Labour and pension reforms in Italy (and Europe)

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SHARE "Employment and Pensions"

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"Extending the Working Lives of Older Workers: A European Success Story?"

EC, 13 March 2008 - Brussels

Motivation

The age composition of the work force has changed in Europe and Italy over the last decades.

Important labor market and pension reforms have taken place in Italy and in Europe.

Two sources of interaction between pension reforms and labour markets.

(1) Effects on work in old age

(2) Effects on the labour force at large (age profile of participation)

Motivation

(1) As for the first I will show evidence from SHARE data and from the ECHP and from Italy and Spain. Which elements are relevant in the exit decision?

(2) The second hinges upon the LUMP OF LABOUR FALLACY and more generally labour market arrangements. Is it possible to detect an effect of the Young-in-Old-out policy in Italy? Was there a Young-in-Old-out explicit policy?

Employment and Pension module in SHARE allows to answer the following questions

The questions:

(1) WHO WORKS? WHO RETIRES? DO PENSION REFORMS/ARRANGEMENTS MATTER?

It is important to understand retirement decisions: transitions out of work have complex dynamics

(2) WHO RETIRES TOO EARLY? (EARLY RETIREMENT OPTIONS)

Early retirement is widespread in Europe, is this due to ill-health? Do institutions also play a role? Is there "unused capacity"?

Jargon

Keywords

Transitions = transitions out of labour force

Early retirement= transitions (exits from the LF) before the normal retirement age (NRA)

Pathways to retirement = there are more ways to make the transition

Reforms= how effective?

Recently the attention has been mainly on sustainability of (PAYGO) systems (macro approach).

Effects of pension arrangements on **labour supply** have been mainly neglected. Yet they may account for large fiscal imbalances of pension systems (micro approach).

The role of **incentives**.

The general message from part 1:

- **Workers do seem to know the rules of the system and can make calculations "at the margin"**

- **Incentives have an effect on exits**

- **Reforms also seem to have an effect, but one has to be careful with the overall design and interpretation**

Data Definitions:

Cross-sectional sample = observations obtained at one point in time, a picture of the population (two waves in 2004 and 2006)

**Panel sample = Respondents are interviewed twice (in 2004 and in 2006), can study the transition**

Employed = working either as employee or as self-employed (self reported)

Retired = left work (self reported)

1. Policy Questions on Work of the Elderly

A first look at the entire SHARE sample 2004-2006
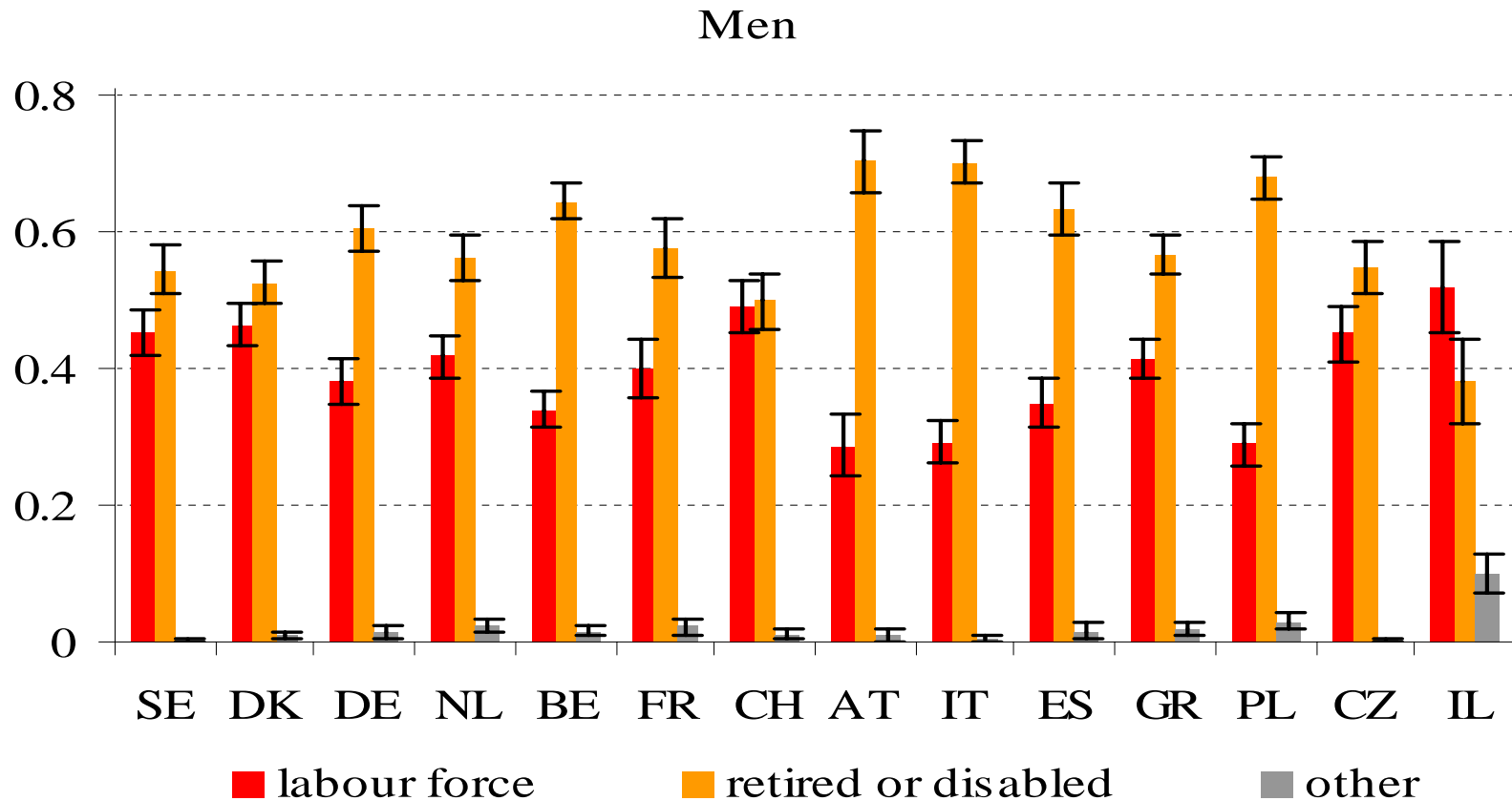**Apparently as people age go from work to retirement**

All
Self-Reported Labor Mkt Status by Age
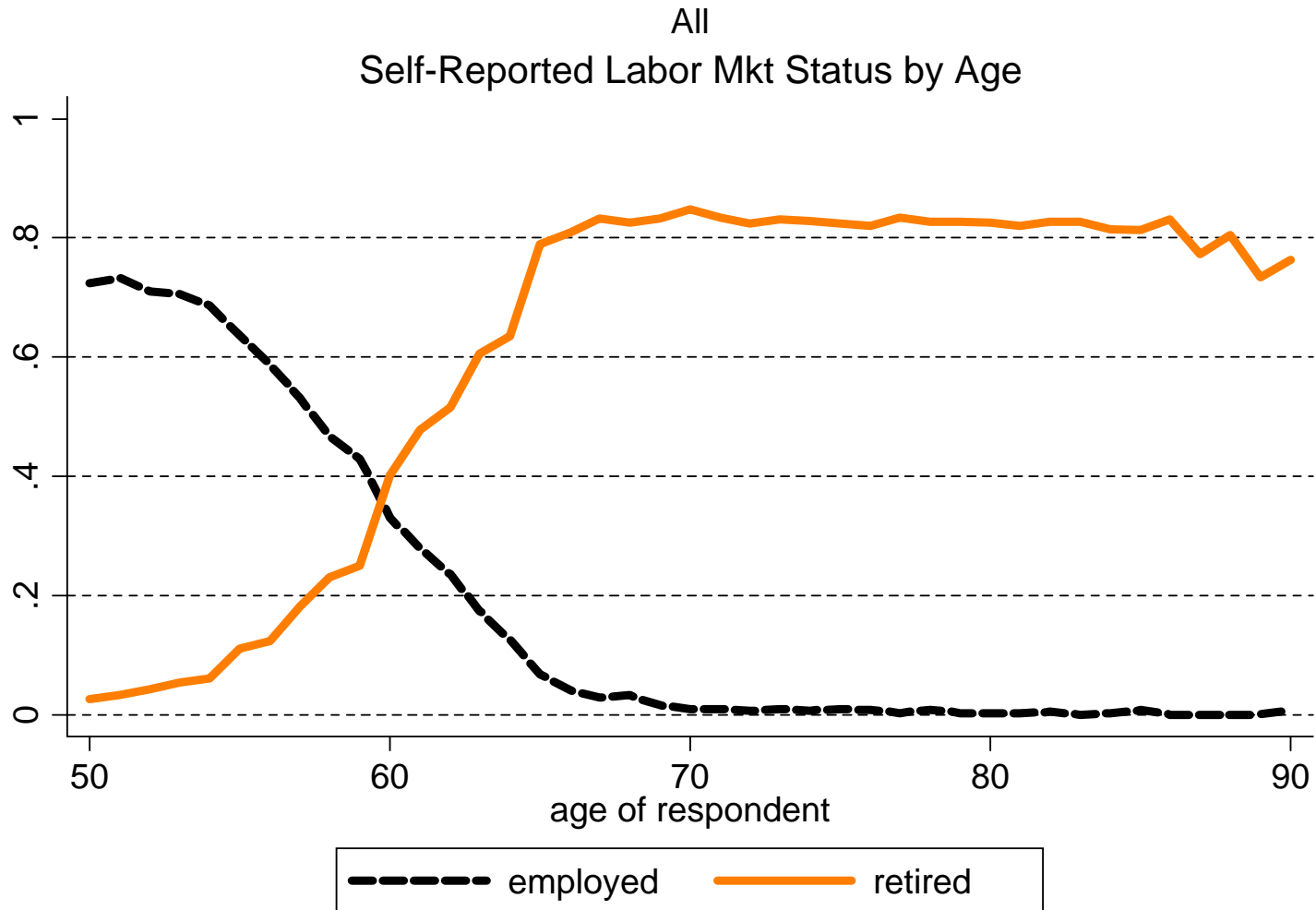
WHO WORKS? WHO RETIRES? HOW DO THEY RETIRE?

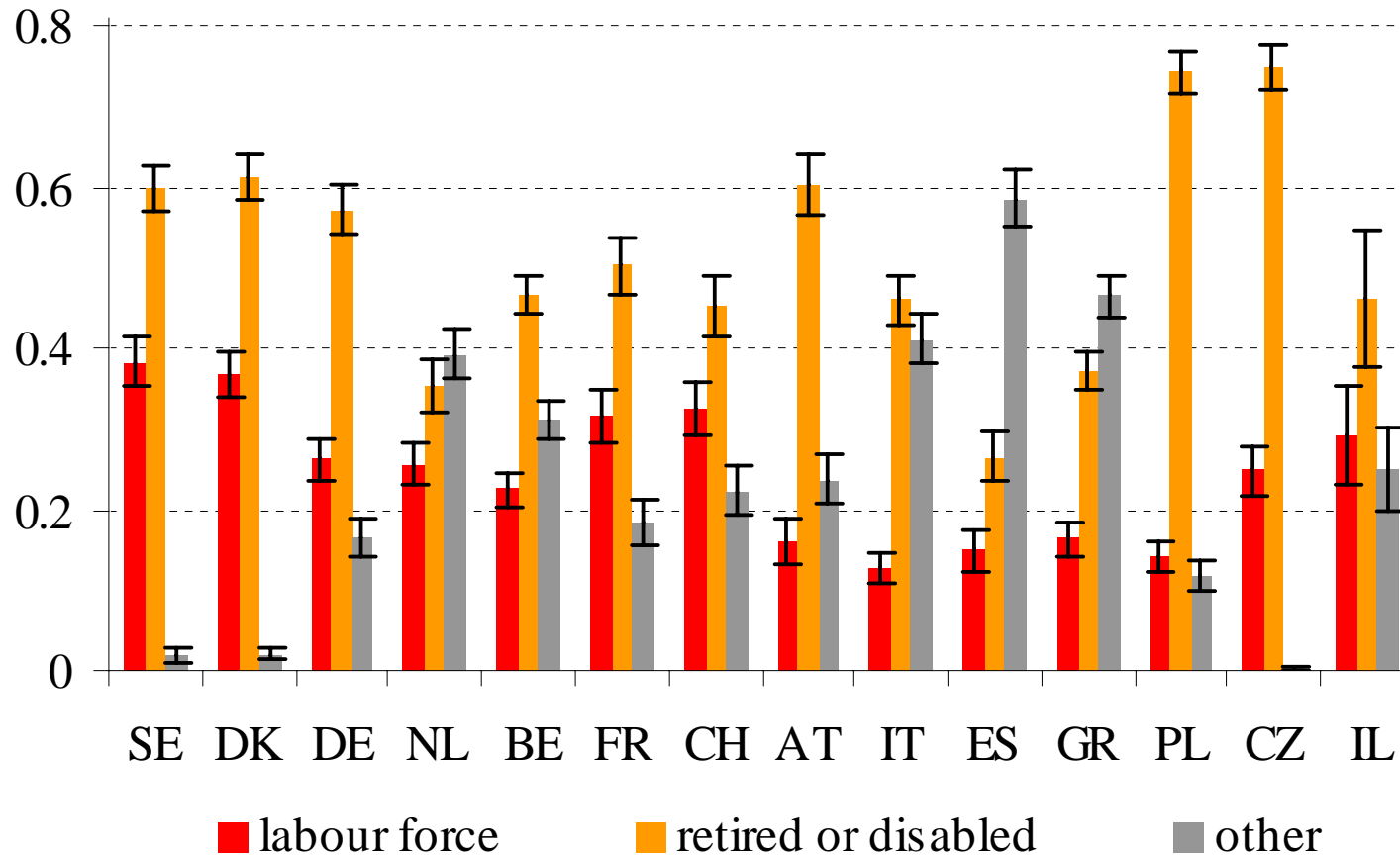**A first look at the entire sample – by country**

Important variation throughout Europe

Men

Important variability also by gender

Women

Transition Matrix: Status in 2004 versus Status in 2006
Panel sample

Wave 1	Wave 2						Obs
	Retired	Employed	Unemployed	Disabled	Homemaker	Other	Obs
Retired	92.12	0.70	0.17	1.62	4.56	0.84	6,562
Employed	14.06	78.01	2.80	1.78	2.38	0.98	3,997
Unemployed	23.85	19.26	39.39	4.81	8.74	0.12	457
Disabled	32.50	6.50	0.75	52.50	6.25	1.50	400
Homemaker	15.96	3.20	1.16	3.20	74.36	2.13	2,250
Other	36.84	7.89	2.63	15.79	15.79	21.05	38
Obs	7,219	3,353	333	487	2,145	167	13,704

Transition Matrix: Status in 2004 versus Status in 2006
Panel sample (Sweden)

SE	LABOUR MARKET STATUS 06						ALL (age 50-65)
LABOUR MARKET STATUS 04	Retired	Employed or self-employed	Unemployed	Permanently sick or disabled	Homemaker	Other	Total
Retired	217	6	0	8	0	1	232
	93.53	2.59	0.00	3.45	0.00	0.43	100
Employed or self-employed	98	629	12	20	4	4	767
	12.78	82.01	1.56	2.61	0.52	0.52	100
Unemployed	12	15	9	4	0	0	40
	30.00	37.50	22.50	10.00	0.00	0.00	100
Permanently sick or disabled	36	10	0	9	0	0	55
	65.45	18.18	0.00	16.36	0.00	0.00	100
Homemaker	5	1	0	0	7	1	14
	35.71	7.14	0.00	0.00	50.00	7.14	100
Other	2	2	0	0	0	1	5
	40.00	40.00	0.00	0.00	0.00	20.00	100
Total	370	663	21	41	11	7	1,113
	33.24	59.57	1.89	3.68	0.99	0.63	100

Transition Matrix: Status in 2004 versus Status in 2006 Panel sample (Italy)

| IT	LABOUR MARKET STATUS 06						ALL (age 50-65)
LABOUR MARKET STATUS 04	Retired	Employed or self-employed	Unemployed	Permanently sick or disabled	Homemaker	Other	Total
Retired	374	3	0	7	12	0	396
	94.44	*0.76*	*0.00*	*1.77*	*3.03*	*0.00*	*100*
Employed or self-employed	68	194	12	1	10	1	286
	23.78	*67.83*	*4.20*	*0.35*	*3.50*	*0.35*	*100*
Unemployed	10	10	8	4	5	0	37
	27.03	*27.03*	*21.62*	*10.81*	*13.51*	*0.00*	*100*
Permanently sick or disabled	4	0	0	7	0	0	11
	36.36	*0.00*	*0.00*	*63.64*	*0.00*	*0.00*	*100*
Homemaker	35	5	1	12	209	2	264
	13.26	*1.89*	*0.38*	*4.55*	*79.17*	*0.76*	*100*
Other	0	1	0	0	0	0	1
	0.00	*100.00*	*0.00*	*0.00*	*0.00*	*0.00*	*100*
Total	491	213	21	31	236	3	995
	49.35	*21.41*	*2.11*	*3.12*	*23.72*	*0.30*	*100*

Transitions out of employment:
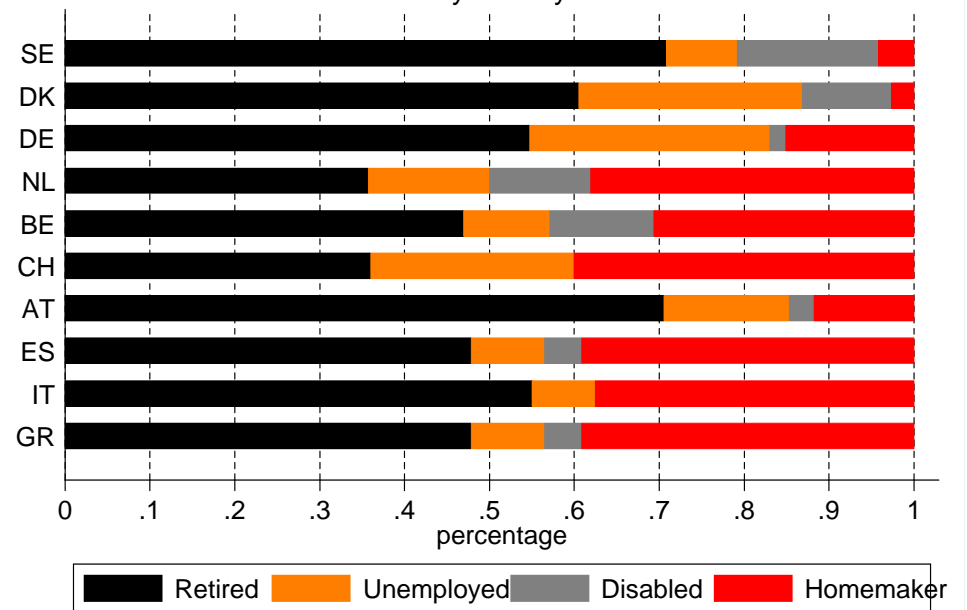**Employed in 2004 versus Status in 2006   Panel sample**
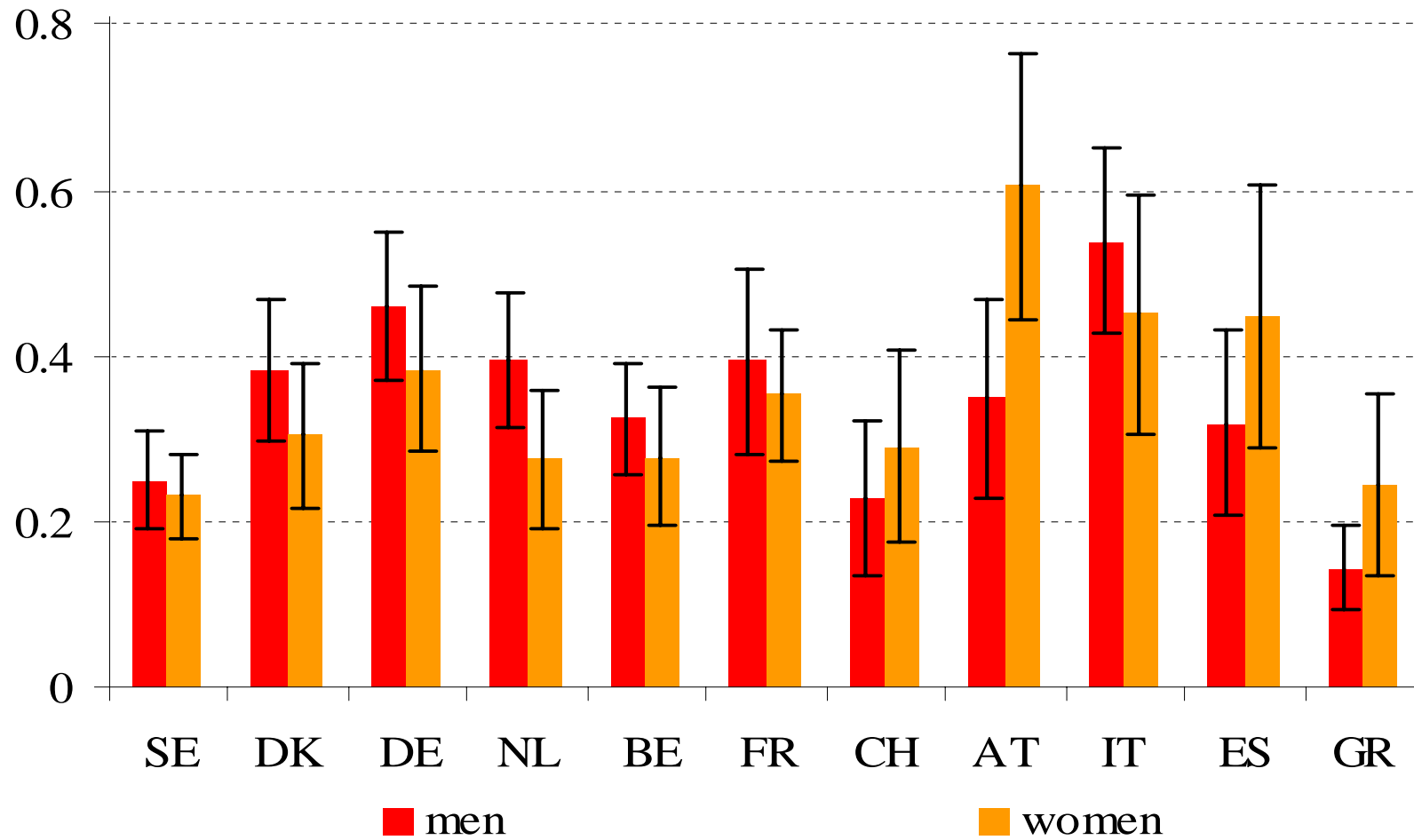
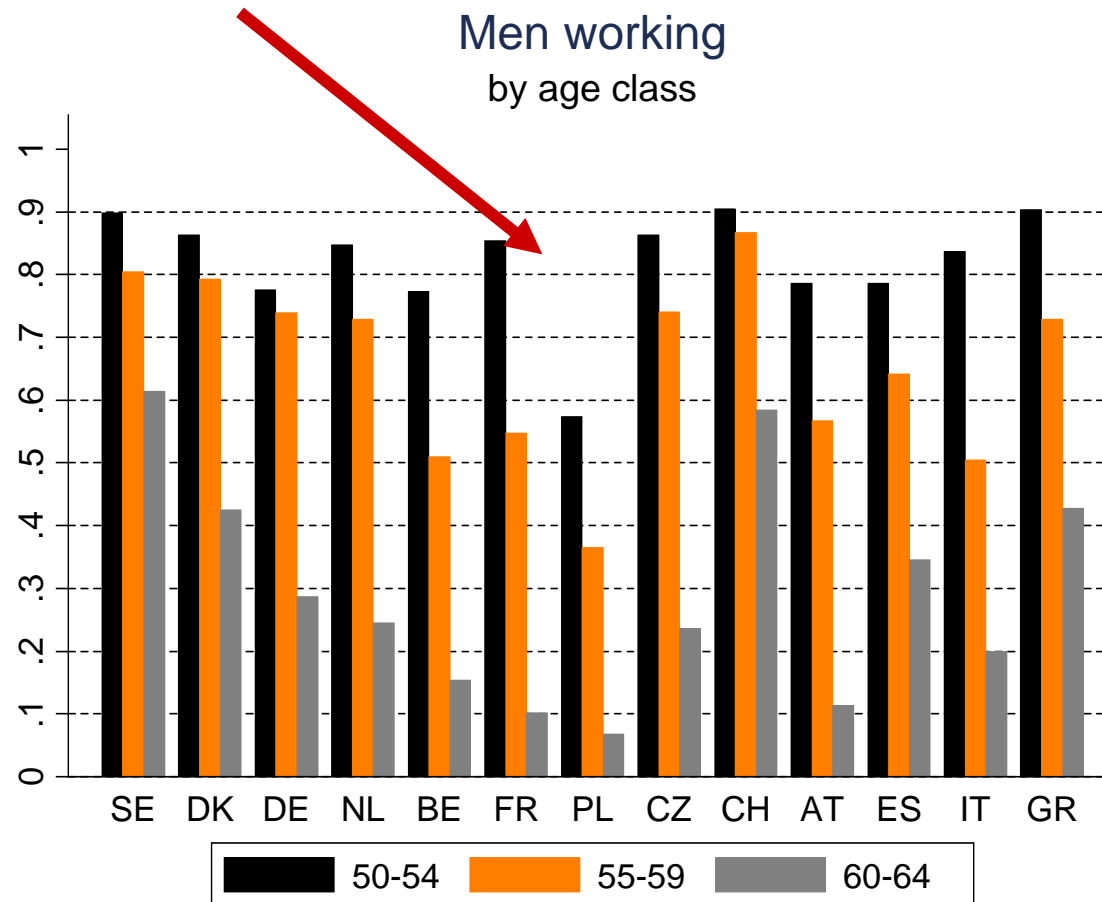# Transitions: Employed in 2004 versus Status in 2006
Panel sample

Transition Out of Employment: Men
by country
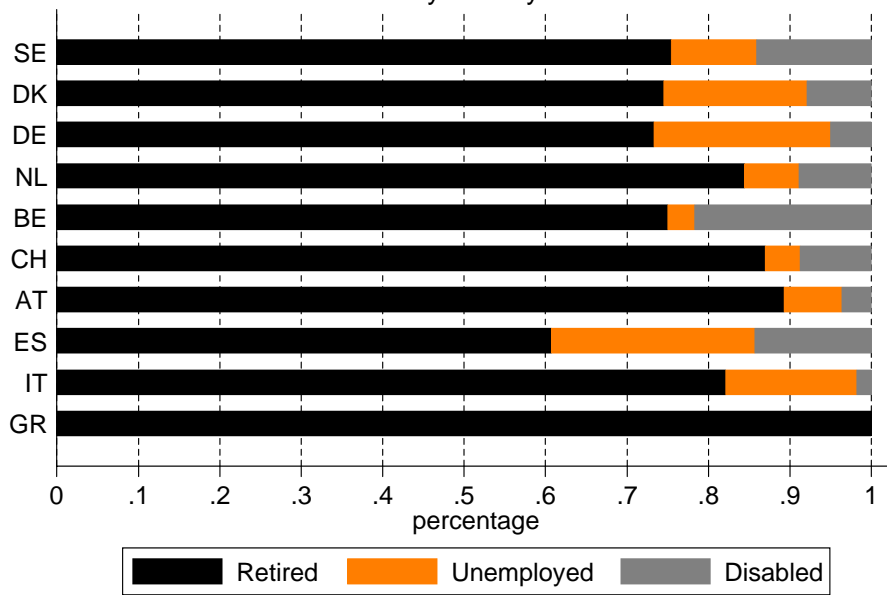
Transition Out of Employment: Women
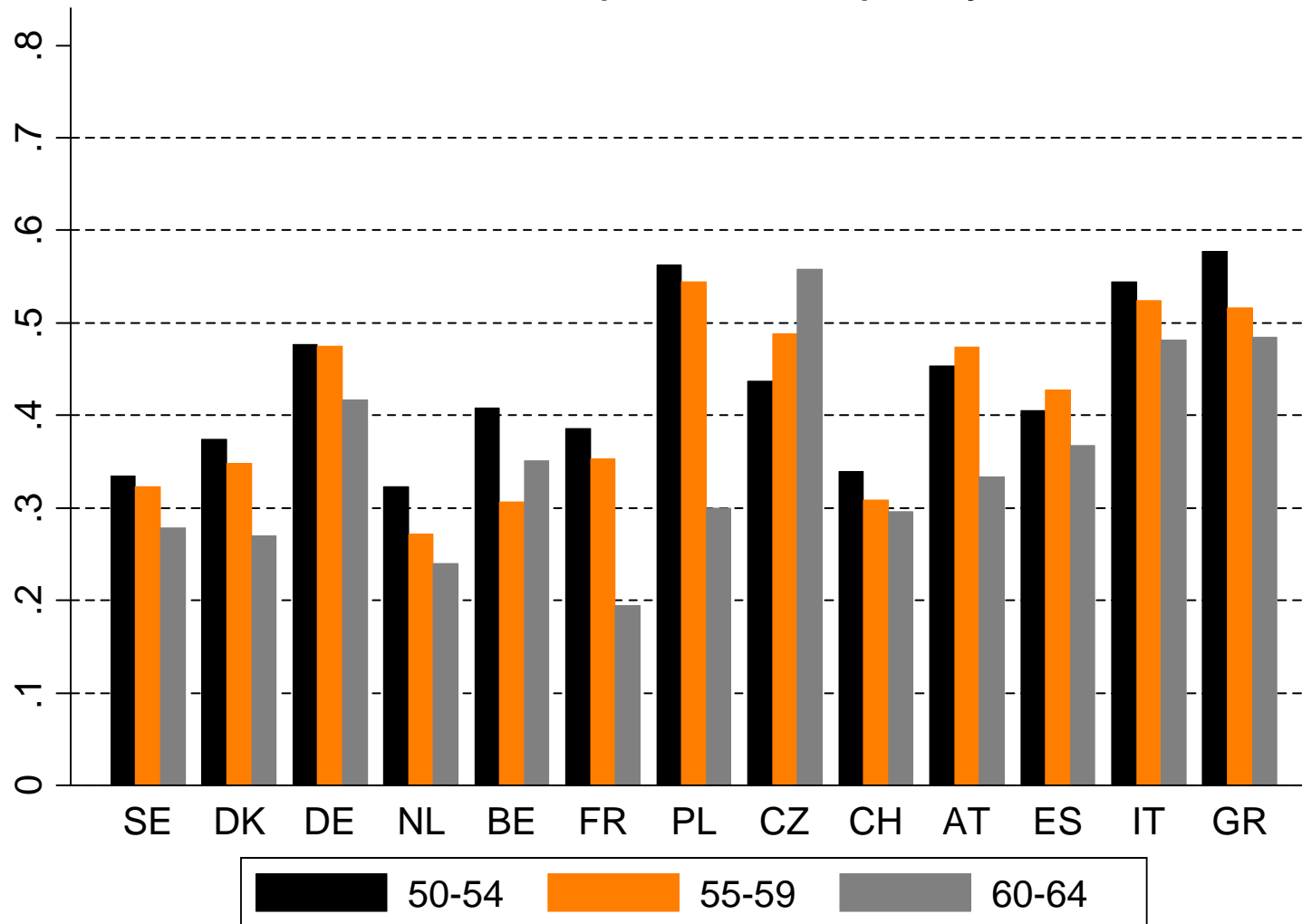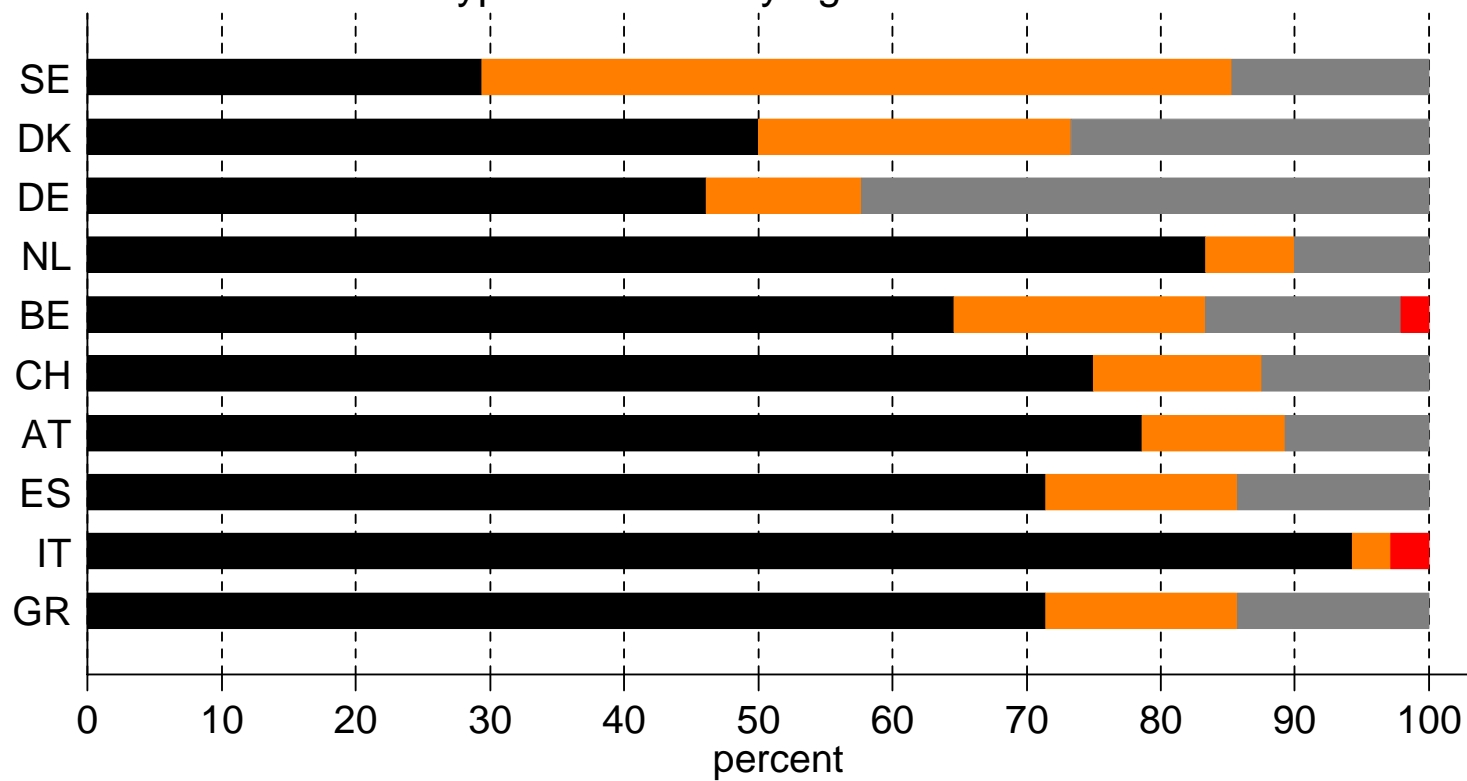by country

Men working
by age class

WHO RETIRES TOO EARLY? WHY?

Labour Demand factors?

Prevalence of poor work quality: Men

Legend: 50-54, 55-59, 60-64

Transition Out of Employment:

type of income by age class: 55-59

other includes survivor and war pensions

Economic Activity if functioning

age 55-65
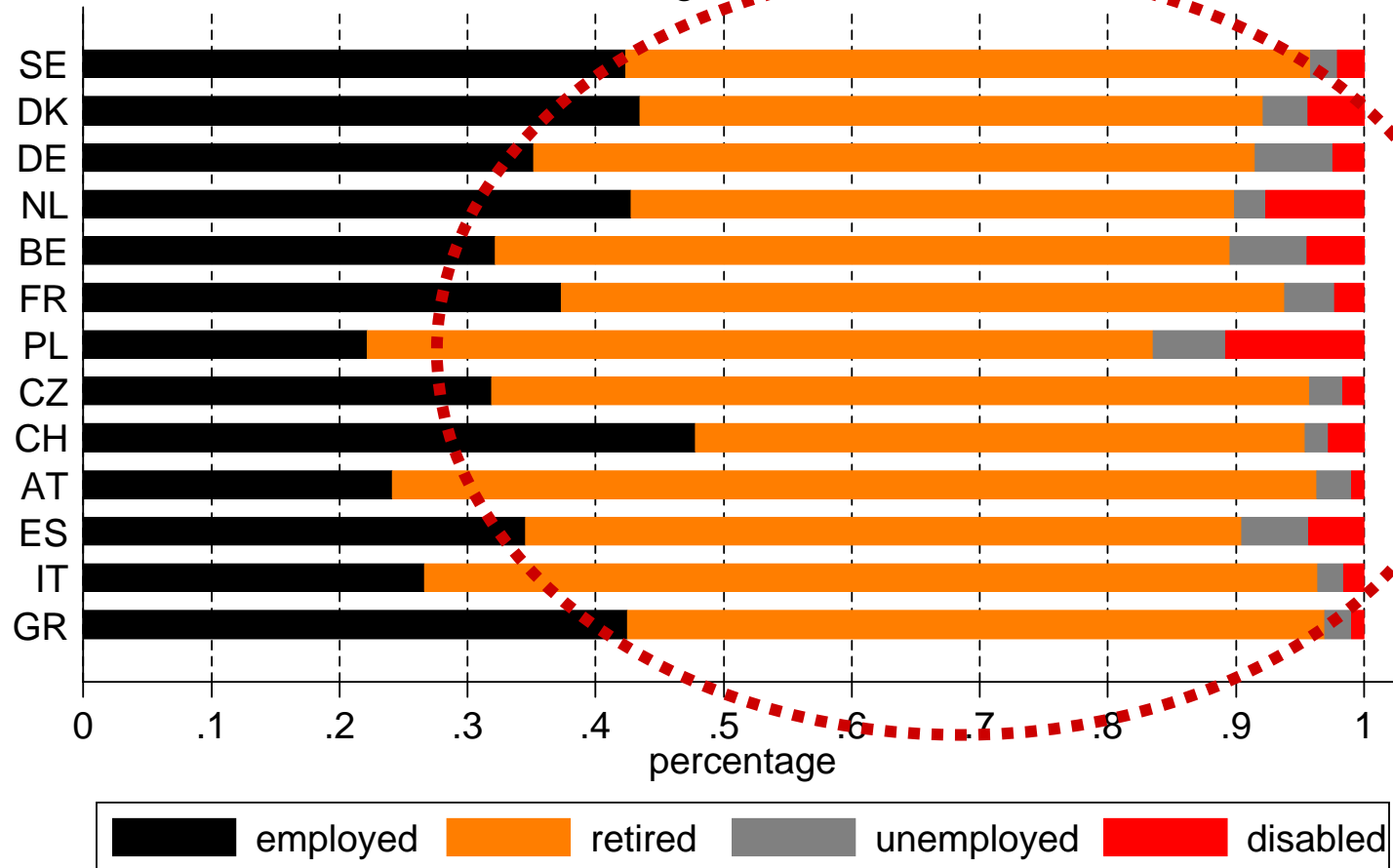
Economic Activity if no chronic diseases
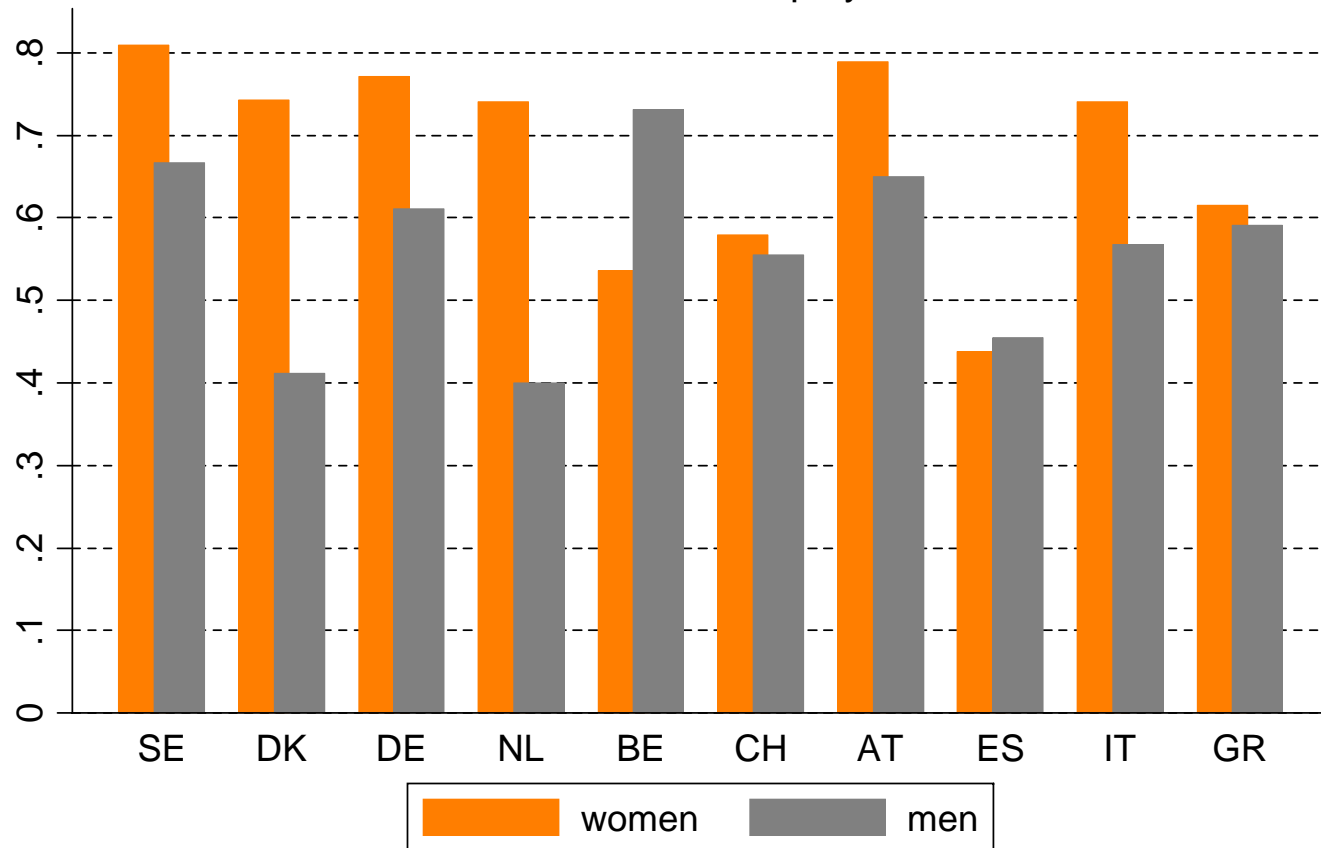
age 55-65

| | employed | retired | unemployed | disabled |
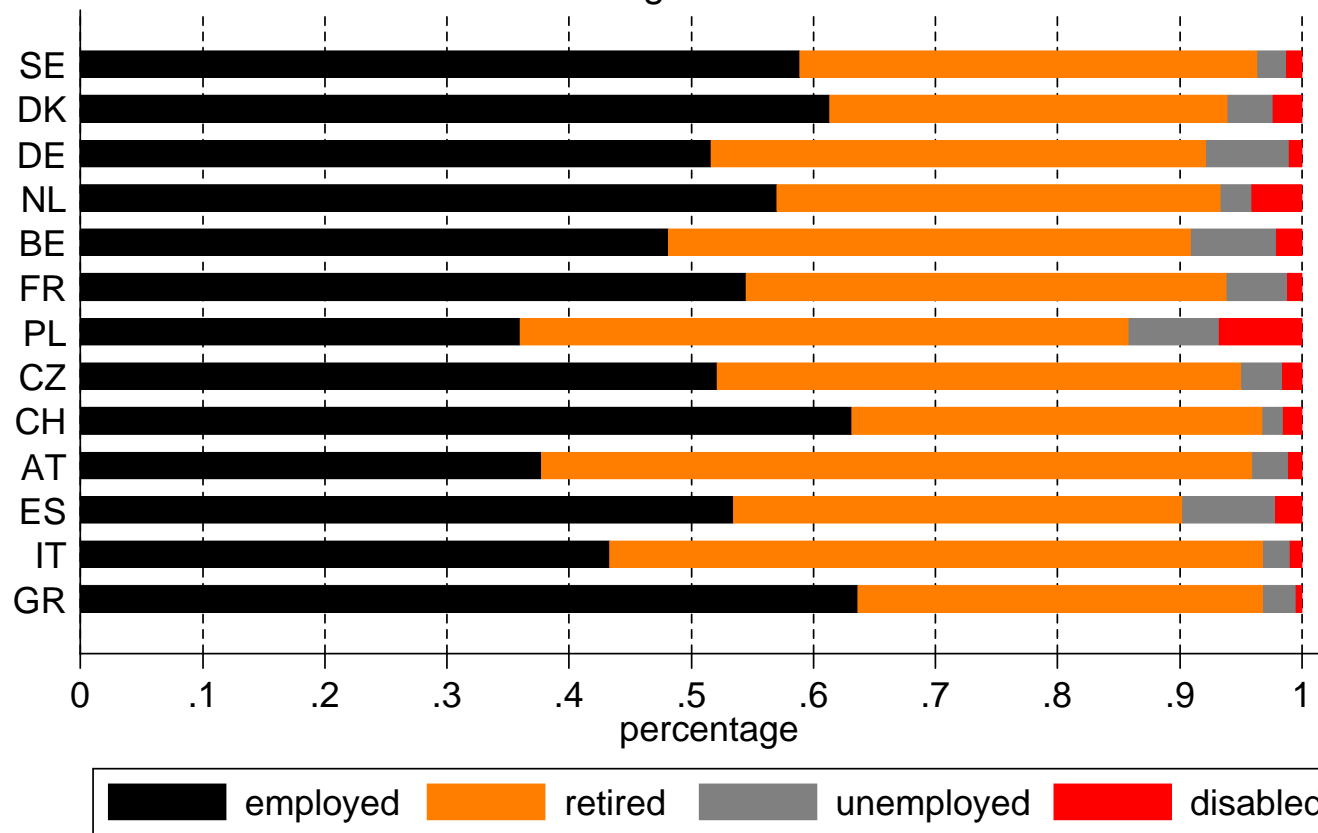
Prevalence of Symptoms
transition out of employment

MULTIVARIATE DETERMINANTS OF RETIREMENT in SHARE

Determinant	*Probability of Retirement*
Male	X (-)
Married	X
Years of schooling	X (-)
Age	X (-)
Age squared	X
Respondent is 65	X
Generosity of pension system	X
IADL limitations	X

Evidence based on the sample 2004.
Signficant coefficients in probit regression. Country dummies are included

ITALY: Data and Definitions

LFS (from 1977 to 2004) with breaks in the series

ER= employed/pop

LFP=(employed+unemployed)/pop

UR=unemployed/LF

SHIW (Bank of Italy) (from 1977 to 2004 every 2 years)

INPS *Administrative data 1977-2003 (panel)*

LFP by age

ITALY
Data and Definitions

Age Groups

- **Young**: people in age 19-29

- **Prime age**: people in age 35-49

- **Old age**: people in age 50-65

Italy: Policy Changes over time

1969

➢ Enrolment into College from any undergraduate curricula

➢ Social Security Benefits become earnings related for all industries

1969 to 1985

➢ Benefits based on average of last 5 years wages

➢ Replacement rate is 80% (if 40 years contributions completed)

➢ Legal retirement age 60 (men) 55 (women)

➢ Can retire any age if 35 years contributions completed, with no actuarial penalty

1985

➢ New short term employment contracts with training-on-the-job. Favorable terms for firms.

Policy Changes

1992

➢ Amato Pension (Social Security) Reform

Benefits based on last 10 years' earnings

Legal (old age) retirement age gradually reaching 65 (men) 60 (women)

Requirements for early retirement gradually tighter (see next table)

1995

➢ Dini pension reform

Defined contribution pension benefits

Window of retirement ages (57-65) with actuarial penalty

To become fully operational after 2030

Policy Changes

1997

➢ Treu-Package

Allows for short term contracts at reduced labor costs – remove the automatic upgrade from short term to permanent contract

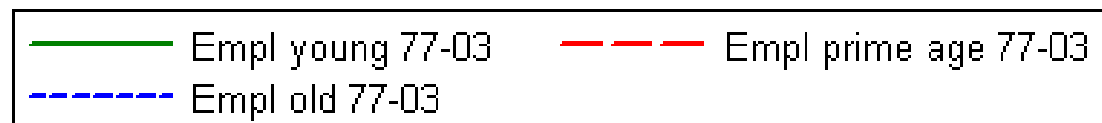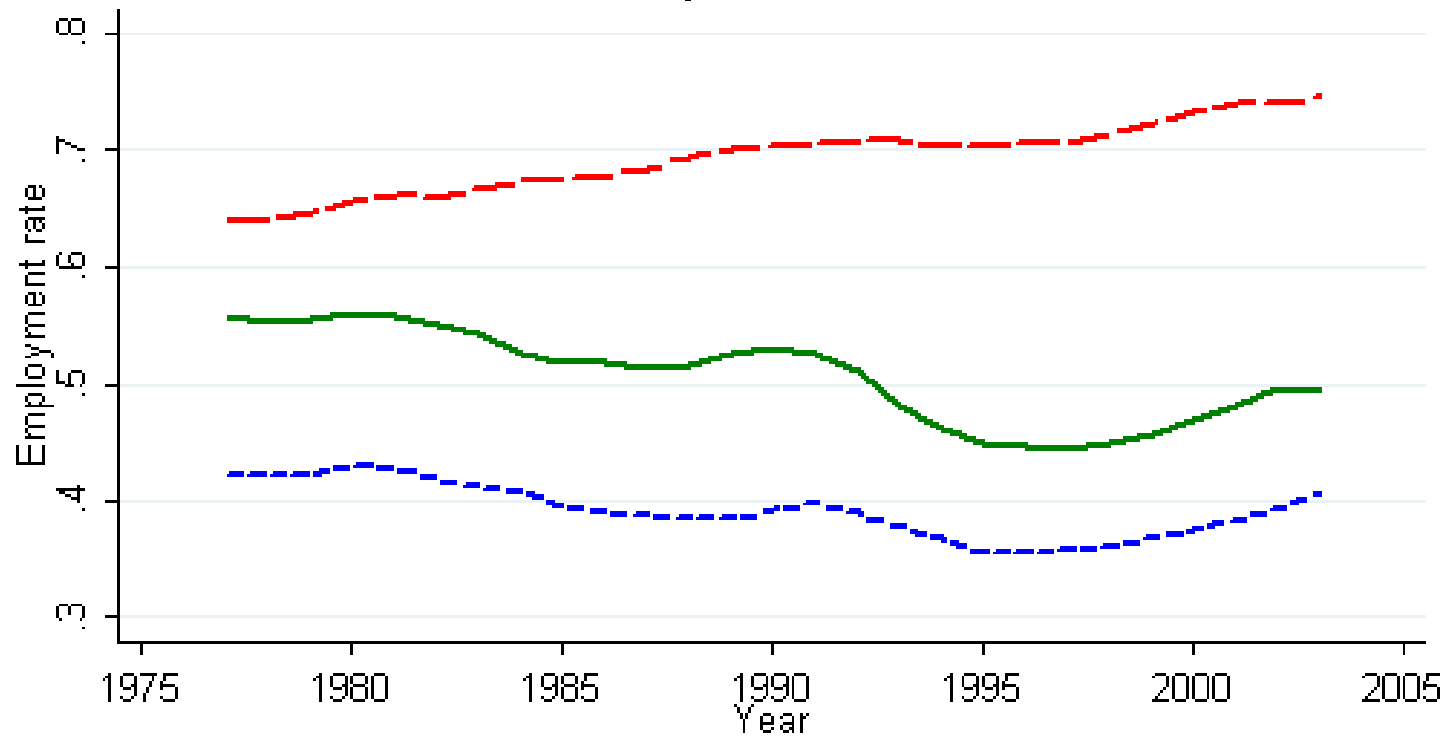**1999**

➢ Compulsory schooling from age 14 to age 15

2003

➢ "Biagi law" allows for a larger class of short term contracts and it provides a uniform framework for "atipical jobs"

Italy: Employment rates over time
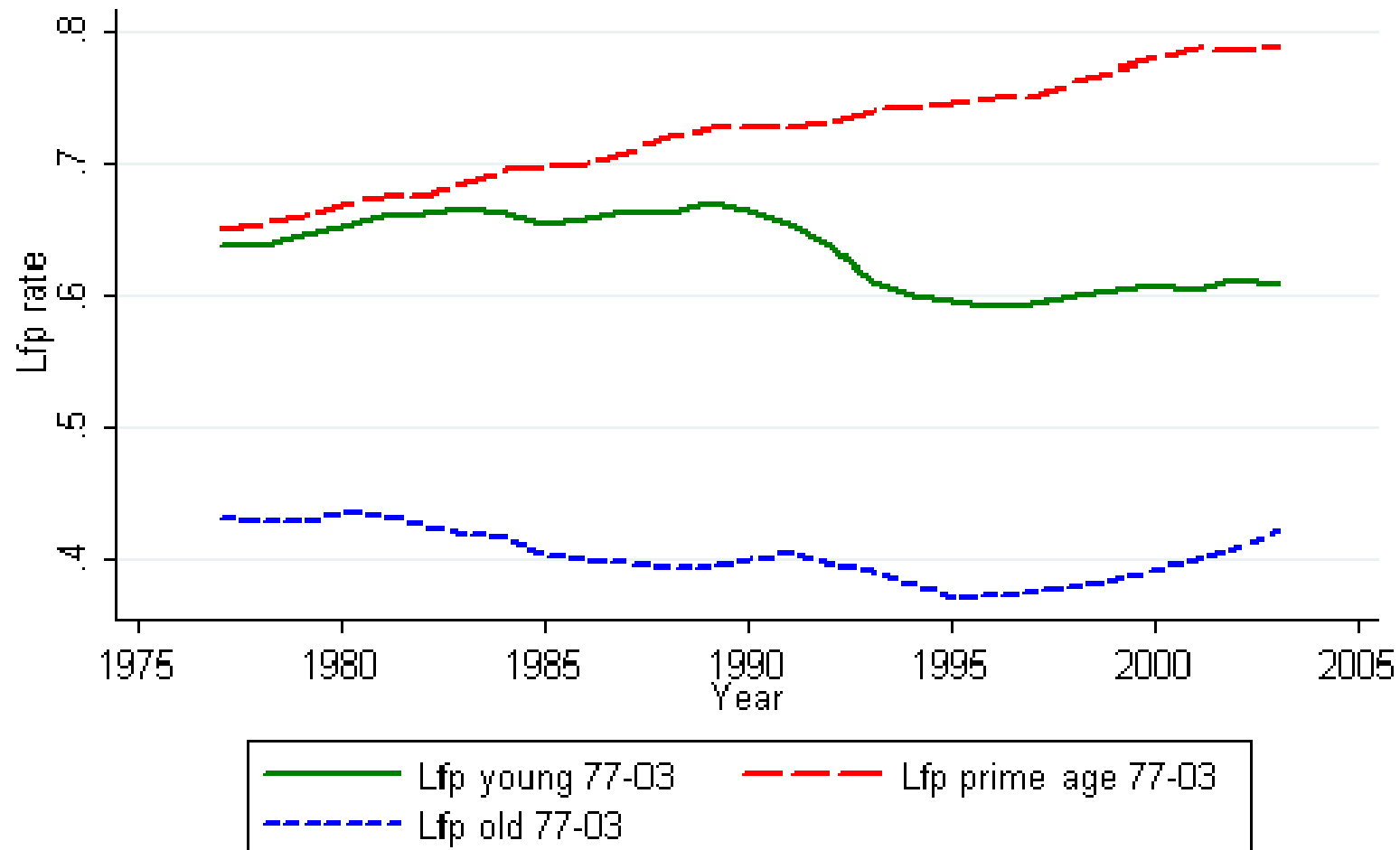

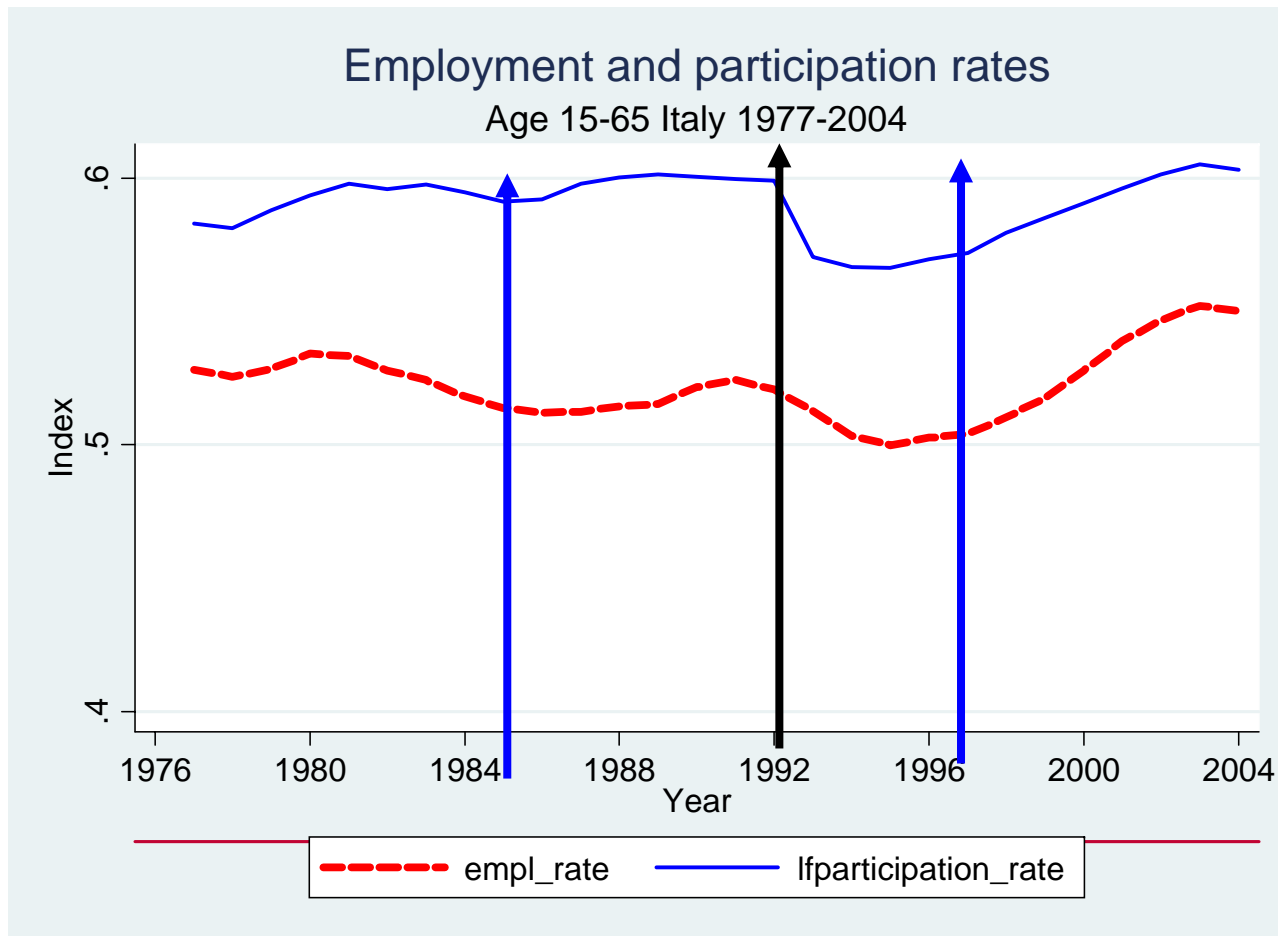**Employment rate old prime age and youth**
Italy 1977-2003

Legend:
- Empl young 77-03
- Empl old 77-03
- Empl prime age 77-03

Italy: participation rates over time

Lfp rate old prime age and youth
Italy 1977-2003

Italy: employment all ages

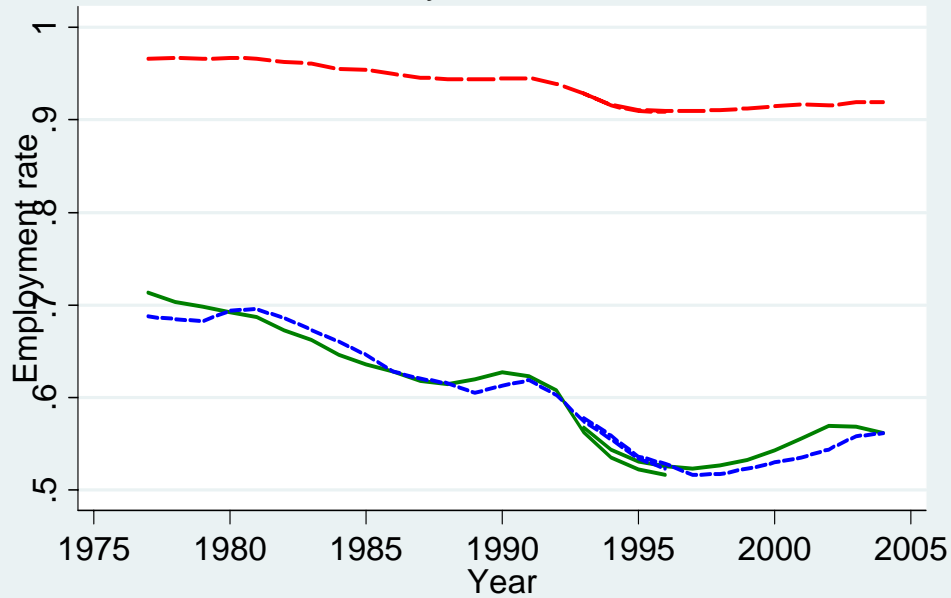Employment and participation rates
Age 15-65 Italy 1977-2004

Italy: indexes

Employment and labor force participation rates indexes
Age 15-65 Italy 1977-2004
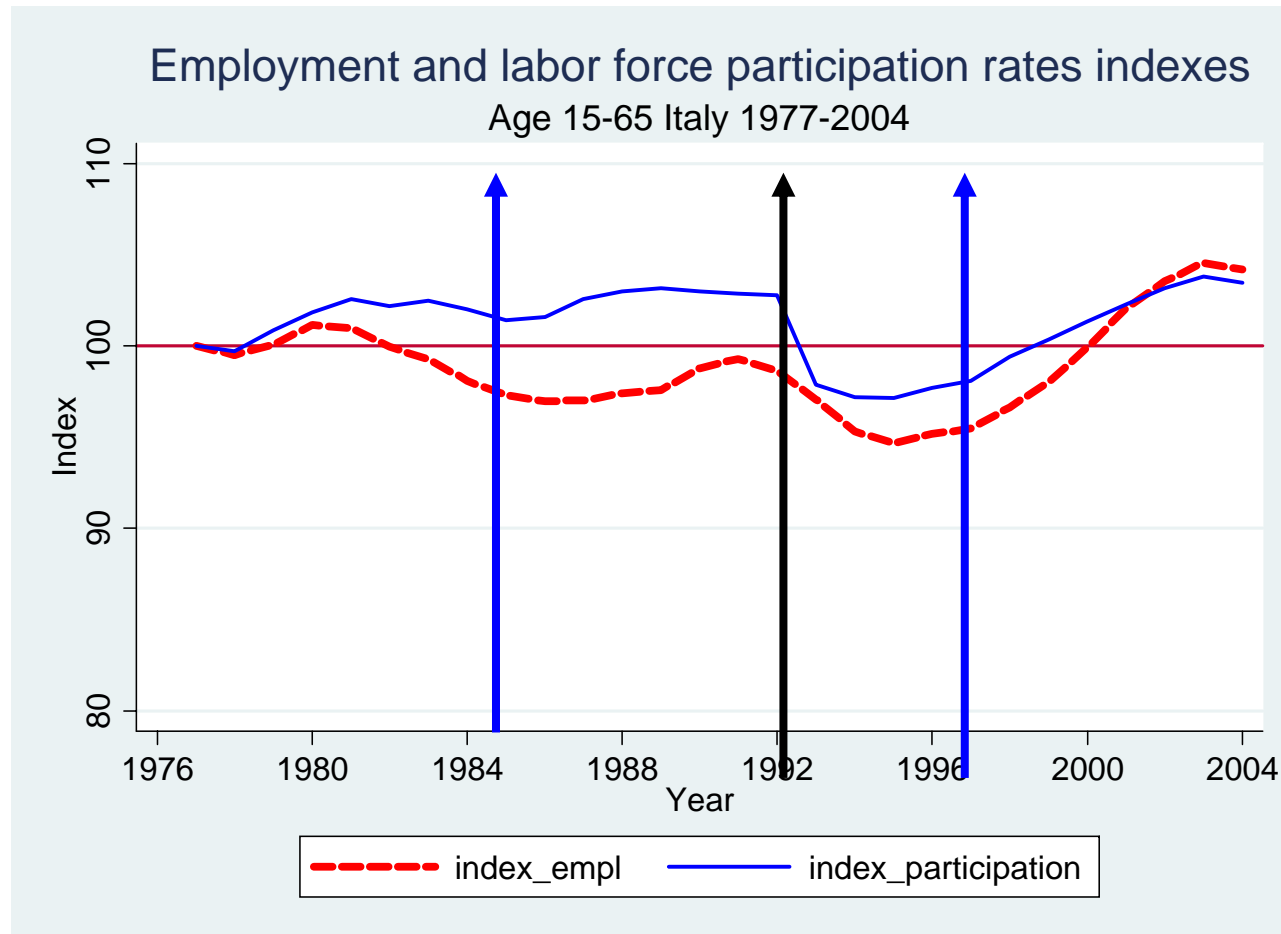
Employment rates by gender in Italy
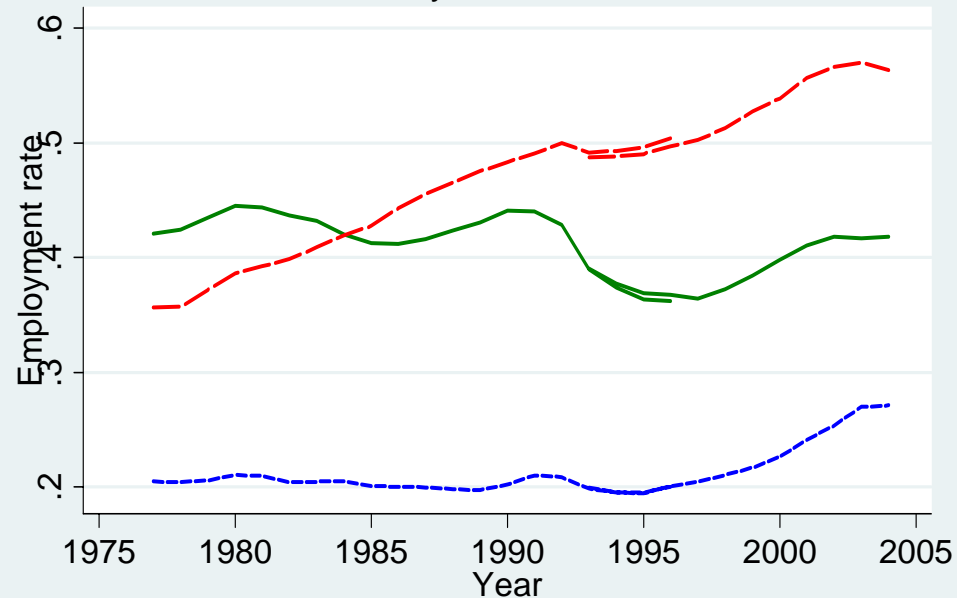
"Italy: windows" for retirement in transition

Year	INPS (Private Sector) Age and years of contribution	INPS-(Private Sector) Only years of contributions	INPDAP (Public Sector) Age and years of contribution	INPDAP (Public Sector) Only years of contribution	Self-employed Age and years of contribution	Self –employed Only years of contribution
1998	54 and 35	36	53 and 35	36	57 and 35	40
1999	55 and 35	37	53 and 35	37	57 and 35	40
2000	55 and 35	37	54 and 35	37	57 and 35	40
2001	56 and 35	37	55 and 35	37	58 and 35	40
2002	57 and 35	37	55 and 35	37	58 and 35	40
2003	57 and 35	37	56 and 35	37	58 and 35	40
2004	57 and 35	38	57 and 35	38	58 and 35	40
2005	57 and 35	38	57 and 35	38	58 and 35	40
2006	57 and 35	39	57 and 35	39	58 and 35	40
2007	57 and 35	39	57 and 35	39	58 and 35	40
2008	57 and 35	40	57 and 35	40	58 and 35	40

Italy age 50-54

Employment rate index
Age 50-54 Italy 1977-2004
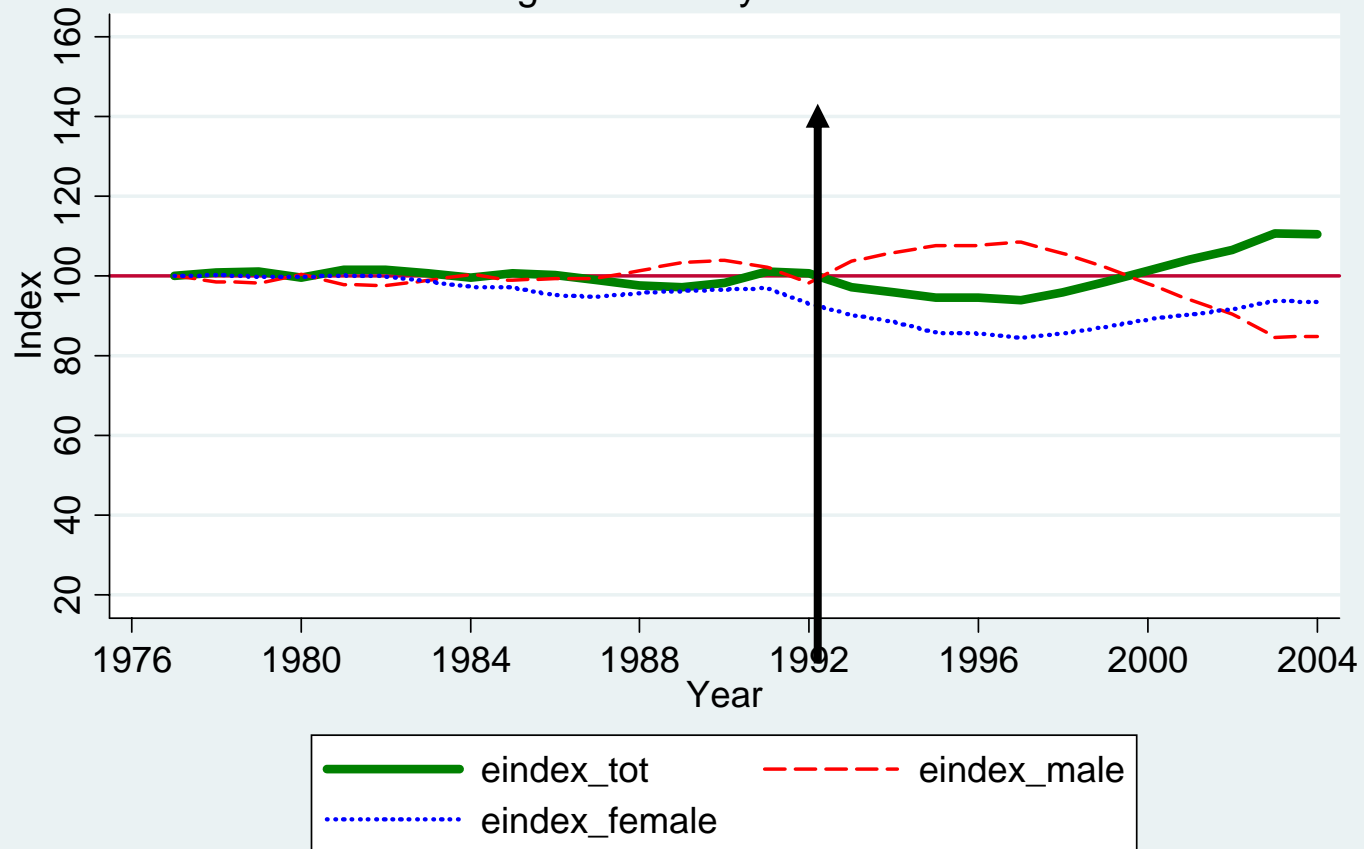
Which institutional differences do matter?
Many workers exit at the normal retirement age (NRA)
Some exit at the early retirement age (ER)

But there is a lot of action in the data before (and in some few cases after) these ages.

Eligibility rules are crucial. These are age restrictions, seniority requirements both on minimum contributory requirements and total years accrued.

Which rules do matter?

Hence:

Italy has currently no actuarial penalties for early retirement. Even once the 1995-reform will be phased in penalties will range between 3% and 4% for each year before age 65.

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Implicit tax on work

Last year of work	Italy		Spain		USA	
	Replacement Rate	Tax/ Subsidy	Replacement Rate	Tax/ Subsidy	Replacement Rate	Tax/ Subsidy
54	…	0	…	…	…	0
55	0,726	0,245	…	0,201	…	-0,022
56	0,744	0,308	…	0,096	…	0,046
57	0,761	0,338	…	0,152	…	0,060
58	0,780	0,372	…	0,355	…	0,069
59	0,798	0,401	0,590	0,279	…	0,072
60	0,799	0,697	0,661	-0,074	…	0,071
61	0,804	0,711	0,730	0,010	0,403	0,064
62	0,805	0,718	0,816	0,032	0,440	-0,028
63	0,805	0,729	0,895	0,167	0,476	-0,005
64	0,809	0,746	0,996	0,264	0,703	0,031
65	0,809	0,756	0,998	0,729	0,749	0,188
66	0,809	0,772	0,996	0,725	0,798	0,225
67	0,809	0,787	0,988	0,718	0,845	0,269
68	0,809	0,803	0,981	0,677	0,872	0,439
69	0,809	0,818	0,973	0,636	0,898	0,455

Specific effects of pension rules: Hazard out of employment of men Italy (by age)
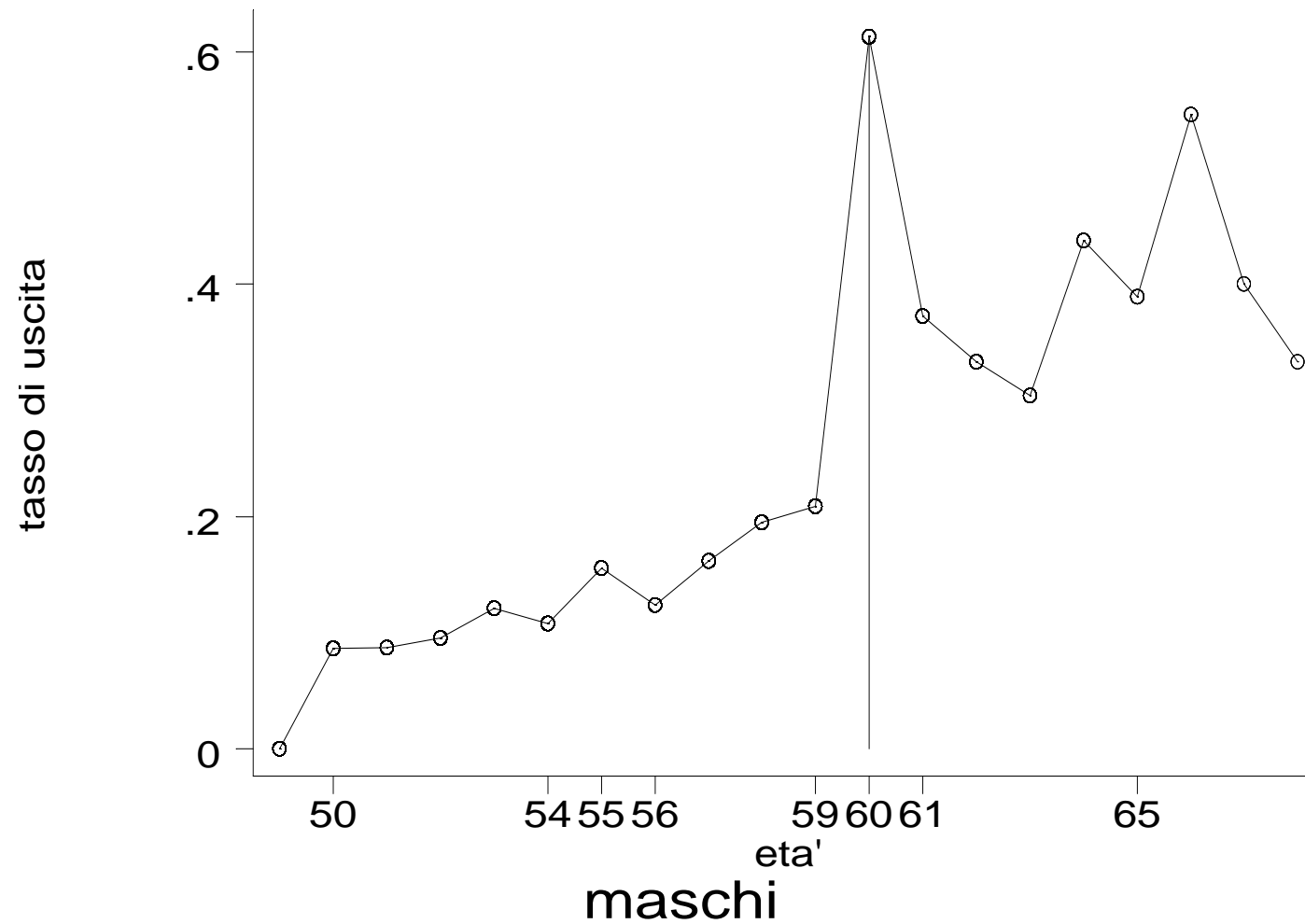
Source: Brugiavini Peracchi Wise 2003, INPS administrative data 1977-2003

What explains these differences in implicit taxes between countries and (for each country) between ages?

Benefit calculation rules. Indexation rules. Existence of capping and minimum benefits. Contributions rates. Different pathways to retirement.

In order to capture these differences needs a summary measure (pension wealth) and its dynamic behaviour.

Make use of "hypothetical reforms" for Italy

1. Shift 3 years normal retirement age
2. Actuarial adjustment of 6% per year of early retirement with respect to age 65

Implement on panel data where can control for age and other factors (INPS Archives)

Make use of "hypothetical reforms" - Italy
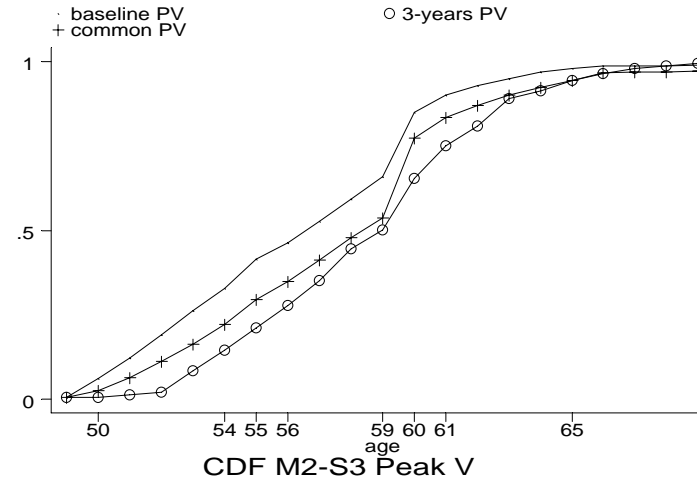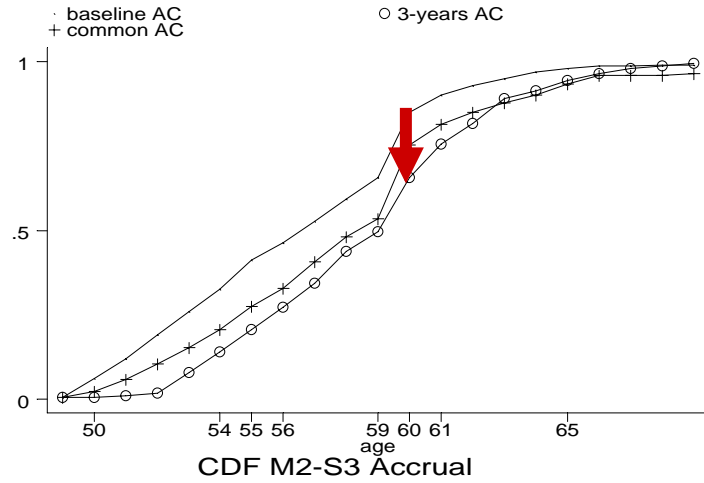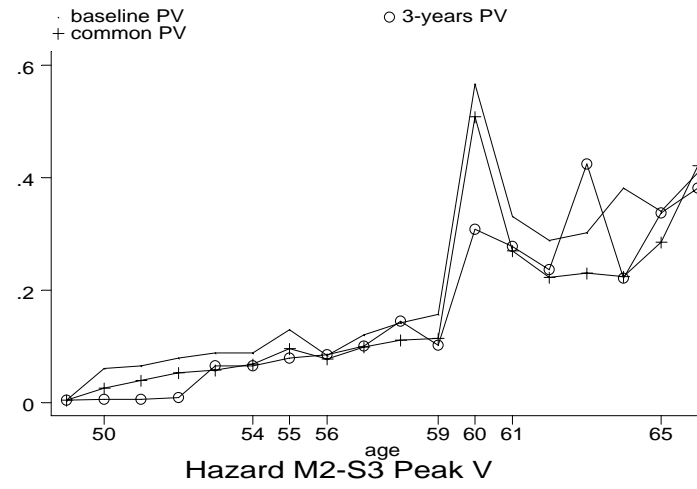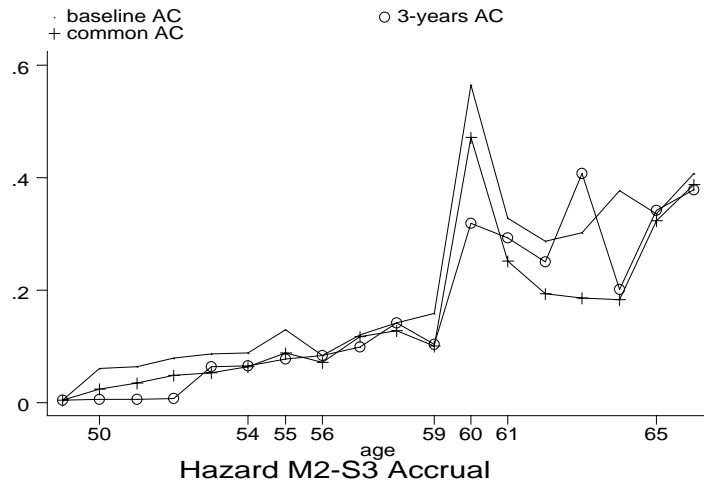
Role of Incentives over time

$$\overline{W}(a,y) = \sum_{t=0}^{a-55} \frac{LFP\ (a-t,y-t-1)}{\sum_{t=0}^{a-55} LFP\ (a-t,y-t-1)} W\ (a-t,y-t)$$

Median wage profile for men and women separately (cohort of 1938)

Earnings profiles shifted up or down according to time

Simulate benefits under the current pension regime

Participation rates by age come from the Bank of Italy (SHIW) and LFS- Labour Force Survey (projected backward)

Ages 55 to 70 (single males, single females and married men with non working wives)

Correlation between LFP and incentives

Employment old and changes in quota
Italy 1977-2004
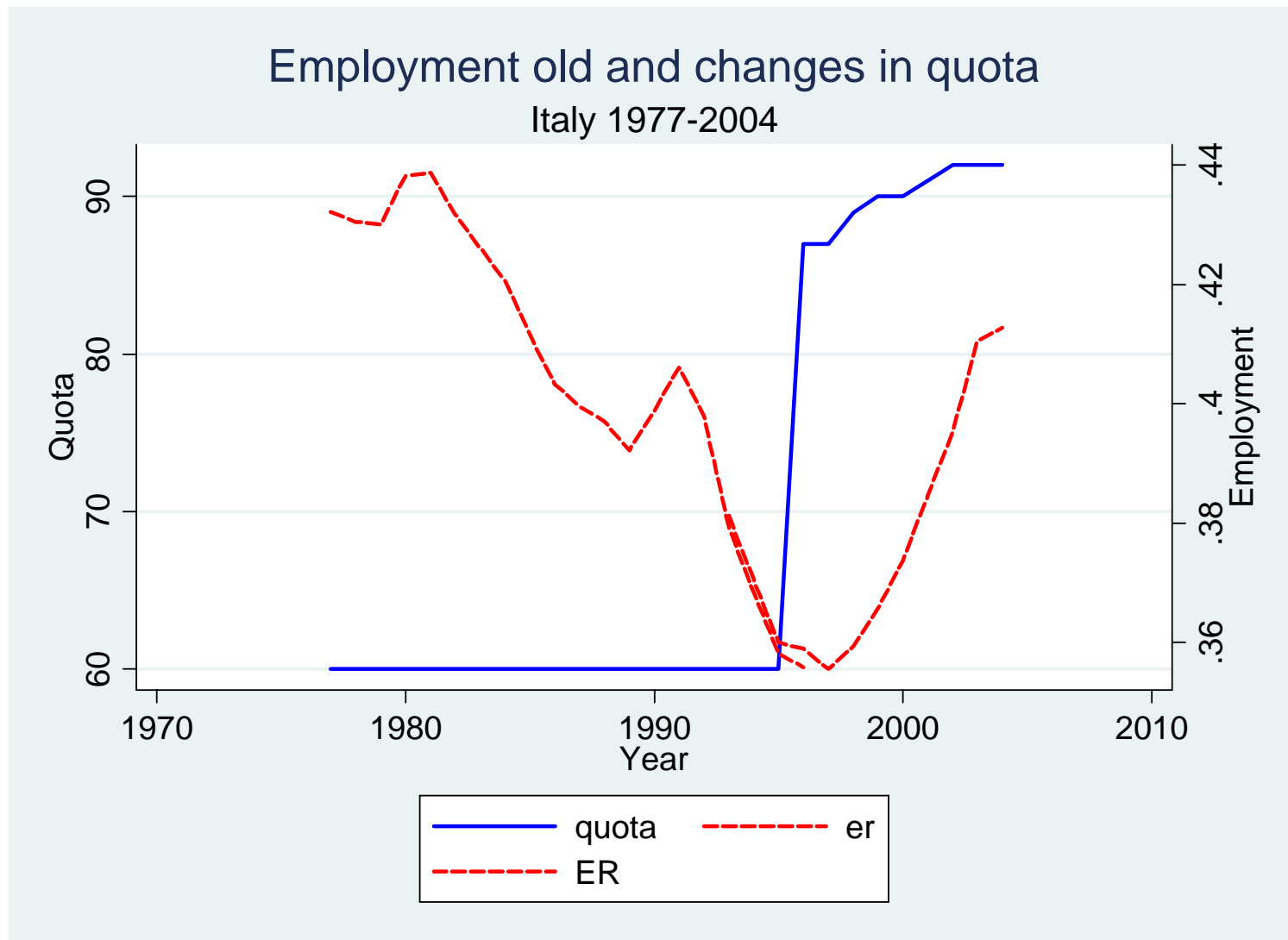
Role of Incentives: a comprehensive definition (Italy)

$$I(a, y) = \{W(a, y) + \alpha[W(a, y) - PV^*(a, y)]\}q(a, y)$$

Covariates: GDP pro capite, time dummies, %young in school, contractual wage, median wage of the group, area-dummies when needed

Regression of LFP of the elderly on incentives

```
-------------------------------------------------------------------------
      lfp_old |    Coef.       Std. Err.      t
-------------------------------------------------------------------------
         ibar | -0.0800433    .0399705    -2.00
gdp percapita|  0.0465747    .0460875     1.01
     min wage|  0.0126859    .0556659     0.23
    avgearning| -0.0614155    .1255688    -0.49
       gender | -0.4274979    .0602776    -7.09
        _cons |  0.7291597    .0921087     7.92
-------------------------------------------------------------------------
```

Ibar= INCENTIVES TO RETIREMENT
gdp percapita= GDP PER CAPITA
min wage= CONTRACTUAL WAGE
avgearning= AVERAGE EARNING OLD AGE GROUP
gender= GENDER (0=male; 1= female)

N = 54
R-sq.= 0.89

2: Labour Market Reforms and Lump of labour fallacy

The political debate:

- How important are labour market reforms for participation?

- Some advocated job-sharing (a young worker and an older worker could both work part time and add up to one "full worker")

- Labor market reforms were sometimes related to the Young-in-Old-out policy

The missing link: one important aspect is employment protection EPL
(OECD Employment Outlook 1999 and 2004)

	Regular Empl. (late 80s 90s 2003)	Temporary Empl. (late 80s 90s 2003)	Collective dismissal (late 90s 2003)	Overall (late 80s 90s 2003)
France	2.3 2.3 2.5	3.1 3.6 3.6	2.1 2.1	2.7 3.0(2.8) 2.9
Germany	2.7 2.8 2.7	3.8 2.3 1.8	3.1 3.8	3.2 2.5(2.6) 2.5
Italy	2.8(1.8) 2.8(1.8) 1.8	5.4 3.8 2.1	4.1(4.9) 4.9	3.6(3) 2.7(4) 1.9 (1.1)
Spain	3.9 2.6 2.6	3.8 3.3 3.5	3.1 3.1	3.8 2.9 3.1

Labour Market reform Spain: employment probabilities

Figure 3: Permanent Employment Probabilities for Men by Age Group
Normalized by First Quarter of 1997, 1995-2000
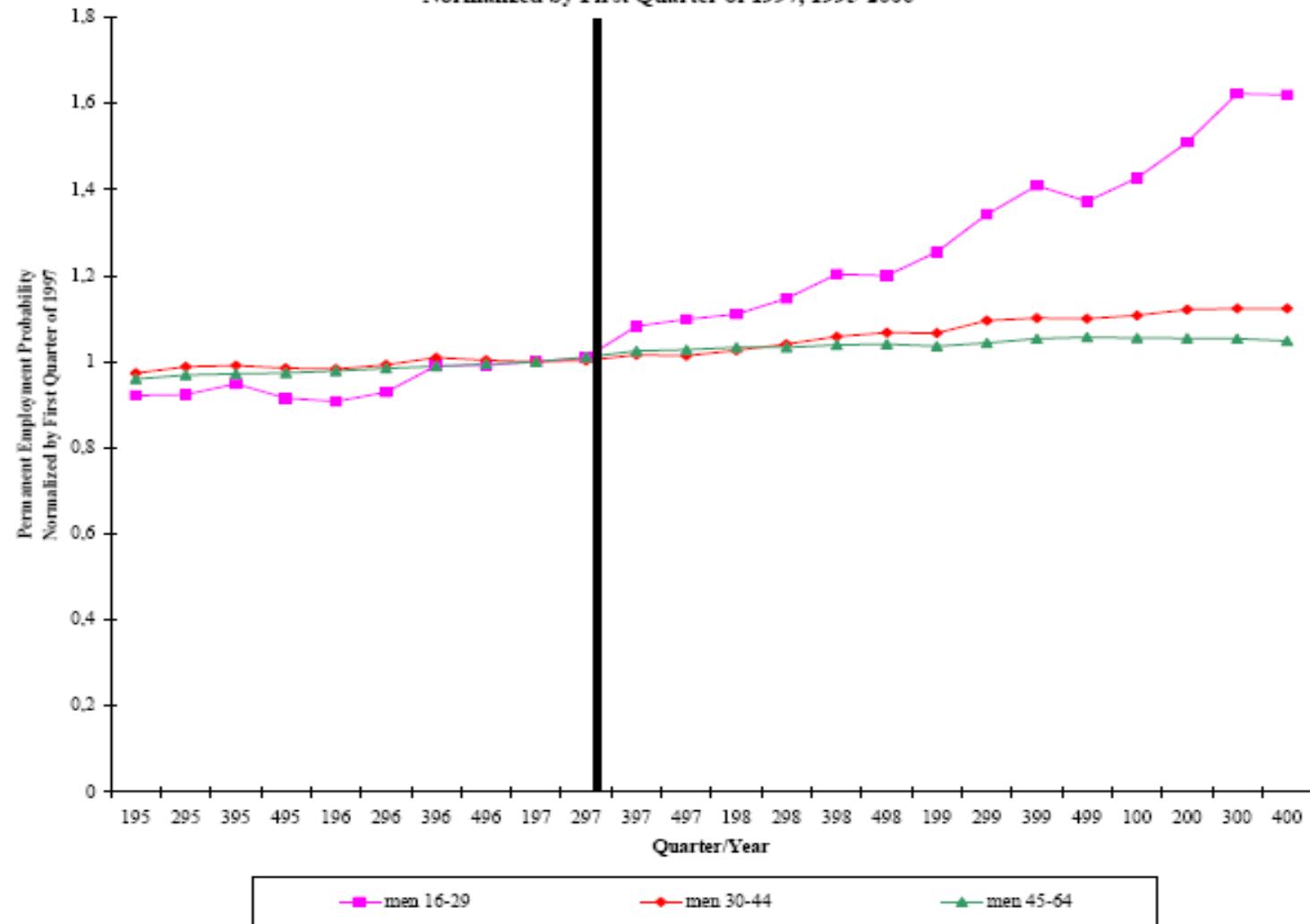
A. Kugler

Labour Market reform Spain

	Age<30		Age>50	
	Men	Women	Men	Women
Non employment to permanent	0.0374*	0.014*	0.0301	-0.0016
	(0.014)	(0.006)	(0.023)	(0.010)
Temporary to Permanent	0.0253*	0.0219*	-0.0083	-0.0126
	(0.005)	(0.007)	(0.006)	(0.0074)
Permanent to non employment	0.008	0.0034	0.0021*	-0.0025
	(0.001)	(0.0027)	(0.0012)	(0.002)

Source: ECHP

# Labour Market reform Spain: perceived job security
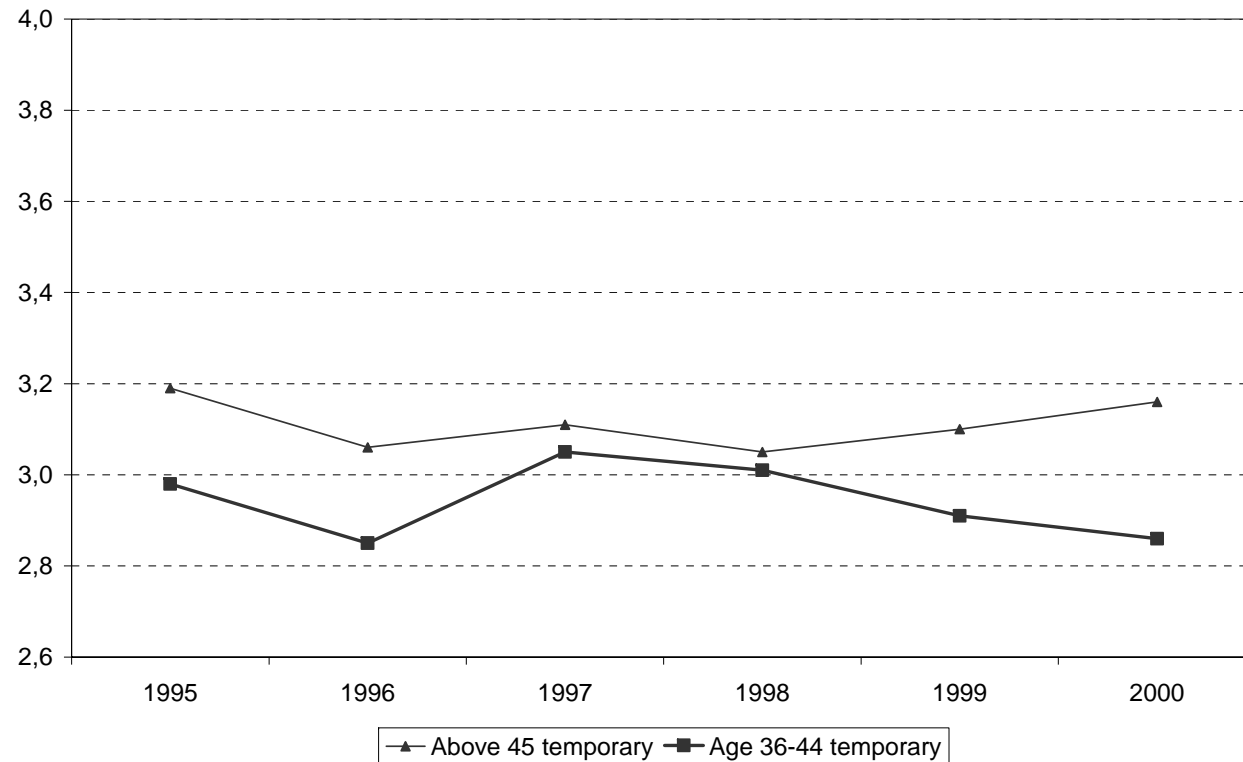
Source: ECHP

Do exits of the old explain participation of the young?

Importance of labor demand shocks: where employment protection is high, in the downturns, firms try to lay out older workers, but no Young is hired.

Business Cycle: employment (unemployment) rates should correlate with the GDP, but sometimes you get a "honeymoon effect" of labor policies making things unclear.

Lfp rate old and Unemployment young

Italy 1977-2004
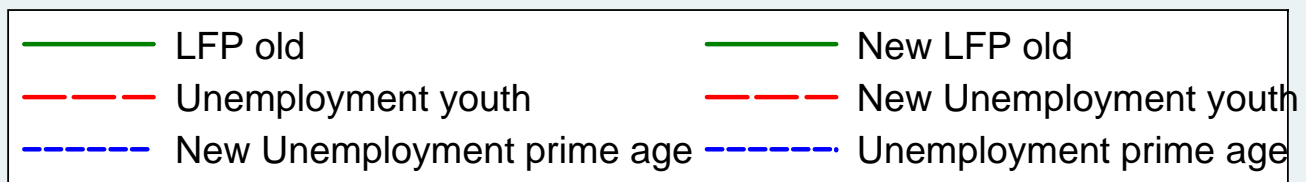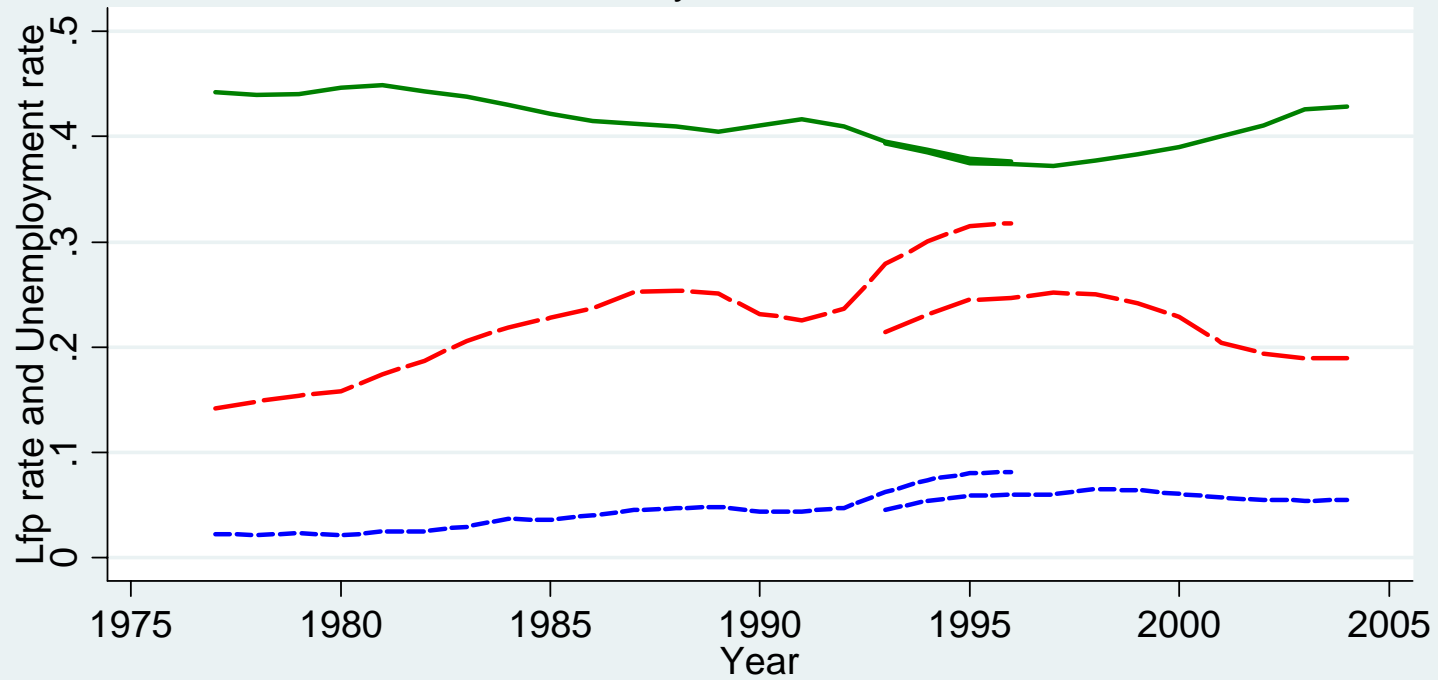
Regression of Unemployment Rate of Young on Employment Rate of the elderly

```
----------------------------------------------------------------------
  ur_young |     Coef.      Std. Err.        t
----------------------------------------------------------------------
    er_old |  -0.2473616   .0920905     -2.69
   avgearn|   0.1026742   .0202278      5.08
   gender |   0.0028415   .0381758      0.07
    _cons |    0.1992406   .0696431      2.86
----------------------------------------------------------------------
```

Legend: er_old= EMPLOYMENT RATE OLD PEOPLE

avgearning= AVERAGE EARNING YOUNG PEOPLE

gender= GENDER (0=male; 1= female)

N=54

R-sq= 0.82

Conclusions

Working in old age largely determined by social security incentives, but in Europe a large variety of "exit routes"

Even after controlling for other determinants such as "health" social security generosity plays a role in Europe
Reforms should look at the whole welfare system

In Italy eligibility rules (particularly minimum age requirements) have been very important

Labour market reforms may also play a role where rigidities are important

Conclusions

In Spain: labour market reforms have little effects on the elderly

In Italy: significant "complementarity" of labor supply of young workers and older workers (no lump of labour)