

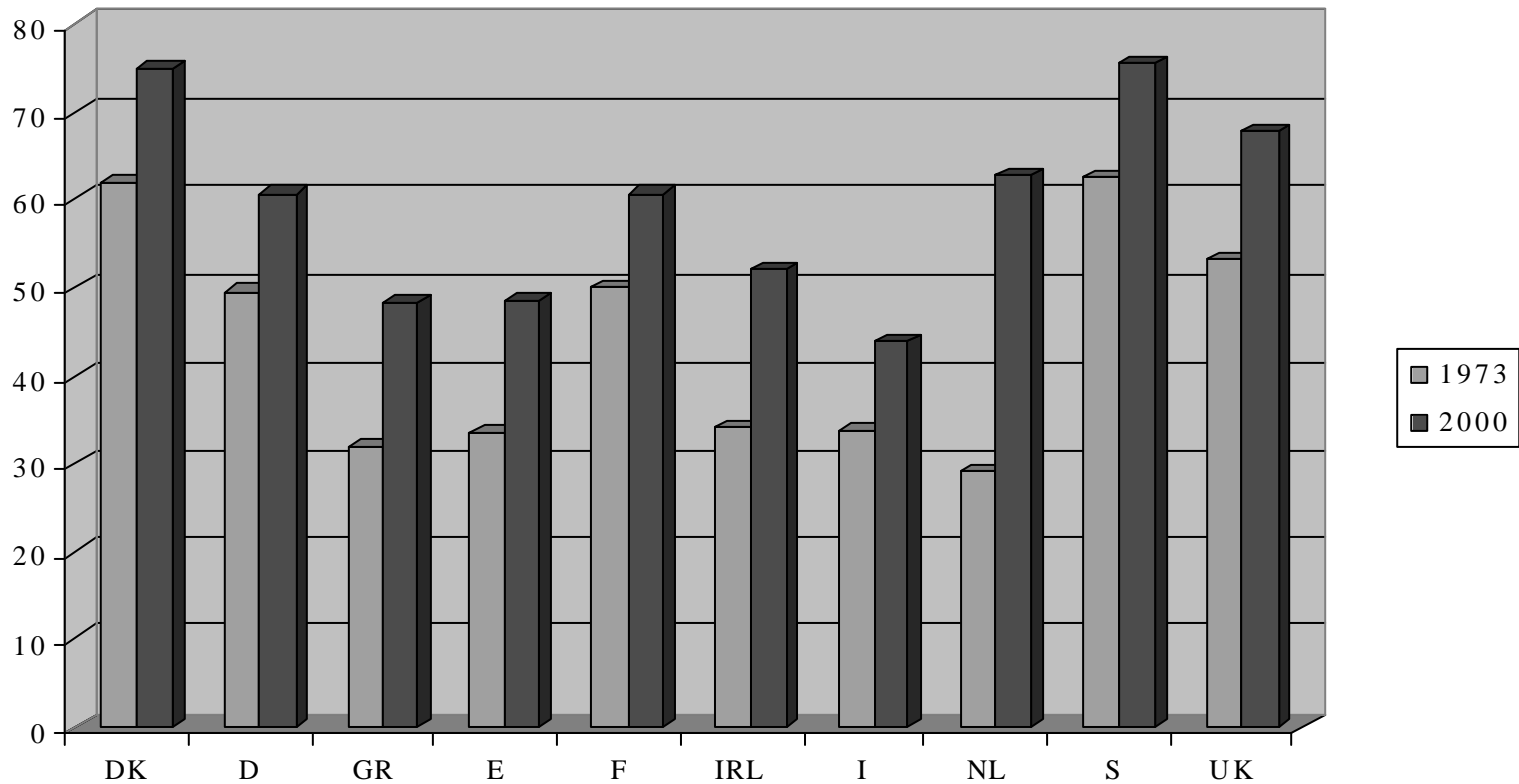
Labour market participation of women and fertility: the effect of social policies

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John Ermisch, Marco Francesconi, Silvia Pasqua,
Steinar Strom

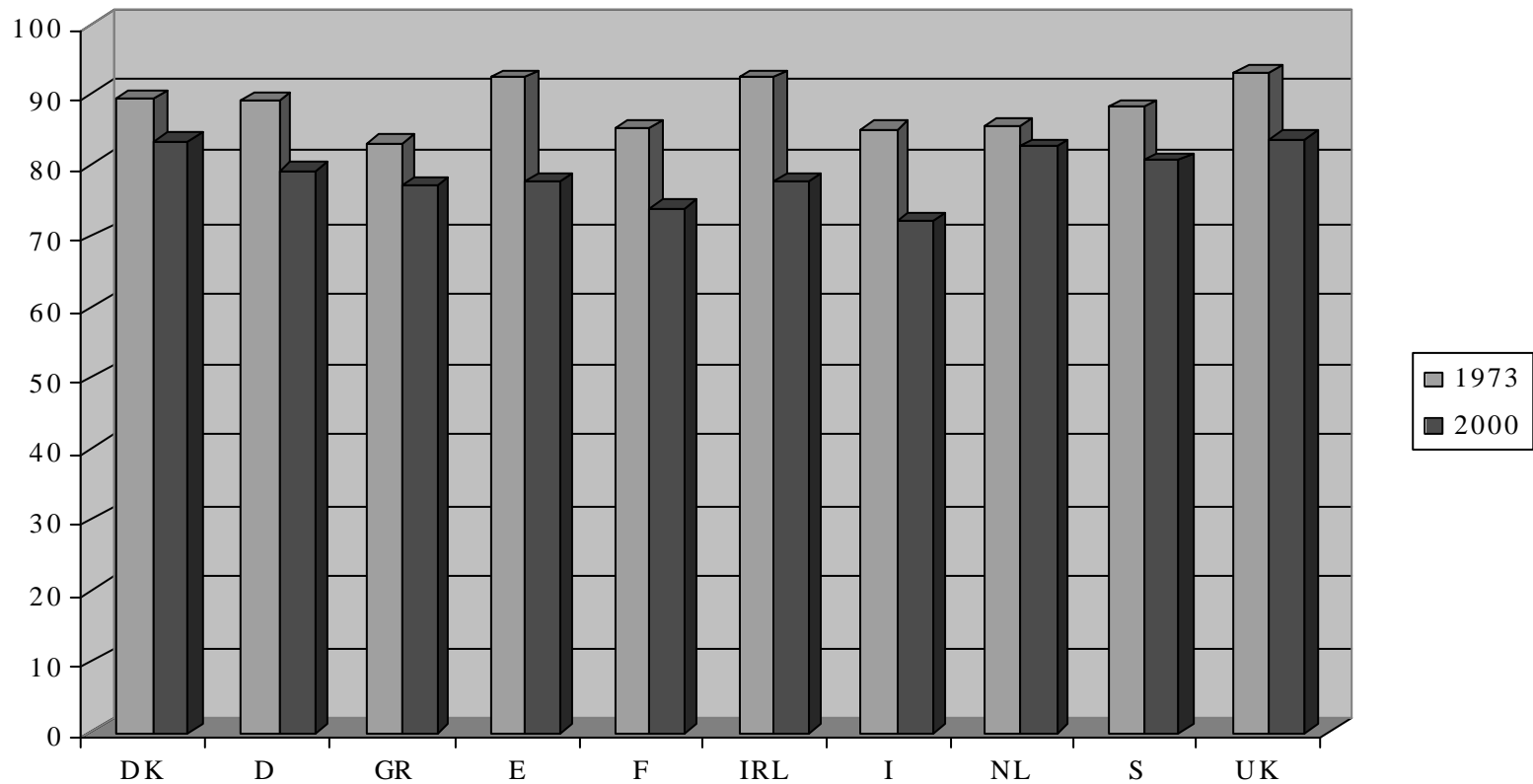
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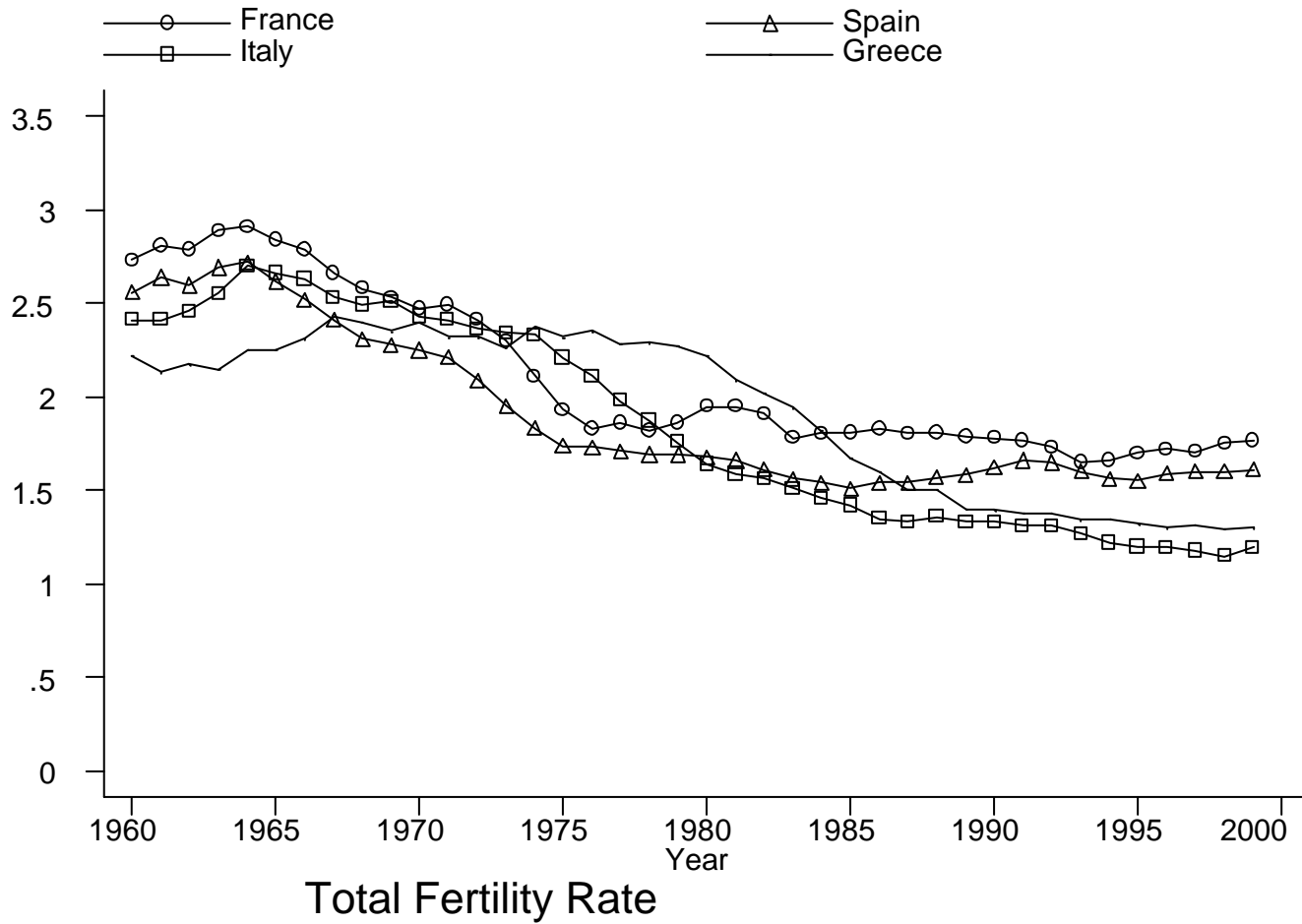
Female participation rates in European countries

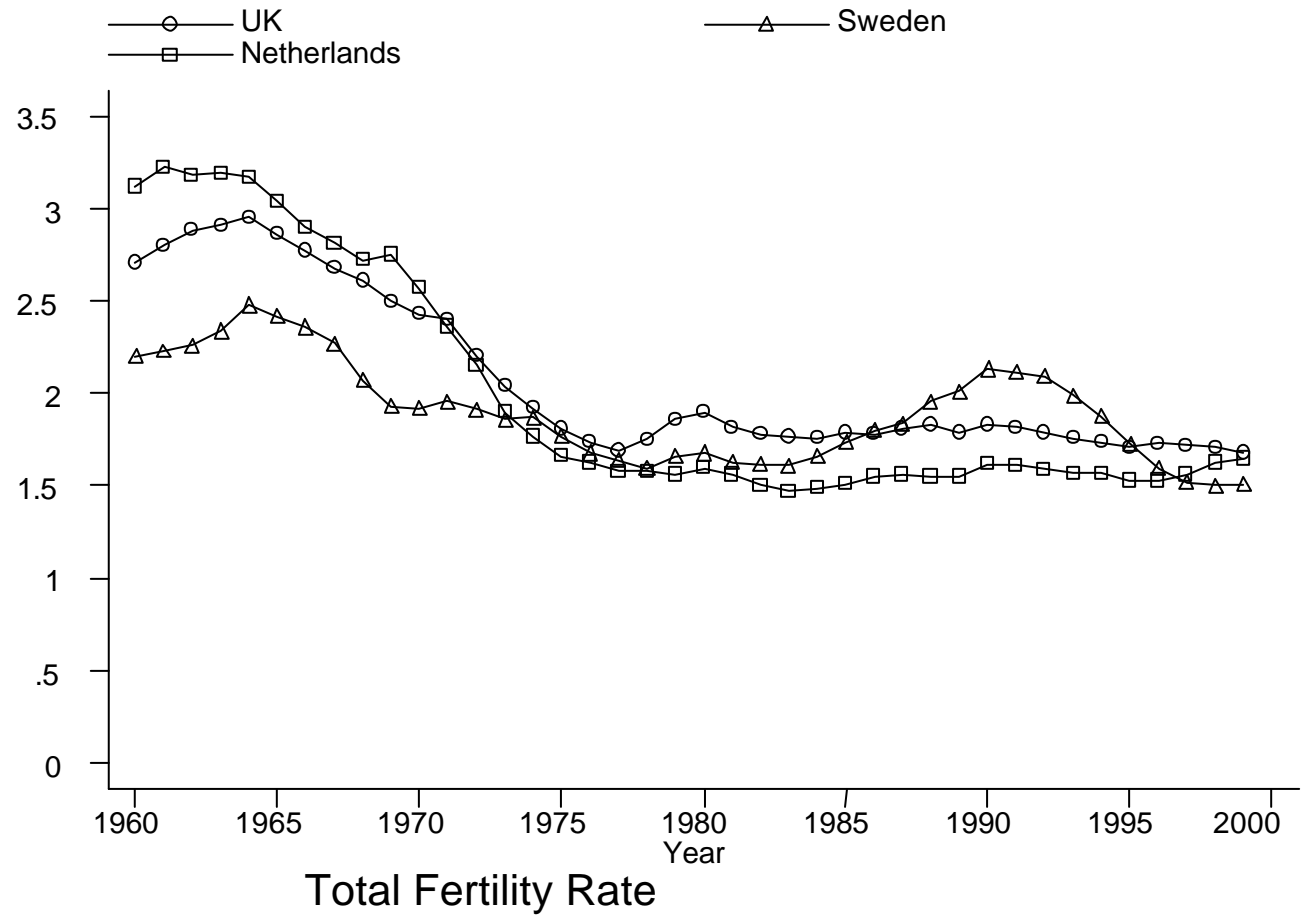


Male participation rates in European countries



D B





Outline

- Labour market participation and fertility
- What is the effect of mothers' work on children well-being?
- What is the effect on income distribution and expenditures?
- Taxation, transfers, labour supply and households welfare

Labour market participation and fertility

- Over the last decades the labor market participation of women increased while fertility declined in most European countries.
- Social and fiscal policies targeted to encourage women employment have then undesired effect of a declining population.

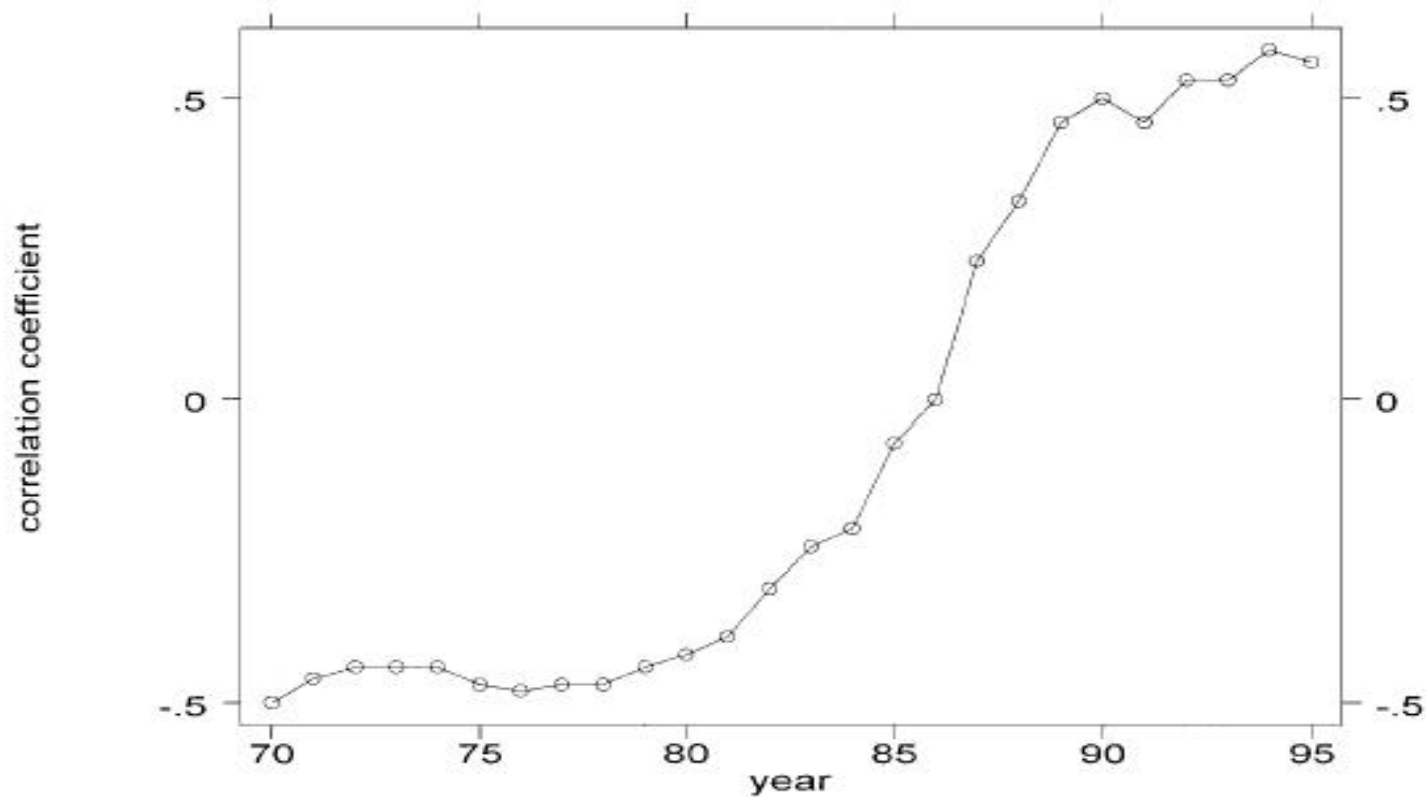


Labour market participation and fertility

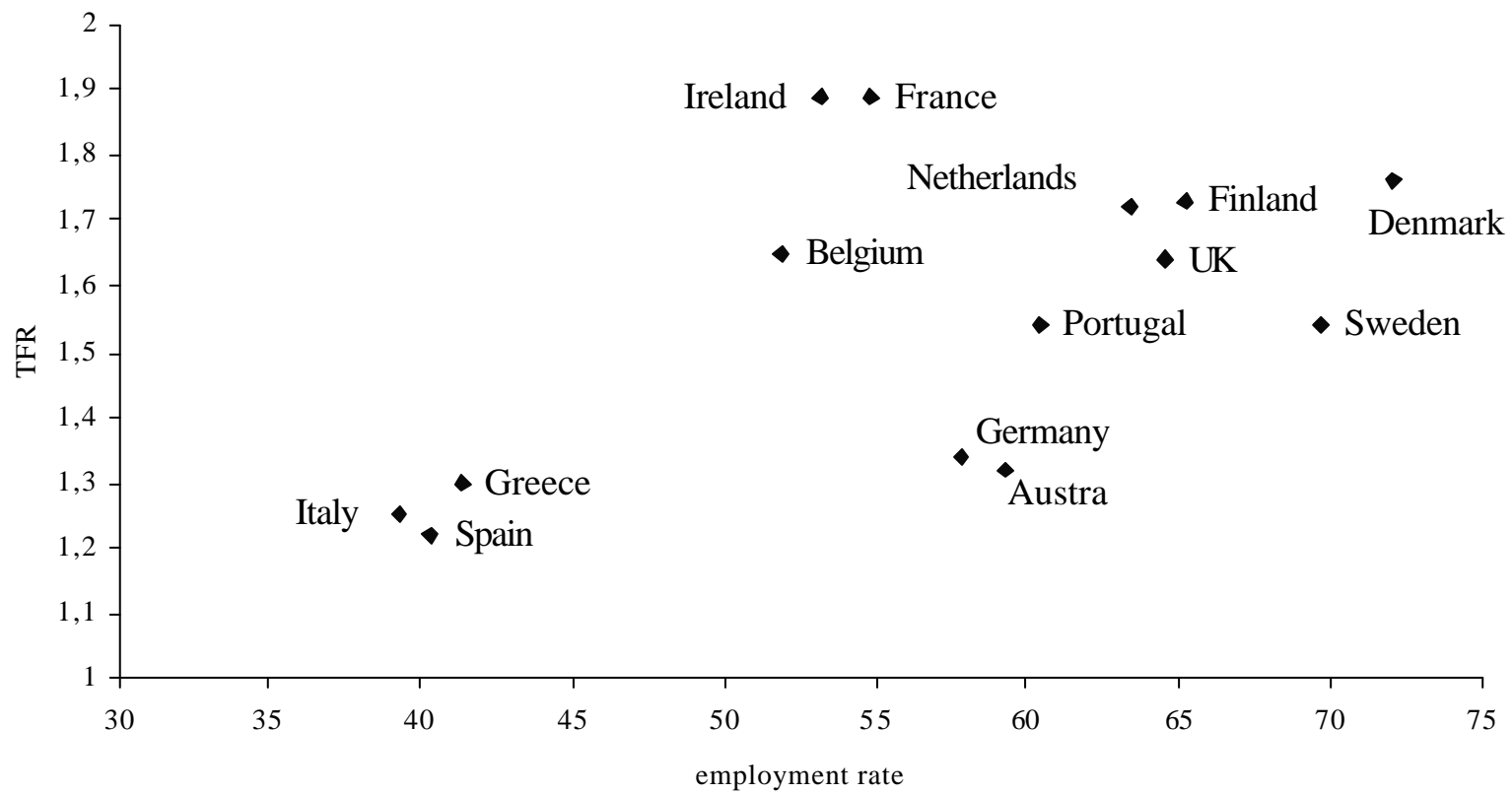
- Low fertility reduces the potential sustainability of the pension system, while high participation increases the sustainability.
- Recent empirical evidence show that from mid 1980s the sign of the cross country correlation changed and becoming positive.
- Therefore encouraging labor supply may actually increase fertility..



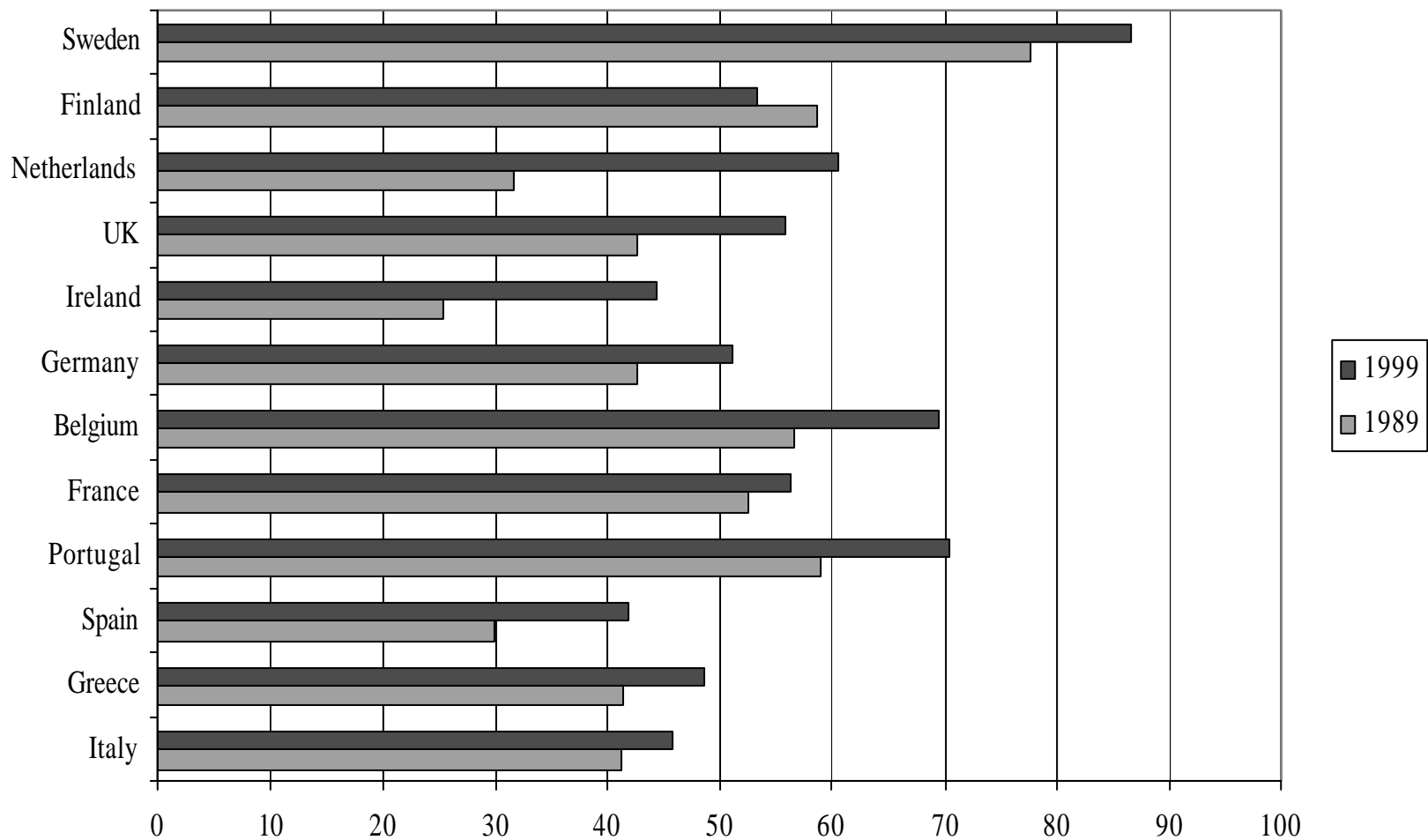
Cross-countries correlation between TFR and female participation



Women's employment rates and fertility in Europe (2000)



Employment rates of mothers with child(ren) under 6



Labour market participation and fertility

- More recent studies disaggregating time and country effects show that the change is different across countries (Kogel).
- Changing social norms towards women working
- Effect of policies that reduce the incompatibilities between employment and child rearing.



Labour market participation and fertility

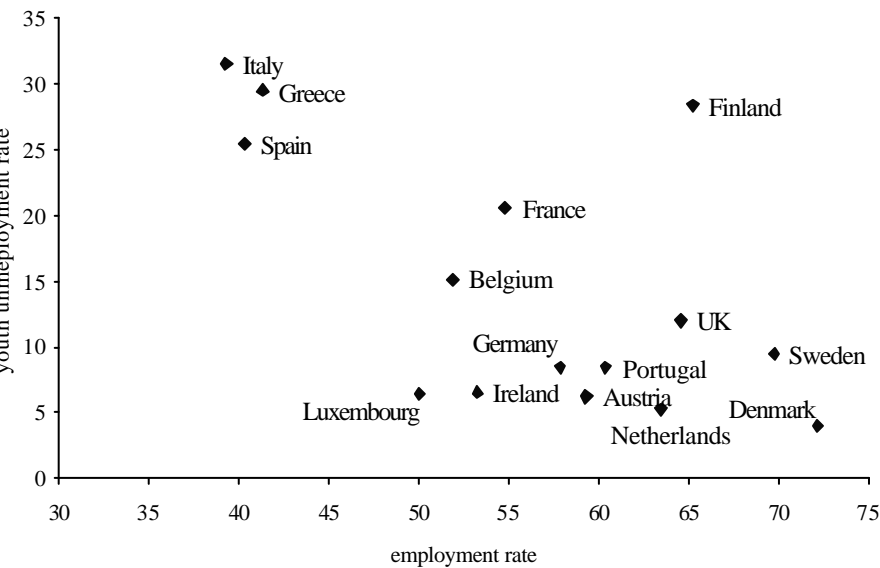


Relevant labour market characteristics

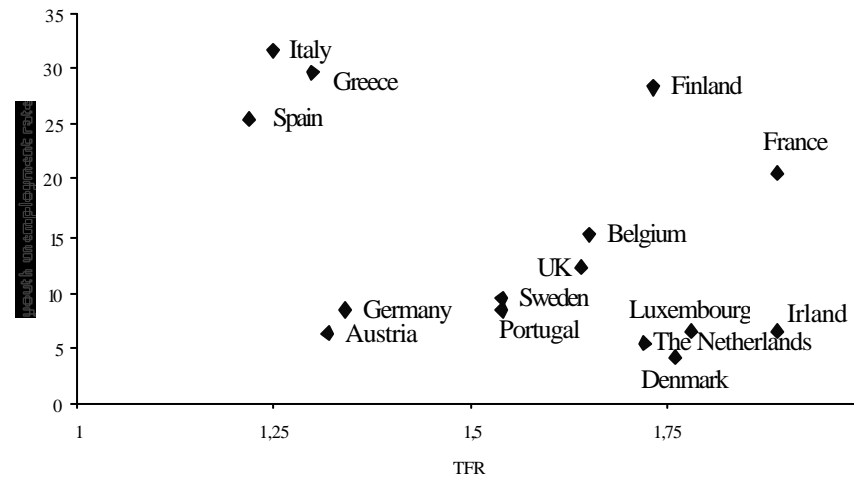
- Unemployment, and in particular youth unemployment
- Availability of part-time jobs
- Temporary contracts

Youth unemployment in Europe (2000)

... and women's employment rates



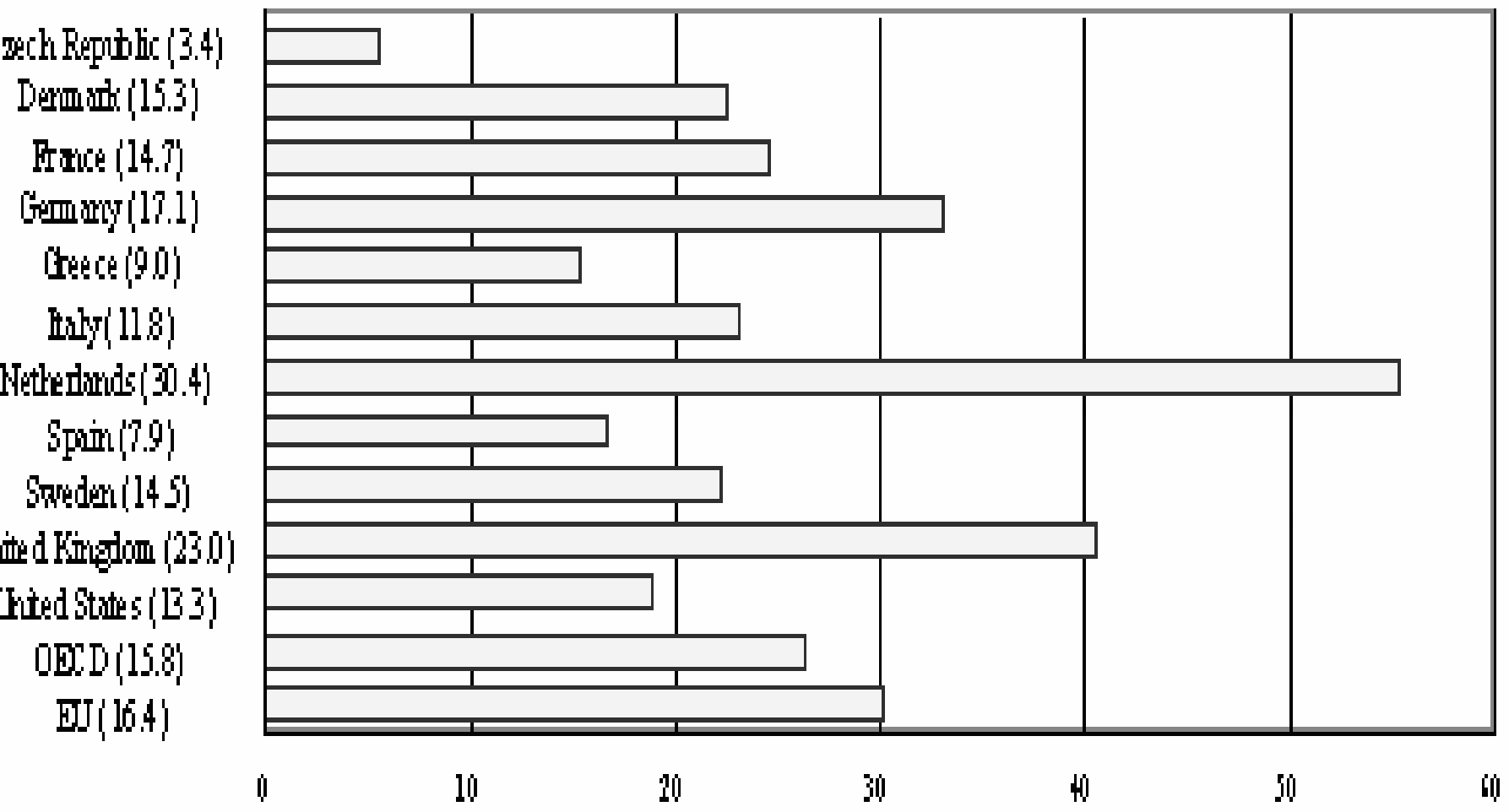
... and fertility



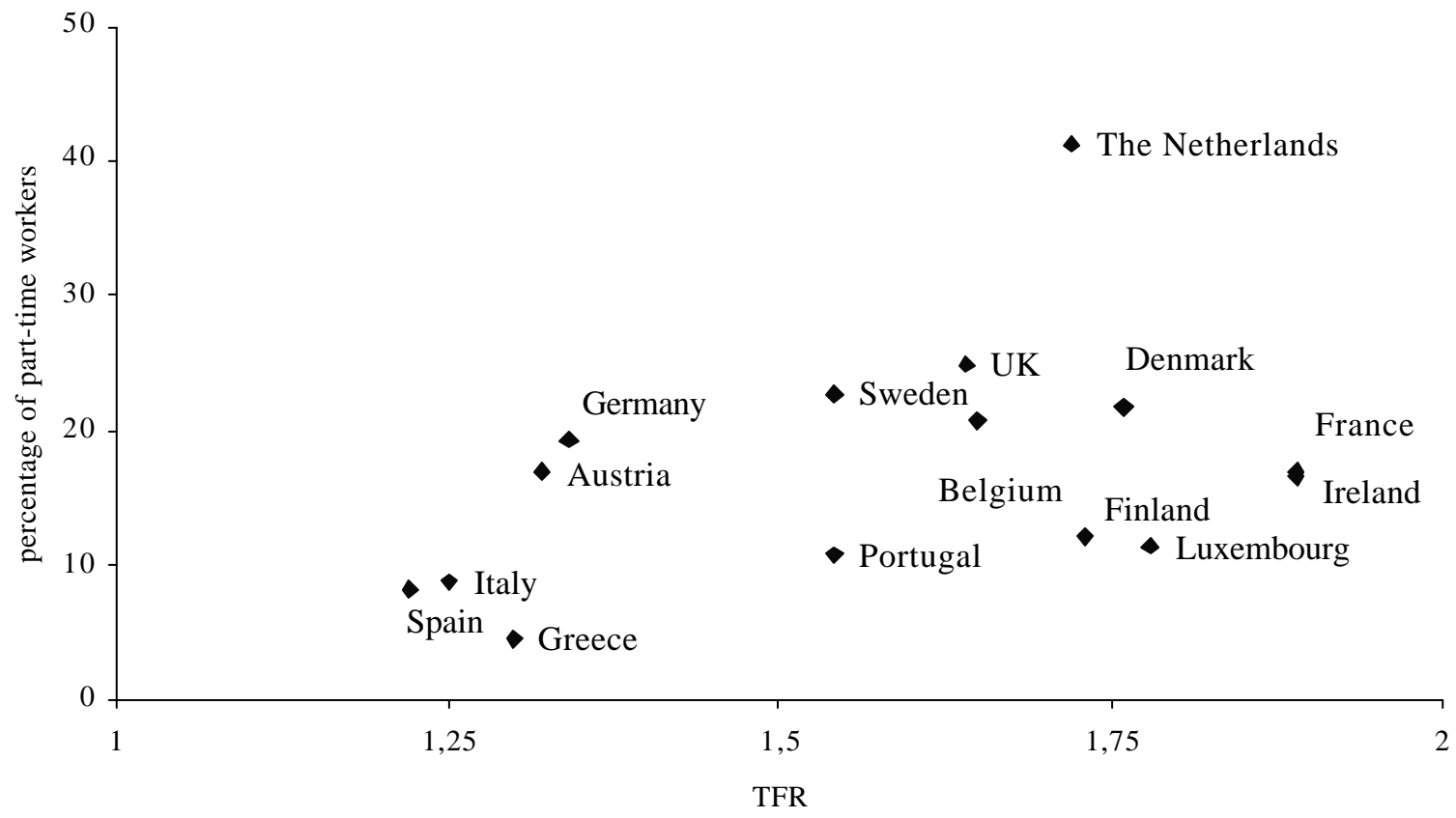
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Incidence of part-time employment
as a proportion of employment

Females



Part-time and fertility in Europe (2000)



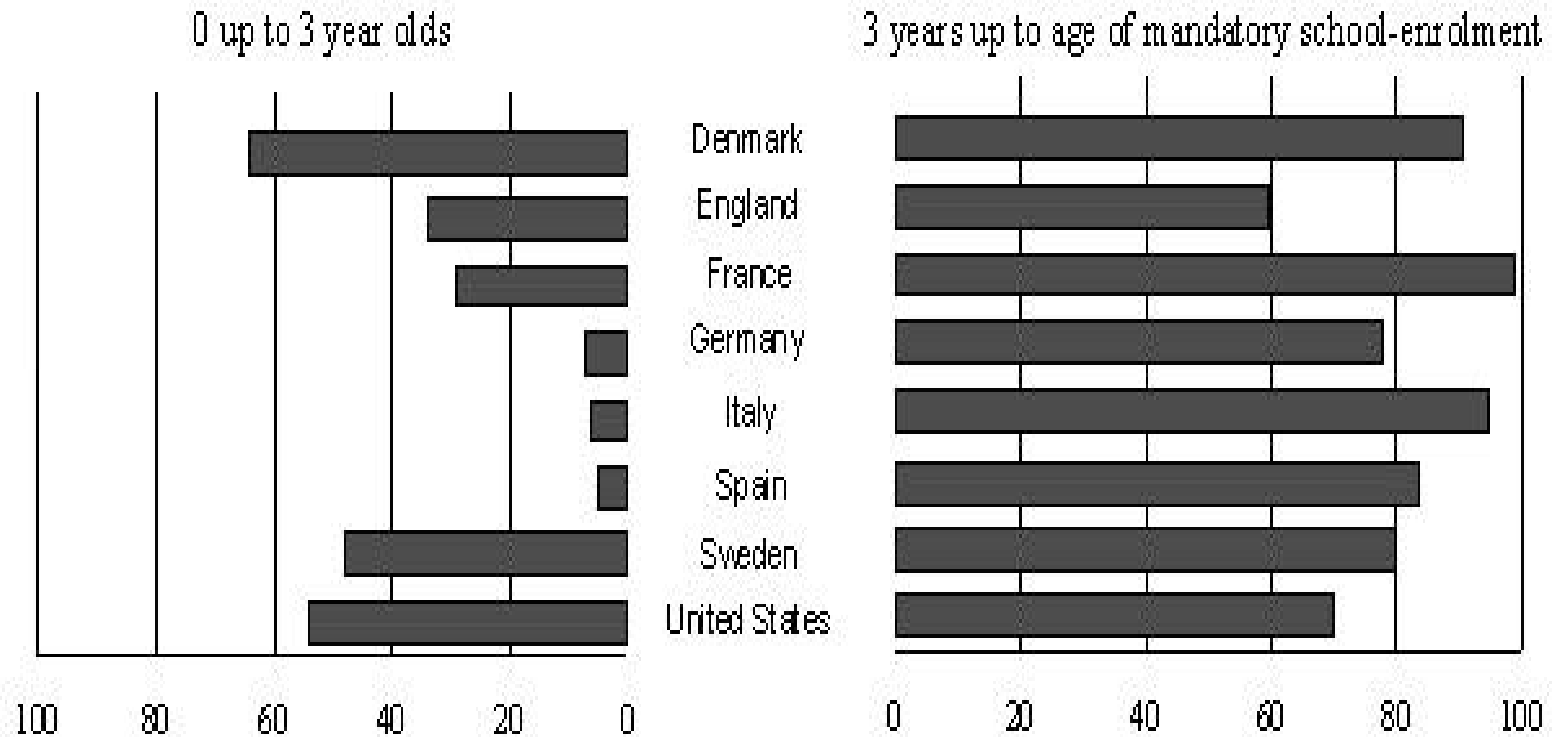
Relevant social policies

- Maternity and parental leave policies
- Childcare services
- Child benefits

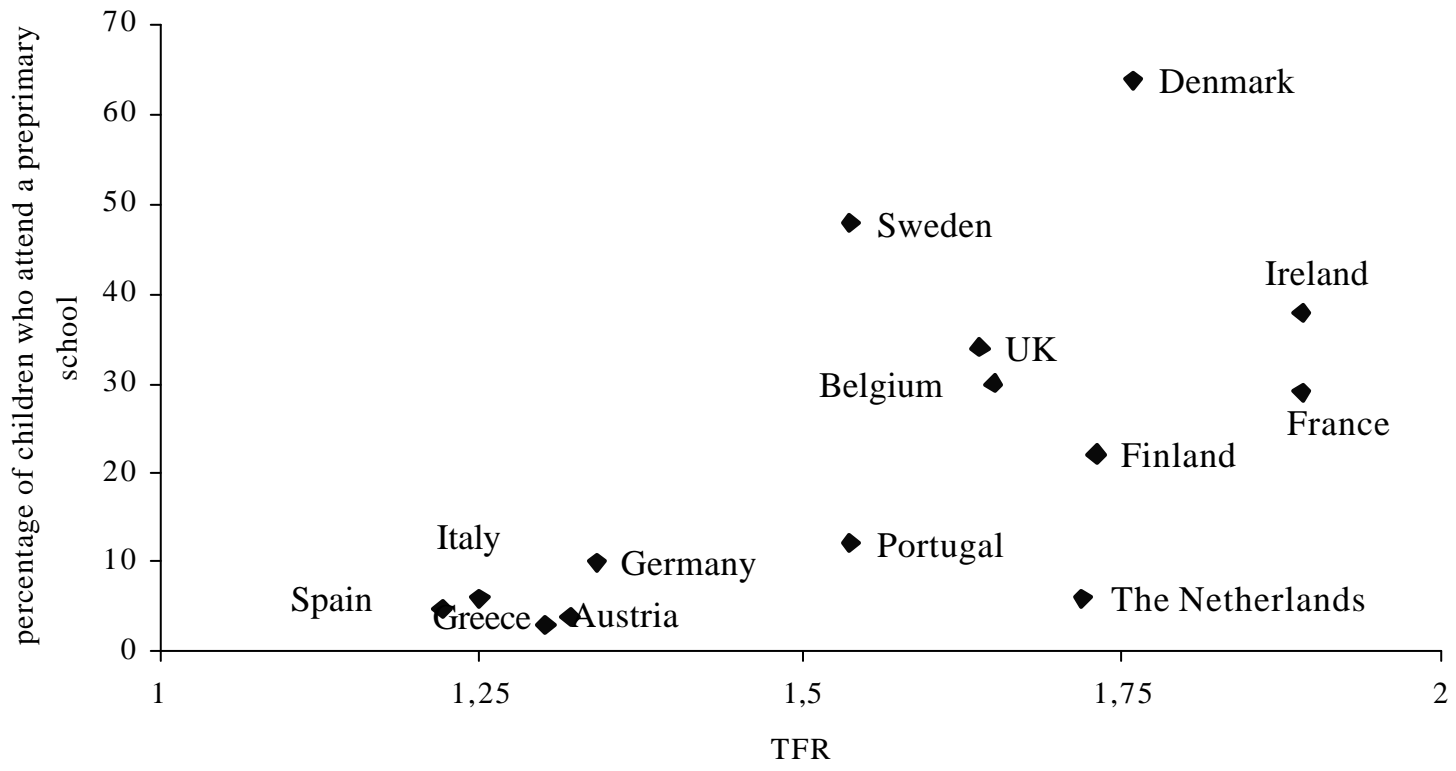
Parental / child-care leave policies in Europe (1999-2000)

	<i>Duration of base maternity leave (weeks) (1)</i>	<i>Maternity benefits during base leave (% of average wages)</i>	<i>Duration of optional parental leave (weeks) (2)</i>	<i>Parental benefits during optional leave (% of average wages)</i>	<i>Total duration of leave (1)+(2)</i>	<i>Paternity leave (*)</i>
Sweden	14	66	64	66	78	10 days
Denmark	28	100	22	83	50	10 days
UK	18	90	24	15.3	42	None
Netherlands	16	100	24	14.2	40	None
Belgium	15	77	12	50.3	27	3 days
Germany	14	100	136	25.1	150	None
France	16	100	132	42.4	148	3 days
Portugal	16	100	96	12.7	112	None
Italy	22	80	26	30	48	None
Spain	16	100	128	7.28	144	2 days
Greece	16	50	28	0	44	1 day (**)

Proportion of children using childcare (2000)



Childcare availability and fertility in Europe (2000)



Child benefits

- Effect on demand for quantity and quality of children
- Different effect if it is paid equally for each child or differently according with the birth order
- Positive effect on number of children and Timing of births
- Possible discouraging effect on women's labour supply

Estimation of Participation and Fertility

European Community Household Panel (ECHP)

- ❖ Personal characteristics: Wife age, Wife non labor income
- ❖ Family characteristics: Husband total income, number of children (no information on family support)
- ❖ Labor market: unemployment, part time.
- ❖ Social policies: child care, optional leave

Estimation of Participation and Fertility

Limitations of the economic analysis of fertility is the omission of factors such as fecundity, tastes, marriage-specific traits which are unobservable to the researcher.

Fixed effect model with panel data.

Results: **positive** effect of **part time** and **child care** on both Participation and fertility.

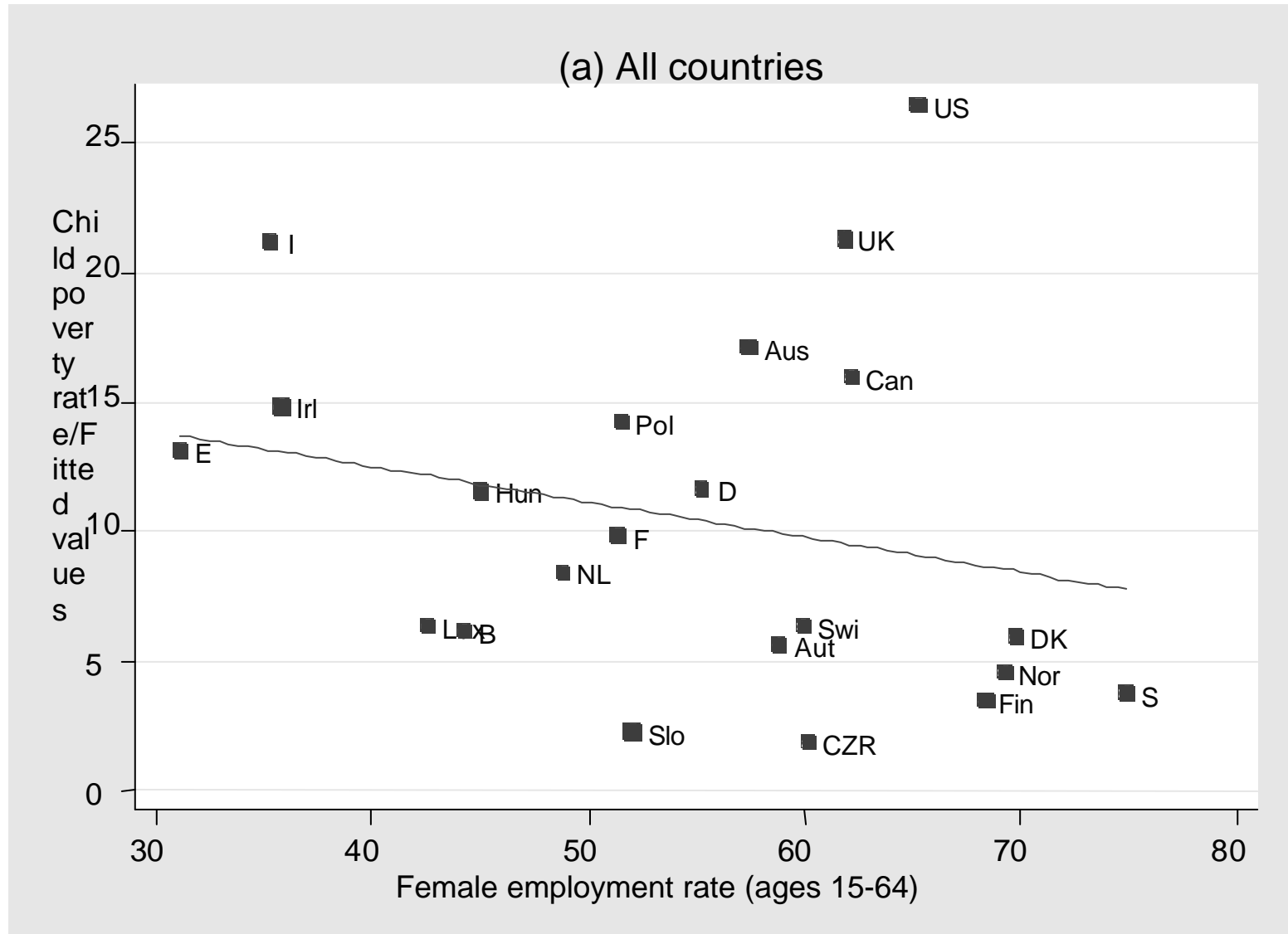
Negative effect of unemployment on both.

What is the effect of Mothers' work on children?

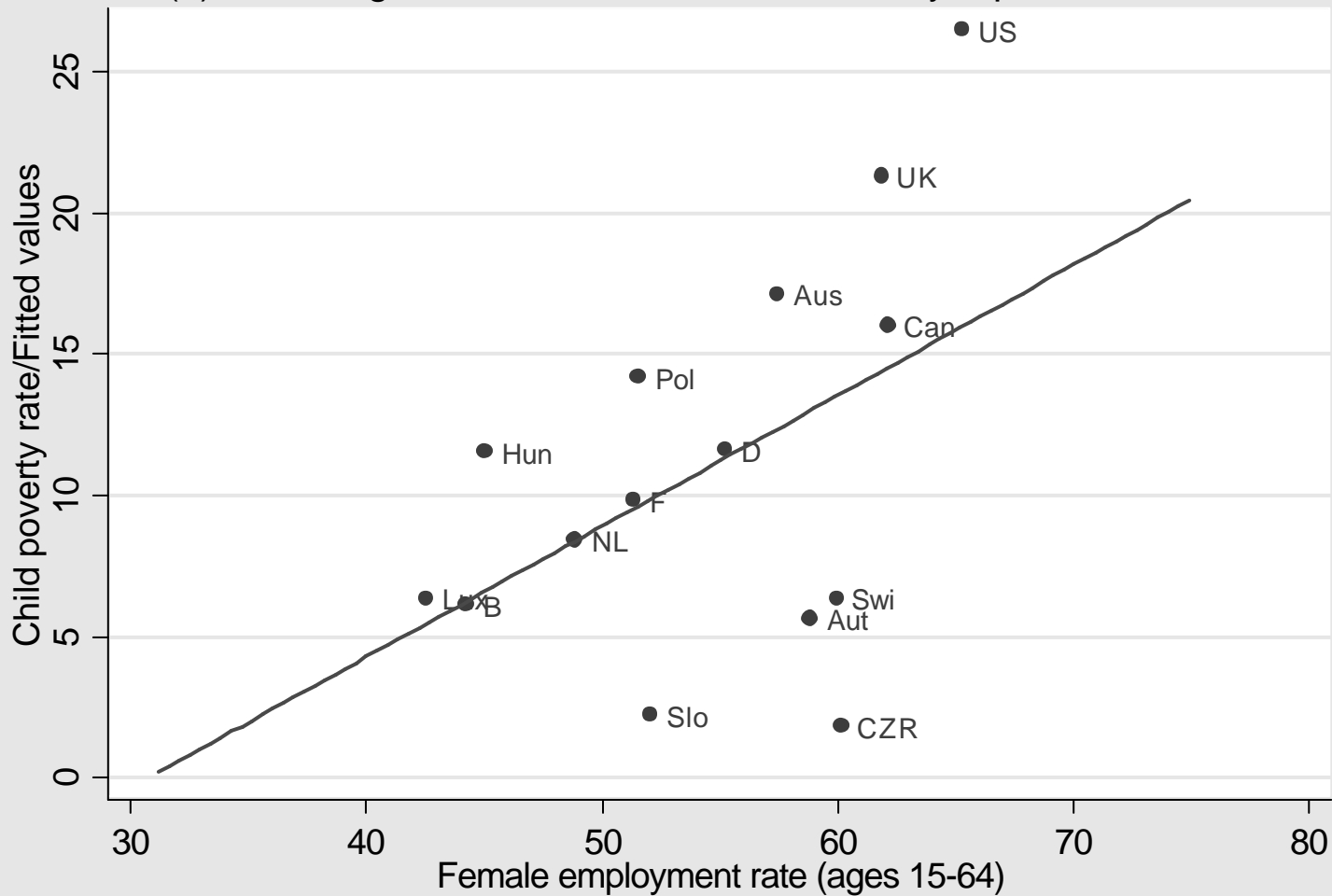
- Government spend large resources on ...
 - * **... children, for example on:**
 - schools- family and child allowances schemes
 - * **... and working mothers and fathers (particularly those with low incomes) for example:**
 - Earned Income Tax Credit – USA
 - Working Family Tax Credit, Child Tax Credit and Working Tax Credit – UK- Self Sufficiency Programme – Canada

Why do we care?

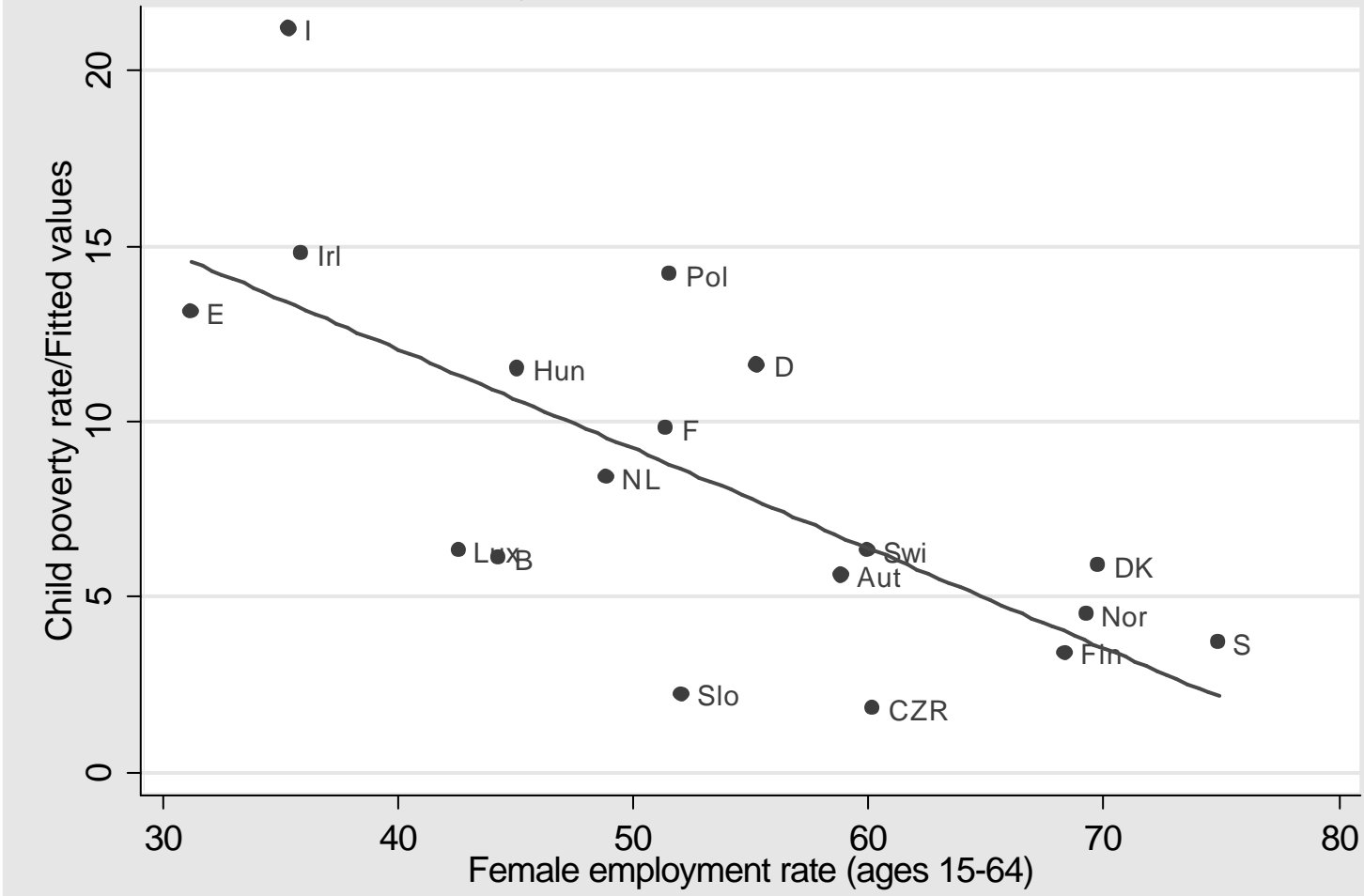
- if greater parental work is associated with lower poverty, and lower poverty leads to greater children's well-being, then we may want to encourage paid work.
- But if greater parental work is associated with higher, more caution in encouraging paid work of mothers (or fathers) of very young children.



(b) Excluding the Scandinavian countries, Italy, Spain, and Ireland



(c) Excluding the US, the UK, Australia, and Canada



Maternal employment and children

- Cognitive outcomes (young children)
- Early literature finds **mixed** results (maternal employment has either positive, negative or no effect)
- Maternal employment in the **first year** of life may have **negative** effects for some groups of children.

(cont.)

Maternal employment and children

1. Some studies find that employment after the first year of the child's life may have more **positive** effects, but other studies finds **negative** effects
2. Most of the negative effects are related to **full-time employment** (rather than part-time employment)
3. **Father's work** choices do not appear to have any significant effect.

Maternal employment and children

Disagreement on the **magnitude** of the effect on cognitive outcomes (**young children**):

-**Small**: between 2 and 4 points lower verbal and math scores (Waldfogel)

Large: up to 0.1 standard deviation reductions in reading and math performance, (Ruhm)

Maternal employment and children

There is some disagreement on the **magnitude** of the effect on educational achievement (**teenagers**):

- **Small**: young people are on average about one tenth less likely to advance one rung of the qualification ladder, (Joshi and Verropoulou)

- **Large**: up to 7-10 percentage point reduction in the probability of achieving A-level or more qualifications (Ermisch and Francesconi)

What are the mechanisms at work?

- Developmental studies are based on the hypothesis that **early years** are crucial to development,
 - 1) Maternal employment decreases the **quantity of time** that mothers spend with their children
 - 2) Marketplace work may decrease the **quality of maternal time** spent with children if working mothers are subject to **emotional distress**.

But points 1 and 2 are problematic not only because they are hard to measure but also because some argue that:

- a) **nonworking** mothers are more likely to be **depressed** and to withdraw from their children; and
- b) **maternal employment** may have positive side effects on mothers by actually **reducing their depression**

- Ermisch and Francesconi offer an alternative explanation
- In a **conditional demand framework** they show higher mother's employment produces a positive **income effect** and a negative **substitution effect** on time allocated to each child. The sign of the effects is, therefore, ambiguous a priori, and must be established empirically

Other family processes and decisions

- Strong evidence (particularly from Britain) that growing up in a family in financial distress
 - **reduces** verbal attainment at early ages;
 - **increases** the likelihood of juvenile delinquency, and
 - **decreases** the chances of staying on at school after the minimum school leaving age, achieving higher levels of education, being employed and receiving higher wages later in life.

Lone parenthood

- Growing up in a nonintact family seems to have negative consequences for children's wellbeing across a broad range of outcomes
 - Not all types of nonintact families have similar consequences. - - growing up with a **divorced or never-married mother** is
 - associated with lower educational attainment and more behavioural problems
 - while growing up with a **widowed parent** is not.

- 1) **Mothers' full time employment** during childhood appears to have both short-term and long-term consequences on children's wellbeing
- 2) Negative effect of the **loss of maternal childcare time**
- 3) However, **beneficial effects** are related to the **greater impact** working mothers have within the family which may affect income distribution and consumption patterns....

What is the effect of Women work on income distribution?

- Working mothers positively affect future labour supply of daughters through their attitudes towards work (Del Boca, Locatelli, Pasqua)
- More resources for women affect their bargaining power within households and consumption decisions. (Phipps, Thomas)
- More spending on children's goods which is likely to compensate for the negative effect caused by the loss of mother's time.
- Health, human capital, recreational activities.

What is the effect of Women work on income distribution?

- Women's work has an important impact on income distribution
- This is important given that:
- In several countries (US, UK, Italy) income inequality has risen and..
- Unequal distribution of income affect economic growth, mainly through the channels of education, and access to capital markets, (Bénabou, Alesina and Rodrik).

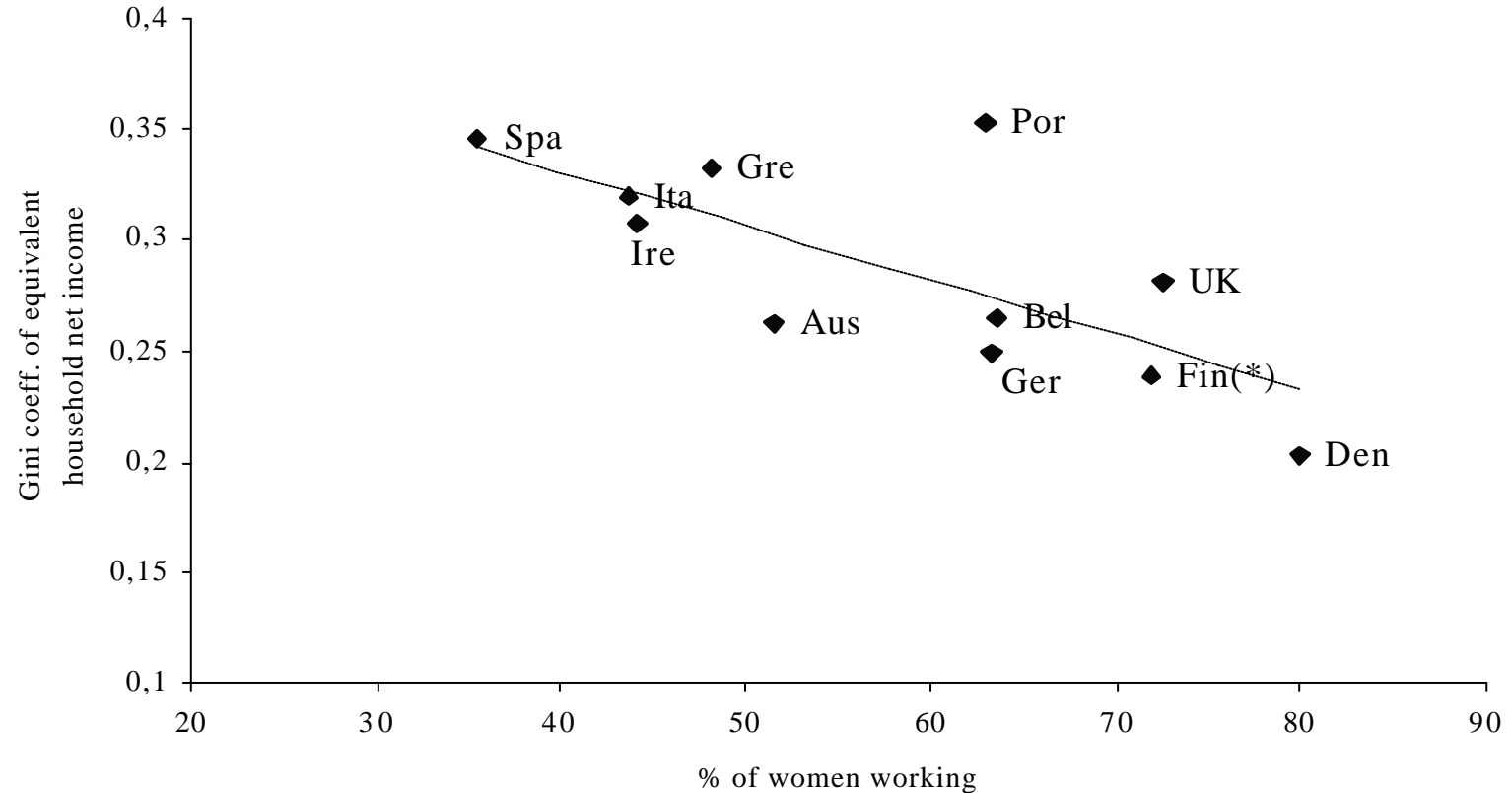
What is the effect of Women work on income distribution?

- If only higher educated women enter the labor market (usually married to higher educated and higher income men) the outcome may be increasing income inequality.
- EU countries: where a small proportion of women participate, usually only a selected group of women work, and inequality is higher (Pasqua, ECHP)
- Italy: in region where participation is higher, inequality is lower (Del Boca Pasqua).

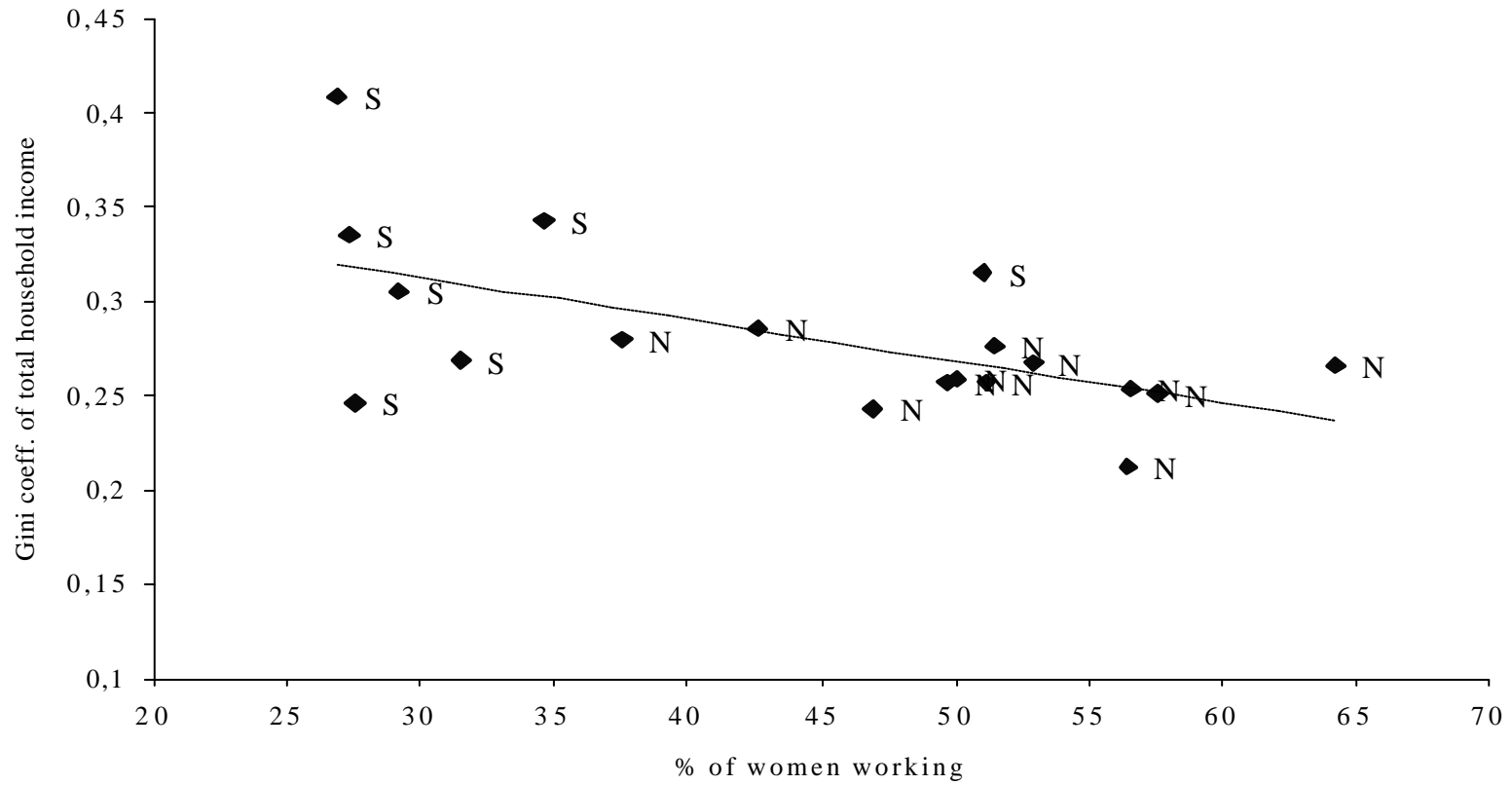
What is the effect of Women work on income distribution?

- Decomposition techniques show that there is positive impact of women working on household income distribution coherent with other studies (Cancian and Reed).
- Household income is distributed more equally among dual earner families than among single earners.
- Policies encouraging women work may also have the positive effect of reducing inequality in household income distribution.

Inequality and women's employment in European countries (ECHP, 1997)



Inequality and women's employment in Italian regions (SHIW, 1998)



Taxes, transfers, labour supply and household welfare

- Taxes and transfers affect labour supply
- Taxes are collected from income generated by labour supply
- Women are the most responsive component of labour supply
- Married women and low-income households turn out to be crucial in evaluating and designing tax-transfer policies

Two (old) ideas for improving the tax-transfer system...

- Improving EFFICIENCY by flattening the marginal tax rates
- Improving EQUALITY by introducing a universal transfer or a minimum guaranteed income

Three hypothetical reforms...

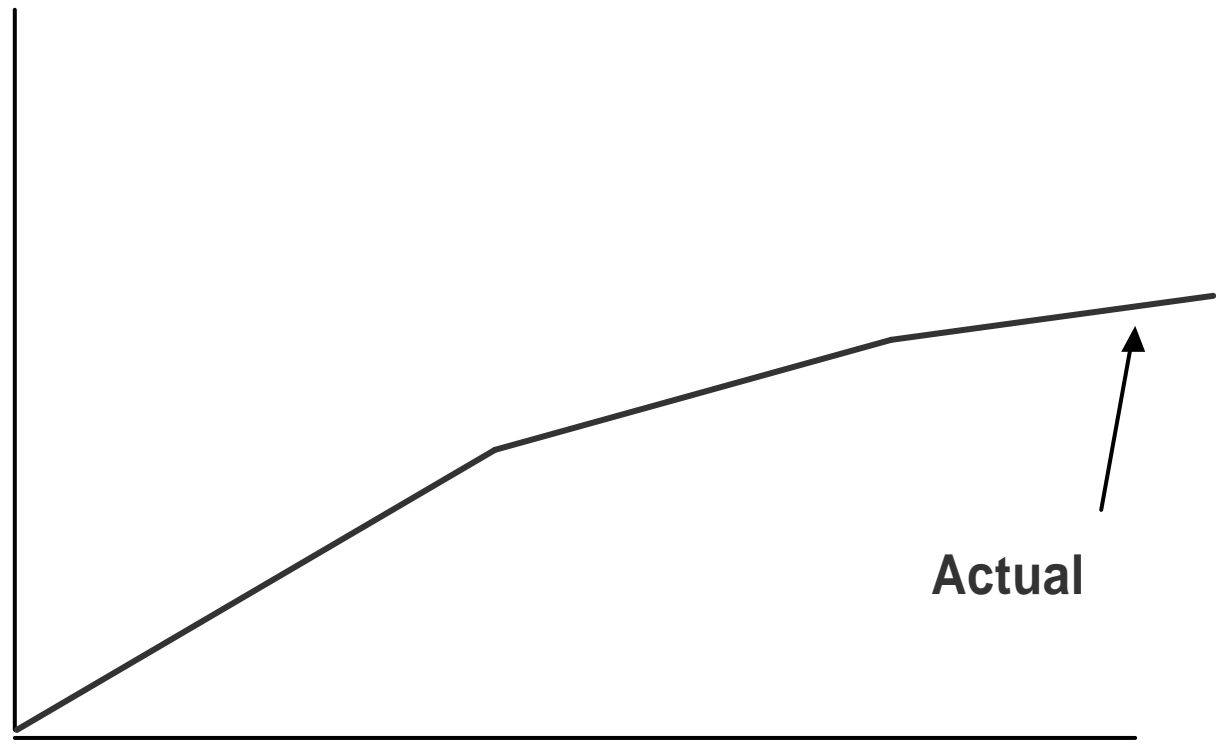
- Flat Tax (FT)
- Negative Income Tax (NIT) + FT
- Work Fare (WF) + FT

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"Actual" tax rule

Net income

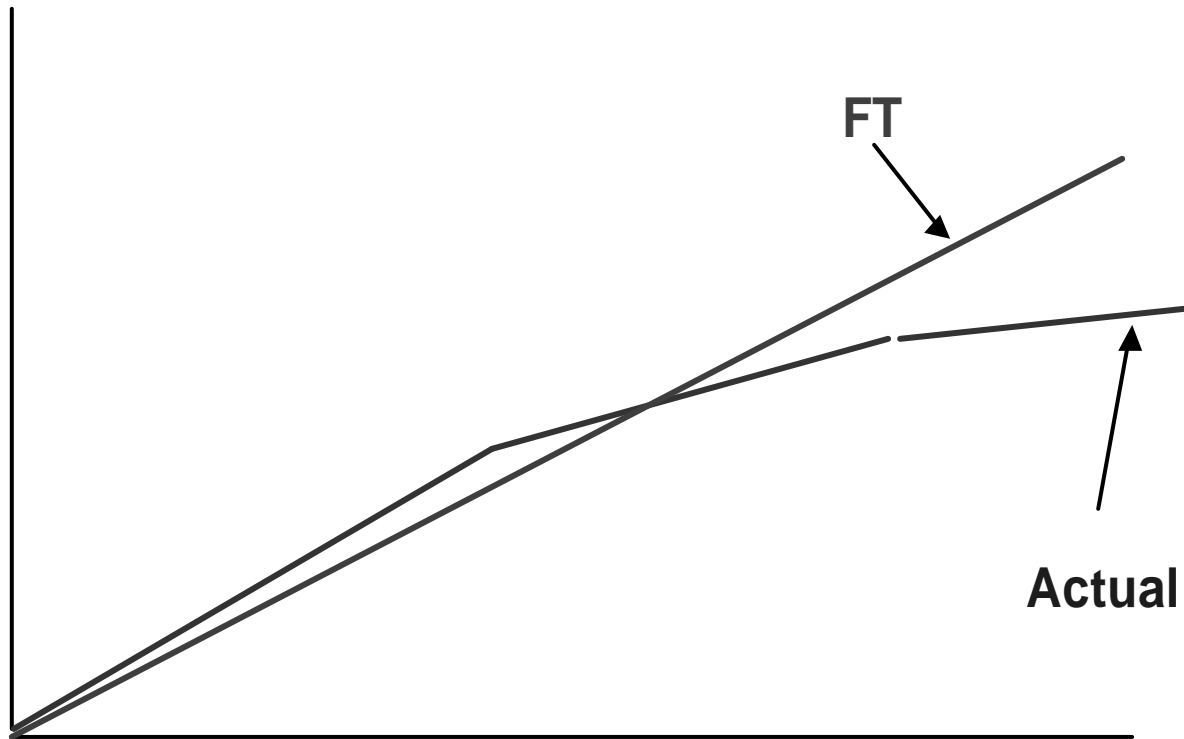


Gross income

Actual

Flat Tax rule

Net income



FT

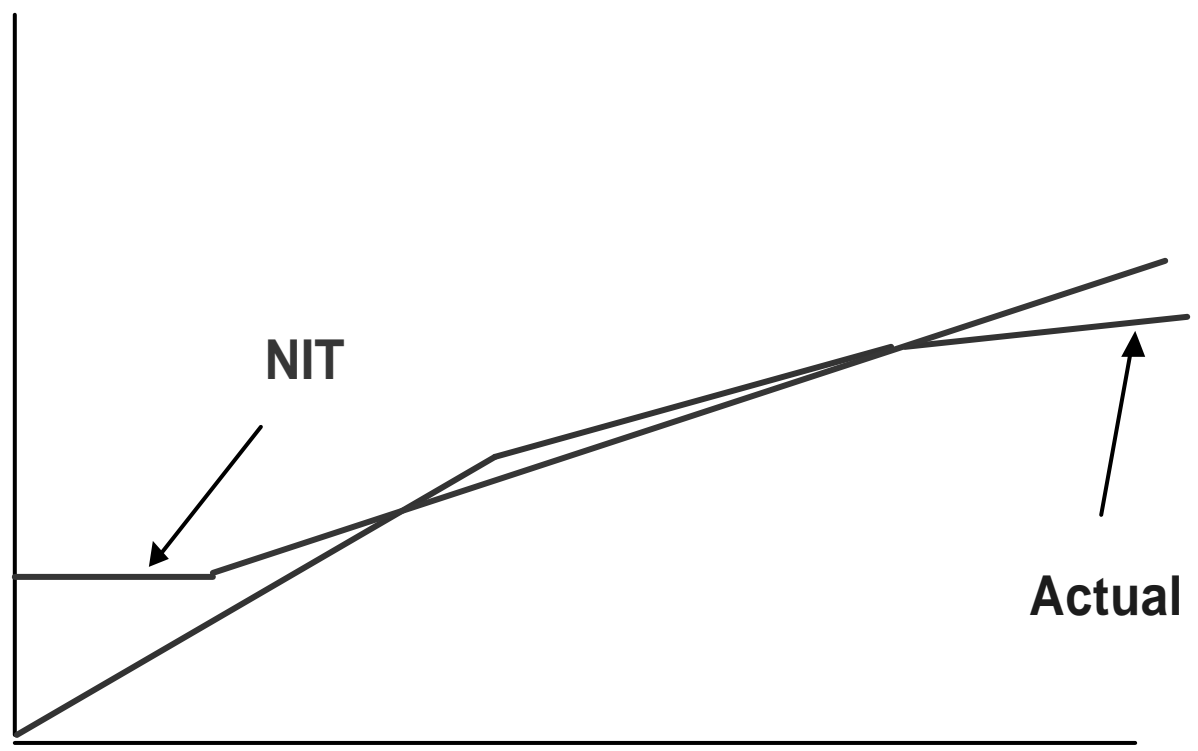
Actual

Gross income

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Negative Income Tax + FT

Net income

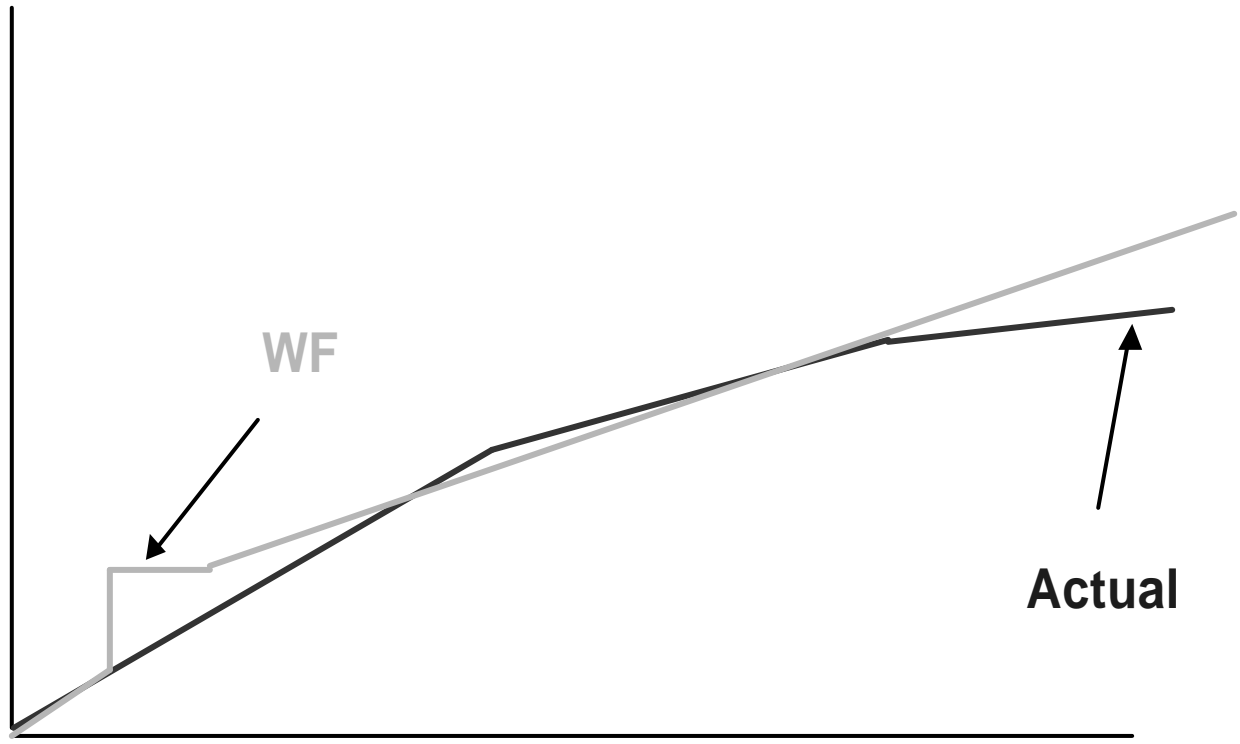


Gross income

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Work Fare + FT

Net income



WF

Actual

Gross income

Our microeconometric model of household labor supply (Aaberge, Colombino and Ström) features:

- simultaneous treatment of spouses' decisions
- exact representation of complex tax rules
- quantity constraints on the choice of hours of work
- choice among jobs that differ with respect to hours, wage rate and other characteristics



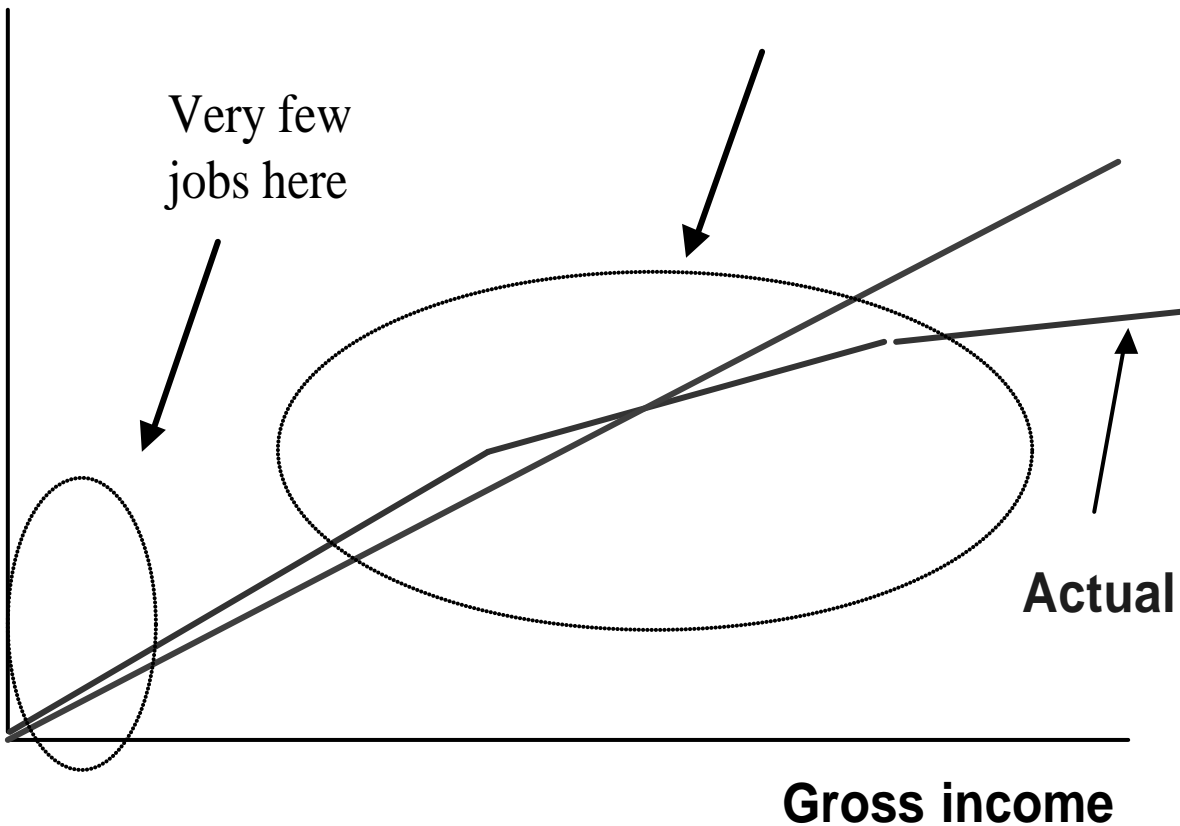
Implications of accounting for quantity constraints...

Net income

Most jobs are here

Very few jobs here

- Constraints to hour choice imply that average tax rates are more relevant than marginal tax rates
- A higher "entry" marginal tax rate might not be a disincentive to participation



Gross income

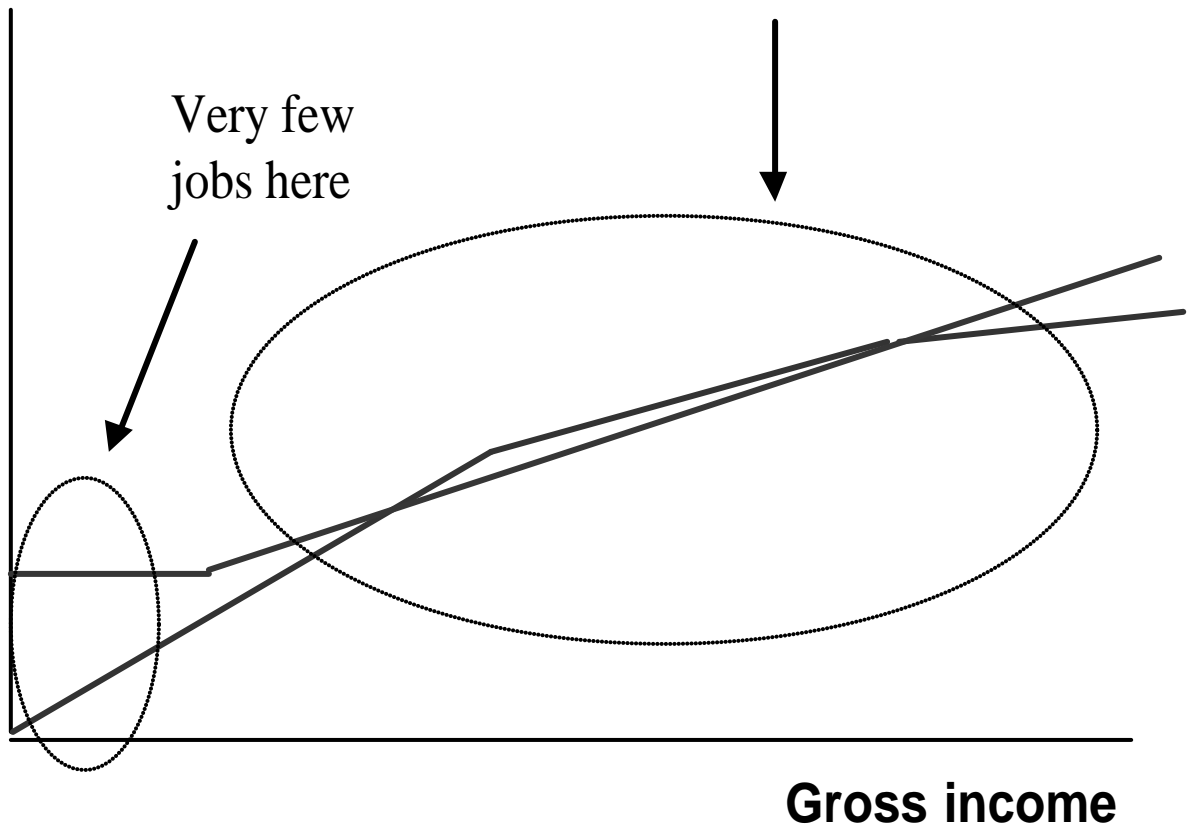
Implications of accounting for quantity constraints...

Net income

Most jobs are here

Very few jobs here

- Constraints to hour choice imply that average tax rates are more relevant than marginal tax rates
- A guaranteed income might not be a disincentive to participation



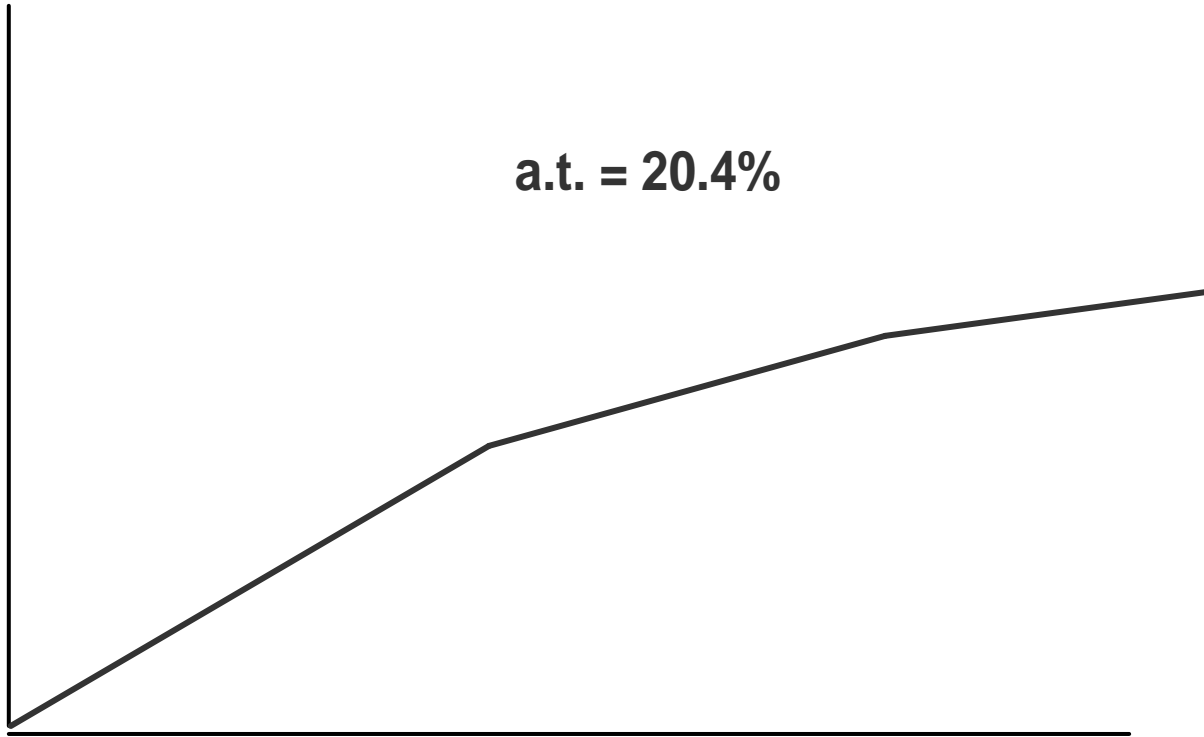
Gross income

Results: the same tax revenue can be generated either with:

- The **1993 tax rule** (*average tax rate = 20.4%*)
- A **18.4% FT** (*average tax rate = 18.4%*)
- A **NIT** that supports income up to **3/4** the poverty level and then applies a **28,4%** tax rate (*average tax rate = 19.8%*)
- A **WF** that requires **1000** hours worked, supports income up to **3/4** the poverty level and then applies a **27,3%** tax rate (*average tax rate = 19.5%*)

Alternative tax systems generating the same tax revenue
Actual

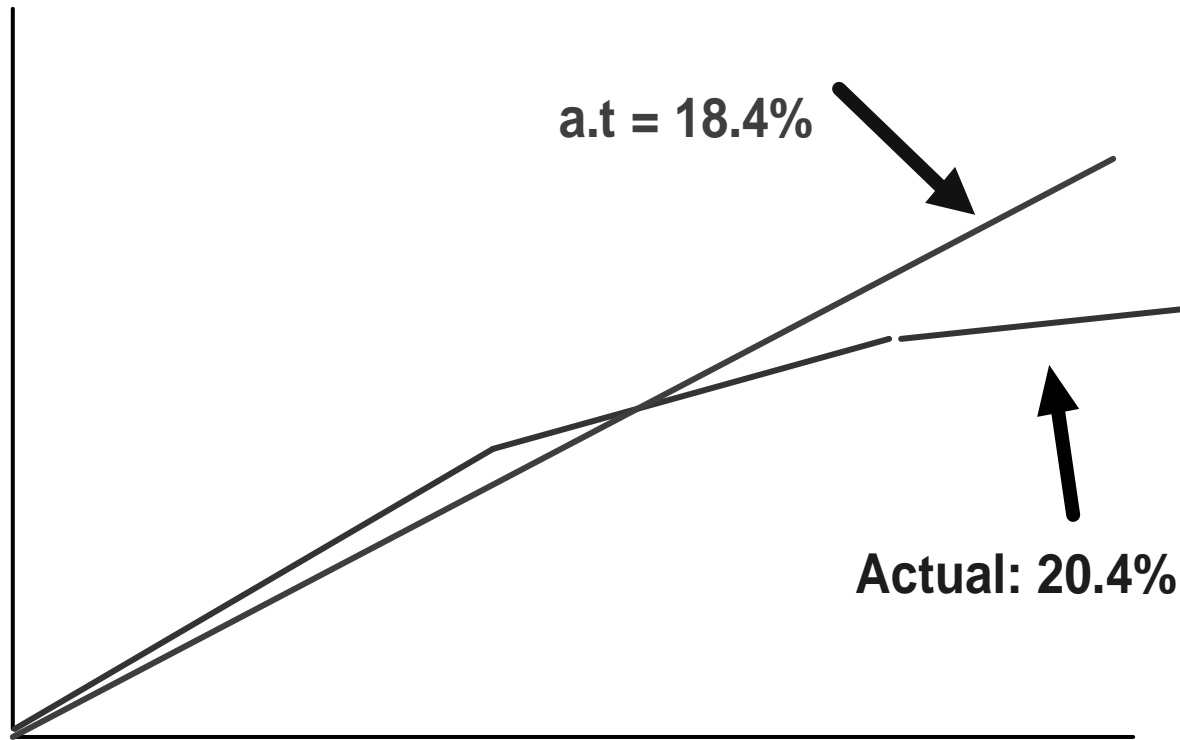
Net income



Gross income

Alternative tax systems generating the same tax revenue
Flat Tax

Net income

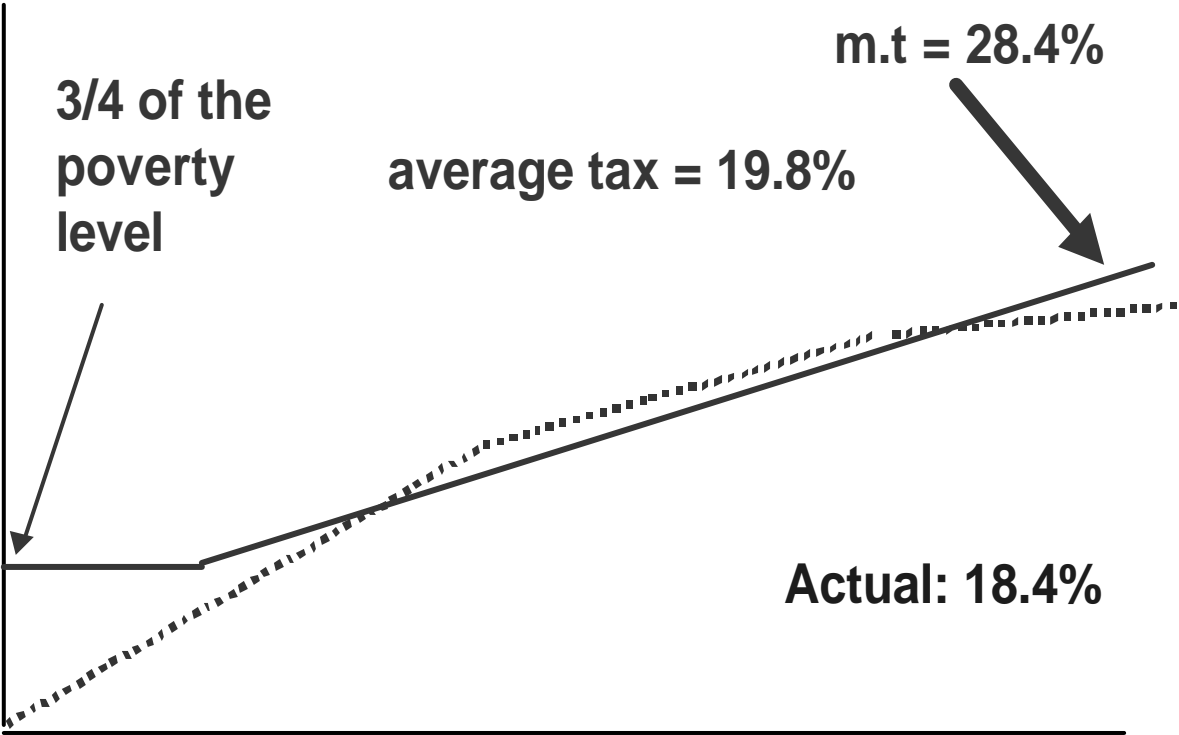


Gross income

Alternative tax systems generating the same tax revenue

Negative Income Tax

Net income

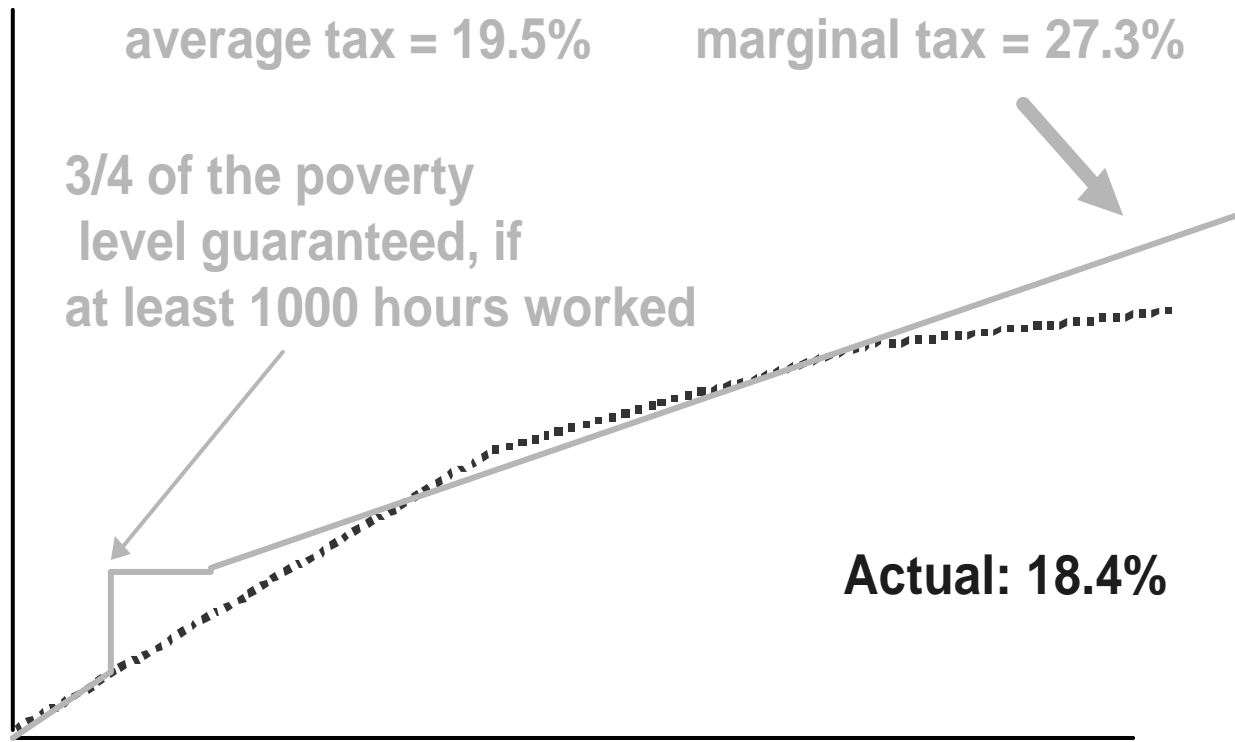


Gross income

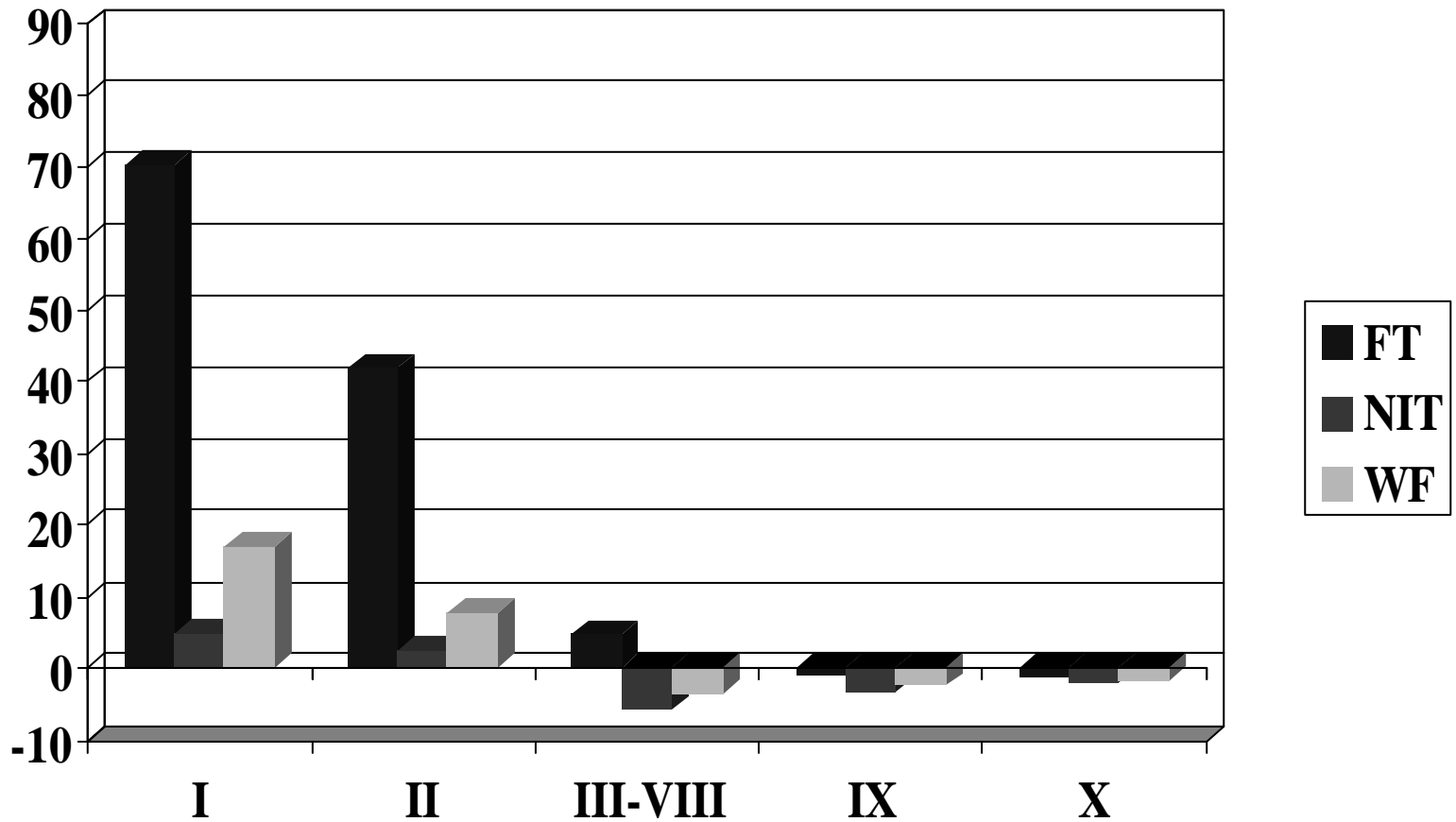
Alternative tax systems generating the same tax revenue

Work Fare

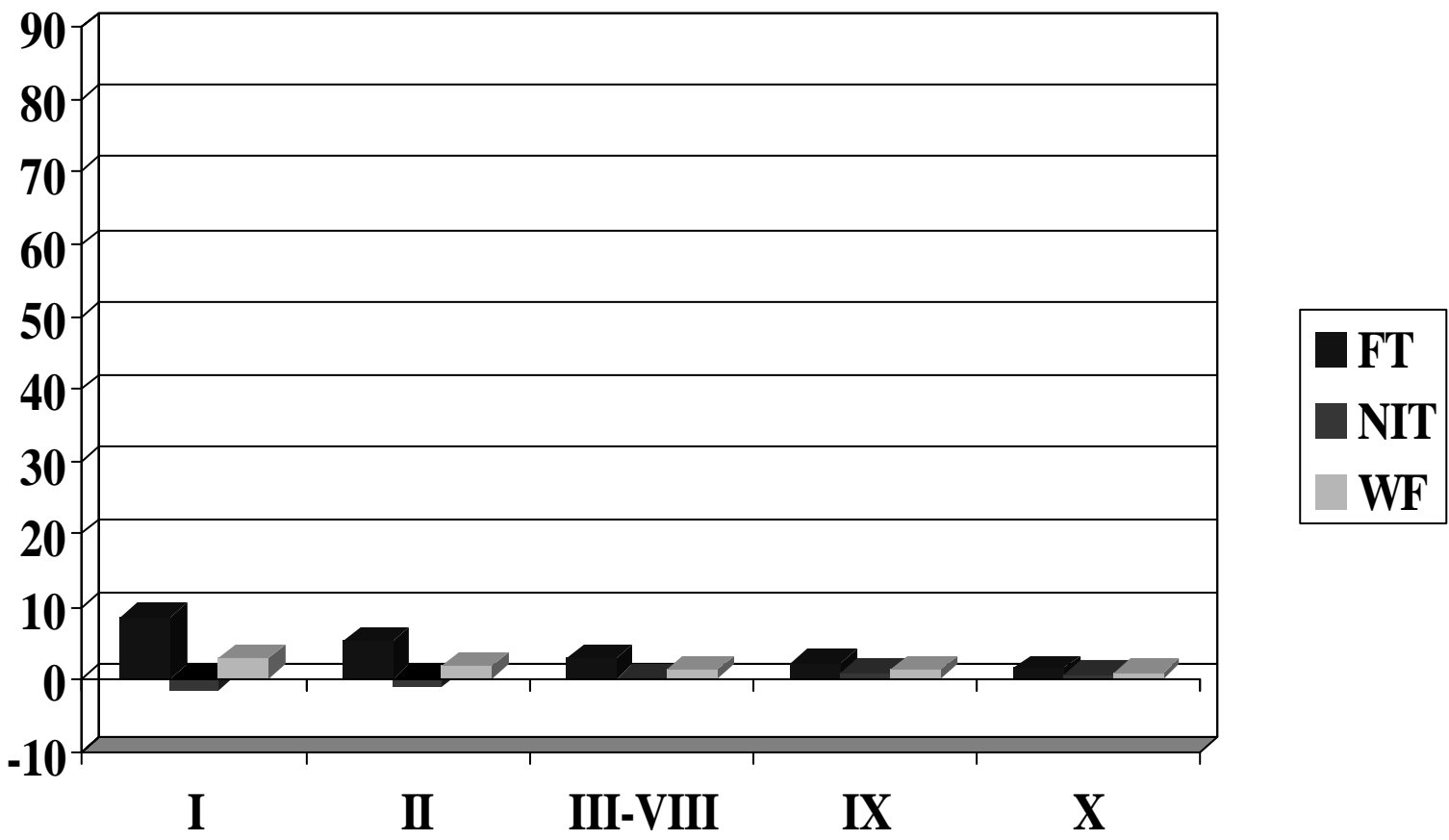
Net income



% Variations of labour supply under alternative tax reforms, by income decile
Women

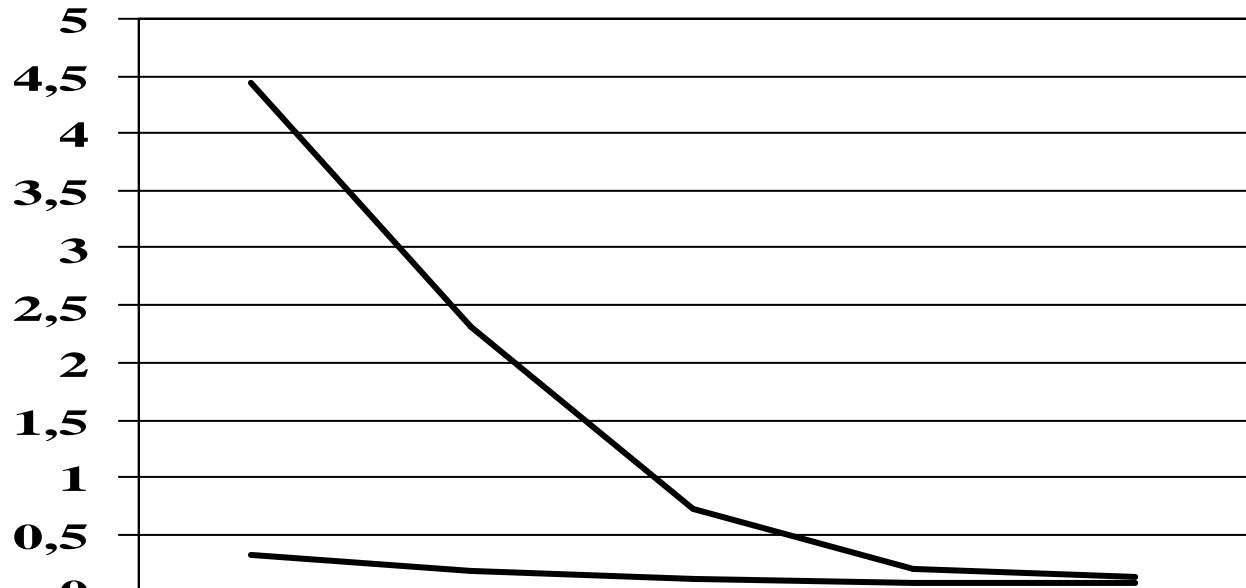


% Variations of labour supply under alternative tax reforms, by income decile
Men



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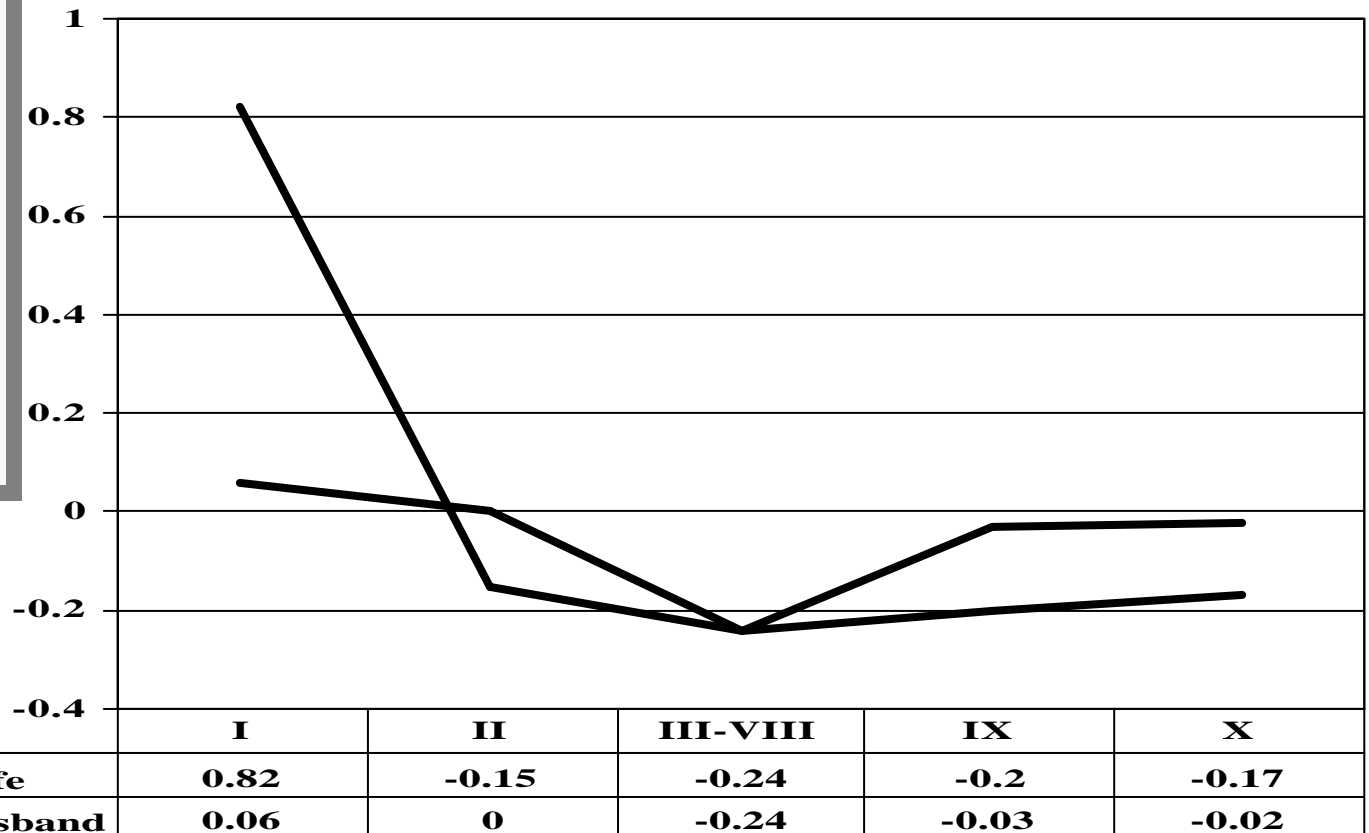
Overall, **women** and individuals in **lower income deciles** are far more responsive to the reforms. This is due to the pattern of own-wage elasticities...



	I	II	III-VIII	IX	X
— Wife	4,44	2,31	0,73	0,2	0,13
— Husband	0,32	0,17	0,1	0,08	0,06

...to the pattern of cross-wage elasticities...

In lower deciles, partners' incomes are complement, rather than substitutes. A higher husband's net wage reinforces the incentive to wife's labour supply



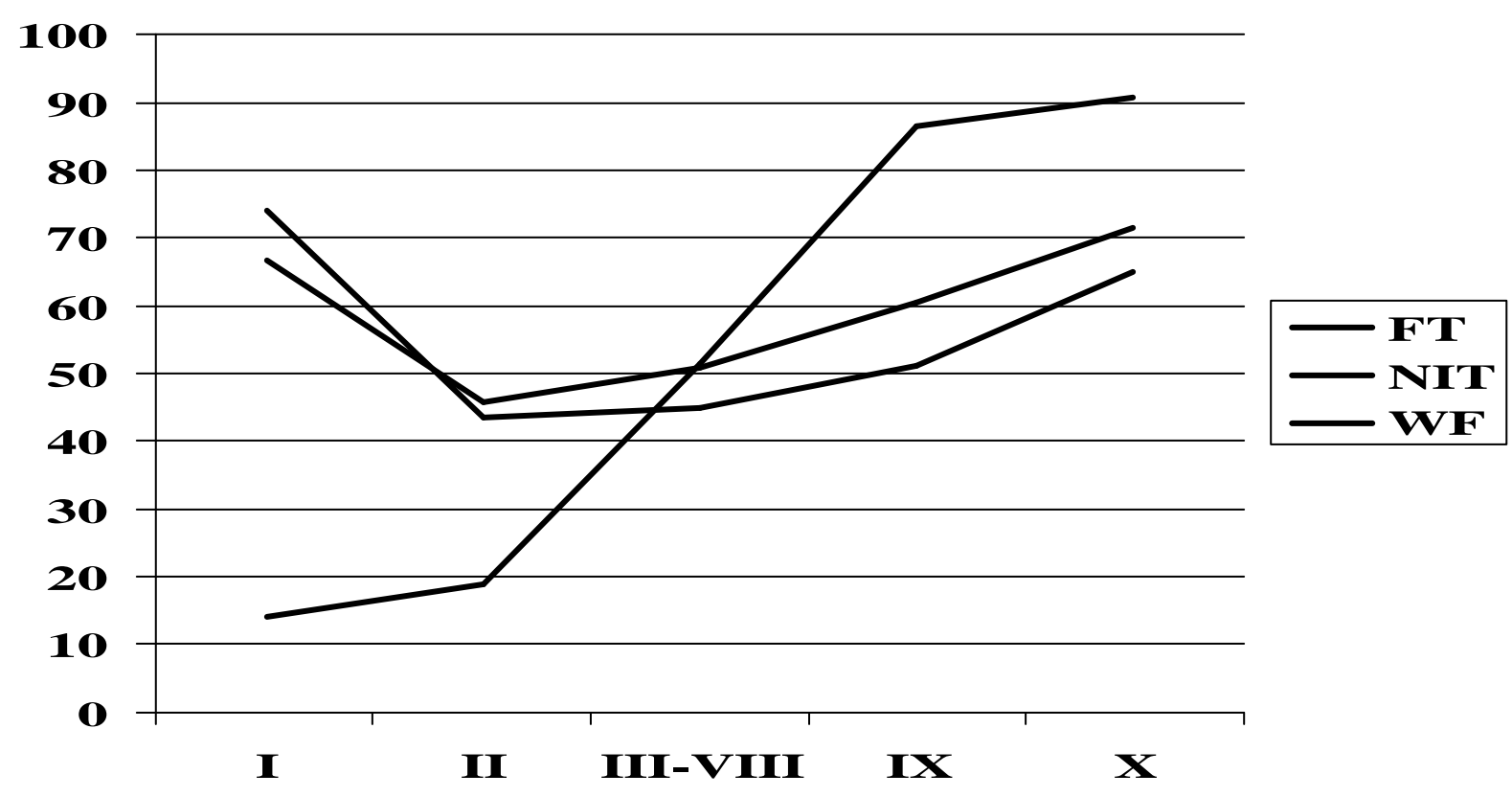
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Since we have estimates of utility functions we can

- Compute money-metric individual welfare
- Identify winners and losers
- Aggregate individual welfare measures into social welfare measures



Percentage of "welfare-winners" under alternative tax reforms, by household income decile



Policy conclusions

- The joint analysis of female participation and fertility is important to determine what combination of labor and social policies work better.
- The best combination seems to be part time and child care (with parental and especially paternity leave).
- The worse is probably full time and no child care.
- Mothers' employment appears to have negative effects on children's well being.



Policy conclusions

- However this is true mostly for full time jobs.
- There are other beneficial effects which concern directly and indirectly children:
- Mothers' labor market activities affect their children's attitudes towards work
- affect not only total household income, but also the intra-household distribution and consumption patterns (larger share spent on the children).



Policy conclusions

- Finally, the behaviour of **women in low-income households is crucial** in deciding the performance of alternative tax-transfer policies since more **responsive** to financial incentives.
- The simulations show that a profitable direction for reform consist in lowering marginal tax rates on low and middle incomes together with income support or work-fare.



Policy conclusions

- In fact, given that at **low income** levels partners' earnings seem to be **complements** rather than substitutes, little reduction in the labor supply when introducing negative income tax or workfare.
- This support mechanism would facilitate the participation of low income women largely excluded from the labor market by the high fixed costs of participation.



Policy conclusions

- Particularly important for Mediterranean countries where women are stuck in a "**low female participation rate and fertility**" equilibrium.
- because of the **mismatch** between the types of jobs sought and the types of jobs offered and the types of child care sought and provided.

