Economic Commentary

Lower response rates implies challenges for monetary policy in several countries

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Monetary policy affects inflation through several channels, including demand and resource utilisation in the economy. This is often measured by unemployment, which means that central banks attach great importance to labour market data. Many central banks, including the Riksbank, also have a flexible inflation targeting policy in which, without neglecting the inflation target, they shall take into account developments in the real economy in their monetary policy decisions. The Federal Reserve has a dual mandate, in which, in addition to an inflation target, they also work to attain maximum employment. Reliable labour market statistics are thus needed.

Over time, however, the response rate in various statistical surveys, including the Labour Force Survey (LFS), has decreased. The development is common to several countries, and was accentuated in many countries in connection with the pandemic. The LFS provides the official measure of unemployment in Sweden. It is an internationally harmonised survey with a relatively short lag and it is an important data source used by many policy makers, including central banks.

In this Economic Commentary, we describe how response rates and uncertainty in labour market statistics have developed in some countries, and we illustrate their importance for monetary policy.

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Lower response rates in labour market surveys

In many countries, a large part of the monthly and quarterly labour market statistics is based on sample surveys where individuals, households and companies are asked questions about the labour market situation. But over time, the response rate, i.e. the proportion of individuals, households and companies responding to the surveys, has declined in many countries (see figure 1). In connection with the pandemic, this development was strengthened and the response rate fell drastically in some cases.

In the UK, the response rate to LFS has been decreasing for a long time. The requirement for social distancing in March 2020 meant that the LFS switched from having

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previously conducted the initial interview as a visitor interview to a telephone interview. This clearly affected the response rate.[2] In 2023, the response rate continued to decline and at the August survey it was so low that the Office for National Statistics (ONS) chose to pause the October release. During that period, the ONS replaced the LFS outcomes with experimental estimates.[3] In Canada, the response rate in the LFS has been high, although it decreased in connection with the pandemic when the subset of LFS conducted as face-to-face interviews was replaced by mainly telephone interviews during March 2020 to October 2022.[4] In Sweden, the response rate was not affected in the same way as in other countries during the pandemic, since the LFS has mainly conducted telephone interviews for a long time. However, it has followed a downward sloping trend since 2009.[5] The response rate in the Economic tendency Survey, which measures, among other things, employment plans in the business sector, has also decreased somewhat over time.

The response rate in various labour market surveys in the United States was also clearly affected in connection with the pandemic. For the Current Population Survey (CPS), which corresponds to the LFS, the pandemic meant that face-to-face interviews were almost entirely replaced by telephone interviews during the period March 2020 to December 2021.[6] Additionally, the response rate in important business surveys, such as the Job Openings and Labor Turnover Survey (JOLTS), which among other things measures job vacancies, and Current Employment Statistics (CES), which publishes employment statistics for the business sector (non-farm payrolls); was affected by the pandemic as a result of new ways of working when a larger proportion of data began to be collected by means of web surveys instead of telephone interviews.[7] Although the pandemic is over and several studies have returned to the collection method they had prior to the pandemic, these studies have not reached the response rate that existed before the pandemic.

[2] See Office for National Statistics (2020).

[3] The ONS has for some time worked on producing a transformed LFS, which in March this year replaced the former LFS as the primary labour market statistics. In the new statistical product, which they call TLFS, they have reintroduced visitor interviews and expanded the selection, see Office for National Statistics (2023).

[4] See Statistics Canada (2023).

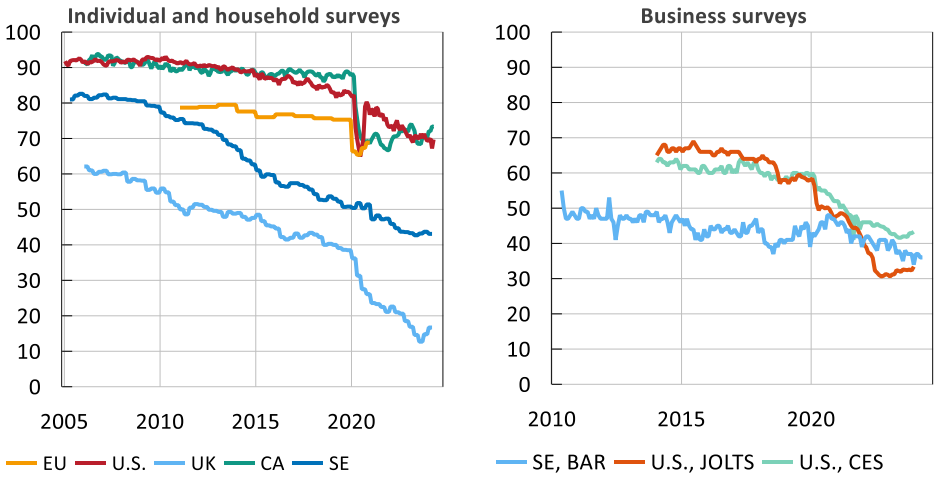
[5] It is difficult to answer exactly why the response rate in the LFS has decreased trend wise in Sweden. Common explanations are that the number of interview surveys have increased, which has created a "survey fatigue" and that more and more people choose not to answer when they do not recognize the phone number that is calling. However, the response rate differs between different demographic groups, and in Sweden the response rate is generally lower among young people and those born abroad, see Statistics Sweden (2015). Foreign-born persons are a group that has increased as a proportion of the population over time and since that group have on average a lower response rate, it can be assumed that this has contributed to a decrease in the response rate as a whole.

[6] See Bureau of Labor Statistics (2022).

[7] See Bureau of Labor Statistics (2020) and Bureau of Labor Statistics (2022).

Figure 1. Response rates in various surveys

Per cent



Note. CA= Canada, SE=Sweden, UK= United Kingdom, U.S.= United States. The EU, Canada, Sweden and the UK refer to LFS. The United States refers to CPS, which, like the LFS, produces statistics on labour, employment and unemployment. Data for the EU during the years 2011−2019 are annual, then quarterly. Data for the EU is missing after Q4 2020. BAR refers to the Economic tendency Survey, an unweighted response rate for the business sector. JOLTS produces statistics on job vacancies, employment and separations. CES produces statistics on non-agricultural employment, hours and income (non-farm payrolls)

Sources: Statistics Sweden, the U.S. BLS, the ONS, Statistics Canada and the National Institute of Economic Research.

A major decline in responses means a deterioration in precision and is an aggravating circumstance for monetary policy

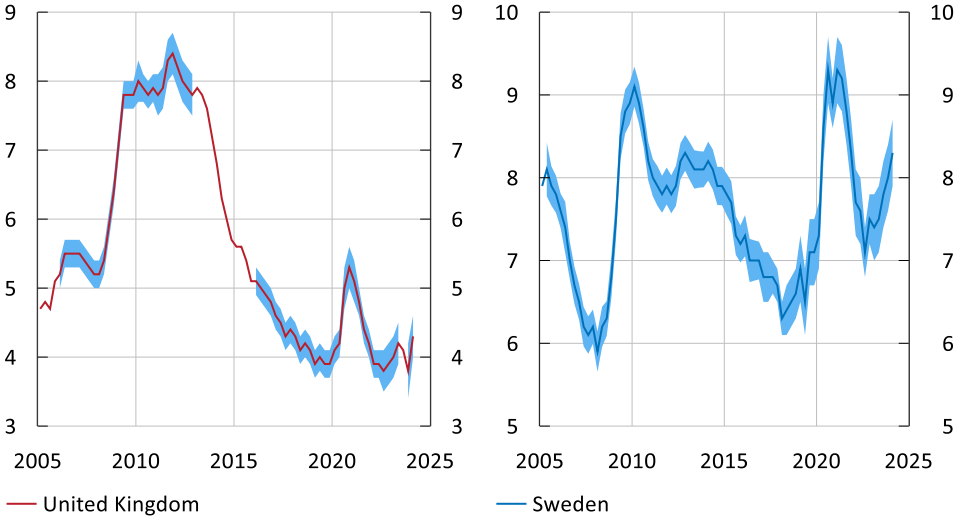
For various reasons, sample surveys are always surrounded by uncertainty. This is partly because they do not examine the entire population, i.e. so-called sample errors, and partly because of various measurement errors and random errors, although these usually decrease in importance when *the number of* answers increases. A low *response rate* (large non-response), on the other hand, means an increased risk of systematic errors, so-called statistical bias, which cannot be managed by increasing the sample size. Statistical bias occurs when the response rate decreases among individuals, households or companies that have different labour market characteristics than the average respondent. This makes the survey less representative of the entire population. With statistical methods, it is possible to estimate the uncertainty that comes from the sample error and from random factors, but it is more difficult to assess the size of the systematic errors and how they affect the results.[8]

[8] The most recent analysis of bias in the Swedish LFS is from 2017 and showed some statistically significant bias, including employed persons being overestimated, see Statistics Sweden (2017). In order to reduce the risks arising from the large non-response and to make the statistics more reliable, the LFS uses register data, such as data from the Swedish Tax Agency and information from the Public Employment Service on

As mentioned earlier, the response rate in the LFS in the UK has decreased significantly and to low levels, but also in Sweden it is clearly lower than the EU average. Between 2006 and 2024, the uncertainty rate for unemployment in the UK and Sweden has increased from around 0.2 percentage points to around 0.3 to 0.4 percentage points. For both countries, the range is now about twice as large as in the mid-2000s. This means that the unemployment rate in Sweden, which in the first quarter of this year amounted to 8.3 per cent, with a 95 per cent confidence interval now lies between 7.9 and 8.7 per cent (see figure 2). In the United Kingdom, the corresponding confidence interval for the unemployment rate in the first quarter was almost 4 per cent to just over 4.6 per cent.

Figure 2. Unemployment with confidence intervals

Per cent of labour force



Note. The unemployment rate series for the United Kingdom shows unemployment among those over the age of 16. For Sweden, the unemployment rate is shown for the age group 15-74 years. Uncertainty figures for the UK are missing for the period 2013Q1 and 2015Q4, and for 2023Q3 when the ONS paused its publication.

Sources: Statistics Sweden and the ONS.

Monetary policy is sometimes described in simplified terms as a rule of action for the policy rate, where different weights are placed on the deviation of inflation from the inflation target and the level of resource utilisation in the economy.[9] The greater the importance monetary policy attaches to resource utilisation in the economy in connection with decision-making, the greater the problem of uncertainty surrounding labour market data.

the number of registered unemployed, as help information in the tax procedure, see Statistics Sweden (2022). Uncertainty is also affected by the fact that the number of respondents has decreased. The sample size in LFS has increased slightly over time, but not enough to fully compensate for the reduced response rate.

[9] Over time, a number of standard monetary policy rules of action have been established under the collective name 'Taylor Rules', which central banks use to varying degrees. The name comes from the American economist John Taylor who drafted the original rule of action, see Taylor (1993).

If one takes into account the uncertainty about the unemployment level in a simple monetary policy rule, it means, all else equal, that the spread of the proposed policy rate over time has almost doubled in the United Kingdom, while it has doubled in Sweden.[10] In reality, monetary policy decisions are based on many different factors and considerations, including different measures of resource utilisation, and thus cannot be captured in a simple rule. The exercise is thus not a description of how the Riksbank or other central banks work, but should only be seen as an illustration of how increased uncertainty in data may affect monetary policy.[11] This uncertainty is especially important to keep in mind during periods when monetary policy is particularly "data-dependent", such as in recent years, with increased sensitivity to individual data outcomes.

Monthly register-based data is increasingly central to labour market analysis

Given the uncertainty surrounding the data, assessments of the labour market situation are almost always based on an aggregate of information from different sources and indicators. And when uncertainty in data increases, the analysis needs to be based on other sources to a greater extent, both to get a picture of actual developments in the labour market and to make forecasts.

Recently, international attention has been drawn to how the increased uncertainty in data affects decision-makers such as central banks.[12] The Bank of England, for example, states that the uncertain statistics have made it more difficult than usual to assess resource utilisation in the labour market, which is a challenge in their decision-making.[13] During the period when the LFS in the United Kingdom was not even published, the Bank of England had to base its labour market analysis more on other data among other things, the analysis was based on various business surveys, register data on tax payments and various indicators.[14] In the United States, where the labour market has

[10] The Federal Reserve continuously reports on the monetary policy proposed by various Taylor rules. As a measure of resource utilisation, the Federal Reserve uses the unemployment gap, that is, the difference between actual unemployment and the assessment of long-term unemployment, see, for example, the Board of Governors of the Federal Reserve System (2023). The effect of the increased uncertainty in the data on the policy rate depends on the monetary policy rule applied. Here we use one of the rules that the Federal Reserve normally sets out and which are described as: $R_t^{t93} = r_t^* + \pi_t + 0{,}5(\pi_t - \pi^*) + (u_t^* - u_t)$ where the policy rate R_t varies around a long-term nominal interest rate level $(r_t^* + \pi_t)$, and the variations depend on how inflation relates to the inflation target $(\pi_t - \pi^*)$ and the unemployment gap $(u_t^* - u_t)$. Our calculation is based on the fact that the assessment of long-term unemployment, which is not observable and very uncertain in itself, is not affected by the uncertainty rate of actual unemployment. In practice, this assessment is often based on historical averages of point estimates for actual unemployment, making the assumption in our calculation example acceptable.

[11] In addition to statistical uncertainty, there are other factors that make it difficult to use a Taylor rule operationally, such as the fact that data is often revised retrospectively, see Orphanides (2001).

[12] Increased uncertainty in labor market data also makes it more difficult for other policy areas, not least for labour market policy.

[13] See Bank of England (2024a), Bank of England (2024b) and Financial Times (May 2024).

[14] See Bank of England (2023).

been surprisingly resilient, there is a discussion about the accuracy of employment data according to, for example, non-farm payrolls.[15]

The Riksbank makes forecasts of unemployment and the number of employed persons according to the LFS.[16] To support its assessment of the labour market situation, the Riksbank has for a long time used many data sources, such as register data from the Swedish Public Employment Service, the Economic tendency Survey, and the Riksbank's own Business Survey. If other sources clearly point to a different development than the LFS, this is taken into account in the analysis.[17]

Due to falling response rates, Statistics Sweden is using register data in an increasing number of its statistical products. In May 2022, Statistics Sweden began publishing a new statistical product: Labour market status of the population (BAS). BAS consists of register data from 2019 onwards and is based, among other things, on data from the Swedish Tax Agency, the Swedish Public Employment Service and the Swedish Social Insurance Agency and can be regarded as a total survey of the labour market situation for different groups based on, for example, gender, age and origins in different industries.

At present, there are not long enough time series in BAS so the Riksbank could be able to use it as its main data source, and BAS is also published with a one-month delay compared to the LFS. To be able to assess the labour market situation right now and where we are heading, we need longer time series, and over different economic cycles. BAS also lacks some information, such as part of youth unemployment and the unutilised labour supply. Data from BAS are also not as internationally comparable as the LFS, which is a harmonised survey, but this aspect would of course be less important if LFS data were no longer considered reliable. At present, the Riksbank uses BAS as a complement to the LFS. However, it is likely that over time it will have an increasingly prominent role in the labour market analysis, as reliable data is fundamental for the Riksbank to be able to make a good assessment of resource utilisation, which in turn is crucial for a well-balanced monetary policy.

[15] Monthly outcomes for non-farm payrolls are normally revised for the following two months and once annually for the following years. Recently, the size of the revisions has been highlighted, see for example the Financial times (March 2024).

[16] Not all countries make forecasts of unemployment according to the LFS. For example, Norges Bank makes forecasts according to statistics from NAV (Norway's equivalent of enrolled at the Employment Service), see Norges Bank (2024).

[17] This type of situation arose on one occasion in 2019. Unemployment according to the LFS, rose rapidly, which was not supported by other sources. It later became clear that there were errors in the data collection of LFS, see Sveriges Riksbank (2019).

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