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# The Role of Perceived Quality of Public Services in Determining Liquidity Constraints to Access Private Specialist Care

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# Motivations

- Literature on the **presence of extensive and persistent health horizontal inequalities** (i.e. people in equal need but different income treated unequally) well developed

- Less developed literature on the role of the **underlying causes of such inequities**:
  - short-run constraint (income?)
  - long-run constraints (education? disadvantaged social environment? lack minimal health knowledge? “Social determinants”?)

- **Baldini and Turati (2006)**: apply the Carneiro-Heckman methodology to separate short- and long-run constraints in the **access to private services** and quantify their role using SHARE data

# Motivations

**Main results in Baldini and Turati (2006):**

•**Italy, Spain and Greece** seem to be the only countries where the share of constrained individuals is significantly higher than zero. In these countries, **both LR and SR constraints** play a role (e.g. in Italy 50% of constrained are subject to SR constraints)

• As expected, the proportion of SR constrained increase for **dental care** in **Italy and Spain**. In this case, also **Greece** presents a significant proportion of constrained individuals

• For **specialist visits**, evidence of constrained individuals in **Italy and Spain**, but also in **Denmark and Sweden**. But for the former LR constraints prevail, while for the latter SR constraints prevail

• Strong **gender differences**: women less constrained than men in almost all countries; for women LR constraints prevail

# Motivations

- Problem of **SR constrained** individuals common to **Mediterranean models of Welfare State**: is there an **explanation**?
  - wide differences in the **quality of publicly provided services**: low quality is an incentive to opt-out for private services. Is there any evidence?
  - In Italy: (1) low quality of care increases health inequalities (Jappelli et al., 2007); (2) wide differences across regions (Jappelli and Padula, 2003)
- <u>This paper:</u> provide direct evidence on the role of quality differences in publicly provided health care services in determining short run constraints in the access to *private specialist care*

# Health inequalities: the evidence

- Health inequalities exist in many different dimensions: (a) different geographical areas; (b) different concepts of health status; (c) different types of care services; (d) different ages during the life-cycle; (e) persistent over time

- Evidence for Italy rather scarce
  - Included in second-generation cross-country studies: Italy fares among the countries where access is more unequally distributed, especially for specialist care and dental care (Van Doorslaer and Masseria, 2004)
  - Cardano *et al.* (2004) [Turin Longitudinal Study Database]: health status more important in influencing exit toward early retirement or unemployment than in influencing social mobility; exit from the labour market ↓ SES after health shock

# Health inequalities: the evidence

- Summing up for Italy:
  - one of the country in which health inequalities are higher, especially for services like specialist care and dental care
  - as in other Southern European Welfare States, regional disparities profoundly contribute to these inequalities
  - from an individual point of view, a mechanism particularly important in explaining inequalities is the arrival of health shocks, causing exit from the labour market, which depresses income for individuals who remains most presumably in bad health after the shock has occurred

# “Inequality in quality”: the evidence

**People very satisfied with hospital services by sex and regions (%, 2000)**

| **Regions** | **Males** | | | **Females** | | | **Total** | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Medical care* | *Nursing care* | *Hygiene of sanitary fittings* | *Medical care* | *Nursing care* | *Hygiene of sanitary fittings* | *Medical care* | *Nursing care* | *Hygiene of sanitary fittings* |
| *North-West* | *40,3* | *42,1* | *34,1* | *46,3* | *44,7* | *35,7* | *43,4* | *43,4* | *34,9* |
| *North-East* | *57,0* | *51,1* | *40,0* | *42,8* | *43,6* | *39,3* | *49,2* | *47,0* | *39,6* |
| **North** | **46,9** | **45,6** | **36,4** | **44,8** | **44,2** | **37,2** | **45,8** | **44,9** | **36,8** |
| **Centre** | **35,2** | **30,4** | **21,0** | **35,8** | **28,8** | **23,9** | **35,5** | **29,5** | **22,5** |
| *South* | *21,1* | *19,4* | *12,9* | *25,9* | *21,1* | *16,8* | *23,6* | *20,3* | *15,0* |
| *Islands* | *21,1* | *20,2* | *10,7* | *29,2* | *23,2* | *17,3* | *24,8* | *21,6* | *13,7* |
| **South& Islands** | **21,1** | **19,6** | **12,2** | **26,7** | **21,6** | **16,9** | **23,9** | **20,6** | **14,6** |
| **ITALY** | **34,9** | **32,9** | **24,3** | **36,6** | **33,2** | **27,4** | **35,8** | **33,0** | **25,9** |

Source: ISTAT

# The CH methodology

- Split the population in two sub-groups S=(H,I)

$$m_i = \alpha_S + \Sigma\beta_S x + \Sigma\delta Q^Y + u_i \quad [6]$$

$$E[m_i|Q^Y=0] = \alpha\text{^} + \Sigma\beta\text{^}x = m\text{^}^4_S$$
$$E[m_i|Q^Y=1] = \alpha\text{^} + \Sigma\beta\text{^}x + \delta\text{^} = m\text{^}^Y_S$$

- Compute “unadjusted” and “adjusted” gaps

- SR constrained individuals = “adjusted” gaps, i.e. after controlling for LR factors affecting needs

# Data

• ***BI-SHIW 1993:***

✓ income, wealth, personal characteristics of both households and individuals

✓self-assessed measures of the **quality of public services** and some additional items (availability of parks, shops, museums, but also the presence of micro-criminality, broadly defining an indicator of the quality of life) using a scale from 0 to 10 (best mark)

- Define quality of publicly provided health care services
- Define “deprivation index” (home square metres per each component of the household)
- Define “environmental quality index” (quality of tap water, quality of air, availability of green areas, traffic conditions, noisiness and street cleaning)

# Data

- no information on **health status**: 2 potential solution
  - matching with BI-SHIW 1995 (e.g. Jappelli and Padula, 2003)
  - work on a narrow sample for which some information are available (this paper)

- focus on **households of employees** (i.e. those in which both partners are employees)

  - 1046 observation left

  - **ill:** those for which at least one member of the households has missed no less than 10 working days
  - **healthy:** all remaining households

# Variables

- Dependent variable (1): dummy indicating whether a person purchased **private** specialist care services **during the last twelve months**

- Dependent variable (2): total expenditure for purchasing **private** specialist care services **during the last twelve months**

# Variables

•The vector **x** in Eq. [6] is composed by a set of family and structural variables that may influence the demand for private health services over the long run like:

- *age, education, gender, family size*
- *current occupation*
- *the presence of a private insurance*
- *"deprivation index"*
- *environmental quality index*

- Inclusion of variables according to the literature on demand of private health services (e.g. Propper, 2000)

# Results on LR-SR constraints

**Fig. 1 Proportion of households purchasing private health services by health status and income quartile**

# Results on LR-SR constraints

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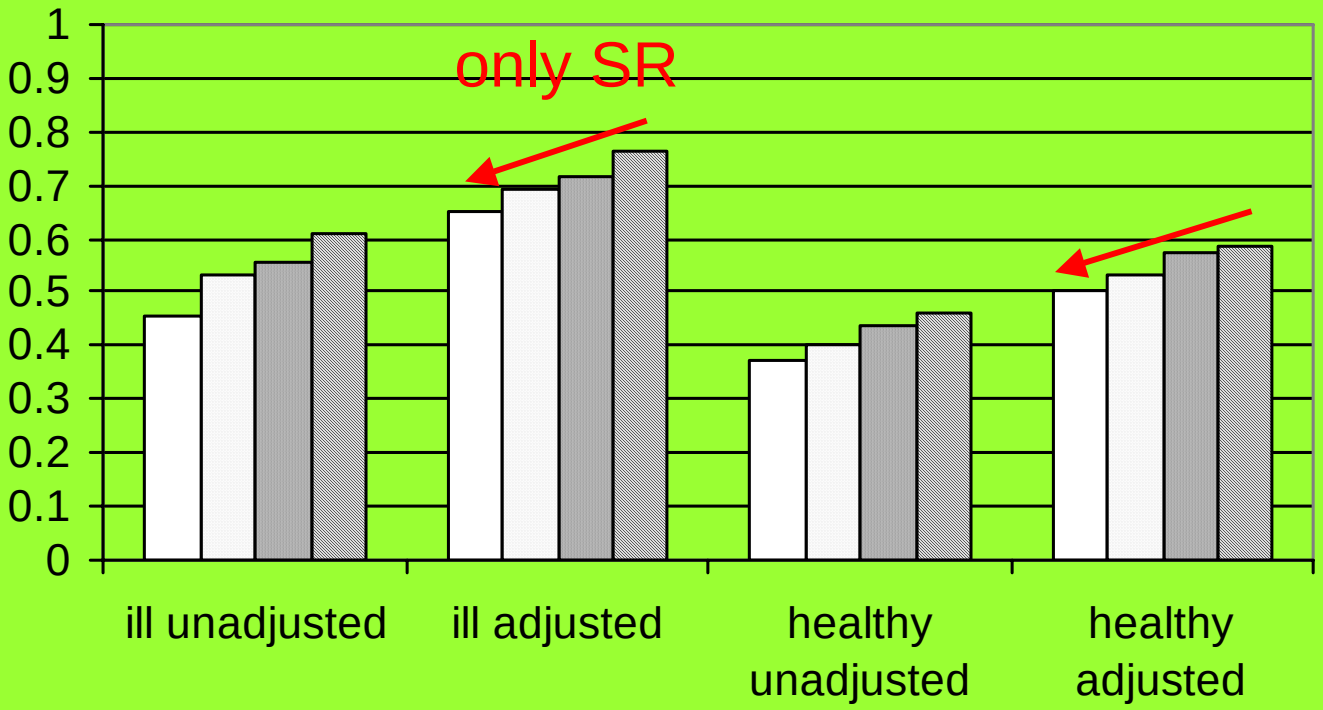

# Results on LR-SR constraints

**Fig. 2 Average yearly expenditure on private health services by health status and income quartile (in euro 2007)**

# Results on LR-SR constraints

**Tab. 2 Proportion of households constrained in the access to private health care**

| | % not constr. | % LR + SR constr. | % SR constr. | % LR constr. |
|---|---|---|---|---|
| *Ill* | 93% | 7% | 6% | 1% |
| *Healthy* | 95.5% | 4.5% | 4% | 0.5% |
| *Total population* | 94.8% | 5.2% | 4.5% | 0.7% |

# Results on LR-SR constraints

**Tab. 3 Proportion of constrained households' expenditures in the access to private health care**

| | % not constr. | % LR + SR constr. | % SR constrained | % LR constrained |
|---|---|---|---|---|
| *Ill* | 91.6% | 8.4% | 8.4% | 0% |
| *Healthy* | 39.4% | 60.6% | 54.8% | 5.9% |
| *Total population* | 58.4% | 41.6% | 38.0% | 3.6% |

# Results on quality

**Tab. 4 Average evaluation of the quality of public health services by health status and income quartile (1_= extremely bad; 10 = very extremely good)**

| | Centre-North Ill | Centre-North Healthy | Centre-North Total | South Ill | South Healthy | South Total |
|---|---|---|---|---|---|---|
| *1* | 5.8 | 4.7 | 5.1 | 4.1 | 2.5 | 3.3 |
| *2* | 5.5 | 5.4 | 5.4 | 4.0 | 3.8 | 3.9 |
| *3* | 4.9 | 6.4 | 5.8 | 4.5 | 4.9 | 4.7 |
| *4* | 5.6 | 6.2 | 6.0 | 5.5 | 4.0 | 4.7 |
| *Total* | *5.4* | *5.7* | *5.6* | *4.4* | *3.7* | *4.1* |

# Preliminary conclusions

- SR constrained individuals are those judging (on average) more of inferior quality public services, hence with a greater incentive to opt out
- SR constrained mostly healthy people, who are looking for diagnostic and preventive care

- Dynamic of health status inequalities: what is the role of diagnostic care in reducing probabilities of health shocks to occur?