

# Measurement Error in Retrospective Reports of Unemployment

RSS 2012 Conference

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# Outline

- Assessment of the prevalence of measurement error.
- Investigation of the error-generating mechanisms.
- Conclusions and description of the next steps.

# Retrospective Questions

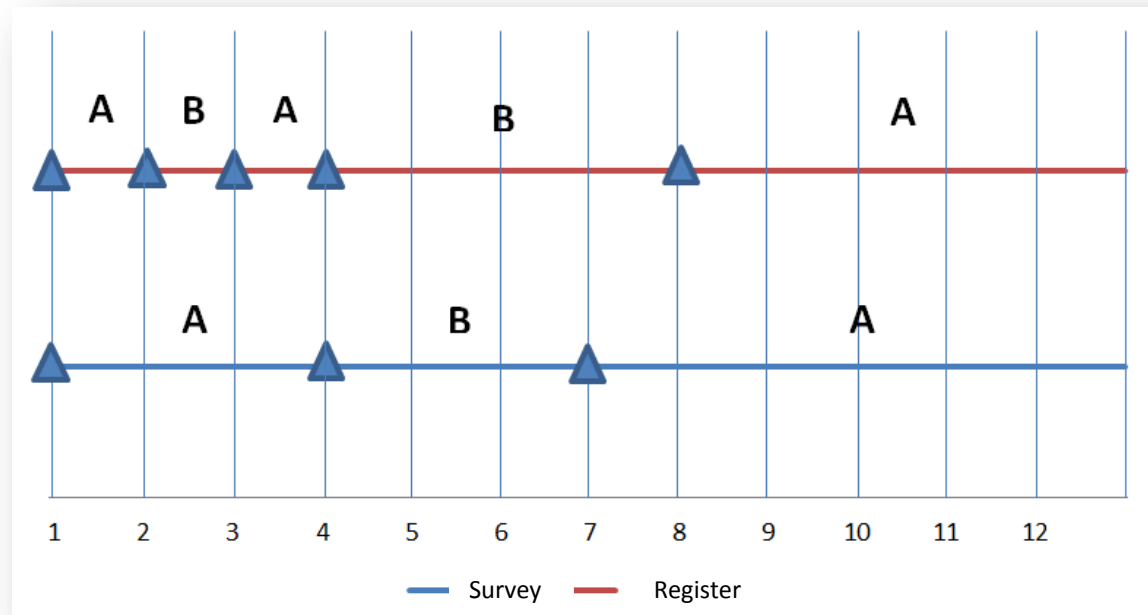
- Retrospective questions are those where interviewees report events that took place in the past.
- Advantages: they capture whole processes, do not suffer from attrition, cheaper.
- One main disadvantage: they are prone to measurement error.

# Prevalence of Measurement Error

- In order to assess the prevalence of measurement error we use a validation design.
- Data from the “Longitudinal Study of the Unemployed” and the Swedish register of unemployment.

# Prevalence of Measurement Error: Three Forms

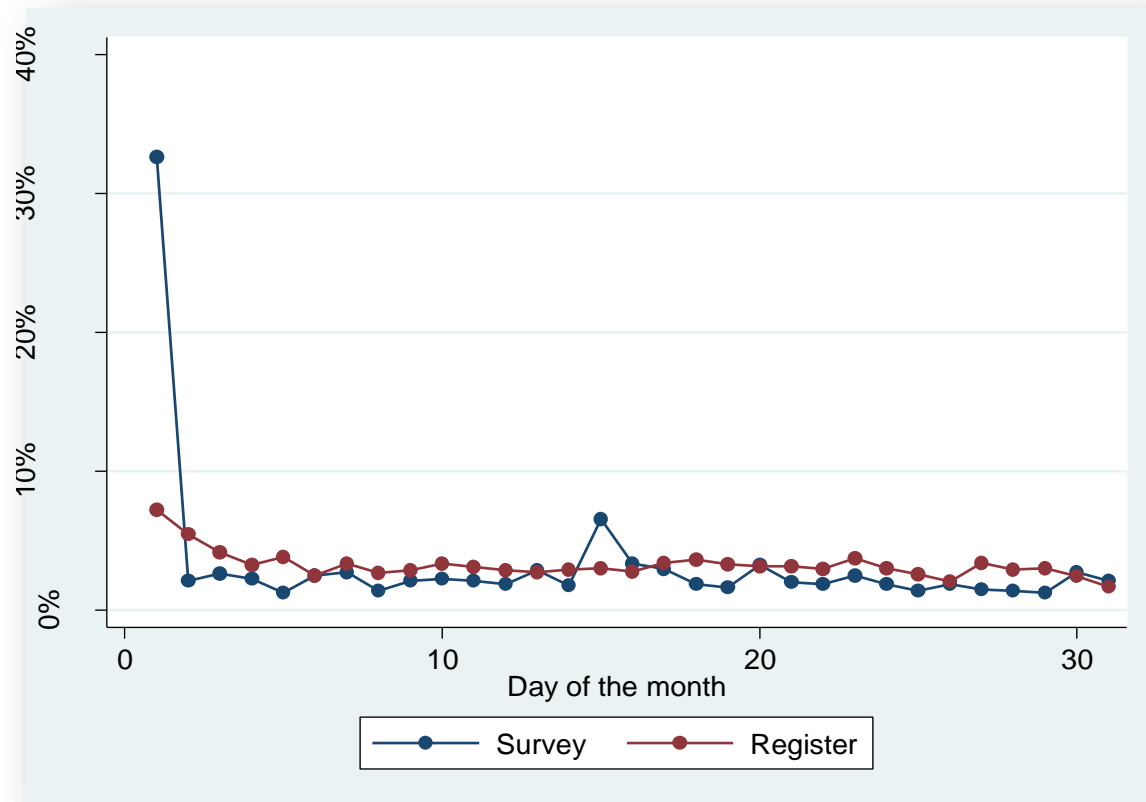
- Miscounting, misdating, and misclassification



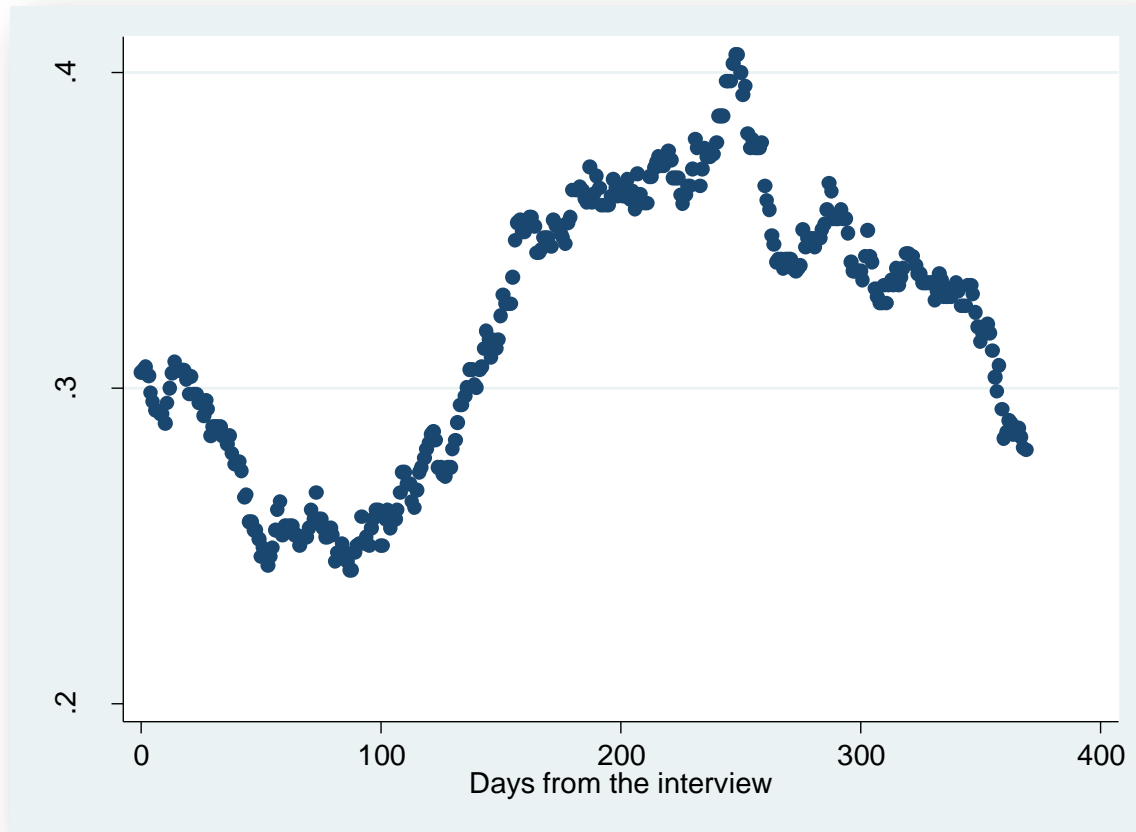
# Prevalence of Measurement Error: Miscounting

Subjects reporting spells correctly	54%
Spells reported / spells registered	82.3%

# Prevalence of Measurement Error: Misdating



# Prevalence of Measurement Error: Misclassification





# Error Generating Mechanisms

- Hypothesis 1: Measurement error increases with recall time.
- Hypothesis 2: Groups of the population more embedded in the labour market generate better reports.
- Hypothesis 3: Long-term unemployment is underreported.
- Hypothesis 4: More complex work histories are more prone to measurement error.

# Error Generating Mechanisms

- Three models using response variables derived from the three forms of measurement error: omitted spells, underreported durations, misclassified person-day cases.
- Controlling for the following variables: age, gender, work experience, time spent in unemployment, number of spells of unemployment, and interview mode.

# Error Generating Mechanisms

- Hypothesis 1: Measurement error increases with recall time between questions, but not necessarily within questions.
- Hypothesis 2: Age and gender have no effect, although experience was inversely associated with misclassification.
- Hypothesis 3: The longer the time in unemployment the greater the underreports of durations but the lower the probability of omitting spells.
- Hypothesis 4: Number of spells and probability of omission are directly associated .

# Conclusions

- The validity of retrospective reports of unemployment needs to be questioned.
  - Designers of questionnaires should simplify the interviewer's task.
  - Consider using retrospectively reported work histories in a simpler form.
- Both the error generating mechanisms and the quality of the data seem to vary according to the form used to define measurement error.
- The level of measurement error might have been exaggerated because of errors in the register.

# Next Steps

- Assessment of the impact of measurement error on event history analysis models.
- Comparison of the effectiveness of methods for the adjustment of the measurement error seen here.