

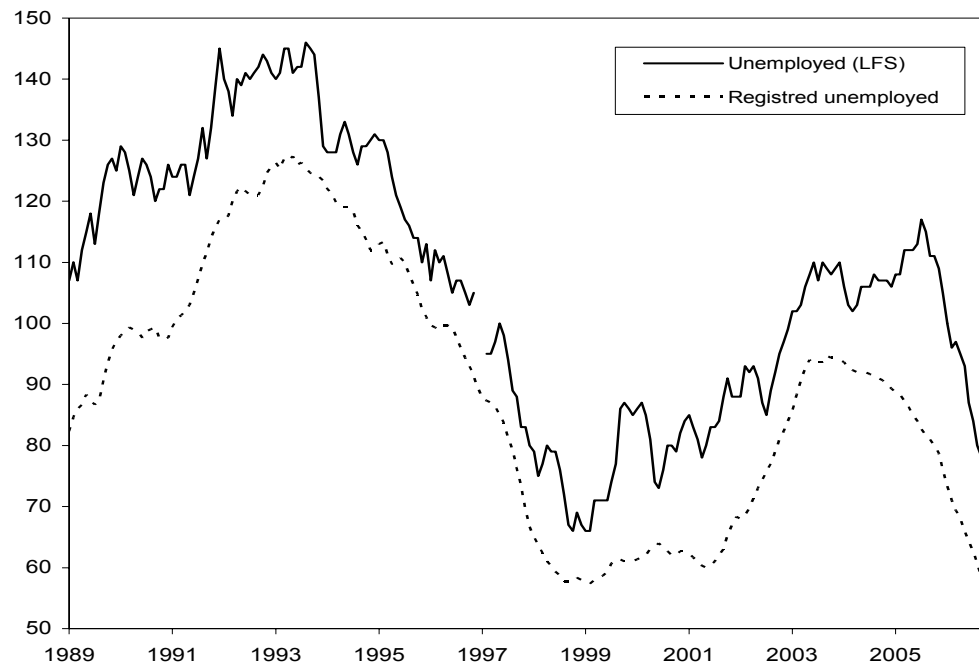
Unemployment measured by survey and register data

- A comparison of the two measurements

Two types of unemployment measures in Norway:

- The Norwegian Labour Force Survey (LFS)
 - Statistics Norway
 - Sample survey
- Registered unemployment
 - The Norwegian Labour and Welfare Organisation (LWO)
 - Based on registrations in LWO's register of job seekers

The recent development of the two unemployment figures



Note: Through the first half of 2005, the deviations becomes larger. The registered unemployment fell some in 2004, and accelerated down through 2005. According to the LFS, the fall didn't start until the second half of 2005.

Main differences between the two measurements:

- LFS shows a higher level of unemployment than the registered figures
- The two time series show the same pattern, except from shorter periods of deviations
- Difference caused by
 - Definitions
 - Methods of measurement
 - Measurement errors

The purpose of this presentation

- To cast light on the causes why the two data sources show unequal level of unemployment, and in shorter periods, different trends
- Presentation mainly based on results from a merging of the two data sources at individual level

The merging between the LFS and register of job seekers I

- Reference periods of data sources:
 - LFS: Covers all weeks in every month
 - Register of job seekers: Status at the end of each month
- Step 1: Merging month by month
 - LFS: Using only last two weeks of each month
 - Register of job seekers: Using full data set (official data)
 - Merging by individuals
 - Enables us to identify individuals found in both data sources, and even LFS-unemployed not in the register of job seekers
 - Can check how each person has been classified in the two data sources

The merging between the LFS and register of job seekers II

- Step 2: Inflating the merged LFS-figures
 - Estimate the magnitude of the classification differences between the two data sources for the total population (aged 16-74)
 - In principle: LFS approximately a random sample of total population, and therefore an approximately random sample of the people in the register of job seekers
 - Our LFS-estimates shouldn't be much biased => LFS ought to give about the same estimated figures for variables linked up from the register of job seekers as the register itself.
 - F.ex.: The expected values for registered unemployed and for work-disabled from the linked LFS data should give about the same result as the official figures from LWO

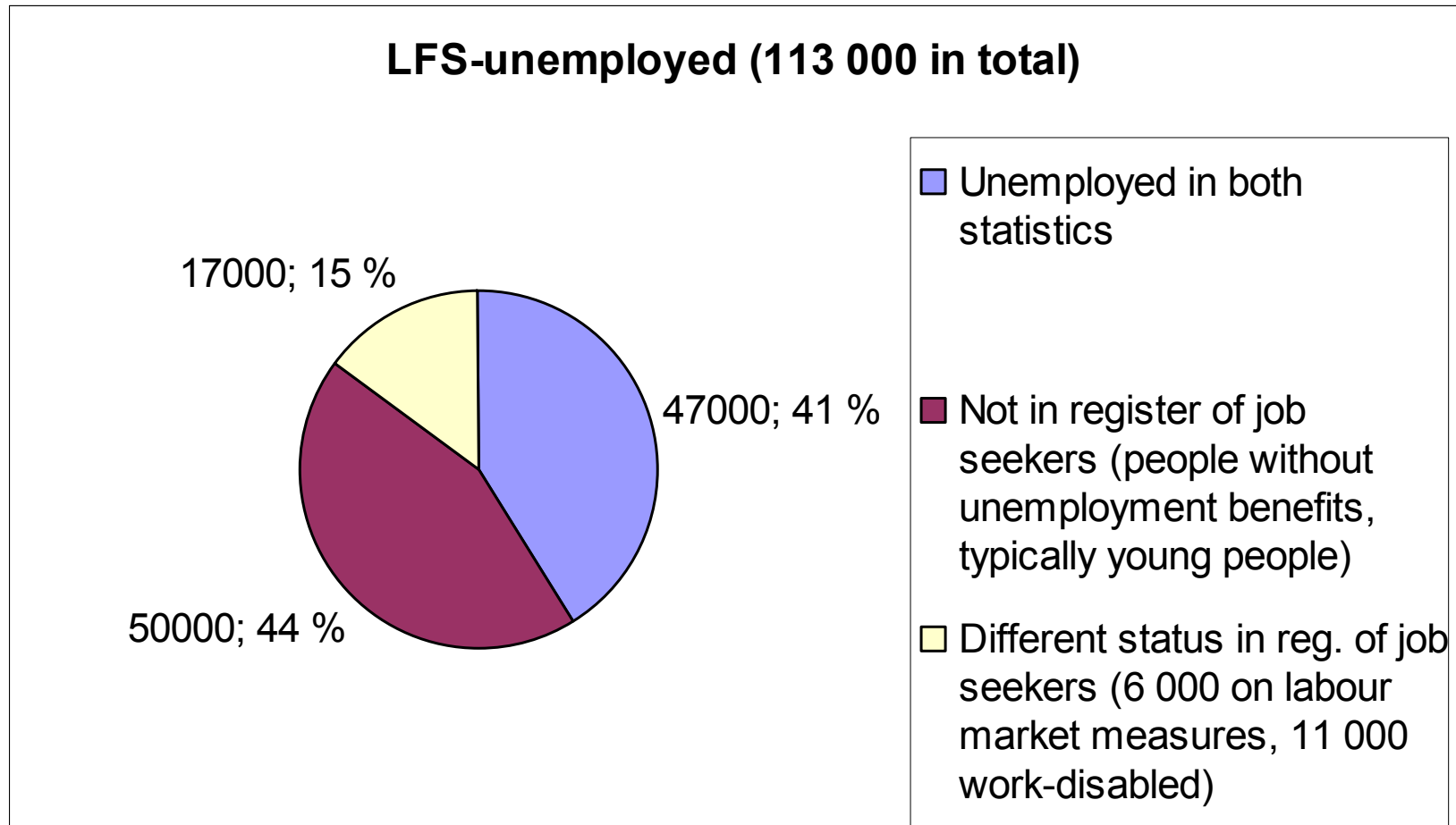
The merging between the LFS and register of job seekers III

- Differences in classification can be caused by:
 - Different definitions
 - Measurement errors
 - Different reference periods
 - Sample uncertainty (attached to population estimates)
 - Leads to fluctuation of the population estimates around the true values from the register of job seekers
 - Biased non-response
 - May lead to repeated over (under) estimation of the true values from the register of job seekers.
 - This effect is reduced by our method of post-stratification

Difference in figures of level I

- Total number of unemployed 1st half 2005:
 - 113 000 according to the LFS
 - 87 000 registered (LWO)
- What kind of status do the 113 000 LFS-unemployed have according to the register of job seekers?

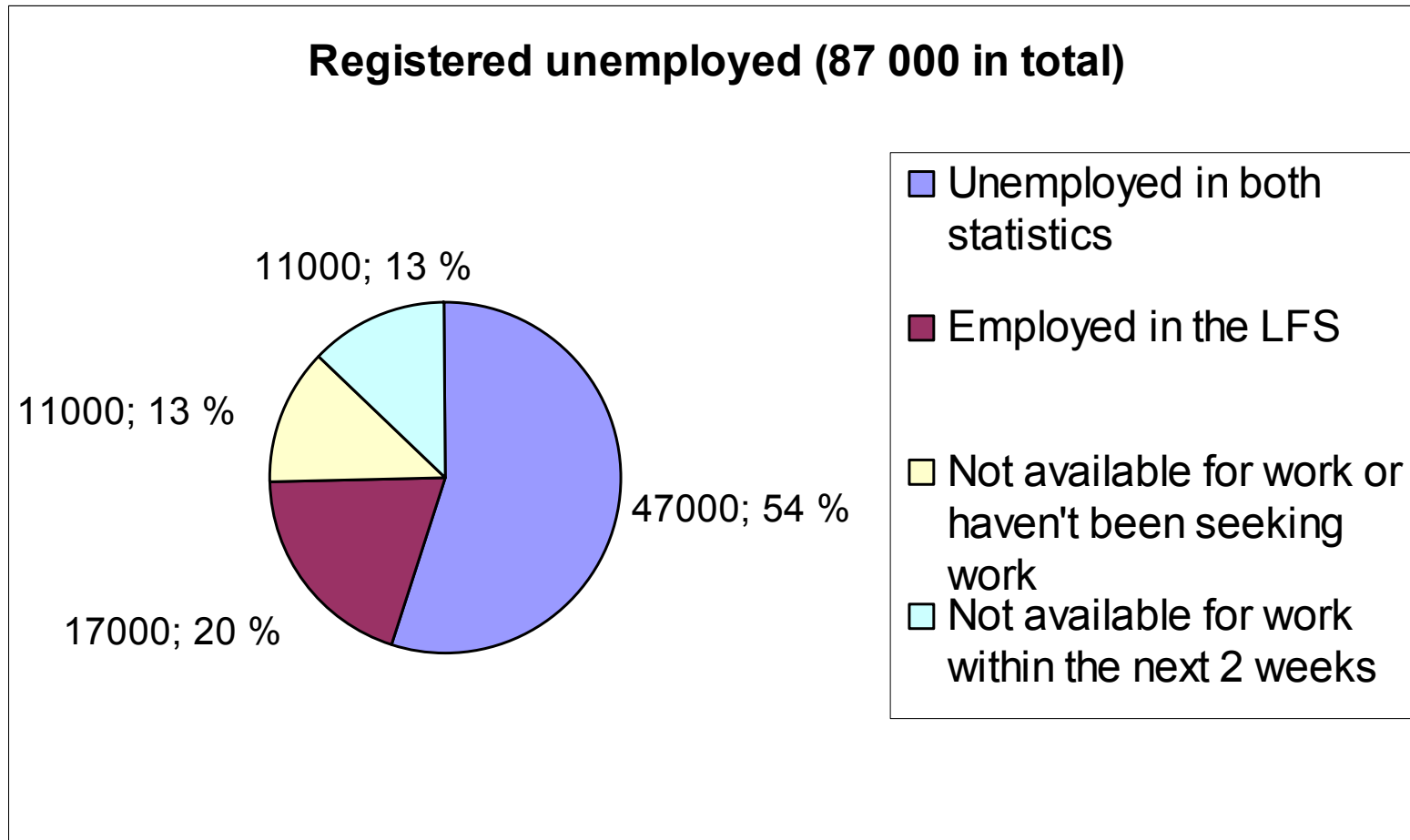
Difference in figures of level II



Difference in figures of level III

- Are all the 87 000 people registered as unemployed also unemployed according to the LFS?

Difference in figures of level IV



Difference in trends I

Focus on three recent time periods:

- 1st half of 2004 to 1st half of 2005
 - Different trends: The number of LFS-unemployed up 4 000, while registered unemployment went down by 6 000 people
 - Two different factors pulled in the same direction, contributing to a different trend in the LFS and LWO figures:
 - The decrease in registered unemployment partly stems from those who were classified as employed in the LFS. Such a decrease will not have an impact on the LFS-unemployment, since they haven't been defined as unemployed in the first place
 - The rise in the LFS-unemployment came amongst people who were classified as work-disabled in the register of job seekers

Difference in trends II

- 1st half of 2005 to 1st half of 2006
 - Similar trend: The LFS and registered unemployment figures decreased by 21 000 and 19 000 correspondingly
 - But some variations for subgroups
 - Some growth among LFS-unemployed not found in the register of job seekers
- February-April to May-July 2006
 - Decline in both figures, but big deviations: LFS-unemployment down 18 000, the registered figures fell by 5 000
 - LFS-unemployment showed an especially large decline in the months of June and July, and particularly for the age group under 25 years, according to underlying LFS data. The drop comes especially among people who don't register in the register of job seekers. Typically for June and July is that there are many school youths applying for holiday jobs.

Conclusion I

- The method of micro merging is a useful tool for interpreting/understanding differences in the two types of unemployment figures
- Long reference periods are needed to make trustworthy results. Method is not recommended when interpreting short-term development (monthly or quarterly basis)
- In periods with less changes in unemployment than observed the recent year, a dominating factor behind figure changes could be sample uncertainty (LFS error margin around +/- 5 000)

Conclusion II

- Why two different measures of unemployment?
 - Differences in development of the two unemployment measures creates from time to time confusion among users => why not use only one data source?
 - Answer: The two unemployment measures supplement each other
 - LFS:
 - Measures total unemployment
 - Follows classification recommendations of international organisations => LFS figures comparable between countries
 - Measures an individual's attachment to the labour market in a broader sense than only giving a figure of unemployment. F.ex.: employment, under-employment and groups that satisfy some, but not all requirements in the definition of unemployment
 - Registered unemployment:
 - No sample uncertainty => can produce unemployment figures by level of municipality and other detailed sub-groups
 - Shorter time of production
 - A more precisely measure of short-term development (changes from month to month)