

A simulation of crisis' effects between generations: will the social security reform balance protections?

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Main objectives



- Estimation of the impact of crisis on labour income
- Simulation of the role of social safety nets in reducing income losses
- Comparison between pre and post reform protections, adopting a generational perspective

How?

- Setting-up a **flexible, data driven model** that simulates labour market trends for a representative sample of the Italian population
- Using **probabilistic transitions** between conditions (e.g. in and out of employment) to update the employment status
- Recursively applying transitions in **discrete units of time** (e.g. quarters) to sample individuals

Methodology (1 / 3)

- **Basic survey:** ILFS (ISTAT) → applying transitions between statuses on the 2008-I survey
- **Unit of time:** for each quarter
- **Period:** 2008-I until 2012-IV
- **Geographical area:** Italian macro-regions

Methodology (2/3)

- **Estimation of transition probabilities of status changes:**
 - **to find and to loose job** → comparison between quarterly employment rates on ILFS
 - **to move from full time to part time and viceversa** → comparison between quarterly employment rates on ILFS
 - **to go in short-working-time scheme (CIG)** → trough INPS data
- **Imputation of status changes: Monte Carlo method**
- **This procedure is applied within cells** → age classes, geog. areas, sectors, type of contract, type of worker

Methodology (3/3)

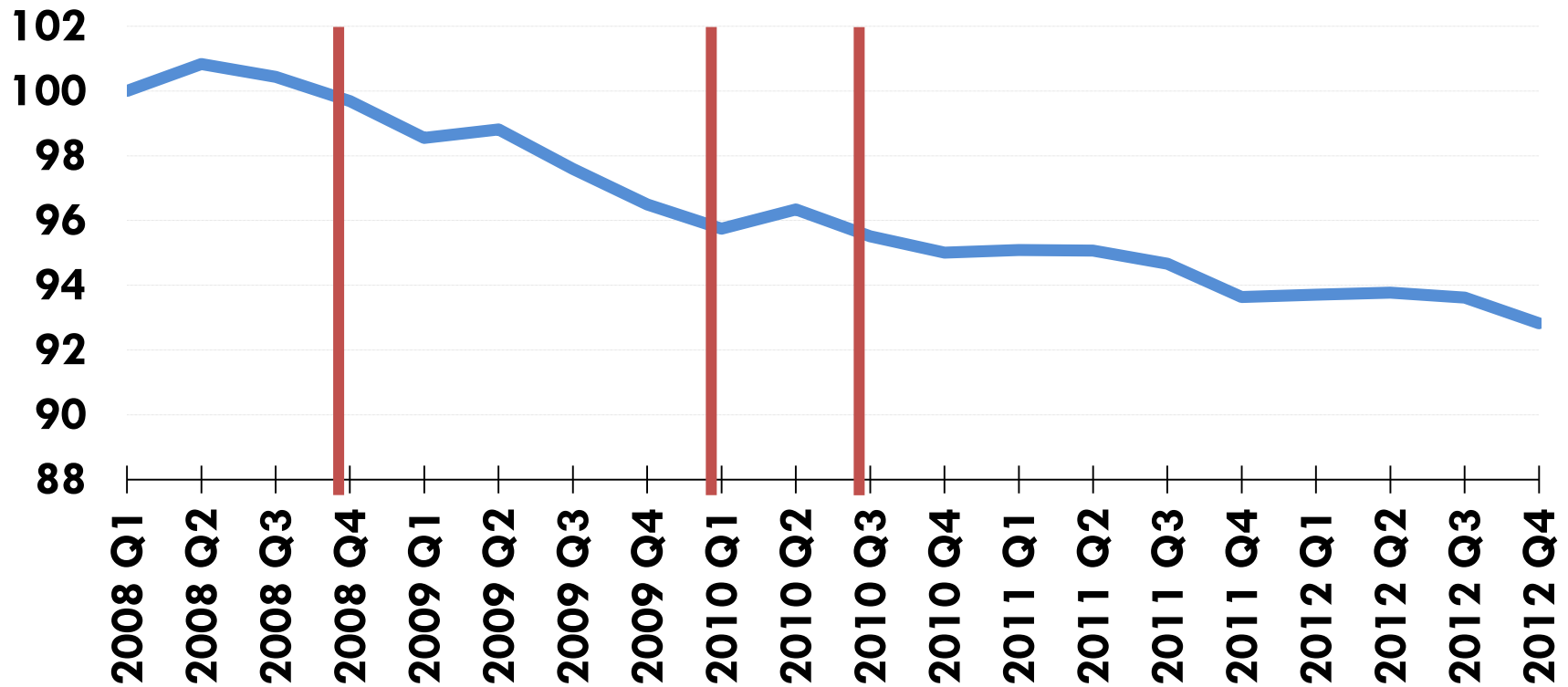
- **Social safety nets simulated**
 - Out with the mobility allowance
 - Out with the ordinary unemployment benefit
 - Out with the unemployment benefit with low requirements
 - Out without subsidies for lack of requirements
- **Wage supplement simulated**
(ordinary, extraordinary and “in deroga”)
- **Decreasing/increasing in income due to the change in working hours** (from full time to part time and viceversa)

Chi-Squared Test for equality of joint distribution

Quarter	Simulation result – Workers (%)								P- Value
	North East- Under 35	North East- Over 35	North East- Under 35	North West- Over 35	Centre- Under 35	Centre- Over 35	South- Under 35	South- Over 35	
2008 Q2	9,3	20,3	6,8	14,8	6,2	14,4	9,0	19,3	1
2008 Q3	9,2	20,4	6,9	14,9	6,1	14,4	8,8	19,2	1
2008 Q4	9,2	20,4	6,8	15,1	6,1	14,6	8,5	19,2	1
2009 Q1	9,1	20,6	6,8	15,1	6,0	14,9	8,4	19,1	1
2009 Q2	8,9	20,8	6,6	15,2	6,1	14,8	8,3	19,3	1
2009 Q3	8,9	20,9	6,6	15,1	6,2	14,7	8,3	19,4	1
2009 Q4	8,9	21,0	6,5	15,1	6,0	14,8	8,2	19,4	1
2010 Q1	8,8	21,0	6,5	15,4	6,0	15,0	7,9	19,3	1
2010 Q2	8,7	21,0	6,4	15,4	5,9	15,1	8,0	19,5	1
2010 Q3	8,7	21,1	6,4	15,4	6,0	15,0	8,0	19,5	1
2010 Q4	8,7	21,2	6,4	15,3	5,9	15,0	8,0	19,5	1
2011 Q1	8,7	21,3	6,4	15,5	5,8	15,0	7,9	19,4	1
2011 Q2	8,5	21,2	6,3	15,5	5,8	15,1	8,1	19,5	1
2011 Q3	8,5	21,2	6,3	15,7	5,8	15,0	8,0	19,5	1
2011 Q4	8,6	21,2	6,2	15,7	5,6	15,0	8,0	19,6	1
2012 Q1	8,4	21,5	6,2	15,7	5,6	15,1	8,0	19,5	0,99999
2012 Q2	8,3	21,5	6,1	15,7	5,7	15,2	7,9	19,6	0,99999
2012 Q3	8,3	21,5	6,1	15,9	5,6	15,2	7,8	19,7	0,99999
2012 Q4	8,3	21,5	6,0	16,0	5,5	15,3	7,8	19,7	0,99998

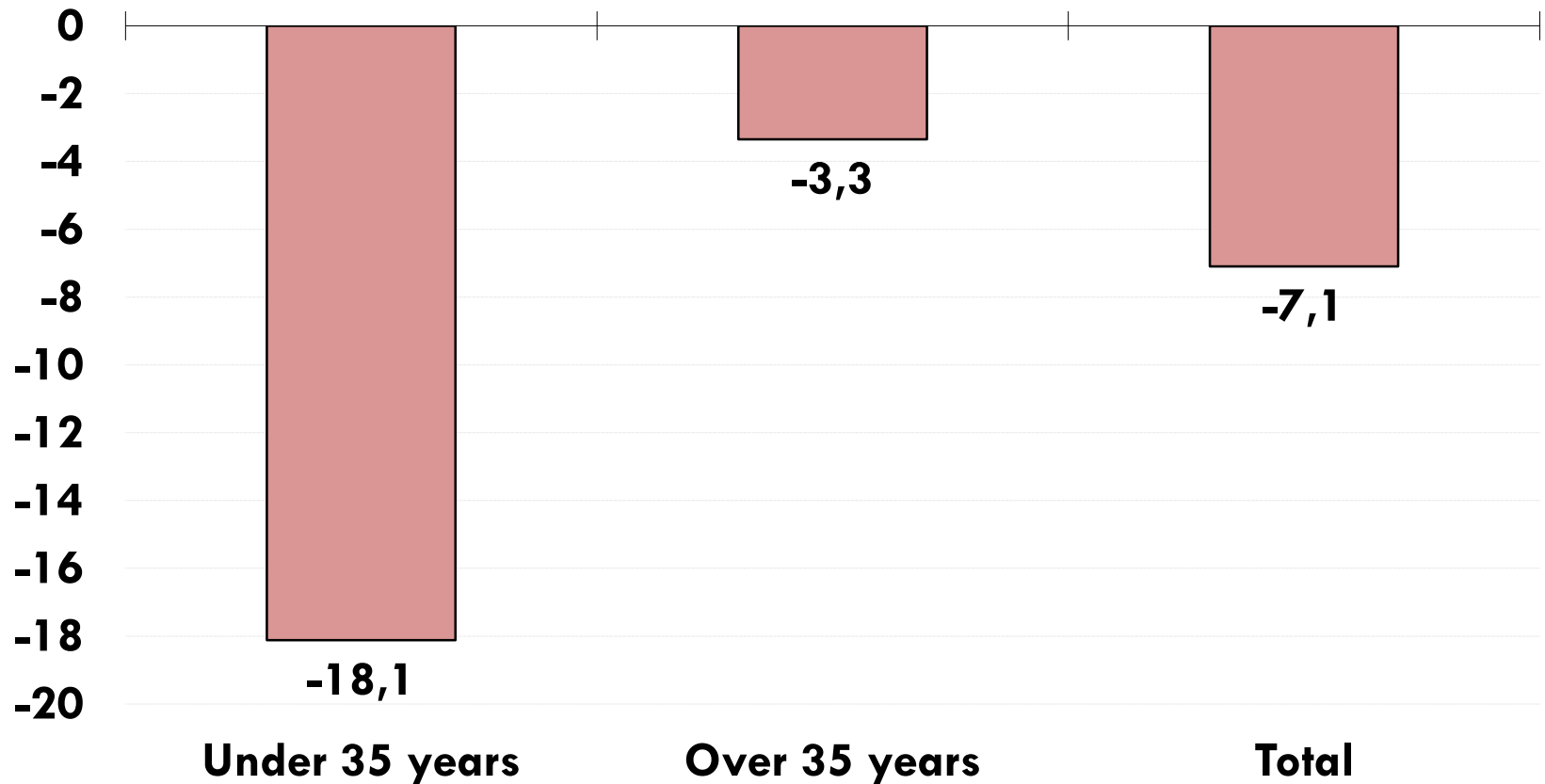
The impact of crisis on income

Quarterly average income from 2008 to 2012
First quarter of 2008 equal to 100%



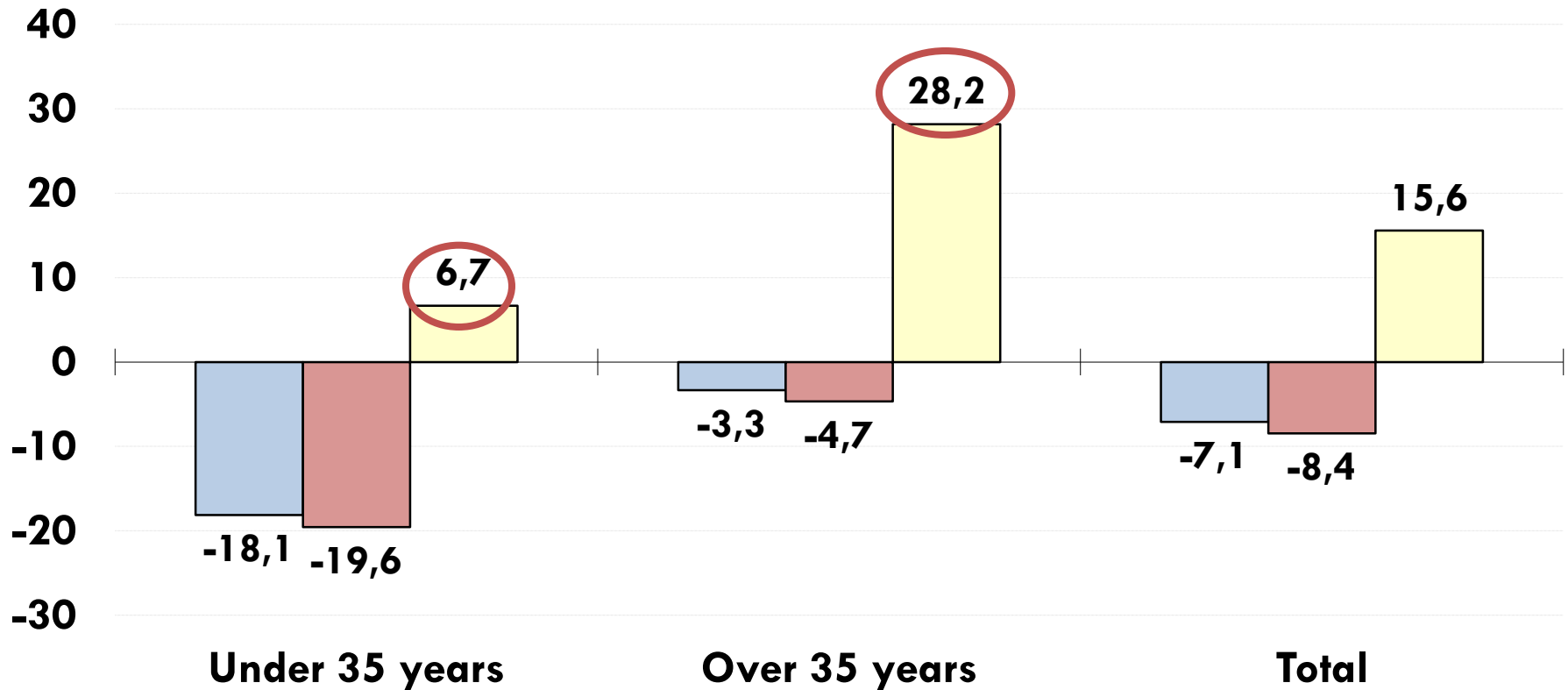
Differences between generations

% Var. annual average income from 2008 to 2012



The role of social safety nets

% share of income recovered with safety nets



■ Var % with safety nets ■ Var % without safety nets ■ Share(%) recovered with safety nets

The Labour Market Reform

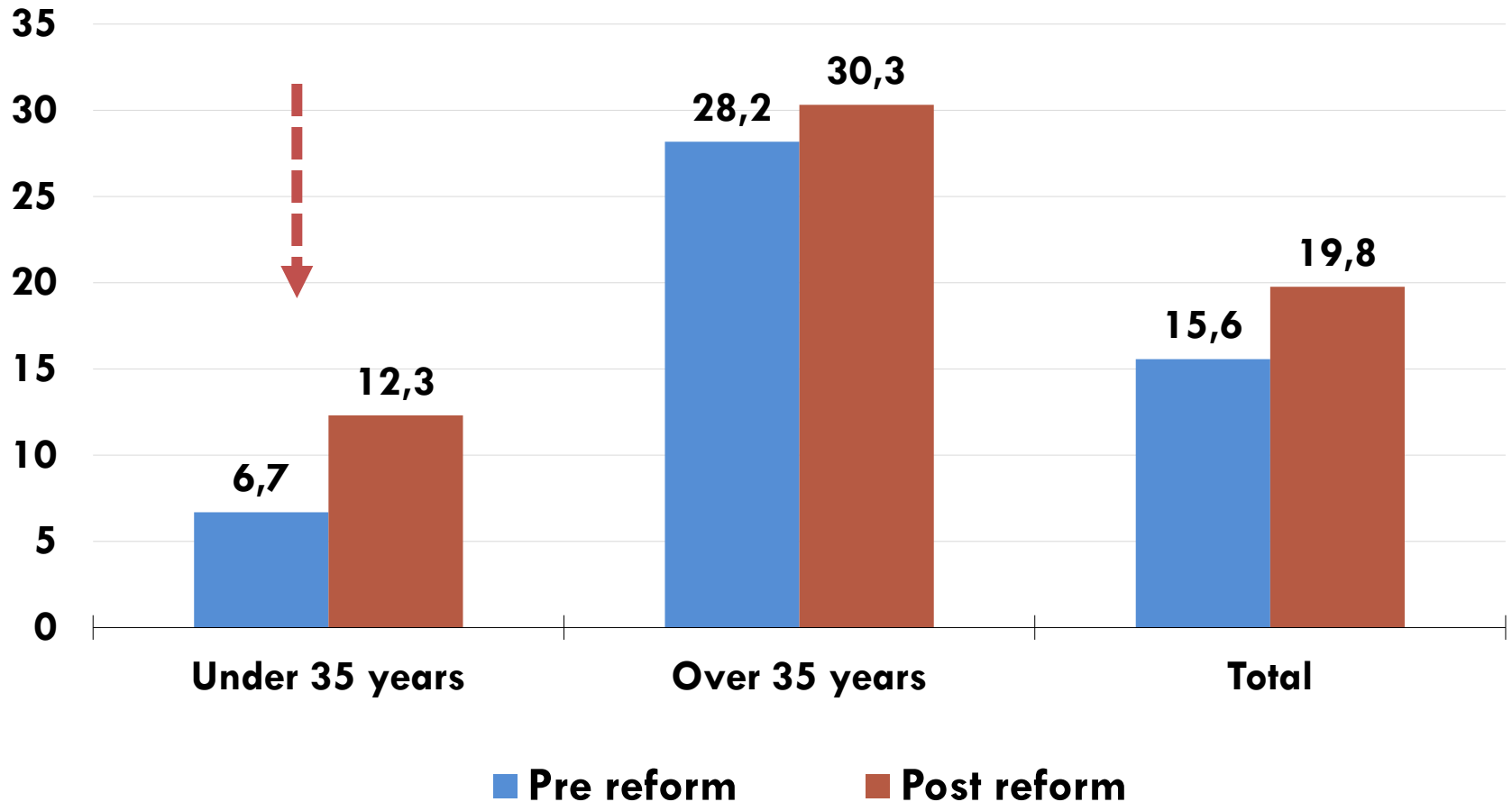
- The labour market reform (l.92/12) intervened on three aspects in order to realize a **more inclusive and dynamic labour market in order to reduce generational differences**
 - More exit flexibility
 - More entry rigidity
 - **Social safety nets**
- **Replacement of ordinary and reduced unemployment benefits with Aspi and Mini-Aspi**
- **Abolition of Mobility allowance from 2017**
- Contribution for employer-coordinated freelance workers became structural
- Extension, harmonization, rationalization CIG

Changes on protection in case of unemployment

- Aspi and Mini-Aspi differ for the duration **but not for the amount** given (as it was for old unemployment benefits).
- Aspi and Mini-Aspi **involve all employees** (also categories excluded in the past system such as apprentices).
- **Abolition of the insurance requirement** for Mini-Aspi
- **Higher duration for Aspi**
- **Higher amount for Aspi and Mini-Aspi**

Pre and Post Reform: differences between generations

% share of income recovered with safety nets



Conclusions

- **The economic crisis moved to the labour market with a strong impact on income and with differences between generations.**
- **The social security system reduce the crisis's negative impact on income but preserve the duality already present in the labour market.**
- **The Labour Market Reform tried to balance these different protections. According to the simulation, it succeeded to do that, but differences remain high.**

Future developments

Application to administrative data “*Compulsory Communications Data*”

Advantages

- No representativeness limitations
- Continuous unit of time
- Hiring and firing flows

Disadvantages

- Missing information on income (matching with other administrative data sources?)
- Missing information on wage supplement (except “in deroga”)

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