

Exploring the statistical matching possibilities for the European Quality of Life Survey

Session 15 – Methodology: Linkage and Modelling

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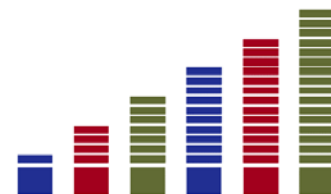
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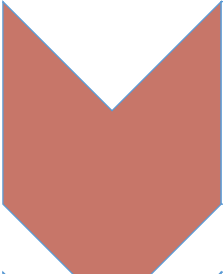
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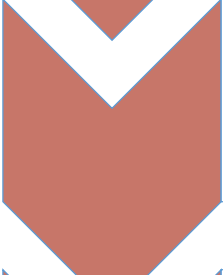
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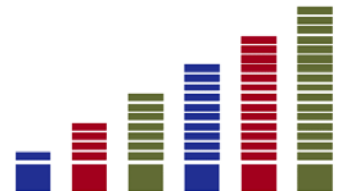


I. INTRODUCTION

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- Increasing growth of collected data
 - Interest on interrelationships of several socio-economic aspects

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- Call for robust methodologies to combine different sources of information

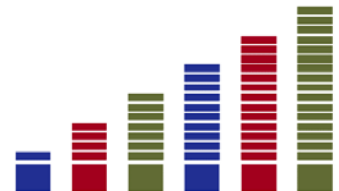
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- One alternative is the statistical matching



I. INTRODUCTION

Statistical matching:

- Aims to link specific variables from independent sample surveys referred to the same target population, using information shared between them as a link
- Potential benefits: possibility to expand the analysis incorporating different angles without increasing response burden or costs



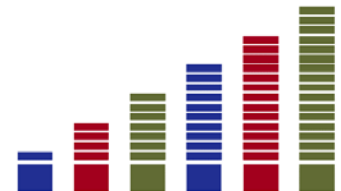
I. INTRODUCTION



EQLS
EU-SILC
ESS
EUROBAROMETER

These sources provide different and complementary information on quality of life

Merging them would give a broader picture

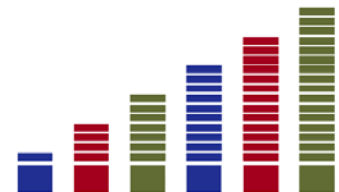


I. INTRODUCTION



We follow the work published by Eurostat in 2013 where data from 2007 was used to assess the link between both sources

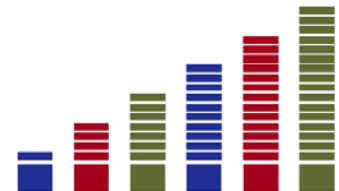
The aim is to analyse if the new data available show improvements in the matching of a selected set of indicators



II. DATA

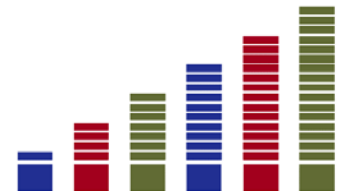
European Quality of Life Survey (EQLS)

- Questionnaire-based interview survey that covers adult (18+) population of all the EU Member States, including also the EU Candidate Countries as well as other European countries.
- Carried out by Eurofound in 2003, 2007, 2011, with the next round taking place in 2016.
- Focused on both objective conditions and subjective assessments, on both individual living conditions and societal characteristics.



European Union Statistics on Income and Living Conditions (EU-SILC)

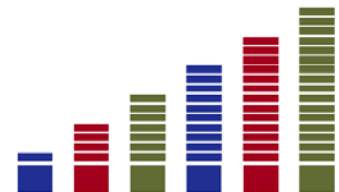
- Annual data source launched in 2003 and coordinated by Eurostat, based on data collected by National Statistical Institutes.
- Its reference population is defined as all private households and all persons aged 16 and over within the household residing in the territory of the Member States at the time of data collection.
- Provides data on income, poverty, social exclusion and living conditions in the European Union.



II. DATA

TARGET INDICATORS - 2011 EU-SILC:

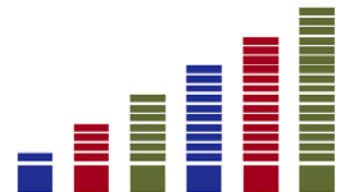
- **At-risk-of-poverty rate:** Share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income after social transfers.
- **Severe material deprivation rate:** Share of population with an enforced lack of at least four out of nine material deprivation items⁹ in the 'economic strain and durables' dimension that represent basic living standards in most of EU MSs.
- **Low work intensity rate:** Share of people living in households where adults work less than 20% of their potential during the income reference year.



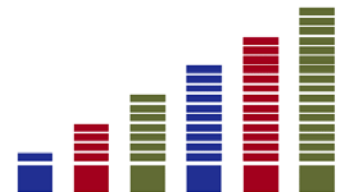
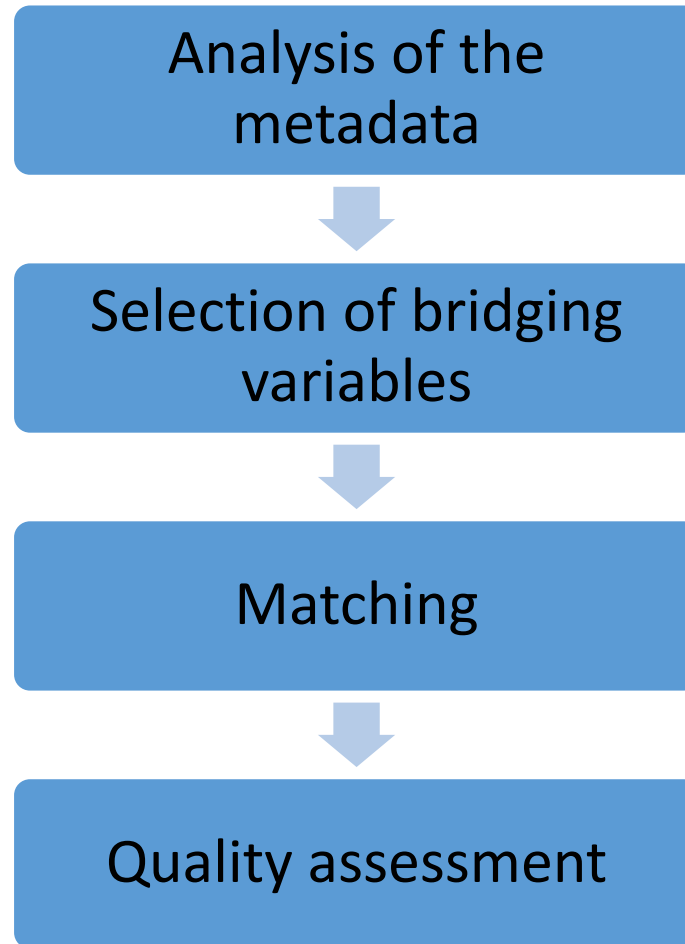
II. DATA

TARGET INDICATORS - 2011 EQLS:

- **Overall life satisfaction:** All things considered, how satisfied would you say you are with your life these days?
- **Trust in institutions:** Please tell me how much you personally trust each of the following institutions: the press/government/legal system/parliament/police/political parties
- **Recognition:** I don't feel the value of what I do is recognised by others.
- **Social exclusion:** I feel left out of society; Life has become so complicated today that I almost can't find my way; Some people look down on me because of my job situation or income.



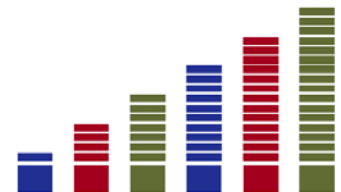
III. METHODOLOGY



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ANALYSIS OF THE METADATA:

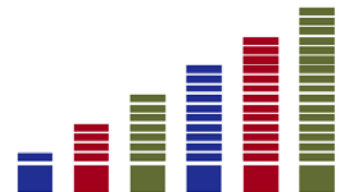
- It covers the comparison of the reference populations, the sample designs, the survey methods and the concepts involved.
- Population of reference.
- Variables harmonization.



III. METHODOLOGY

SELECTION OF BRIDGING VARIABLES:

- Drop variables with a high non-response rate
- Drop variables with a small sample size for some categories
- Consistence of the marginal distributions:
 - Overlap of confidence intervals
 - Hellinger distance to quantify the similarity between distributions
- Explanatory power :
 - Association with the target variables
 - Regression



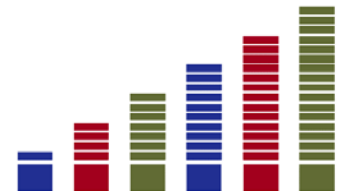
III. METHODOLOGY

MATCHING:

- Hot-Deck Method
- Regression

QUALITY ASSESMENT:

- Uncertainty intervals for the joint distribution of life satisfaction and severe material deprivation



IV. CONCLUSIONS

- Important efforts done in harmonization of core variables
- Improvement of the matching
- Future:
 - ESS guidelines on standardisation of core social Variables
 - 2016 New modules on public services

