Information and the Political Obstacles to Pension Reform

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Living longer, working less

(Average cohort-specific average length of working life and life expectancy at 65 in the EU15)

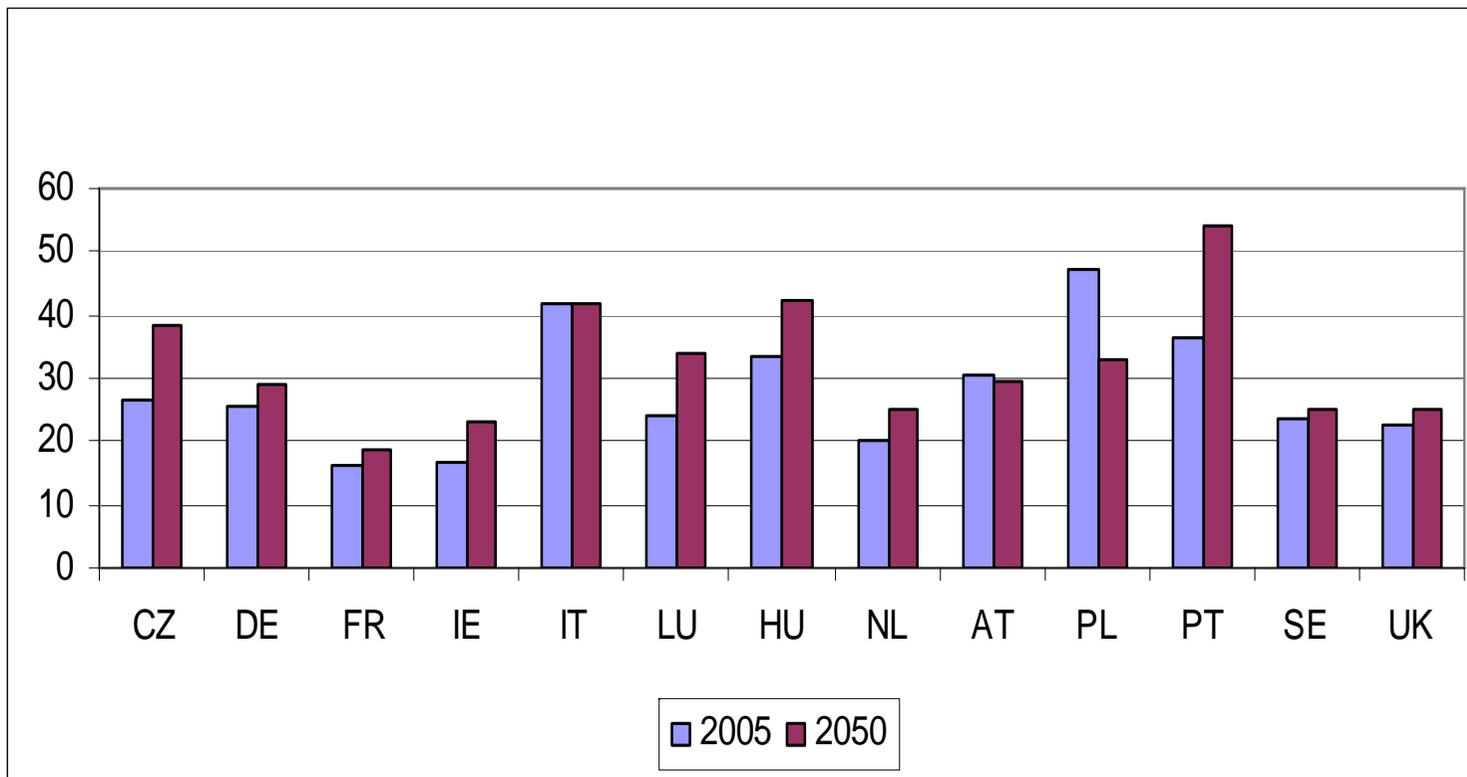| Cohorts	Average length of working life	Life Expectancy at the age of 65
1925	45.80	14.09
1930	43.92	16.12
1935	41.52	17.32
1940	37.64	17.57

Source: ECHP for average length of working life, OECD (2004), Health Data (2004) for life expectancy at the age of 65
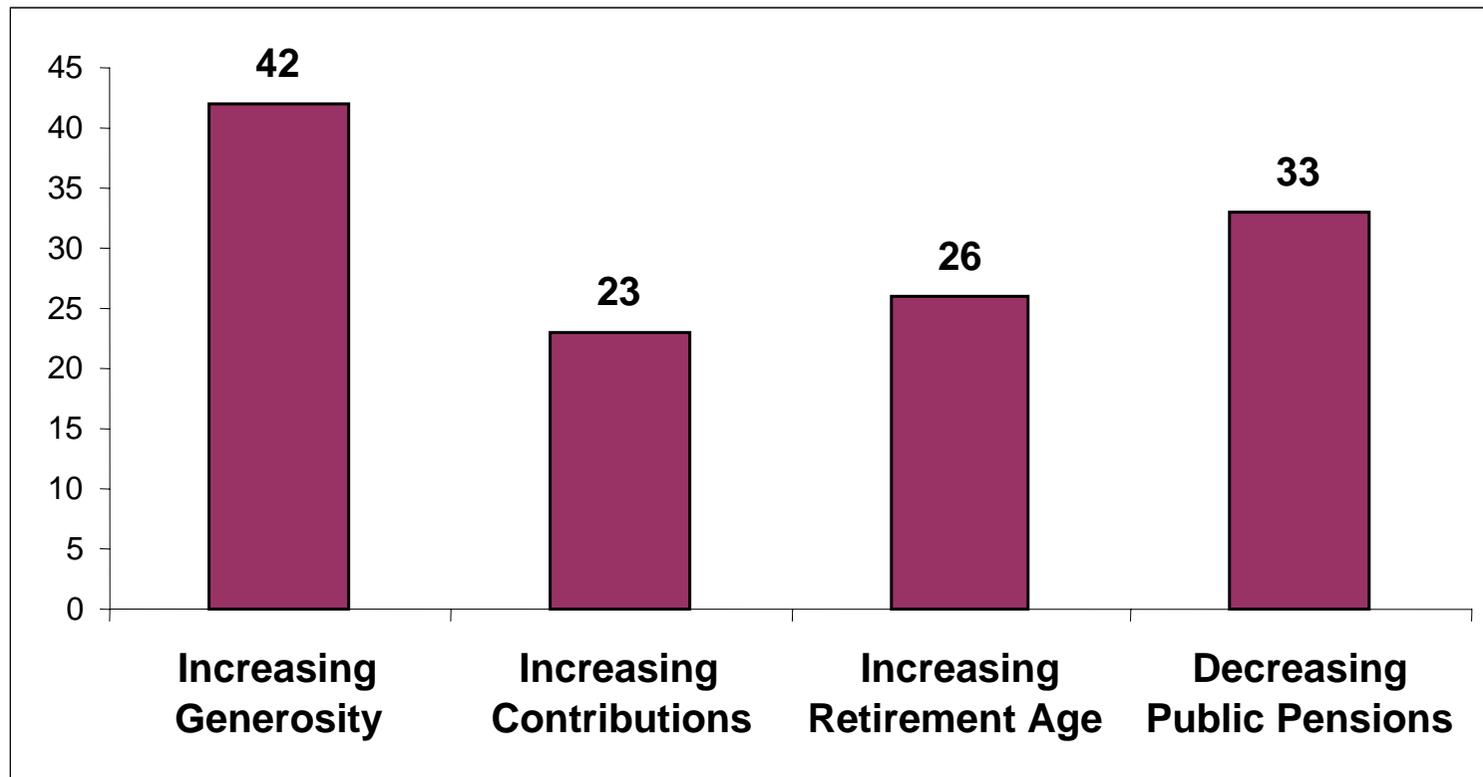
While fertility is declining
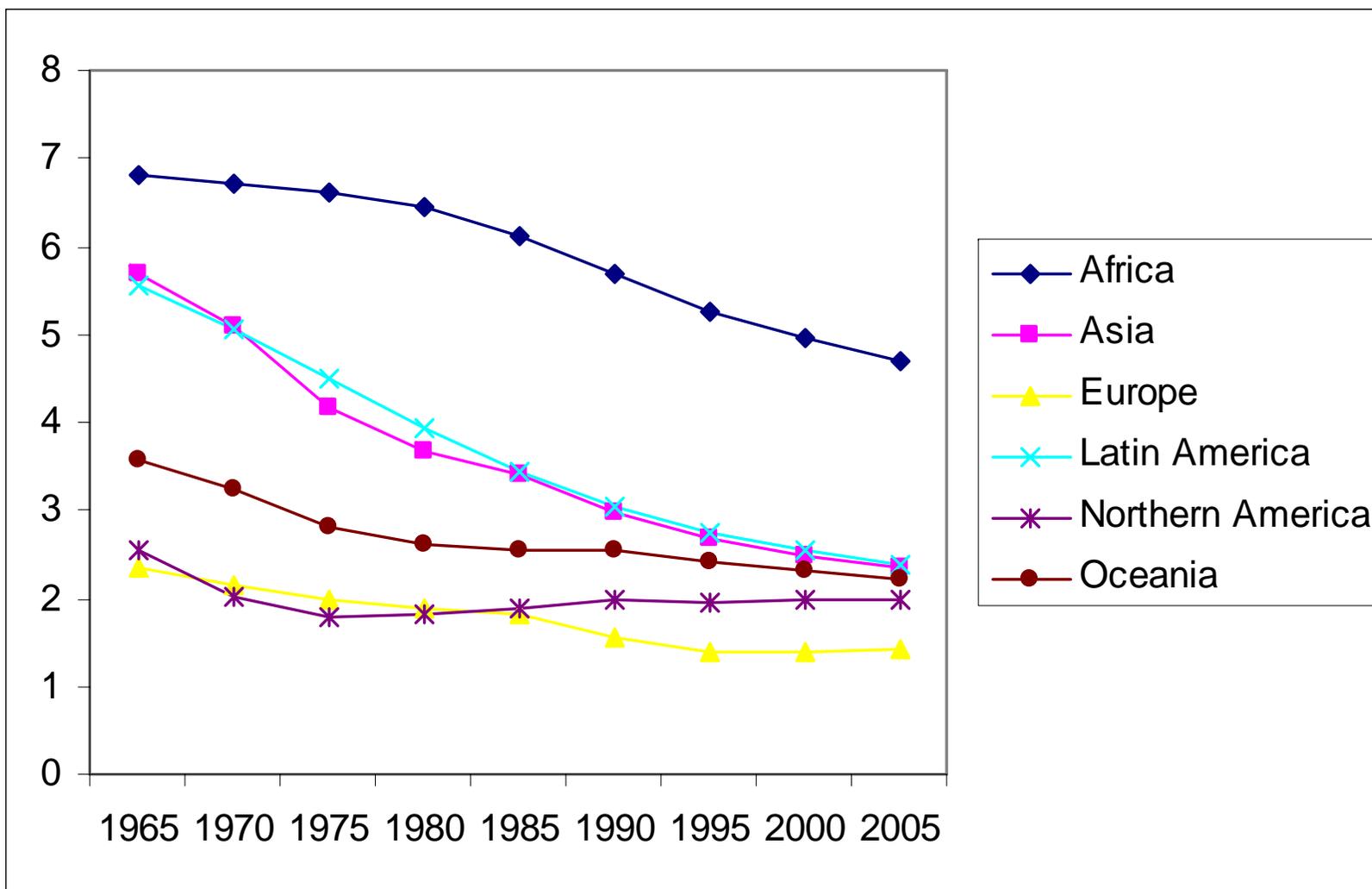
Unreformed pension systems will require further increase of contributions

Equilibrium contributions at unchanged policies as a % of gross wages

But reforms of pension systems are politically difficult
Reforms of Public Pensions in Europe, 1986-2002

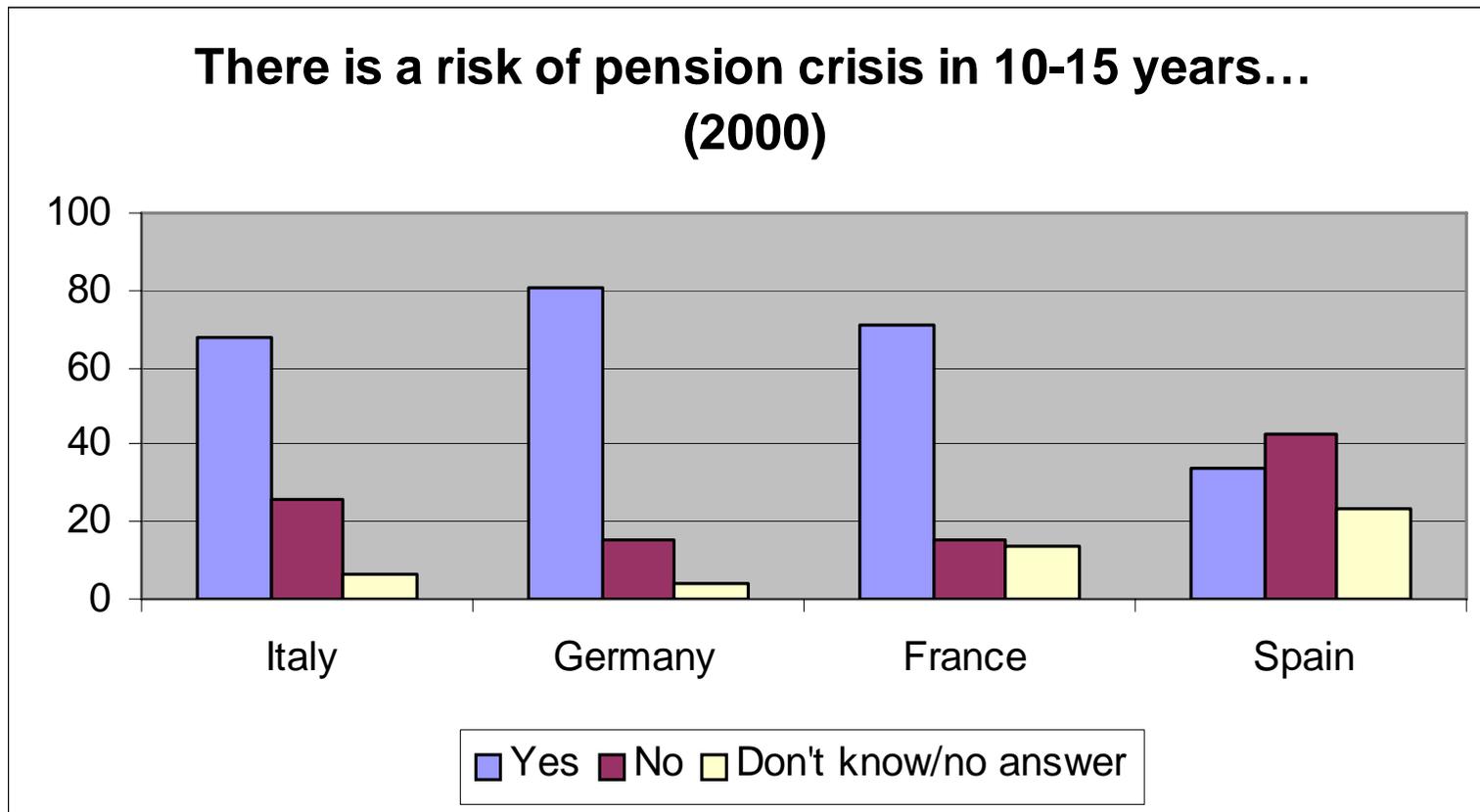|	Increasing Generosity	Increasing Contributions	Increasing Retirement Age	Decreasing Public Pensions
Value	42	23	26	33

Source: fRDB Social Reform Database

Lack of Information

- Public opinion surveys in Germany and Italy, 2000, 2001 and 2004 (also France and Spain in 2000).

- Individuals were asked about:
  - aggregate costs
  - individual costs
  - intergenerational redistribution

  operated by public pension systems

Aware of *aggregate dynamic* budget constraint?

There is a risk of pension crisis in 10-15 years…
(2000)

Aware of the *aggregate static* budget constraint?

Aware of *individual* costs?

Which percentage of your salary is used to pay public pension contributions? (2000)

Legend: understimate, correct, overstimate, don't know/no answer
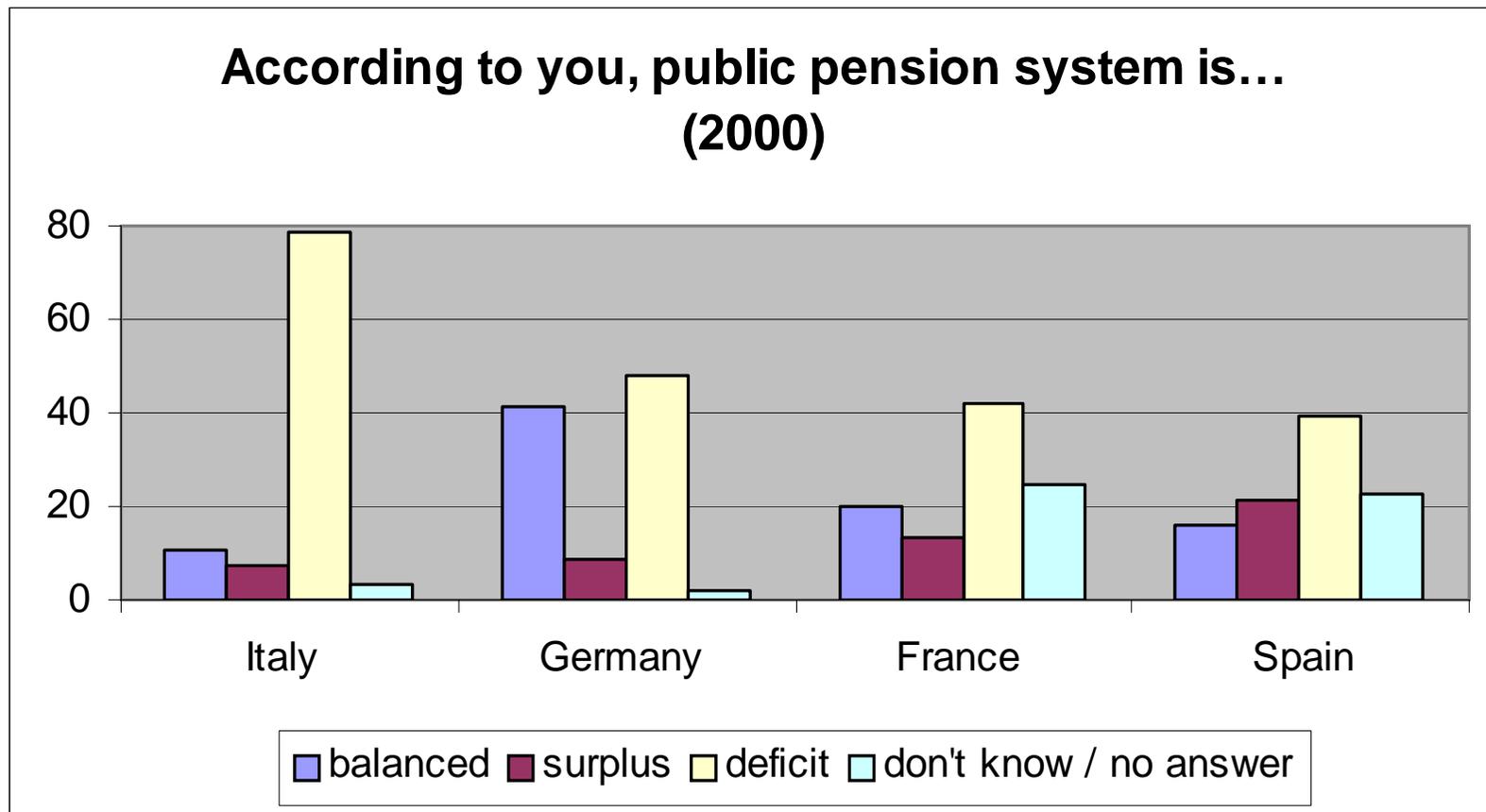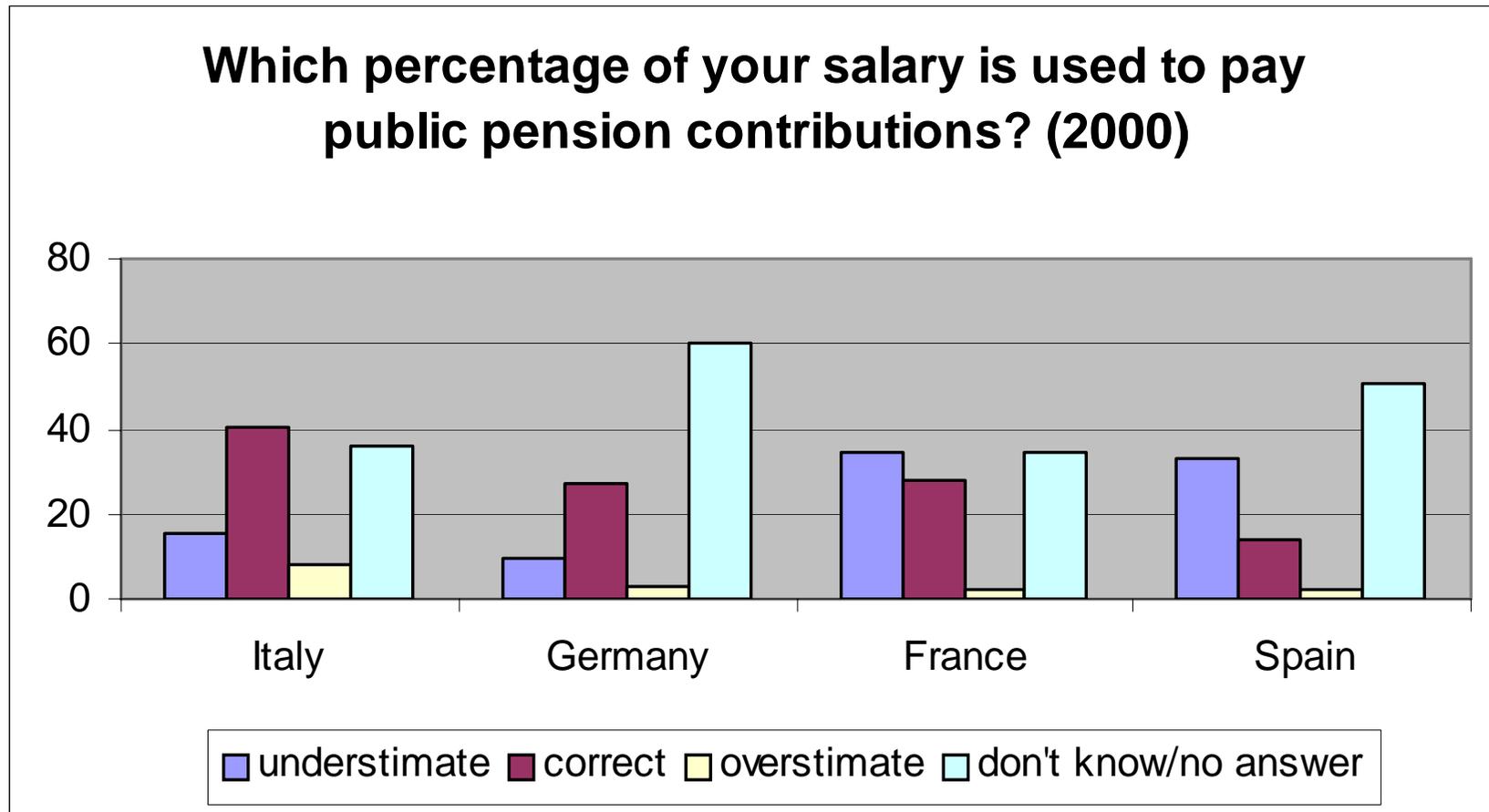
Aware of *intergenerational redistribution* (PAYG)?

According to you, for which purpose are the contibutions used for? (2004)

Legend:
- to pay only your own future pension
- to pay only current pensions
- to pay both your own future and current pensions
- refused /don't know

Categories: Italy, Germany
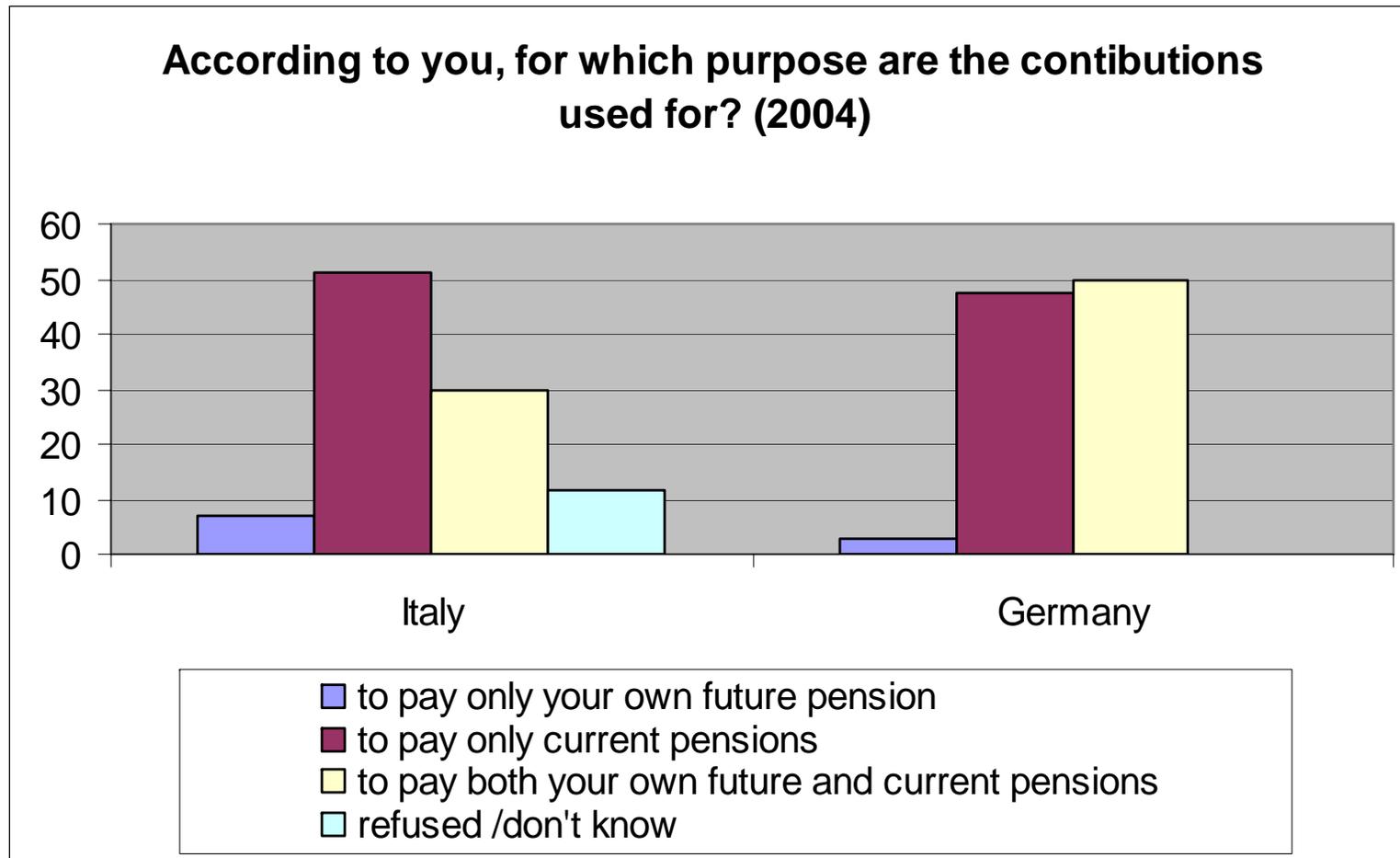
Key issues

- How does lack of information interact with preferences about reforms of pension systems?

- A causal effect of information on political preferences?

Literature

- *Theory*: little, if any, reference. Political economics: voters informed or info does not matter.

- *Empirical work*: Blinder and Krueger (2004, based on opinion polls in the US) and BBT (2001 and 2002)

Does Information increase Political Support to Reforms (with Guido Tabellini)

- Estimation strategy

- Data

- Exogenous information

  – Multinomial logit (with Heckman)

  – Non-parametric PSM

- Endogenous information

  – IV estimation

  – Joint ML

- Role of media coverage in learning processes

- Are there better ways to inform?

Key findings

- Informed more prone to support reforms reducing the generosity of public pension systems (lower bound: increase by 8 per cent; controlling for endogeneity, at 20-30 per cent)

- Press-media coverage not much informative

Estimation strategy

Our goal is to estimate (OPINION):

$$Y_i = F(X_i, I_i) + e_i$$

where Y_i is a binary variable measuring policy opinions of individual i (X_i denotes her general attributes), I_i is a measure of how informed she is about the costs and the functioning of the pension system, and e_i is an unobserved error term.

We model INFORMATION as:

$$I_i = G(X_i, Z_i) + u_i$$

where Z_i is a set of *additional* observable individual features that determine the information possessed by each individual, and u_i is an unobserved determinant of information.

We initially assume that the system is recursive. Then we test recursivity and deal with endogeneity bias.

Data

- Survey carried out in March 2004. Two-stage sampling of 1500 Italians aged 16 to 80. CATI.
- Questionnaire structured in 5 parts:
    - individual socio-economic characteristics
    - individual expectations about incomes at retirement
    - information about costs and functioning of PAYG
    - opinions about reforms reducing size or just increasing sustainability
    - income and ideology
- Posited tradeoffs (contingent valuation)
- No framing

Opposition to reforms

Are you in favour of...
(Italy 2004)
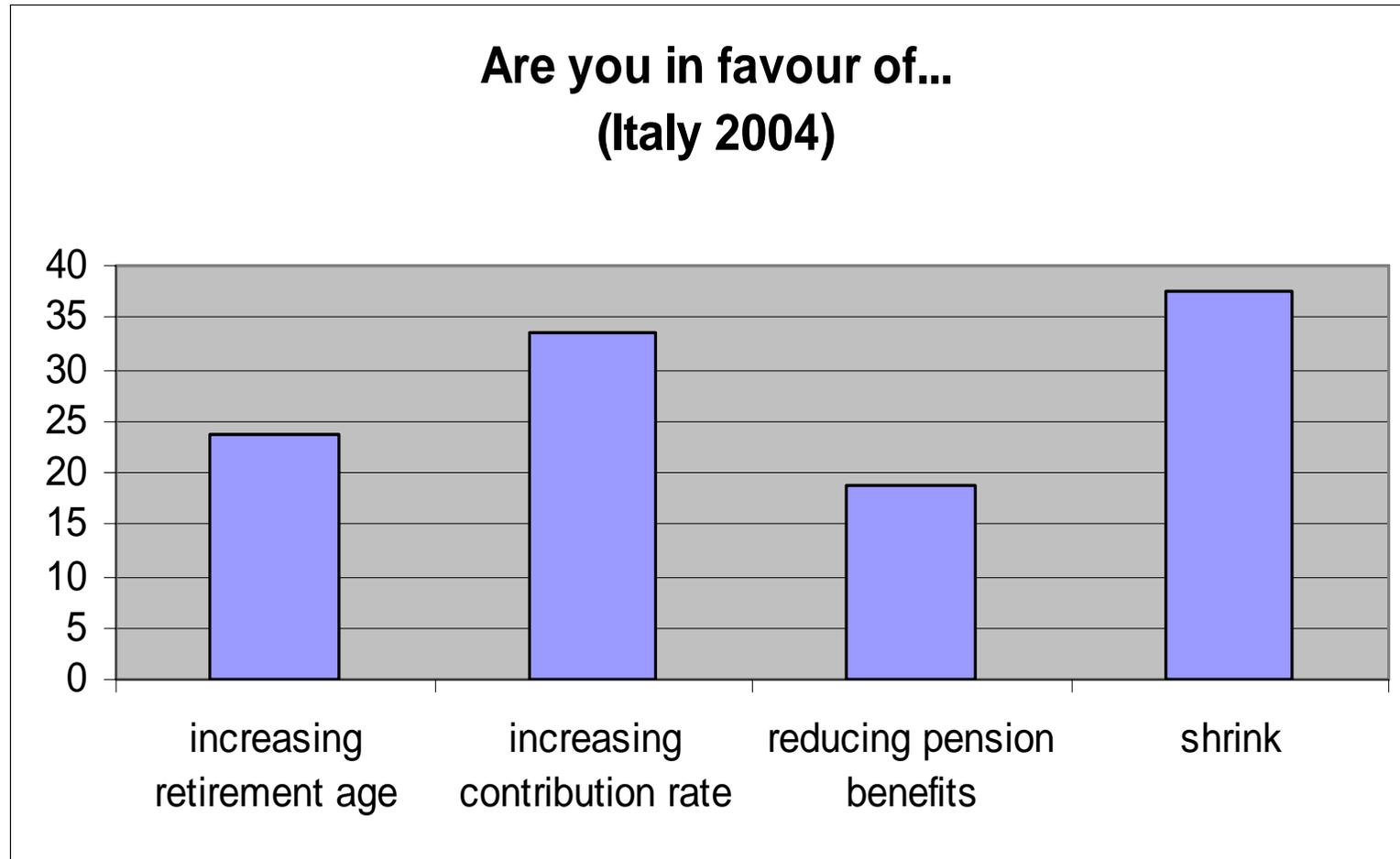
Information variables
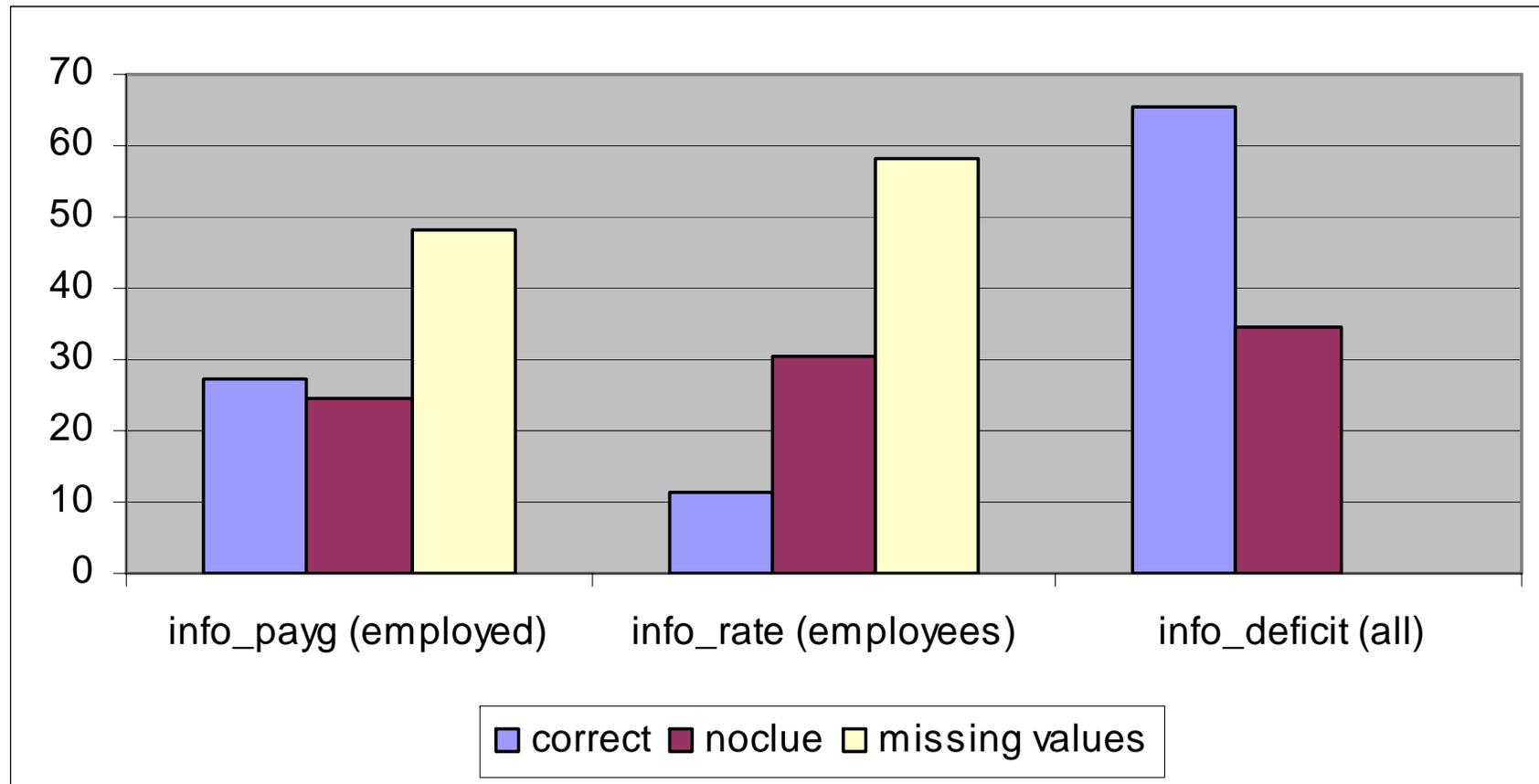
Favourable to reforms by awareness of individual costs

(which percentage of your salary is used to pay public pension contributions?)

Legend: Informed (knows her/his contribution rate) — Not informed

Categories: Increasing retirement age, Increasing contribution rate, Reducing pension benefits
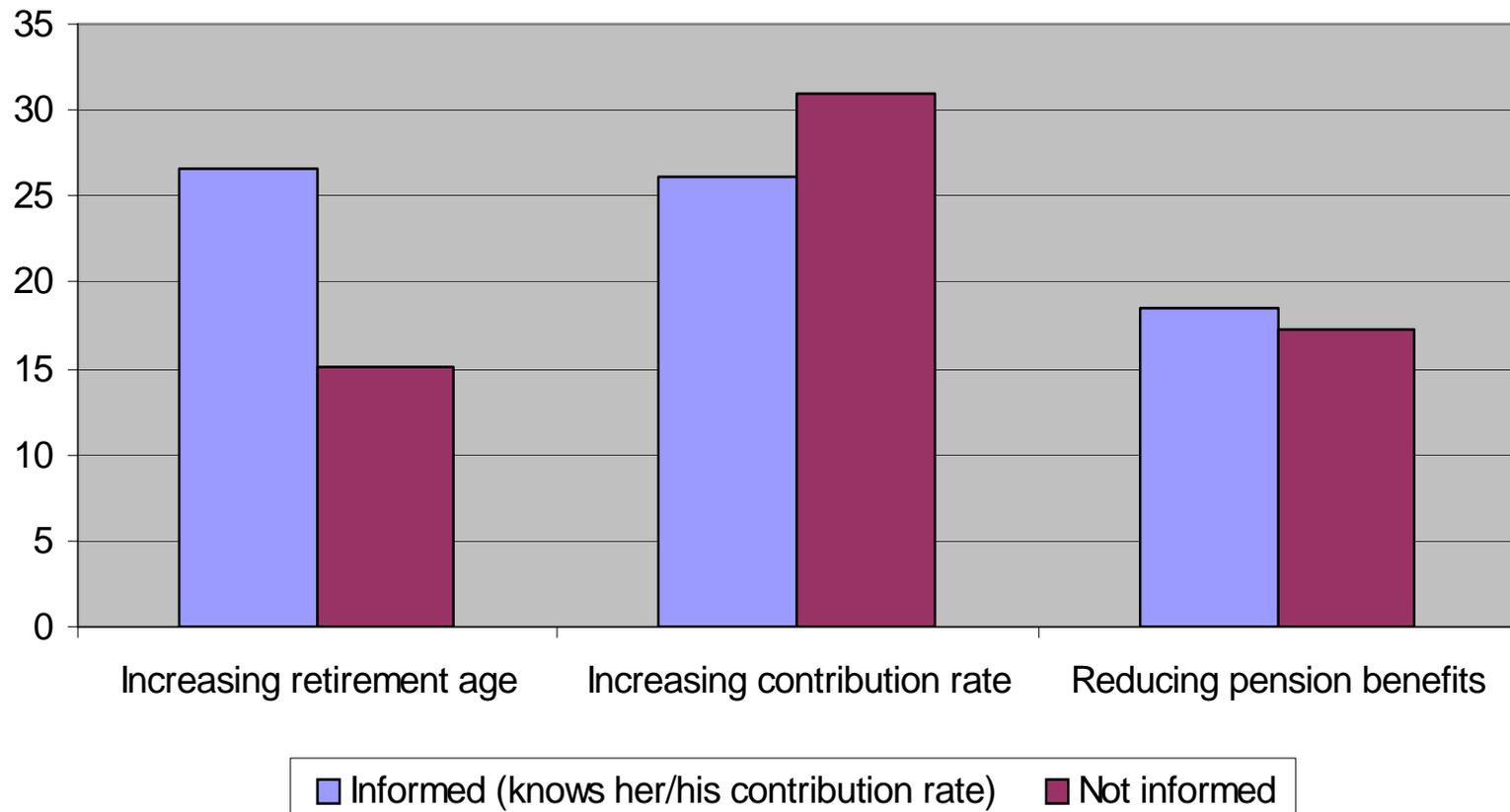
Favourable to reforms by awereness of pension system deficit

increasing retirement age increasing contribution rate reducing pension benefits

■ deficit ■ no deficit
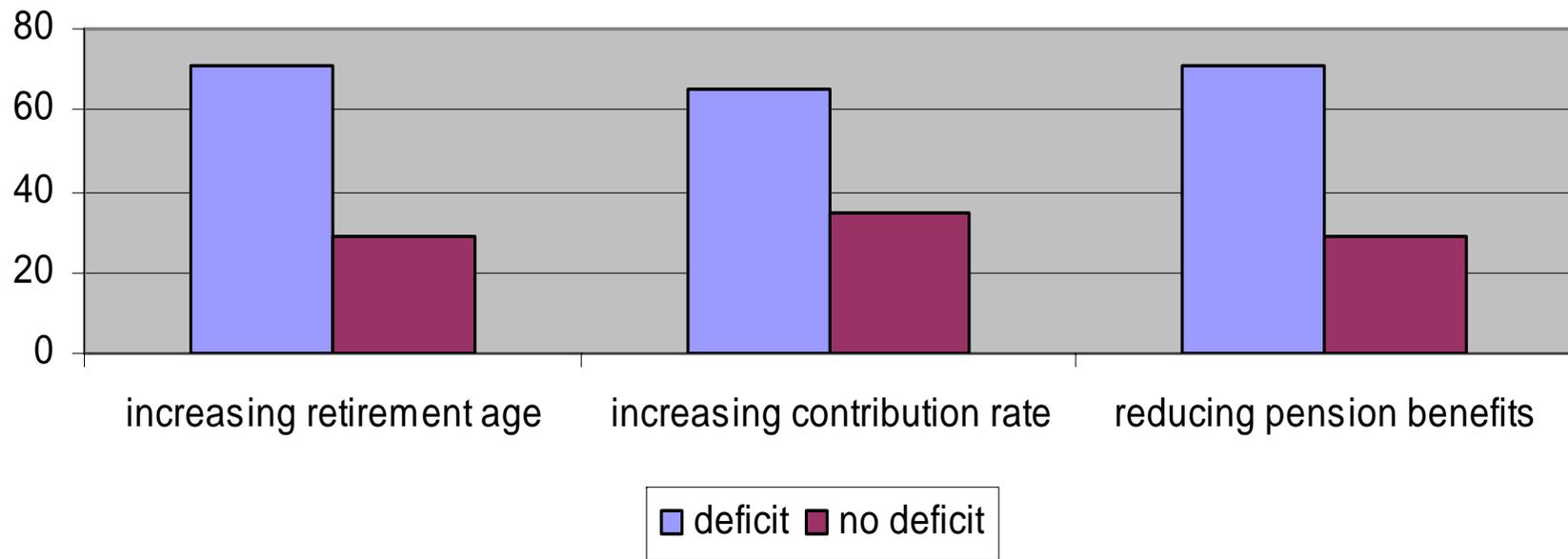
Favourable to reforms by awareness of PAYG system functioning

(for which purpose are public pension contributions used for?)

Increasing retirement age   Increasing contribution rate   Reducing pension benefits

☐ Informed (knows that contributions go to current pensioners)   ☐ Not informed
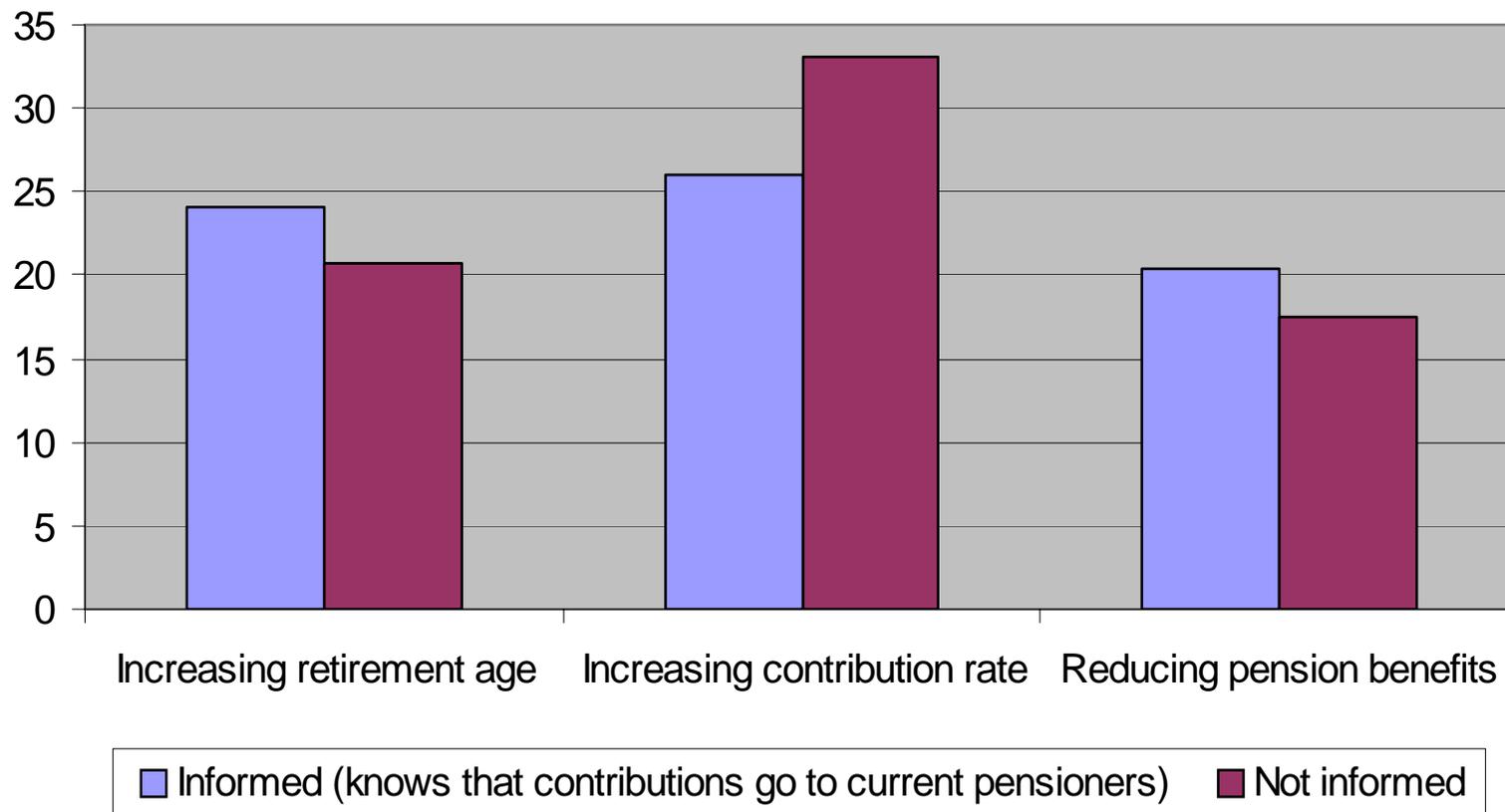
Summary measures of information

Variable	Values	Description	Sample	%
info_deficit	1	the respondent is aware of the fact the pension system is in deficit	all	65.53%
	0	otherwise		34.47%
info_payg	1	the interviewee knows that the public pension contributions are used only to pay pension benefits to current pensioner.	employed	52.37%
	0	otherwise		47.63 %
info_rate	1	the interviewee is aware of which percentage of his wage is used to pay pension contributions.	employees	26.79%
	0	otherwise		73.21%
info2	2	both *infodeficit* and *infopayg* are equal to one (the interviewee knew that both the pension system is in deficit and the public pension contributions are used only to pay pension benefits to current pensioner)	employed	40.69%
	1	either *infodeficit* or *infopayg* are equal to one.		42.62%
	0	both *infodeficit* and *infopayg* are equal to zero (i.e. the interviewee gave the wrong answer to both questions).		16.69%
info3	3	*infodeficit*, *infopayg*, *infocostind* are all equal to one (i.e. three correct answers about the pension system functioning).	employees	10.05%
	2	the respondent gave two correct answer out of three questions about the knowledge of the pension system.		42.42%
	1	it takes value one if the interviewee give just one correct answer out of three.		34.61%
	0	none of the answers is correct		12.92%

Summary statistics on Information

Variable	Obs	Mean	Std.Dev	Min	Max	Median
info_deficit	1500	0.655	0.475	0	1	1
info_payg	779	0.524	0.500	0	1	1
info_rate	627	0.268	0.443	0	1	0
info2	779	1.240	0.719	0	2	1
info3	627	1.496	0.843	0	3	2

Model with exogenous information (probit)

|	All (1) Shrink	Employed (2) Shrink	Employees (3) Shrink
male	0.48	0.43	0.21
	(0.12)***	(0.17)**	(0.19)
married	-0.34	-0.49	-0.54
	(0.15)**	(0.20)**	(0.23)**
university	0.34	0.24	0.38
	(0.16)**	(0.21)	(0.24)
whitecollar	-0.50	-0.75	-0.25
	(0.15)***	(0.19)***	(0.19)
bluecollar	-0.49	-0.79	
	(0.20)**	(0.24)***	
id_right	0.70	0.97	1.07
	(0.15)***	(0.21)***	(0.24)***
info_deficit	0.35		
	(0.13)***		
info2		0.24	
		(0.12)**	
info3			0.19
			(0.11)*
Observations	1443	755	606
Pseudo R 2	0.05	0.08	0.05

Notes: Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%.
Not reported variables: old, young, compulsory, pensioner, headpens, planearly, dini, id_left, crisis.

Propensity score matching

Outcome	Treatment	Propensity score matching methods	Coeff	t test
shrink (sample: all)	info_deficit	- Nearest neighbor matching method (random draw version)	0.075 (0.039)	t = 1.942
		- Nearest neighbor matching method (equal weights version)	0.077 (0.038)	t = 2.019
		- Stratification method	0.082 (0.026)	t = 3.182

Note: Standar errors in parentheses

Propensity Scores
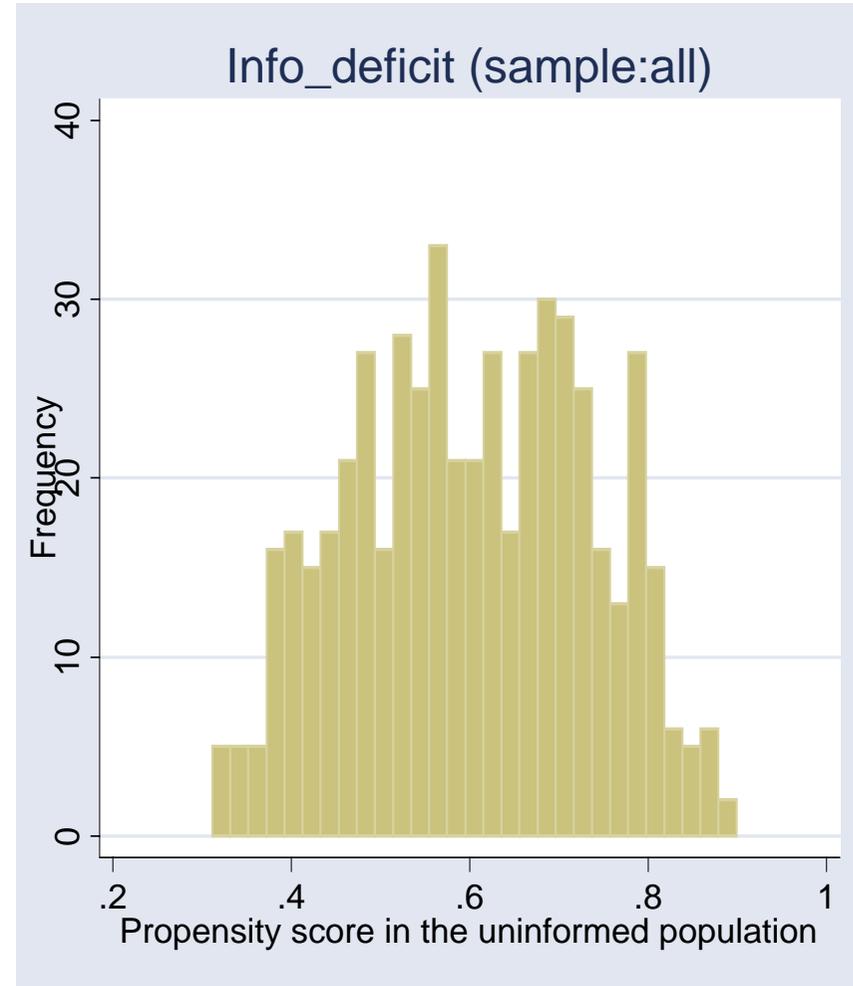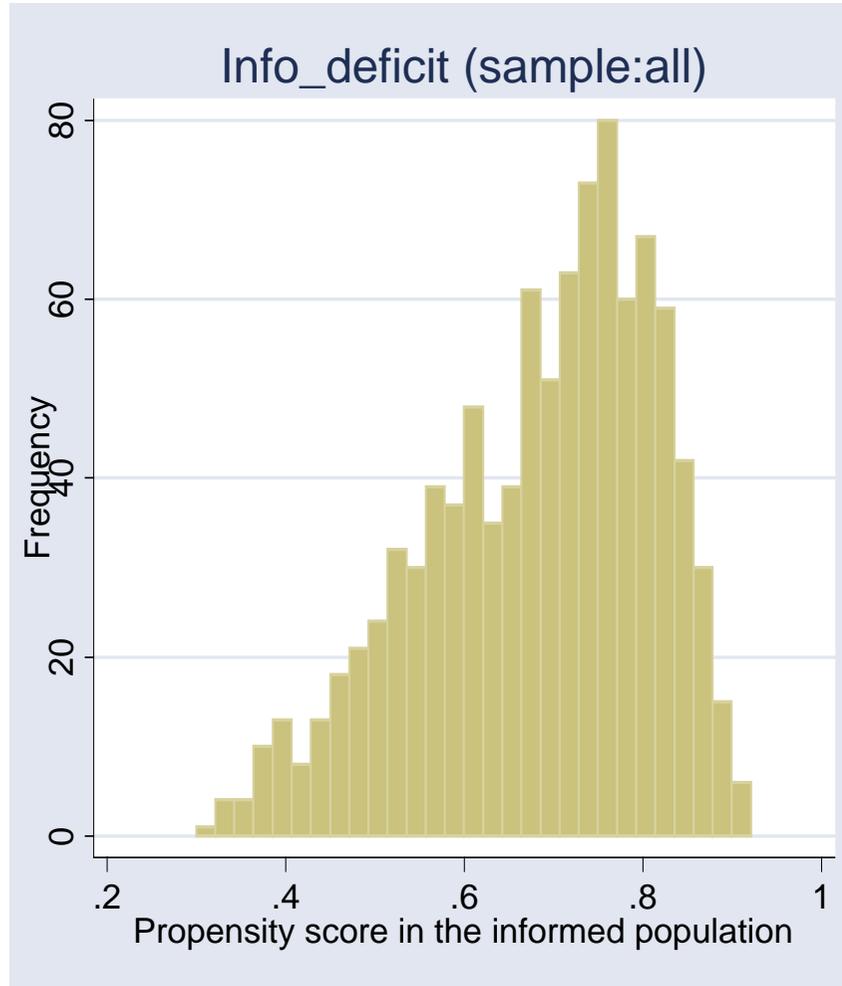
Testing exogeneity

- $E(e_i, u_i) = 0$

- Two-step procedure: i) linear regression of INFORMATION, obtaining $\hat{u}_i$ ii) probit estimation of OPINION on X_i, I_i and $\hat{u}_i$

- t-test of the coefficient on $\hat{u}_i$

- Note: no need to impose normality or homoskedasticity of $\hat{u}_i$

Exogeneity test

	All	**Employed**	**Employees**
	(1)	(2)	(3)
	shrink	shrink	Shrink
info_deficit	5.00		
	(1.32)***		
info2		3.59	
		(0.91)***	
info3			2.99
			(0.71)***
resid	-4.80	-3.46	-2.90
	(1.32)***	(0.91)***	(0.72)***
Observations	1443	755	606
Pseudo R2	0.07	0.11	0.09

Notes: Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%.

Not reported variables: male, married, old, young, university, compulsory, children, pensioner (only for sample one), whitecollar, bluecollar (only for saple one and two), headpens, planearly, dini, id_left, id_right, crisis, expertinfl, tradeunion, unioninfl.

IV estimation

Our instrument is *noclue, m*easures the strenght of individual's beliefs

Defined as # of times the rispondent gives DK/NA to 13 questions (excluding the reforms themselves) about:

- – A. Sustainability of reforms
- – B. General policy options (size of the welfare state)
- – C. Who represents your opinions
- – D. Positive on income distribution

Mean 2, stdev 2.2, range 13

Sensitivity on A,B and C

Joint probit estimates

	All	**Employed**	**Employees**
	(1)	(2)	(3)
	info_deficit	info_payg	info_rate
noclue	-0.05	-0.08	-0.11
	(0.02)***	(0.02)***	(0.03)***
Observations	1443	755	606

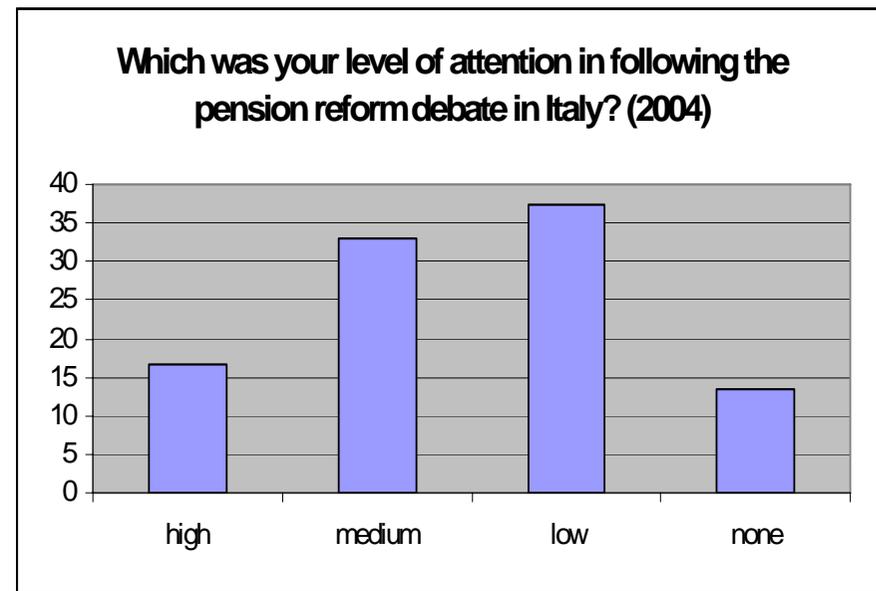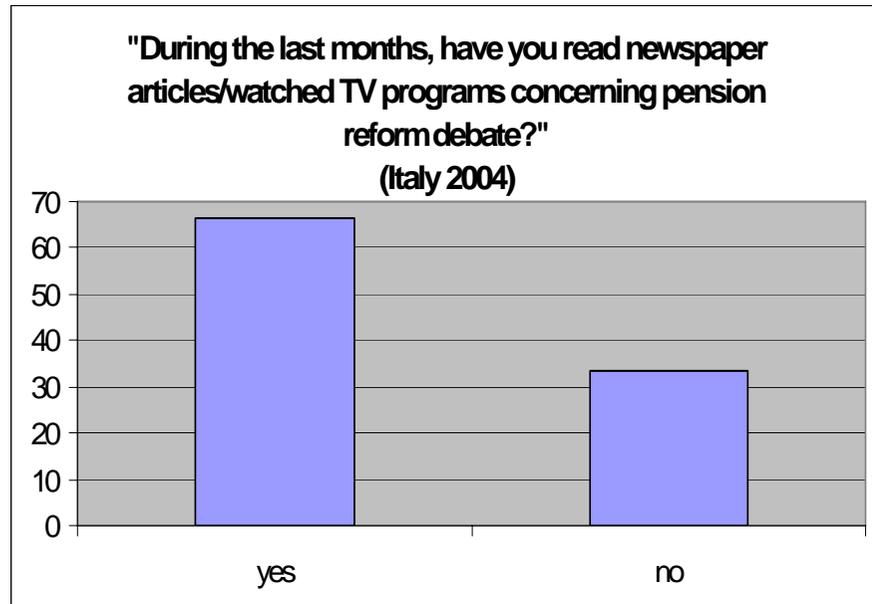|	**All**	**Employed**	**Employees**
	(1)	(2)	(3)
	shrink	shrink	shrink
info_deficit	1.50		
	(0.12)***		
info_payg		1.50	
		(0.09)***	
info_rate			1.65
			(0.11)***
Observations	1443	755	606

Notes: Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%;
Not reported variables: male, married, old, young, university, compulsory, children, pensioner (only for sample one), town, city, whitecollar, bluecollar (only for saple one and two), headpens, planearly, dini, id_left, id_right, crisis, tradeunion, unioninfl, expertinfl

IV linear

1st Stage:

	All	**Employed**	**Employees**
	(1)	(2)	(3)
	Info_deficit	info2	info3
noclue	-0.01	-0.04	-0.05
	(0.01)**	(0.02)**	(0.02)**
Observations	1443	755	606
Test of excluded instruments	5.06	4.97	6.61
	(Prob > F = 0.02)	(Prob > F = 0.03)	(Prob > F = 0.01)

2nd Stage:

	All	**Employed**	**Employees**
	(1)	(2)	(3)
	shrink	shrink	shrink
info_deficit	1.73		
	(0.86)**		
info2		1.13	
		(0.56)**	
info3			0.88
			(0.39)**
Observations	1443	755	606
Residual SS	1122.89	577.93	395.13
Residual SS from OLS	311.07	152.85	120.26

Notes: Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%;
Not reported variables: male, married, old, young, university, compulsory, children, pensioner
(only for sample one), whitecollar, bluecollar (only for sample one and two), headpens,
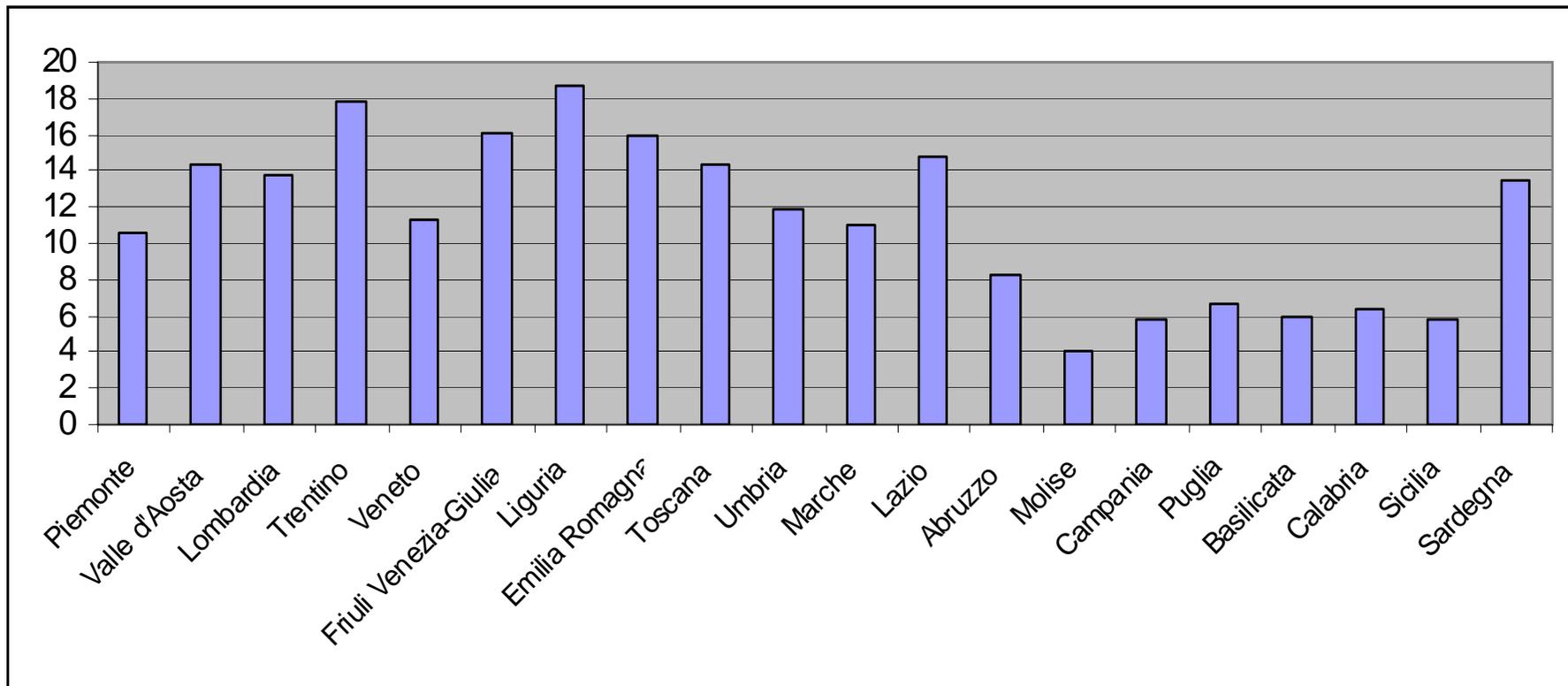planearly, dini, id_left, id_right, crisis, tradeunion, unioninfl, expertinfl.

Degree of *involvement* and *attention* in the public debate

"During the last months, have you read newspaper articles/watched TV programs concerning pension reform debate?"
(Italy 2004)

Which was your level of attention in following the pension reform debate in Italy? (2004)

Diffusion of newspapers

Press coverage of pensions

Number of Quotations of "Pension(s)" in Newspapers
(1-1-99 to 31-12-99)

| | | Economic Daily | | | |
| | | in titles | | in articles | |
		n.a.	%	n.a.	%
France	Les Echos	305	0.71	1715	4.01
Germany	Handelsblatt	729	1.18	5636	9.11
Italy	Il sole 24 Ore	1105	1.70	4673	7.19
Spain	Expansión	326	0.69	1413	2.97

'Sources: Les Echos, on line; Verlagsgruppe Handelsblatt; il Sole24ore on line; Expansión (Documentation Office)

Note: number of articles in which the words "pension or pensions or similar" are quoted in the title or in the full text as a per cent of all articles published in 1999

In particular, we looked up:

retraite, retraites, pension for France

all words with *-rente-* except "Rentenmarkt" and similar expressions for Germany

pensione, pensioni, previdenza for Italy

pensión, pensiones for Spain

Role of media coverage

	Dependent variables		
	info_deficit (sample: all)	info_payg (sample: employed)	info_rate (sample: employees)
Probit estimations:			
attention	0.04	0.00	0.16
	(0.05)	(0.06)	(0.08)**
involvement	0.02	0.16	0.08
	(0.09)	(0.12)	(0.16)
press	0.74	2.34	-0.49
	(1.10)	(1.48)	(1.82)

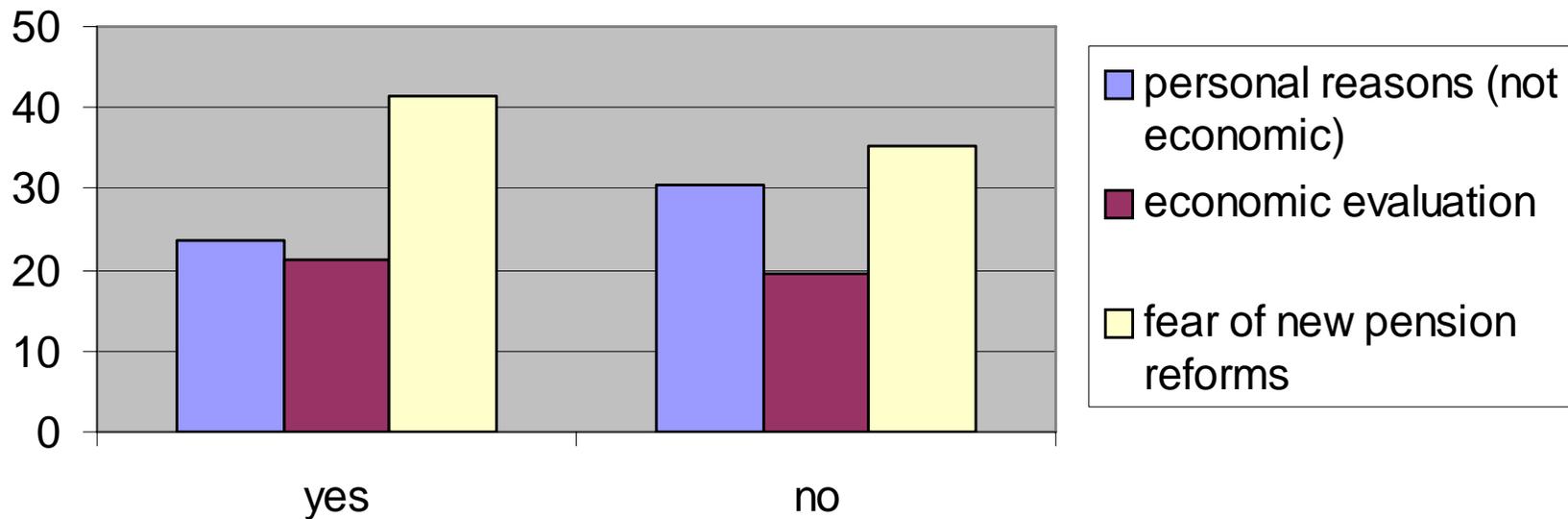|	Outcome: info_deficit (sample: all)	
	Coefficient	t test
Propensity score matching:		
involvement *(treatment)*:		
- Nearest Neighbor Matching method (random draw version)	-0.007 (0.039)	t = -0.168
- Nearest Neighbor Matching method (equal weights version)	-0.006 (0.039)	t = -0.160
- Statification method	0.030 (0.027)	t = 1.083

Notes: Standar errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%
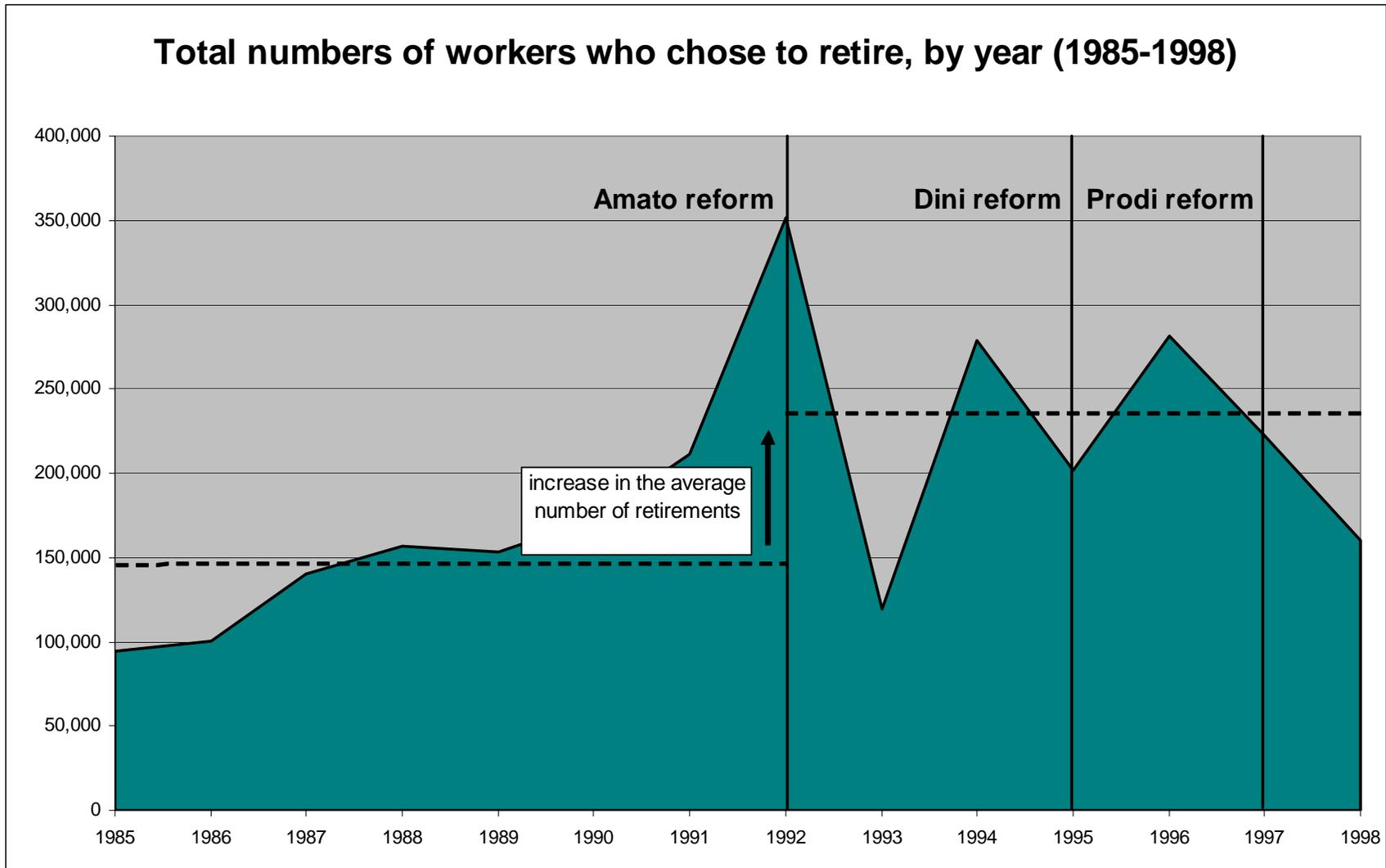
Does press-media coverage scare people?

In determining your retirement decision, which element will be more important?

(**Have you read newspaper articles/ watched Tv program concerning pension reform debate?**)
Italy, 2004

Legend:
- personal reasons (not economic)
- economic evaluation
- fear of new pension reforms

The "announcement effect"

Total numbers of workers who chose to retire, by year (1985-1998)

Amato reform   Dini reform   Prodi reform

increase in the average number of retirements

Source: fRDB – CeRP calculations on LABOR – Inps data

Summarising

- Those informed about individual and aggregate costs and intergenerational redistribution more likely to support reforms shrinking size

- Sizeable effect: 20-30 per cent increase in the probability of supporting reforms

- Evidence of causality: from information to willingness to reform

- Press coverage is not informative

Better ways to inform? The orange envelope....

You can receive a pension from more than one source
Besides their national pension, many people also receive a pension from elsewhere. This may be an occupational pension from their employer or perhaps a pension from their own private pension saving. This money is not described here, but it makes your total pension higher.

If you draw your national pension from

age 61: With 0% growth you receive SEK 8,800 per month   With 2% growth you receive SEK 13,000 per month

age 65: With 0% growth you receive SEK 11,600 per month   With 2% growth you receive SEK 18,400 per month

age 70: With 0% growth you receive SEK 16,700 per month   With 2% growth you receive SEK 29,300 per month

Example: Your national pension at age 65 and zero per cent growth consists of: SEK 9,400 income pension (incl. any supplementary pension) and SEK 2,200 premium pension (for the calculation assumptions for premium pension, see *Forecast* in the Glossary).

Make your own forecast on the internet
Go to *www.pension.nu* and use the amounts below, which come from pages 2 and 5 of this annual statement:

SEK 702,476   SEK 18,385

Would you like more information?
Visit *www.pension.nu* (the Insurance Office) or *www.ppm.nu* (the Premium Pension Authority). You can also phone the Insurance Office's help line on 020 – 524 524.