

Measuring Unemployment

Using Administrative data to complement the Labour Force Survey

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What is unemployment?

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Official (LFS) definition

- Not in employment
- Actively searching for a job
- Willing to start work within the next 15 days

This definition is harmonized across countries (EUROSTAT, OECD, ILO)

→ Registered as unemployed

Depends on each country:

→ Count benefit recipients (*passive*)

→ Count employment seekers (*active*)

Academic definition

Depends on research focus

- Not in employment
- Willing to accept a job if offered one
- Sometimes active search, sometime not

Why it matters?

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...but there can be big disparities in measured unemployment

→ Illustrate these points with data from Spain

The Spanish Labour market at a glance

- 30% of all jobs are temporary contracts (defined end date) since the beginning of the '00s
- 90% of new hires are into temporary contracts
- Less than 8% of temporary contracts are converted into regular employment
- Pretty generous unemployment insurance
- Large shares of long-term unemployment (>12 months)

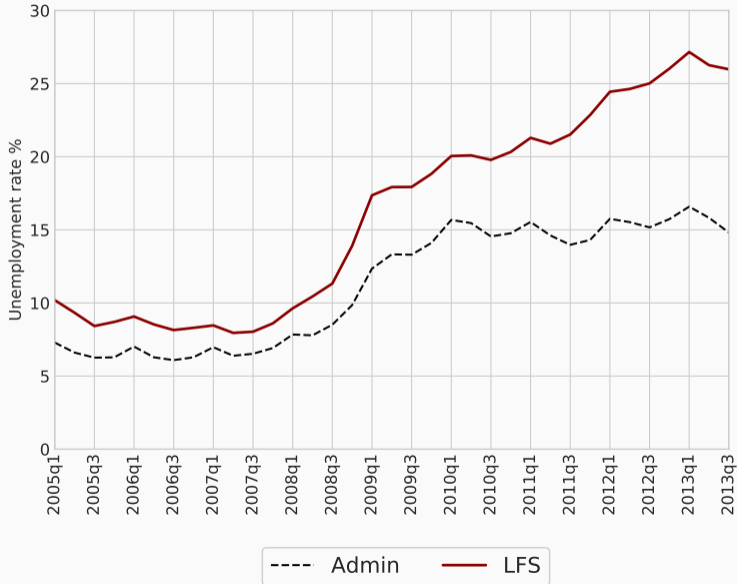
Labour Force Survey (LFS)

- National Survey
- Quarterly frequency
- 100K sample (with weights)
- Rotating panel (6 q each)
- Available since 1975

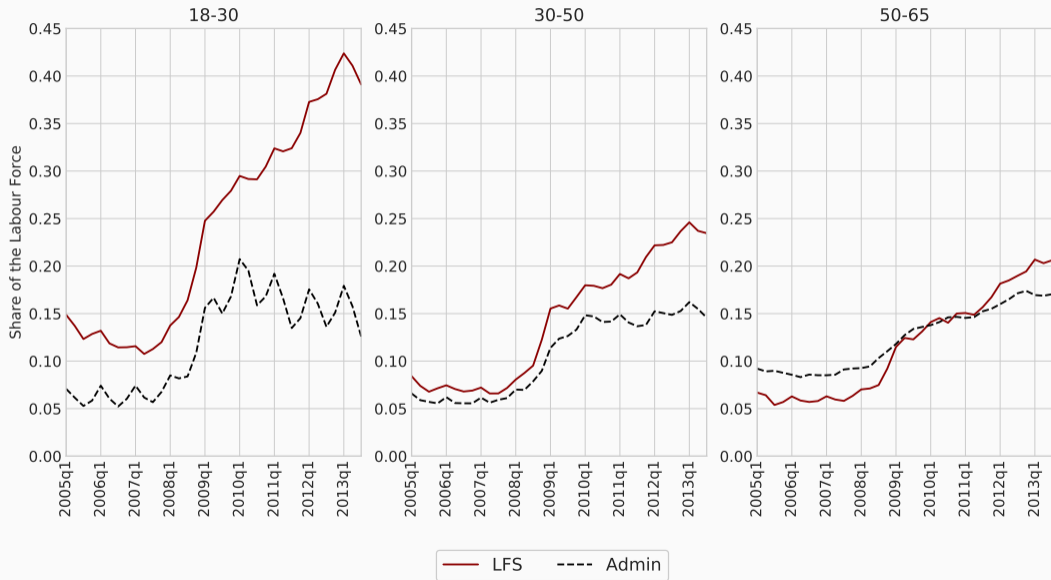
Working Lives Sample

- Full working histories
- Daily records
- 1M sample (no weights)
- Available since 2004
- Only unemployed with benefits are registered

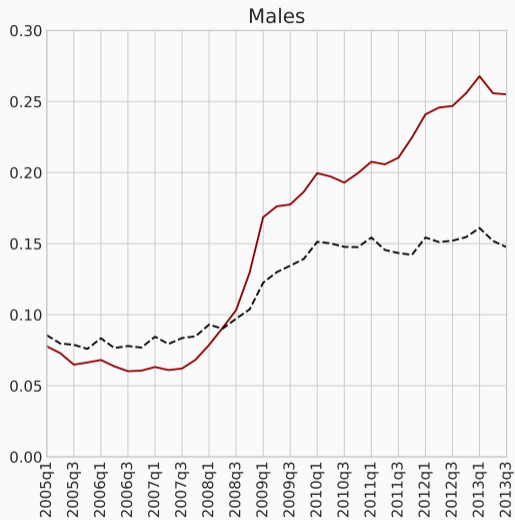
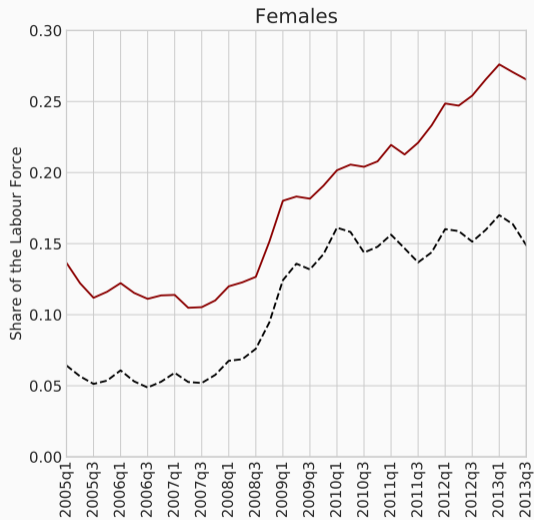
Unemployment rate



Unemployment rate by age



Unemployment rate by gender



— LFS - - - Admin

Where are the missing unemployed?

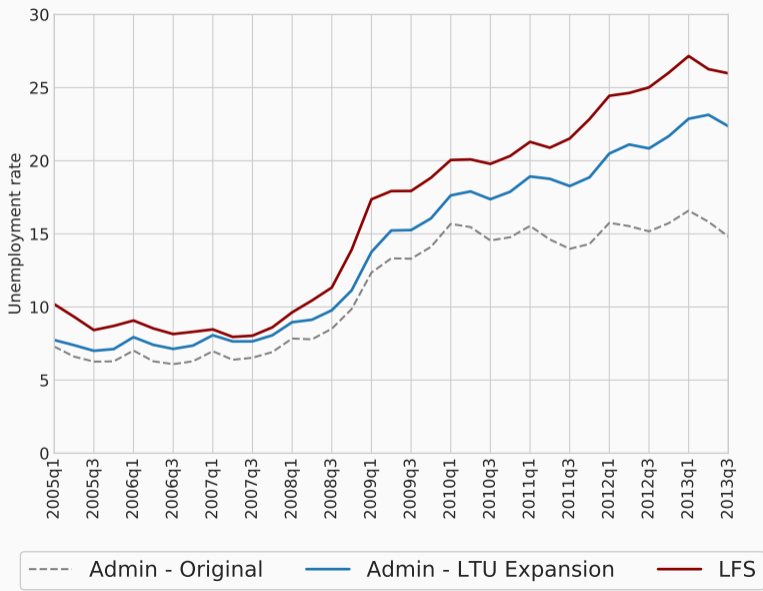
Unemployed whose benefits expire

A worker can claim unemployment benefits for 4 months per year employed, with a maximum of 2 years

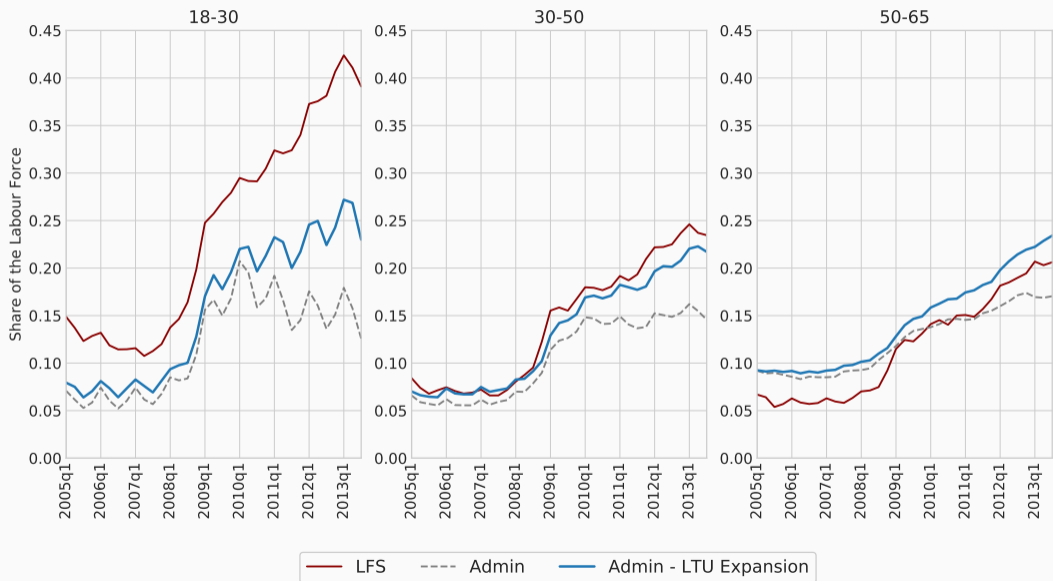
Those who exceed that time loses their benefits and *disappear* from administrative records

→ Add those workers who lose their benefits: **Long-term Unemployment Expansion**

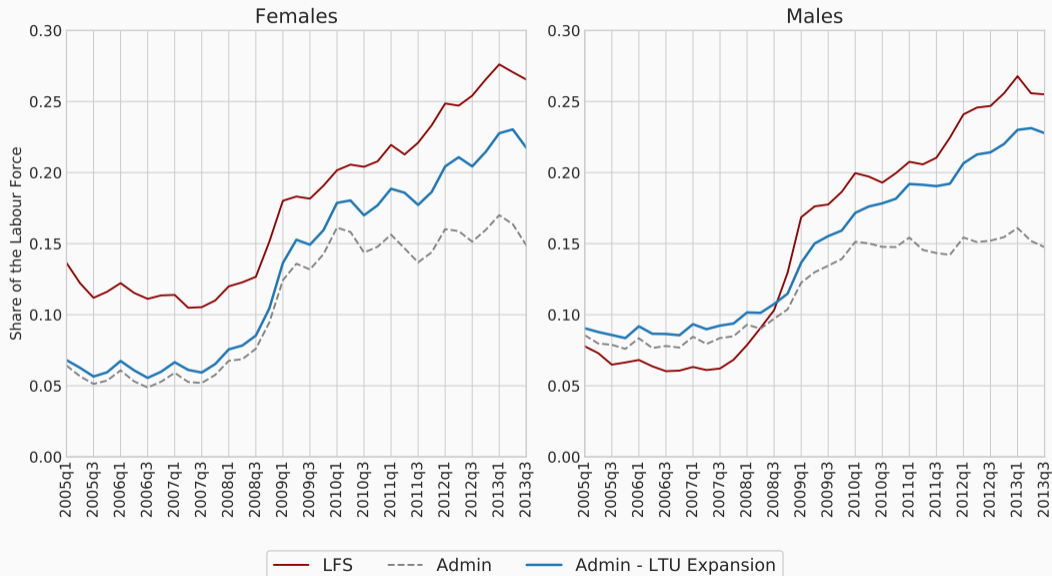
LTU expansion



LTU expansion by age



LTU expansion by gender



Where are the missing unemployed?

Unemployed with no right to claim

Young workers with short temporary contracts often do not meet the minimum requirements to claim unemployment benefits (12 months of employment contributions to national insurance)

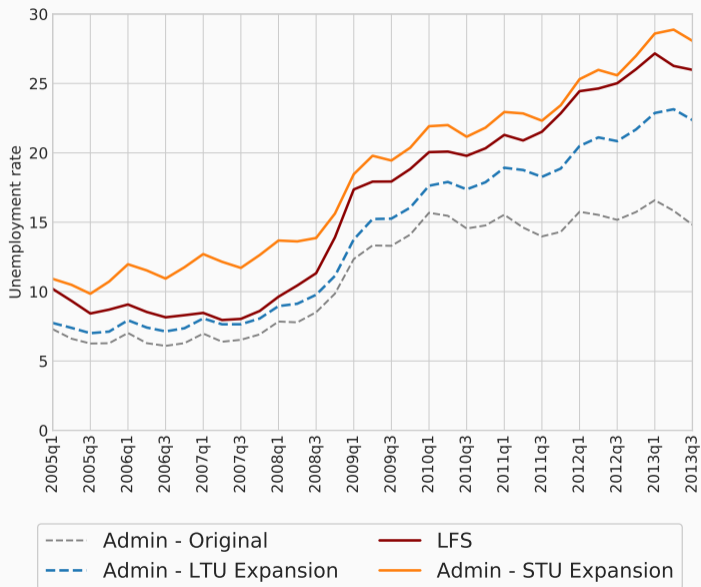
Quitters and the self-employed are also not eligible (so they are not registered as unemployed either)

- Add workers in these categories with gaps between employment spells: **Short-term (STU) Unemployment Expansion**

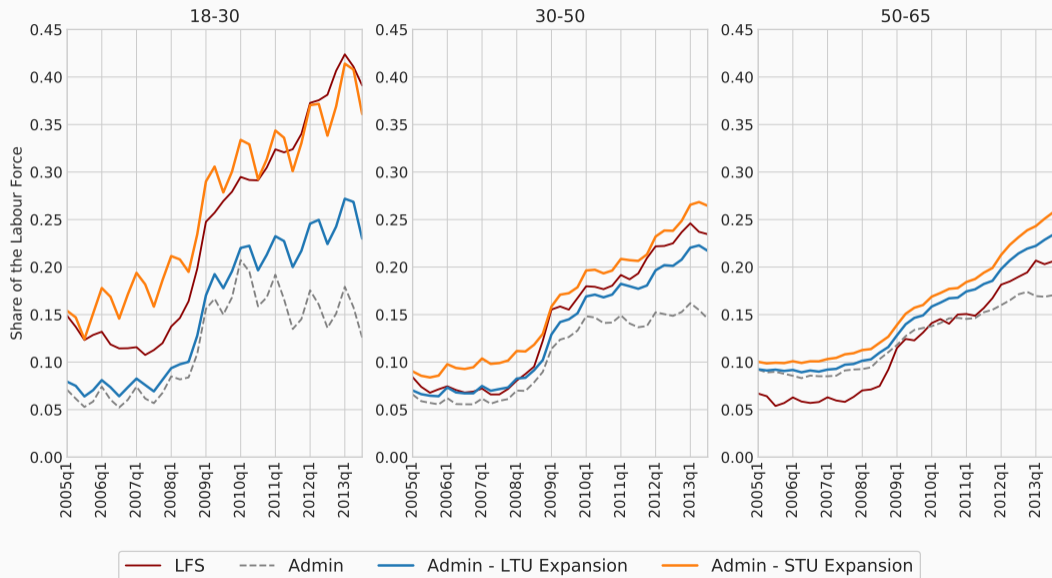
◀ recalls

◀ other approachers

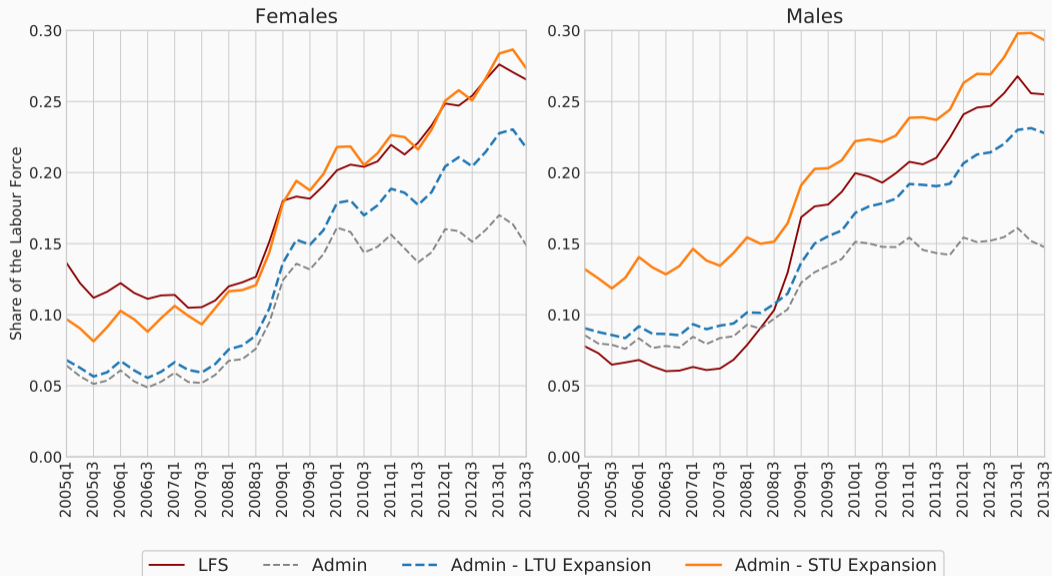
STU expansion



STU expansion by age



STU expansion by gender



Who are the short-term unemployed?

- Mostly young workers: more than 50% are younger than 30 years old
- Approximately 70% unemployed without the right to claim, 20% quits and 10% self-employment
- Most of them are between temporary contracts or self-employment spells

These spells are **frictional unemployment**

Frictional unemployment in the LFS

Because of its format, the LFS is often not able to capture frictional unemployment:

- Quarterly frequency
- Attrition problems (non-responsiveness)

Administrative data can help to measure very short unemployment that the LFS may fail to capture

- If employment becomes more unstable, measuring frictional unemployment will be more important

Applications: attrition

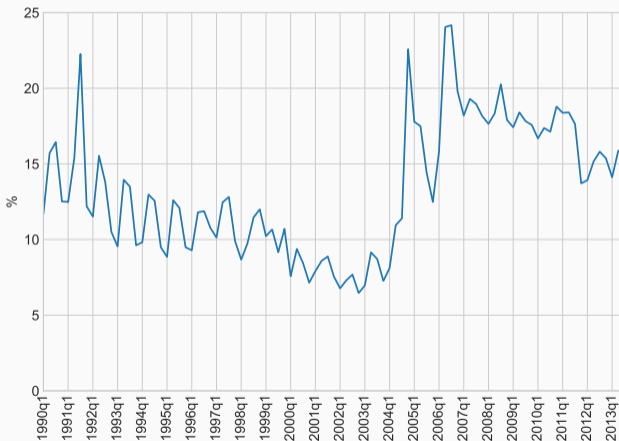
Administrative data can also help with attrition problems in the LFS

That is, unemployed workers who fail to respond to the survey in the next quarter

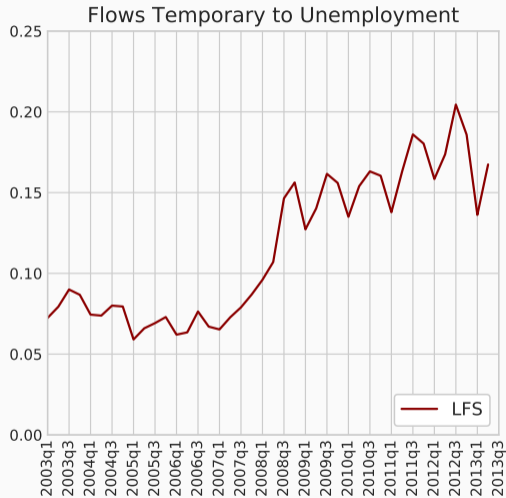
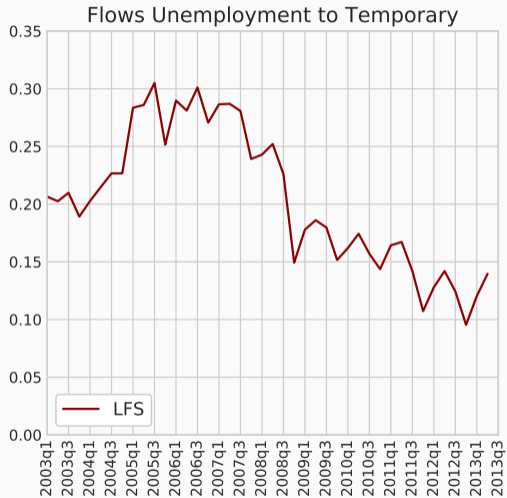
This is an important issue: in some quarters **over 20%** of surveyed unemployed fail to respond in the next quarter

→ This can bias labour flows upwards

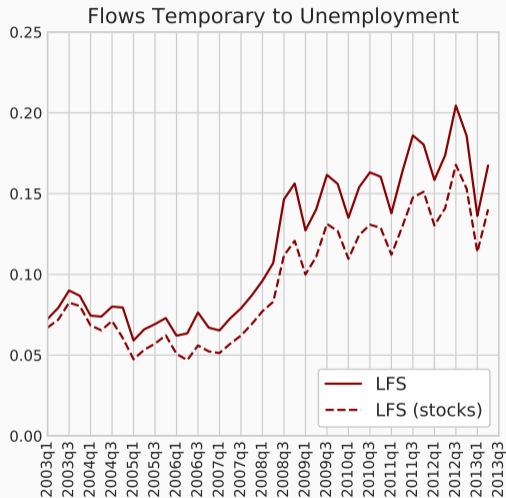
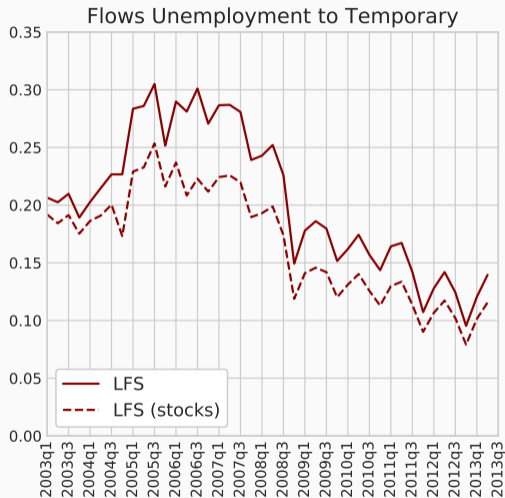
Share of non-respondents the next quarter



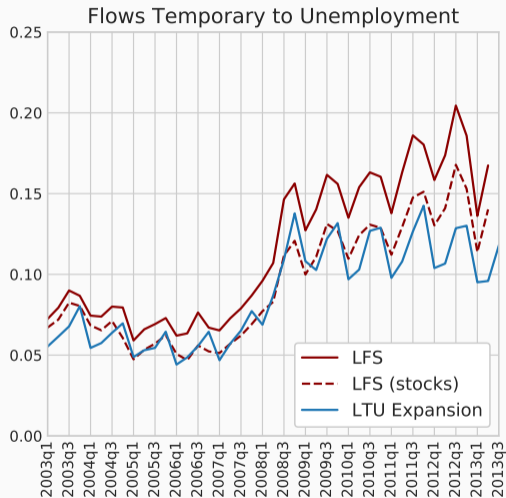
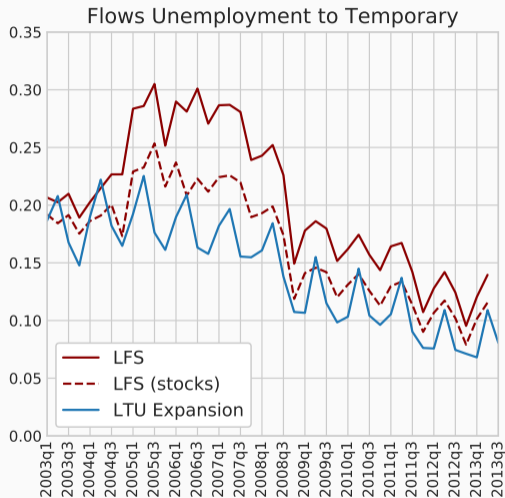
Applications: attrition and flows



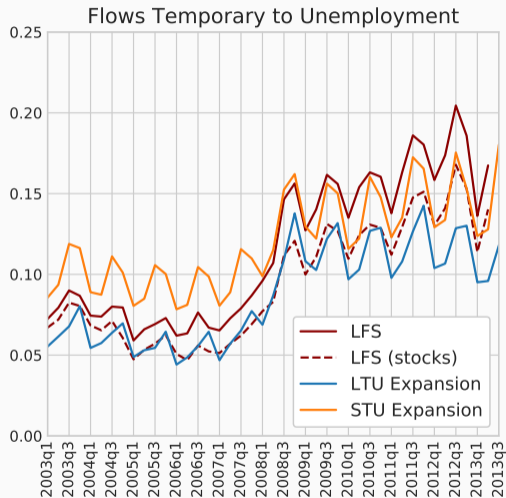
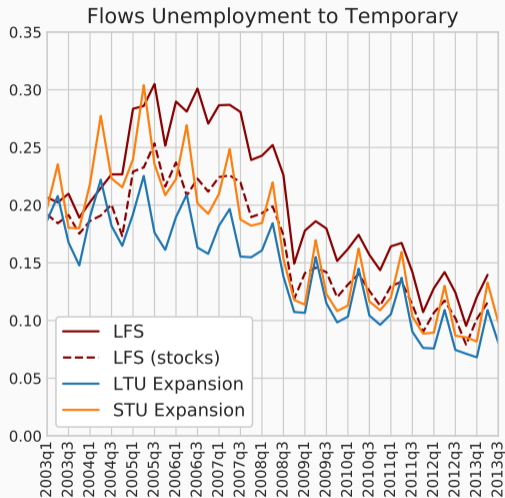
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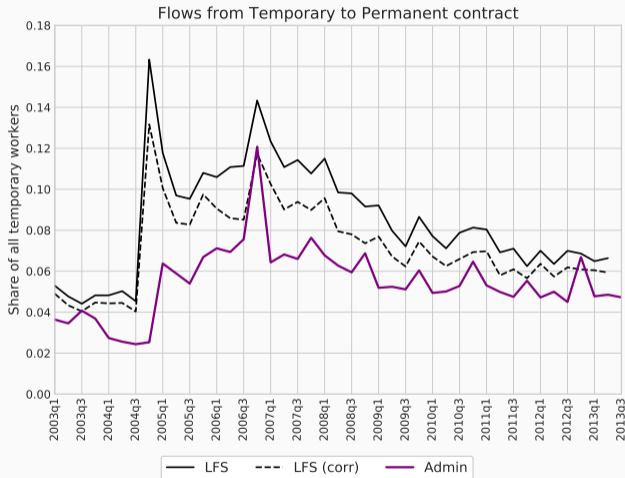


Applications: discontinuities

Changes in the structure of the survey can create discontinuities in labour market flows

This is true even when stocks are consistent over time

→ Admin data can help identify the spurious change in the flows - and vice versa



Conclusion

Administrative data can be used to study unemployment

Administrative data can complement the information of the LFS in several ways:

- more reliable stocks/flows
- more information on short-term unemployment

The LFS is still important because it allows us to measure movements in and out of the labour force

If employment becomes more precarious over time, the importance of frictional unemployment will grow

Thank you

Can something else be done?

If there was enough common information between the LFS and Administrative records, it could be possible to create a "score based approach" where only some individuals are added as unemployed

However there is not enough common information to do so reliably and it would introduce more noise - the definition based approach is more easy to implement and to be aware of the noise

For many economic applications, finding a job after a jobless spell is considered unemployment

I do not include recalls into the STU expansion: gaps between jobs with the same employer are not considered unemployment

This is to approximate the LFS definition of unemployment, were these workers would not be looking for a job - and thus, not employed in the LFS definition

It could be interesting however to measure this

LTU Expansion details

I include both unemployed whose benefits have expired and:

- eventually find employment again or
- have uncompleted spells by the end of the sample

This last category is important to include the long-term unemployed that resulted from the 2009-2011 unemployment inflow

I do not include non-employment spells longer than 2 years - the results are not sensitive to allow for shorter or longer spells

It is possible to identify those workers who retire or receive a pension because of illness or disability

Parental leave is also identifiable