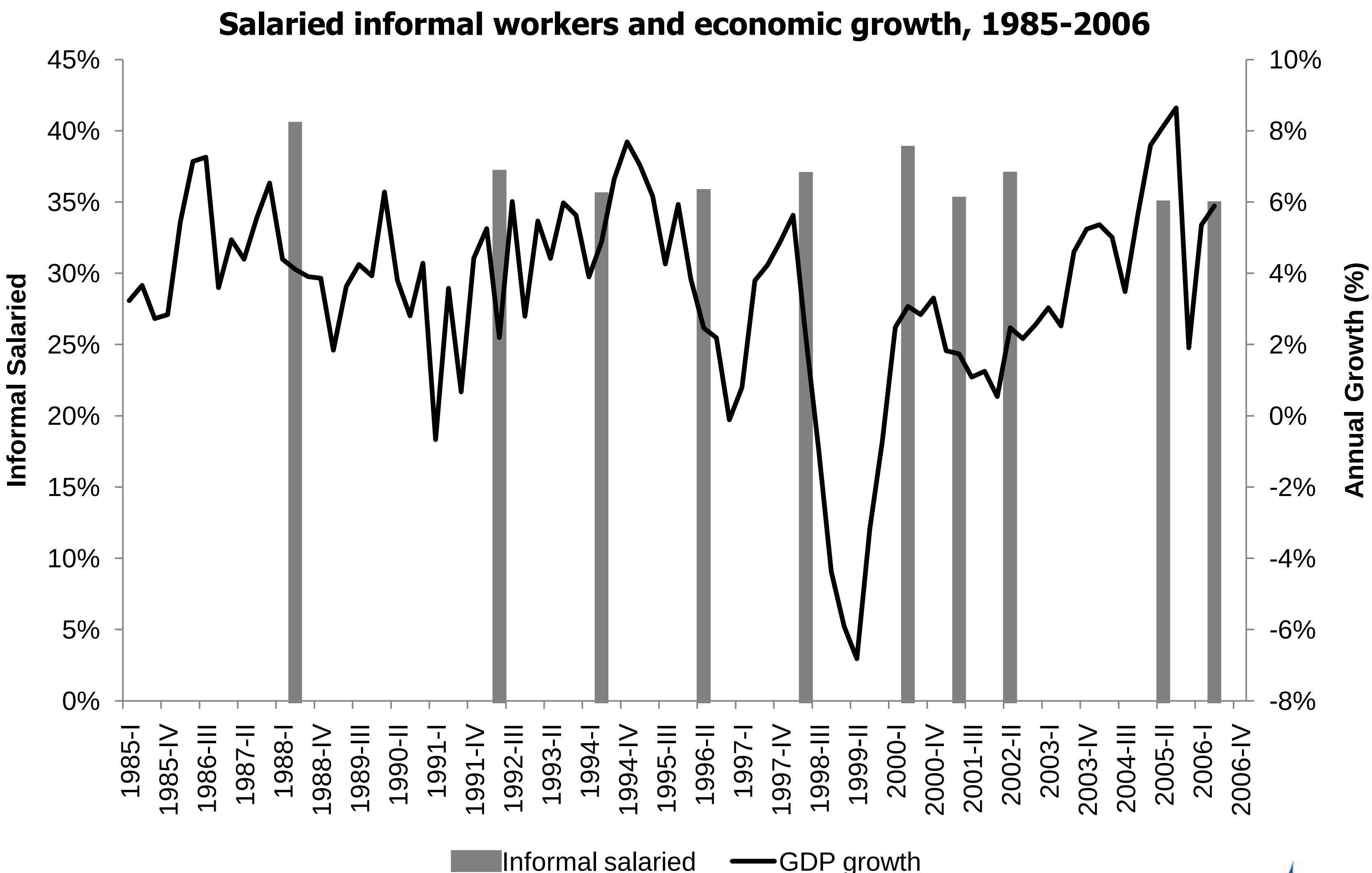


Source: Santa María et al. (2009)

Giving way to the "vicious circle of informality"

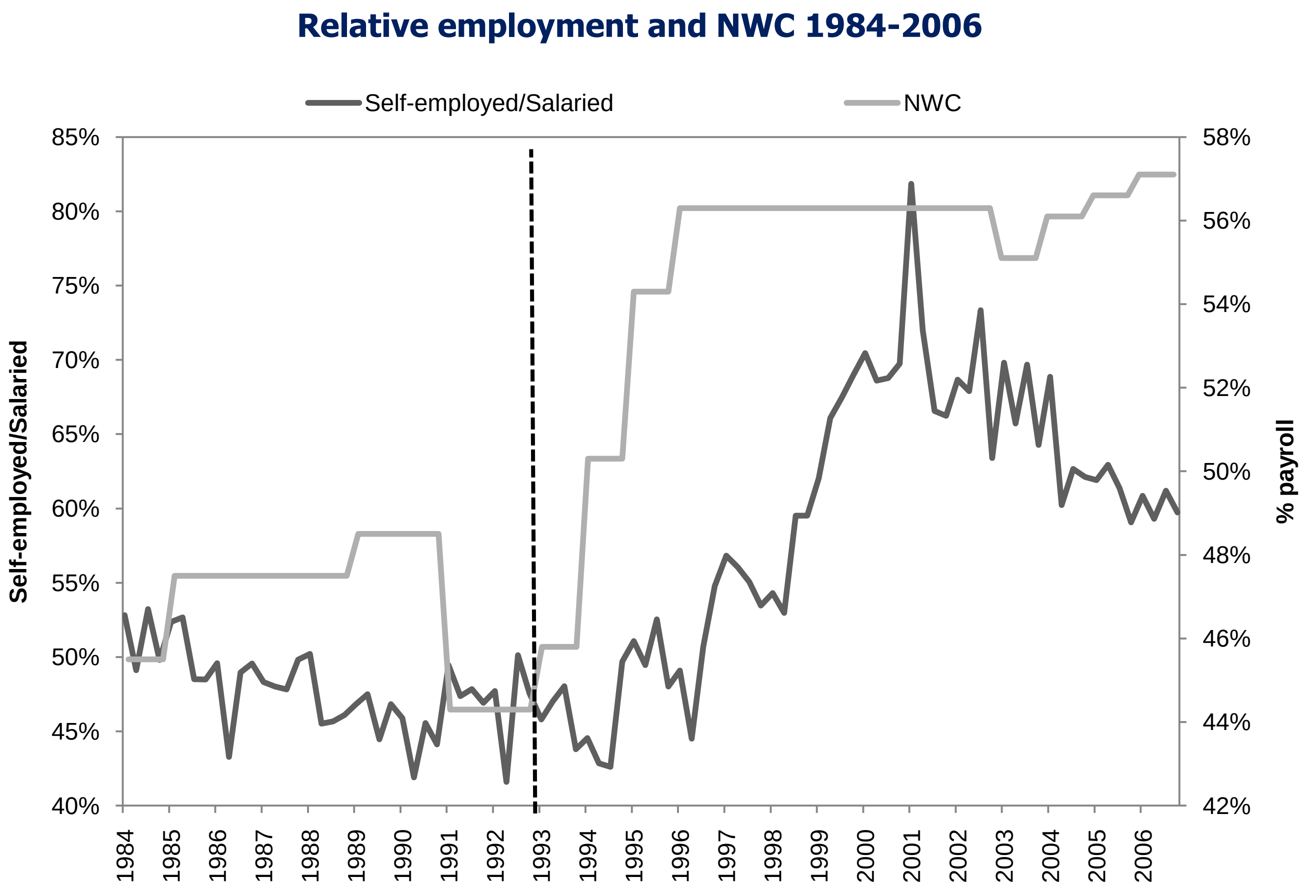


This is confirmed because informality does not seem to respond to GDP variations…



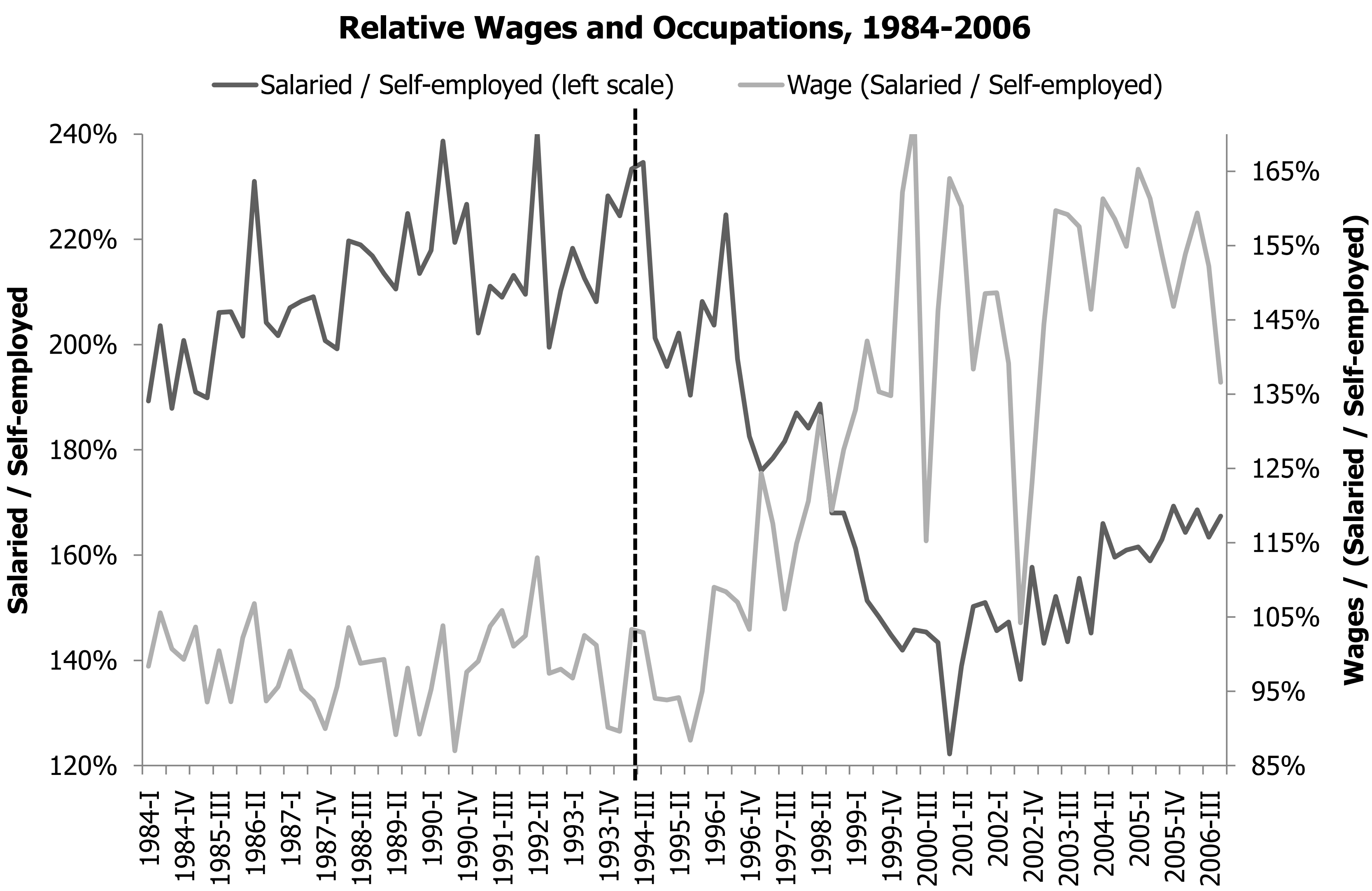
Source: Santa María et al. (2009).

… and self-employment and unemployment seem to follow closely the behavior of the NWC



Source: Santa María et al. (2009).

Which in turn led to labor market segmentation

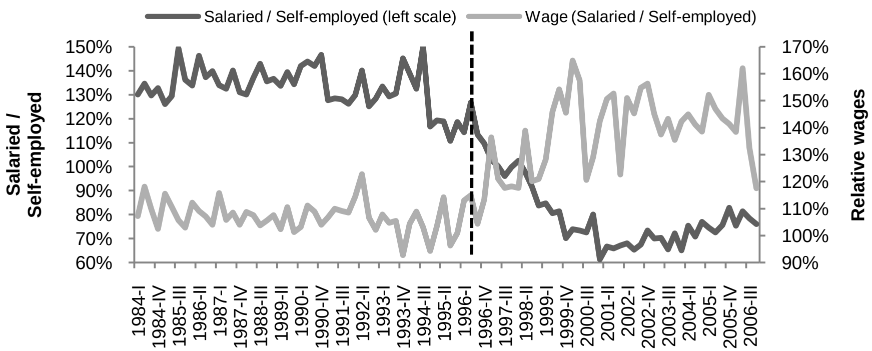


Source: Santa María et al. (2009).

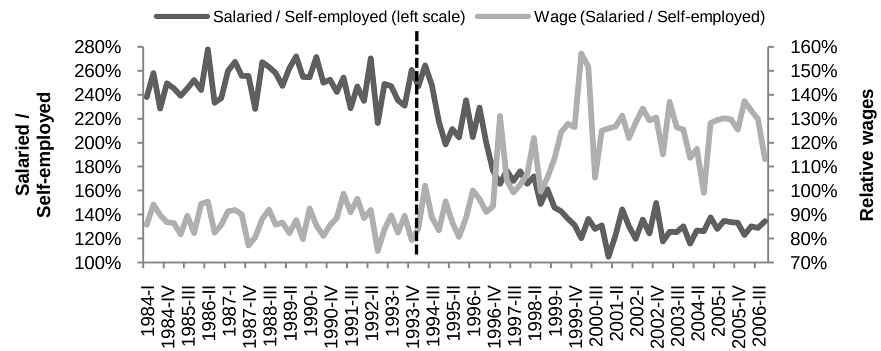
…with greater effects among the least educated…

Relative Wages and Occupations by educational level, 1984-2006

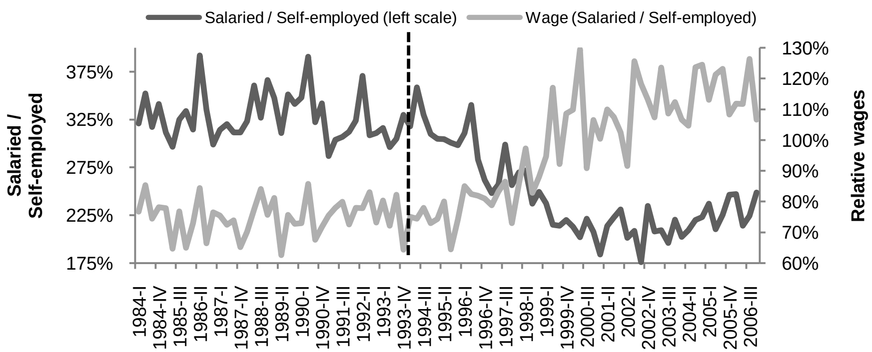
Elementary School



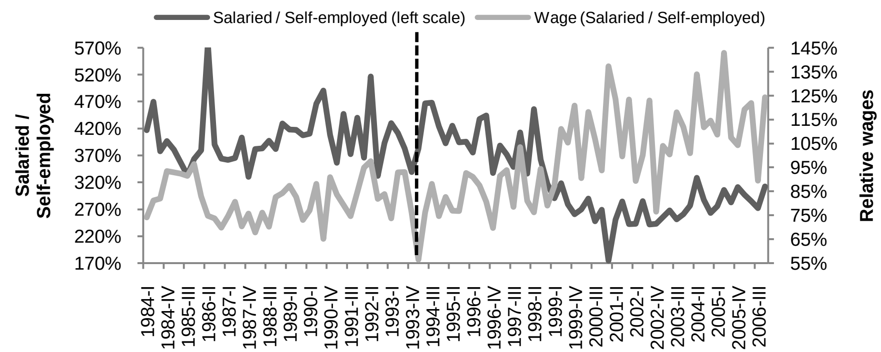
Incomplete High School



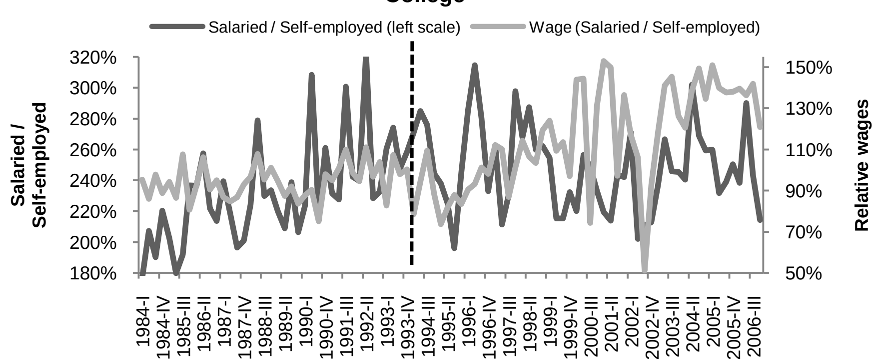
High School



Incomplete College



College



Source: Santa María et al. (2009).

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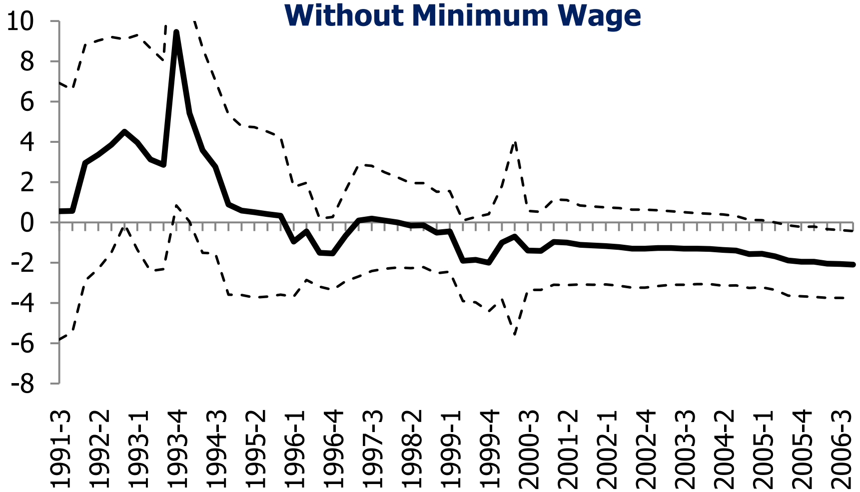
… and deteriorating the situation of self-employed workers (in terms of wages)

Real wages of salaried and self-employed workers, 1984-2006

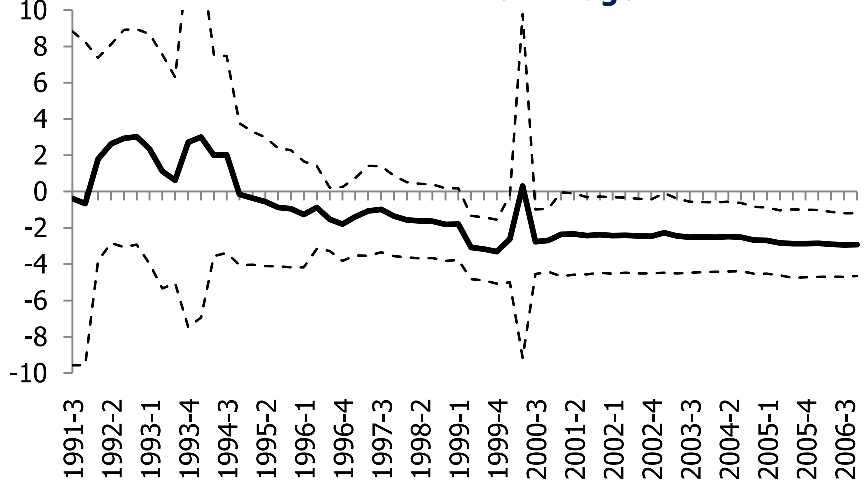
Source: Santa María et al. (2009).

NWC have had a negative impact on salaried employment since 1999 (with MW)…

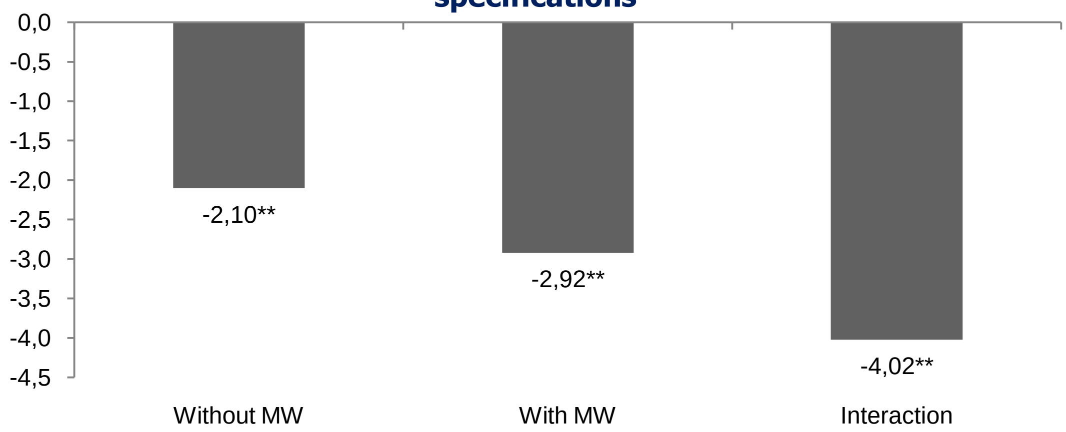
Iterative Coefficient (ARMA) of the relationship between NWC's and relative employment, 1984-2006 Without Minimum Wage



Iterative Coefficient (ARMA) of the relationship between NWC's and relative employment, 1984-2006 With Minimum Wage

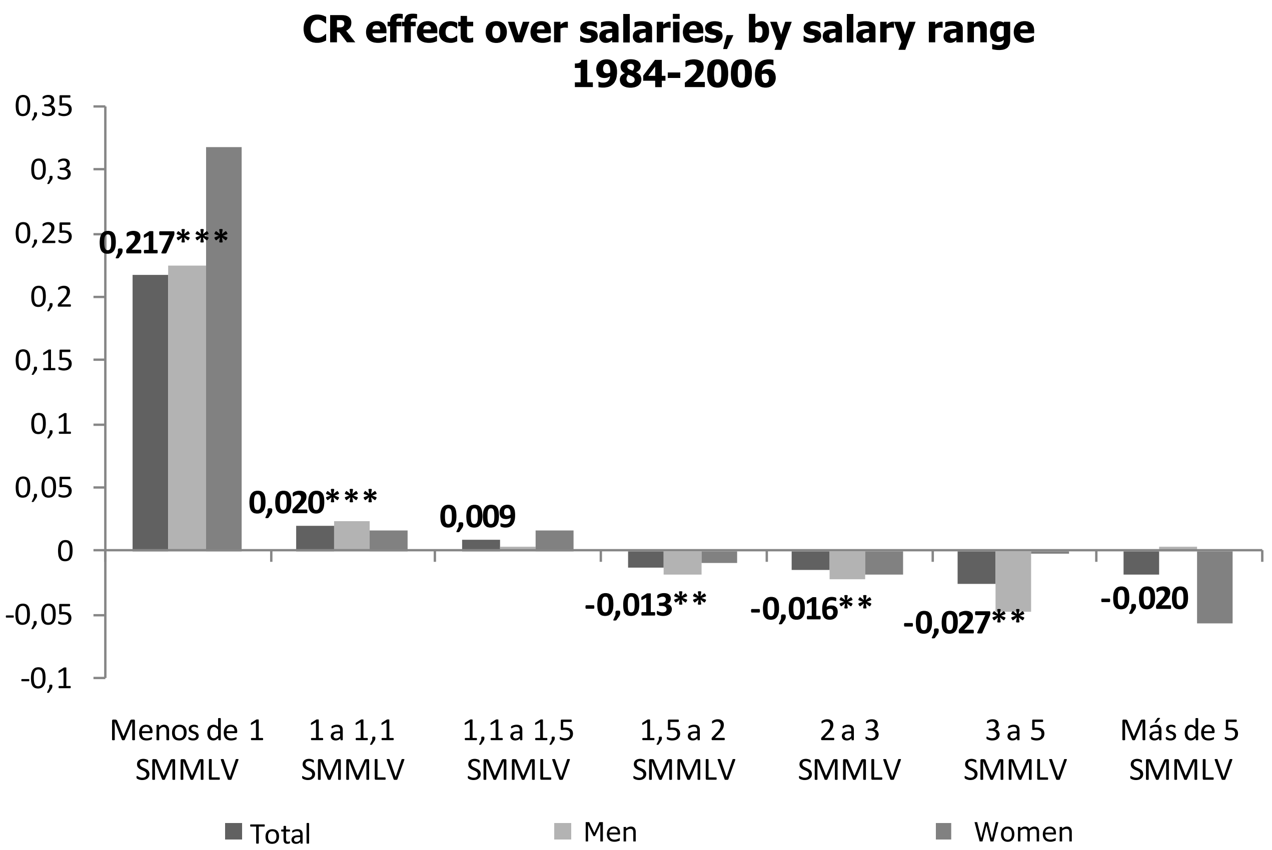


Comparison between the effects obtained with the different specifications



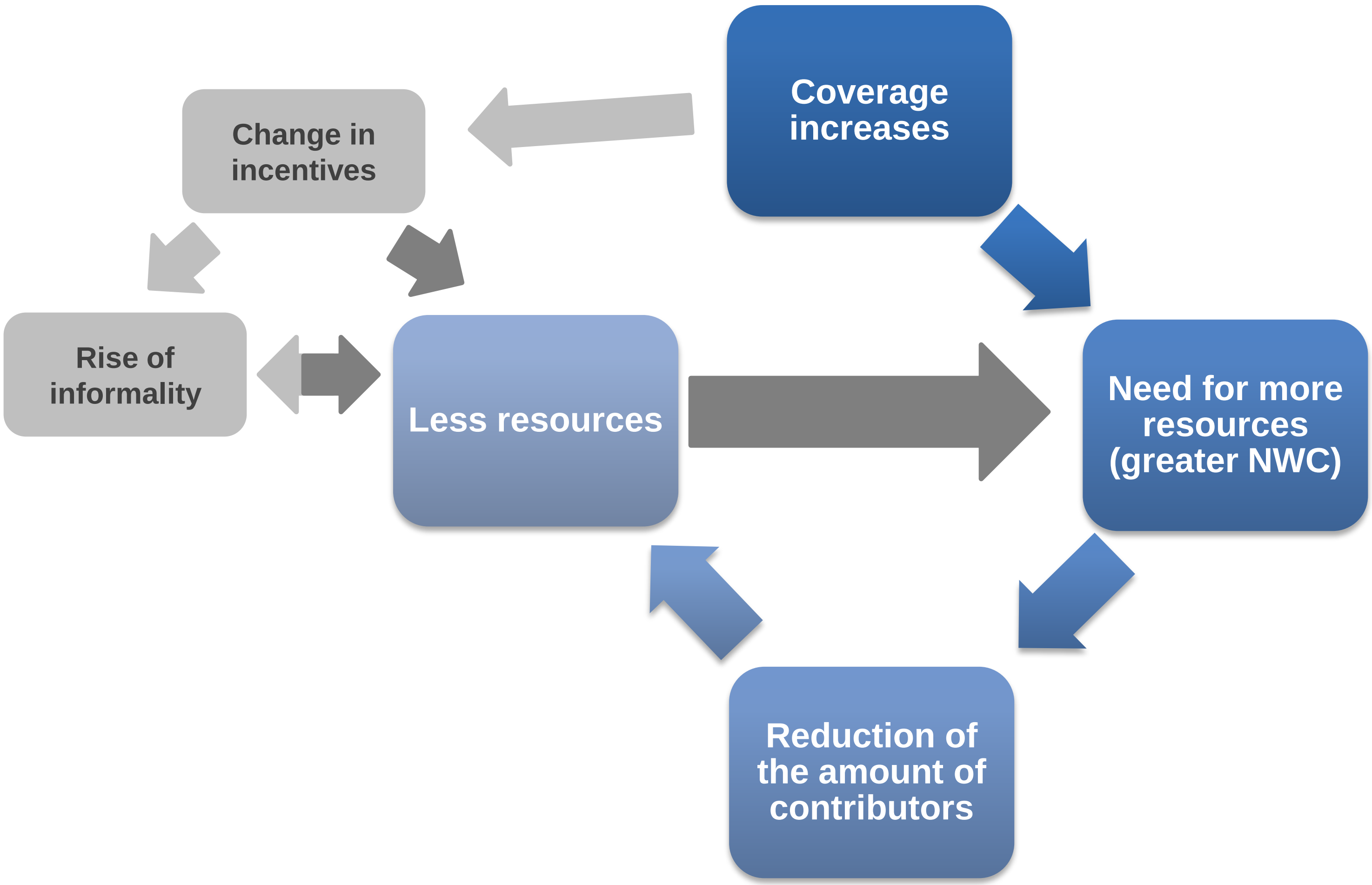
Source: National Household Survey. Authors' Calculations.

… this is caused by the inflexibility of the minimum wage



Source: EH 91-94, ECH 04-06. Authors' Calculations.

The incentives generated by the system deepen the "vicious circle of informality"



Subsidies are causing serious problems within the labor market

- With subsidies, poor people that are excluded of the labor market find an incentive to continue under informality.
- The size and permanent nature of these subsidies is generating a serious problem that, in turn, worsens the informality problem
- Subsidies that are causing informality through the demand side, combined with subsidies through the supply side, make the system unsustainable.
- The formal system pays taxes and the informal sector receives subsidies. This seems to be designed to generate even more pressure on the formal sector and give more subsidies to informality

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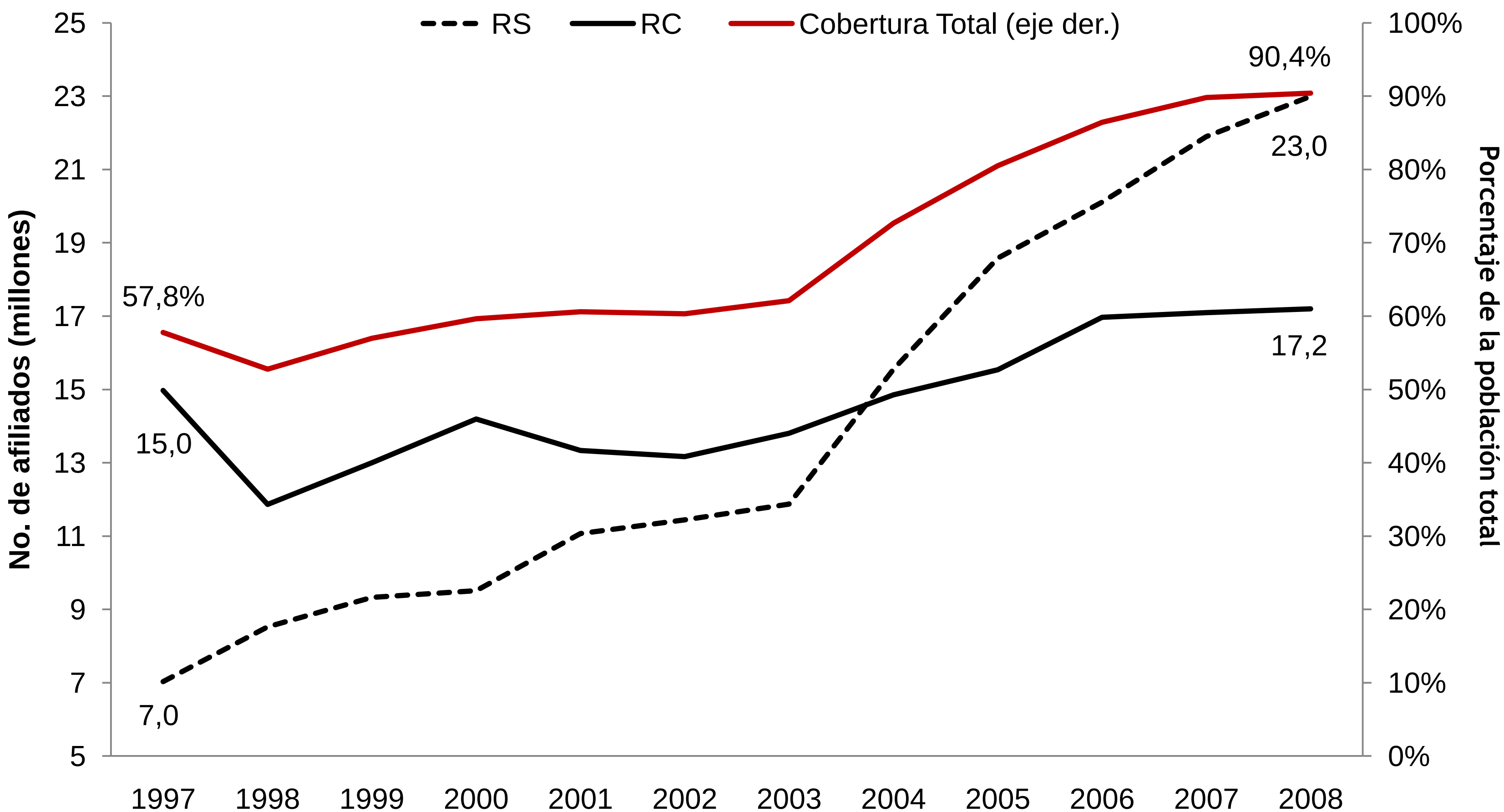
There is a perfect example in the health sector



Fuente: DNP. Cálculos de los autores.

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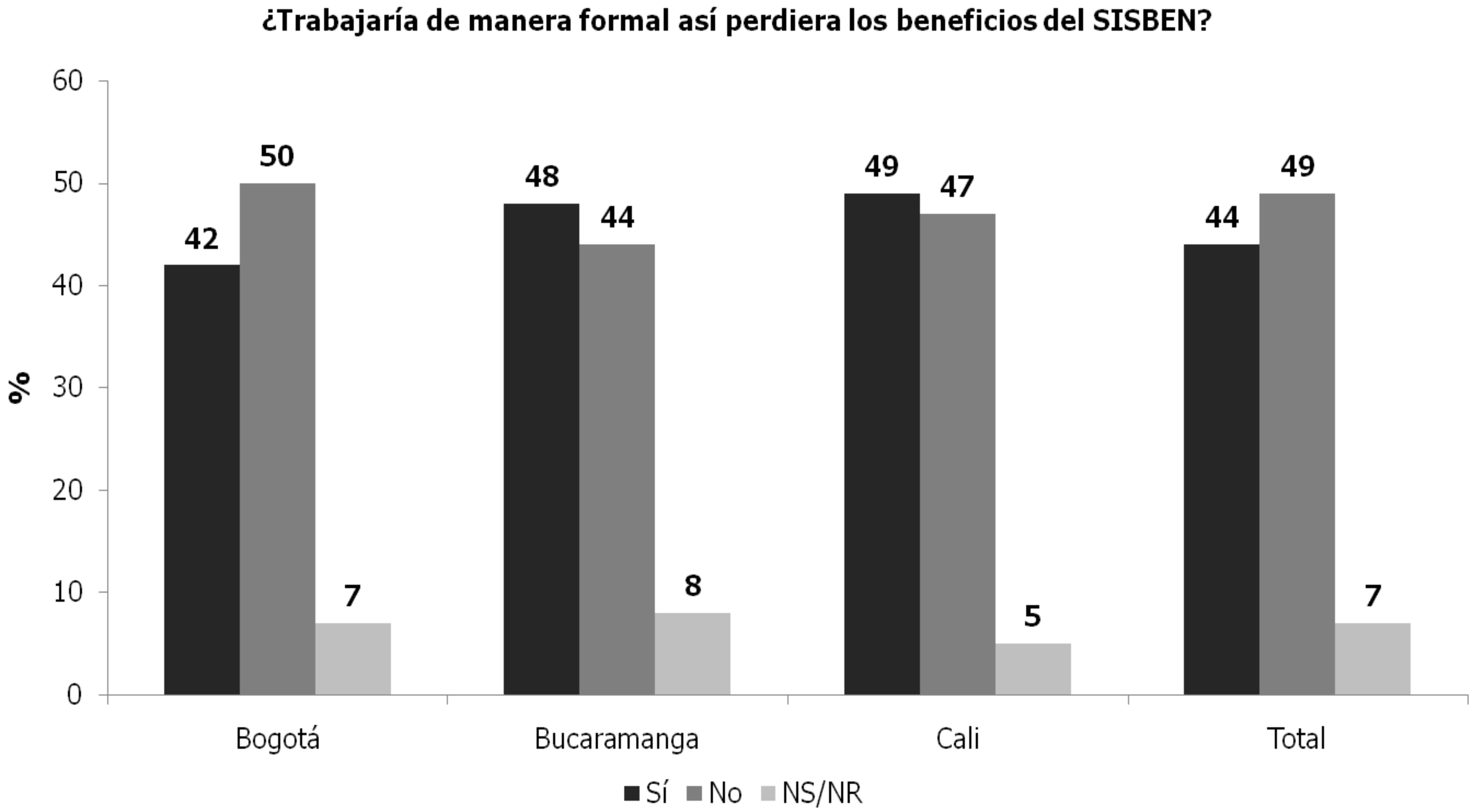
In which half of the population would not abandon SR in exchange of a salaried job



Fuente: Encuesta Social Longitudinal, 2007

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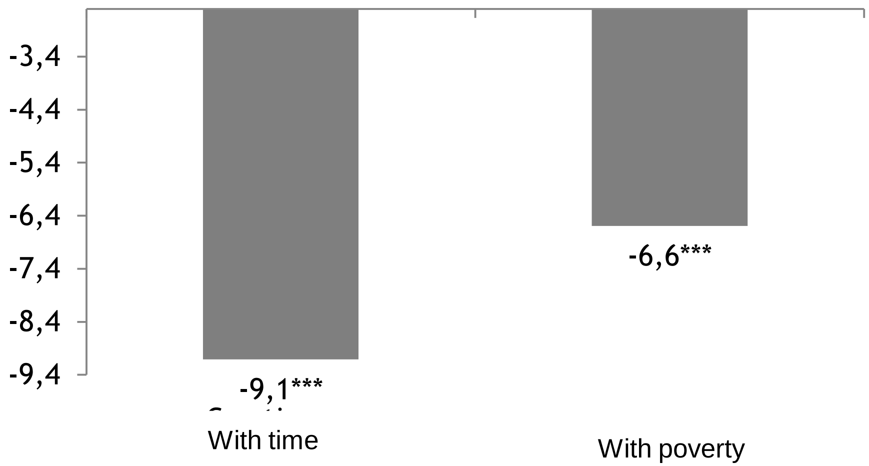
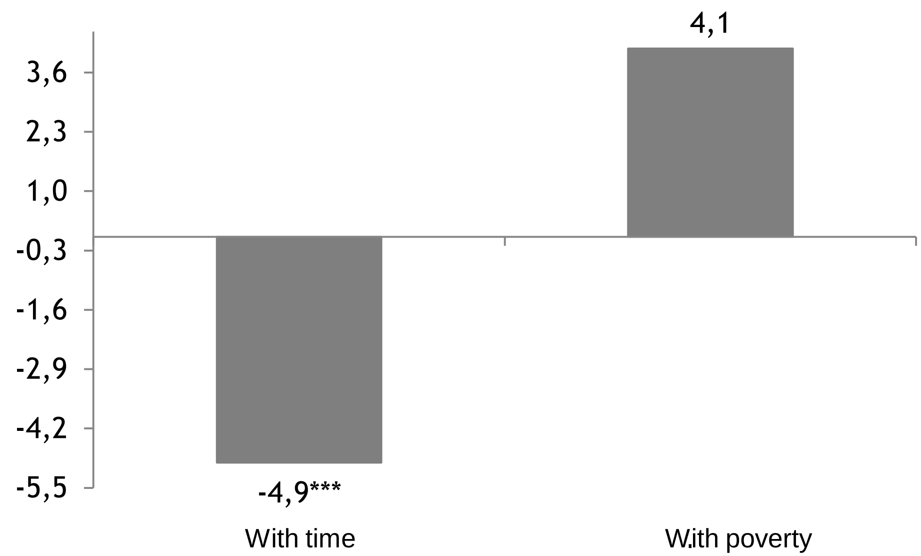
The SR takes out poor people s incentives to get into the salaried sector



SR effect over type of occupation

Effect with extreme poor population

Effect with poor population



Source: Santa María et al. (2008)

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4. Concluding Remarks

Concluding remarks

- Law 100 of 1993 has had a deep impact in the health sector
  - Positive results
    - ✓ Children health improvement
    - ✓ Preventive appointments increased (prenatal and postnatal controls)
    - ✓ Hospitalization and medicine expenditures decreased
    - ✓ Vaccination
  - Negative results
    - ✓ Quality in the system has not improved
    - ✓ Inequity
    - ✓ Impacts are greater among the extremely poor than among poor population

- Bad impacts of the law 100 in the labor market
  - The way that social policy is being financed and its design are causing serious problems in the labor market.
  - These problems end up as barriers when trying to reduce inequality.
  - The interaction between NWC and nominal rigidities (minimum wage) exclude poor people from the labor market and from the pension system.

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