Occupational transition in Italy. Evidences from Longitudinal Data from the Labour Force Survey

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Outline of the presentation

- Basic information about Italian LFS
- Methodology for preparation of longitudinal microdata
- Cross-sectional and longitudinal estimates
- Interpretation of Transition matrices
- Longitudinal Analysis of employment
- Longitudinal Analysis of unemployment
The Italian Continuous LFS

Quarterly sample dimension
- 75,000 households / 170,000 individuals
- Average sampling rate: 1/300

Many operators and institutions involved
- Istat (field work organisation and monitoring)
- Municipalities (sample selection)
- Private companies (CATI interviews)
Main methodological and organizational aspects

Reference population
- Persons residing in **private** households

Sample unit
- Private households

Reference period
- All 52 weeks of the year

Field work
- Mixed CAPI / CATI technique
- Professional interviewers

Questionnaire
- Electronic (BLAISE, CONVERSO)
# Household rotation scheme 2-2-2

<table>
<thead>
<tr>
<th>REFERENCE PERIOD</th>
<th>ROTATION GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter 4 2000</td>
<td>A2 B1</td>
</tr>
<tr>
<td>Quarter 1 2001</td>
<td>B2 C1</td>
</tr>
<tr>
<td>Quarter 2 2001</td>
<td>C2 D1</td>
</tr>
<tr>
<td>Quarter 3 2001</td>
<td>A3 D2 E1</td>
</tr>
<tr>
<td>Quarter 4 2001</td>
<td>A4 B3 D2 E2 F1</td>
</tr>
<tr>
<td>Quarter 1 2002</td>
<td>B4 C3 F2 G1</td>
</tr>
<tr>
<td>Quarter 2 2002</td>
<td>C4 D3 G2 H1</td>
</tr>
<tr>
<td>Quarter 3 2002</td>
<td>D4 E3 H2 I1</td>
</tr>
<tr>
<td>Quarter 4 2002</td>
<td>E4 F3 I2 L1</td>
</tr>
</tbody>
</table>

50% of the sample overlaps after 1 quarter and 1 year
Longitudinal data from LFS

Given the rotational pattern, possibility to match records for individual participating in two or more quarters.

For example, in **Quarter 2 2002** we have

- Cross-sectional LFS data
- 12 months Longitudinal LFS data
  - Quarter 2 2001 – Quarter 2 2002
- 3 months Longitudinal LFS data
  - Quarter 1 2002 – Quarter 2 2002

Possibility to “weight” matched individual records in order to obtain coherent longitudinal estimates with the usual quarterly data resulting from the cross-sectional LFS.
Quarterly data (levels) from LFS

Quarterly estimates let us measure net changes in the levels.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001Q2</td>
<td>21.373</td>
</tr>
<tr>
<td>2002Q2</td>
<td>21.757</td>
</tr>
</tbody>
</table>

Net Change +384 thousands

Do not provide information about people entering and leaving employment
Net changes in quarterly levels

are the final result of a high number of gross flows of different nature and different size

Demographic flows:
- Children aged 15 entering working age
- Deaths
- Internal and International migration

Labour status transitions:
- Flows between the three main activity states (employment, unemployment and inactivity)
Demographic Flows for working age population

Population 2001Q2 (15+)

Deaths

People Leaving the Municipality

Longitudinal Population

Children aged 15

People Entering the Municipality

Population 2002Q2 (15+)
Longitudinal population

Longitudinal estimates refer to the population which is resident in the same municipality for the entire 12 months period

excluding

– deaths
– those who have moved to other Italian municipalities (change of residence)
– Migrants to other countries
GESIS – Mannheim, 5 – 6 March 2009

GROSS LABOUR MARKET FLOWS

CHILDREN AGED 15 AND PEOPLE ENTERING MUNICIPALITIES

UNEMPLOYMENT

DEATHS AND PEOPLE LEAVING MUNICIPALITIES

EMPLOYMENT

INACTIVE

ISCRITTI ALL'ANAGRAFE e 15enni

CANCELLATI DALL'ANAGRAFE e MORTI

NON FORZE DI LAVORO

PERSONE IN CERCA DI OCCUPAZIONE

UNEMPLOYMENT

NON FORZE DI LAVORO

INACTIVE

MORTI

CANCELLATI DALL'ANAGRAFE e 15enni

ISCRITTI ALL'ANAGRAFE
Complete Matrix with net and gross flows. Quarter 2 2001 – Quarter 2 2002. *(Thousands)*

<table>
<thead>
<tr>
<th>Labour Status at 2001Q2</th>
<th>Population aged 15+ 2001Q2</th>
<th>Labour Status at 2002Q2</th>
<th>People Leaving the Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Unemployed</td>
<td>Inactive</td>
</tr>
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<td>21.373</td>
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<td>2.271</td>
<td>1.168</td>
<td>559</td>
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<tr>
<td>Inactive</td>
<td>25.422</td>
<td>666</td>
<td>22.963</td>
</tr>
<tr>
<td>Total</td>
<td>49.066</td>
<td>2.139</td>
<td>24.420</td>
</tr>
</tbody>
</table>

| Children aged 15        | 28                         | 7          | 521      | 556    |
| People Entering the Municipalities | 888                 | 64         | 306      | 1.257  |

| Population aged 15+ 2002Q2 | 24.757                     | 2.209      | 25.246   | 49.213 |

Deaths: 63, 565
Leaving the Municipalities: 63, 565, 3, 101, 478, 456, 544, 1.123
Complete Matrix with net and gross flows. Quarter 2 2001 – Quarter 2 2002. *(Thousands)*

<table>
<thead>
<tr>
<th>Labour Status at 2001Q2</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Inactive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>19.543</td>
<td>305</td>
<td>898</td>
<td>20.745</td>
</tr>
<tr>
<td>Unemployed</td>
<td>440</td>
<td>1.168</td>
<td>559</td>
<td>2.167</td>
</tr>
<tr>
<td>Inactive</td>
<td>858</td>
<td>666</td>
<td>22.963</td>
<td>24.488</td>
</tr>
<tr>
<td>Total</td>
<td>20.841</td>
<td></td>
<td></td>
<td>178</td>
</tr>
</tbody>
</table>

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<tr>
<th>People Leaving the Municipalities</th>
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<tbody>
<tr>
<td>Deaths</td>
</tr>
<tr>
<td>63</td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<tr>
<td>565</td>
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<th>Population aged &gt; 14 2001Q2</th>
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<th>Net change due to Longitudinal Population flows + 96</th>
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<th>Net change due to Demographic flows - 35</th>
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<td>-35</td>
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</table>

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<tr>
<th>Net change due to Migratory flows + 323</th>
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<tr>
<th>Net change in cross-sectional employment +384</th>
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### Transition Matrix for longitudinal population. Quarter 2 2001 – Quarter 2 2002. (Thousands)

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<td><strong>2.139</strong></td>
<td><strong>24.420</strong></td>
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</tbody>
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#### Persistence in employment
- **Employed**: 19.543
- **Unemployed**: 440
- **Inactive**: 858

#### Entering employment
- **Employed**: 19.543
- **Unemployed**: 1.168
- **Inactive**: 666

#### Leasing employment
- **Unemployed**: 1.203

#### Net change
- **+96**
- About 2,500 movements
Analysis of Employment
from Quarter 2 1998 – Quarter 2 2002
using 12 months longitudinal data
Persons leaving or entering employment

Number of persons entering employment:
- 1998Q2-1999Q2: 1.451
- 1999Q2-2000Q2: 1.416
- 2000Q2-2001Q2: 1.447
- 2001Q2-2002Q2: 1.298

Number of persons leaving employment:
- 1998Q2-1999Q2: 1.236
- 1999Q2-2000Q2: 1.145
- 2000Q2-2001Q2: 1.119
- 2001Q2-2002Q2: 1.202

Total number of persons leaving or entering employment:
- 1998Q2-1999Q2: 2.687
- 1999Q2-2000Q2: 2.500

Legend:
- Entering employment
- Leaving employment
Employment inflows. Share by labour status at the beginning of the period

Increasing share of inactivity to employment flow
Employment: persistence probabilities by gender

Lower persistence probability for women

Increasing persistence probability

Percentage points


Total  Male  Female
Women have lower persistence probability and higher transition probability to inactivity.

South has lower persistence probability and much higher transition probability to unemployment.
Employment: persistence and transition probabilities by job characteristics. 2001Q2 – 2002Q2

- Total employment
  - 94.2% persistence in employment
  - 1.5% transition to unemployment
  - 4.3% transition to inactivity
- Self Employed - Full time
  - 93.9% persistence in employment
  - 0.9% transition to unemployment
  - 5.2% transition to inactivity
- Self Employed - Part time
  - 77.1% persistence in employment
  - 3.5% transition to unemployment
  - 19.3% transition to inactivity
- Permanent - Employee - Full time
  - 96.2% persistence in employment
  - 1.7% transition to unemployment
  - 11.2% transition to inactivity
- Permanent - Employee - Part time
  - 92.6% persistence in employment
  - 1.7% transition to unemployment
  - 5.7% transition to inactivity
- Temporary - Employee - Full time
  - 85.6% persistence in employment
  - 7% transition to unemployment
  - 7.5% transition to inactivity
- Temporary - Employee - Part time
  - 80.7% persistence in employment
  - 6.2% transition to unemployment
  - 13% transition to inactivity

High segmentation in persistence and transition

- Total employment "non standard"
  - 56.5%
  - Persistence in "not standard" employment: 29.4%

- Self Employed - Part time
  - 47.4%
  - Persistence in "not standard" employment: 29.7%

- Permanent - Employee - Part time
  - 70.3%
  - Persistence in "not standard" employment: 22.2%

- Temporary - Employee - Full time
  - 43.1%
  - Persistence in "not standard" employment: 42.5%

- Temporary - Employee - Part time
  - 63.9%
  - Persistence in "not standard" employment: 16.8%

Legend:
- persistence in "not standard" employment
- transition to "standard" employment
- transition to unemployment
- transition to inactivity
Analysis of Unemployment 
from Quarter 2 1998 – Quarter 2 2002 
using 12 months longitudinal data
Unemployment: persistence probability by gender

Percentage points

Total  Male  Female

Increasing persistence probability
Unemployment: persistence probability by region

- **Increasing persistence probability for South**
- **Decreasing persistence probability for North**

- **Percentage points**

- **Time periods:**
  - 1998Q2-1999Q2
  - 1999Q2-2000Q2
  - 2000Q2-2001Q2
  - 2001Q2-2002Q2

- **Regions:**
  - North
  - Center
  - South
Unemployment: transition probability to employment by duration of search

Transition probability is inversely correlated to the duration of search for employment.

Chances to get an Employment for long term Unemployed are reducing.
Unemployment: persistence and transition probabilities by sex and NUTS1 region. 2001Q2 – 2002Q2

- Higher probability to get an employment for men
- Higher probability to leave labour force for women
- Huge differences in the persistence and transition probabilities between north and south
Main Conclusions

Potentials

- Longitudinal data provide extremely useful insight on labour market dynamics
- Are obtained from the EU-LFS, without new financial investment, but with high investment in methodology
- Can be produced regularly on quarterly bases (if human resources are available in the NSI’s)

Limitations

- EU-LFS is not a panel survey, thus longitudinal estimates can refer only to a specific longitudinal reference population
- Known totals for this longitudinal reference population have to be available for weighting
- Methods for non-response treatment have to be used to reduce bias
- Methods to ensure coherency with cross-sectional estimates have to be used
THANK YOU

FOR YOUR ATTENTION

.... AND FOR

YOUR GREAT PATIENCE
Longitudinal data let us compute estimates of:

- Labour market transitions
  - Between the three main activity states (employment, unemployment and inactivity)
  - Between job characteristics (employee vs self-employed; temporary vs permanent; full-time vs part-time).

- Transition and persistence probabilities for “employment”, “unemployment” and “inactivity”
  - Persistence probabilities in employment
  - Transitions probabilities from temporary to permanent jobs
  - Transitions probabilities from part-time to full-time work.
  - Persistence probabilities in unemployment
  - Transitions probabilities from unemployment to employment
Employment outflows. Share by labour status at the end of the period

Increasing share of employment to inactivity flow
Employment: persistence probability

Percentage points

Increasing persistence probability

1998Q2-1999Q2: 93.7
1999Q2-2000Q2: 94.3
2000Q2-2001Q2: 94.5
2001Q2-2002Q2: 94.2
Employment: persistence probabilities by region

Lower persistence probability for South

Increasing persistence probability for Center
Employment: persistence and transition probabilities. 1998Q2–2002Q2

Increasing persistence probability in the first 3 years
Decreasing transition probability to unemployment in the same period
Employment: persistence probabilities by job characteristics.

High segmentation in persistence in employment
High reduction of the “not-in-employed” to “standard Employment” as share of all inflows into “standard employment”
Unemployment: persistence and transition probabilities. 1998Q2–2002Q2

Increasing persistence probability

Decreasing transition probability to employment
Complete Matrix with net and gross flows. Quarter 2 2001 – Quarter 2 2002. *(Thousands)*

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Demographic Flows for working age population

Population 2001Q2 (15+) = 49.066

Deaths and People Leaving the Municipality = 1.667

Longitudinal Population = 47.399

Children aged 15 and People Entering the Municipality = 1.814

Population 2002Q2 (15+) = 49.213