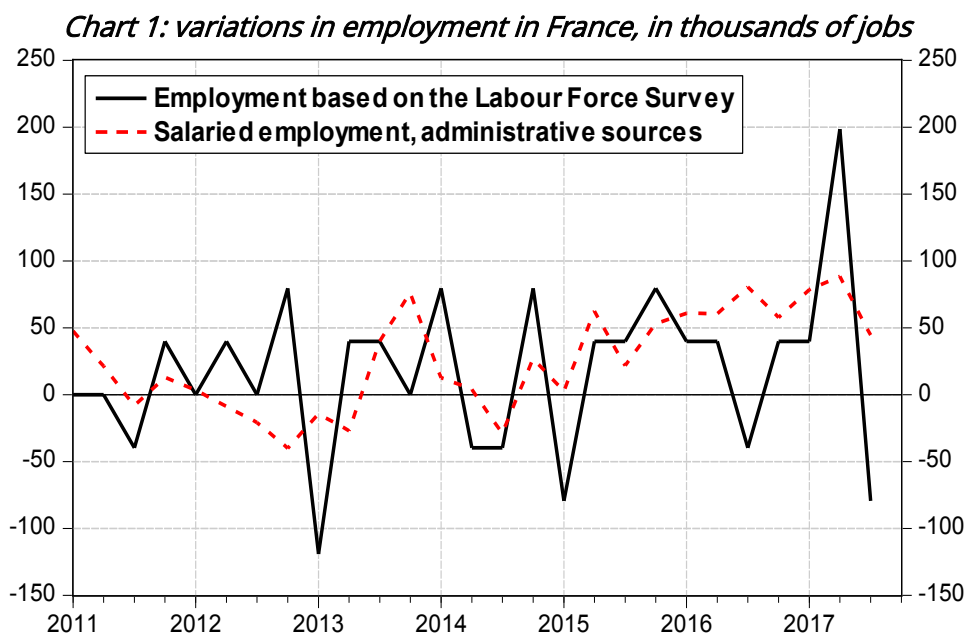


# Quarterly variations in employment and joblessness

By Pierre Sicsic and Antoine Sigwalt

*According to administrative sources based on employer returns, salaried employment in France rose by more than 40 thousand in 2017Q3. Conversely, according to the household Labour Force Survey, the unemployment rate increased from 9.2% to 9.4% in metropolitan France. In principal, this divergence may be related to changes in the labour force. In practice, it is also the result of differences in the methods applied to measure quarterly employment variations.*



Source: Insee. Employment based on the Labour Force Survey (black curve) is recalculated on the basis of the employment rate published with the survey.

## Variations in employment based on the Labour Force Survey

The unemployment rate in metropolitan France rose from 9.2% to 9.4% between the second and third quarters of 2017 despite an increase of over 40 thousand people in salaried employment.

The first statistic on the unemployment rate as defined by the ILO, published on 16 November 2017, was taken from Insee's quarterly Labour Force Survey based on data collected from households. The unemployment rate is published alongside the employment rate, which is defined as the ratio of the number of people in employment to the total population of working age (between 15 and 64 years old). Neither the level of employment nor its variation is published. However, by multiplying the employment rate by the population between the ages of 15 and 64, which has remained stable since 2010, we obtain

the employment series shown in Chart 1. According to this calculation, approximately 80 thousand jobs were lost in the third quarter of 2017.

The second statistic on salaried employment, published on 12 December 2017, was mainly taken from estimations of main sector workforces according to administrative sources based on employer returns.

### **The labour force, joblessness, employment, and the effects of economic upturns and downturns**

A simultaneous increase in both joblessness and employment can be explained by an increase in the labour force. On the one hand, there is a trend increase in the labour force as a result of both demographic factors and reforms to modify the retirement age. Therefore, every year, the number of young people entering the labour market exceeds the number of elderly workers leaving it. On the other hand, in addition to this trend increase in the labour force, there is an "economic upturn/downturn" mechanism: a rise in employment encourages inactive people to look for work, and therefore enter the labour market (either as a worker or a job seeker). Thus, the labour force can grow more rapidly than employment.

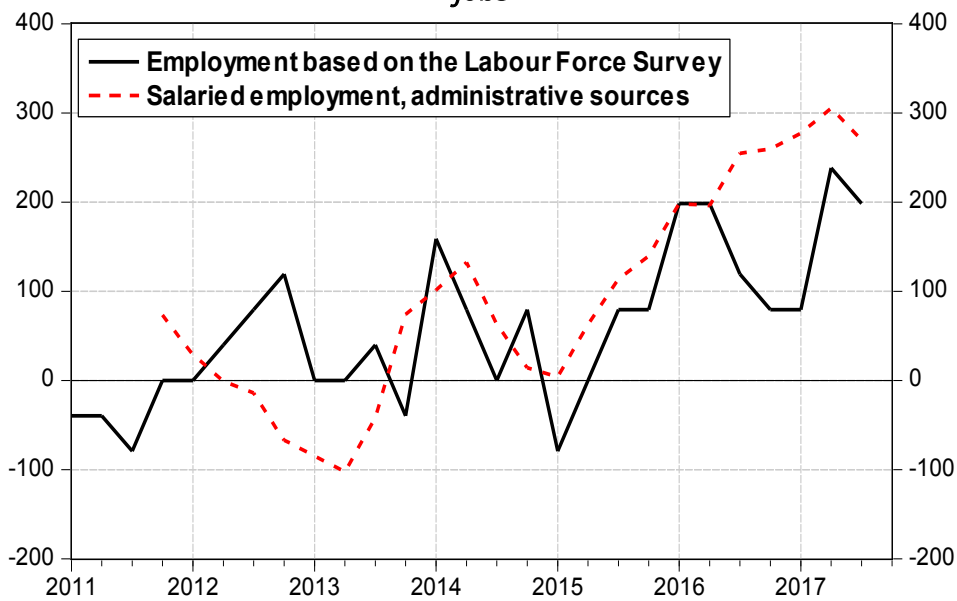
### **Two sources for the short-term measurement of employment: employers and households**

The divergence between the employment levels obtained from the two sources mainly result from differences in scope (see the documentation tab on the Insee website's ["Employment estimates"](#) page). First, the household survey also takes into account self-employed persons, who are not covered by administrative sources based on employer returns. Second, the two measurements have different geographical scopes: the Labour Force Survey covers French-resident households, members of which are counted as "employed" even if they work abroad; however, the administrative sources only deal with salaried workforces in France.

A comparison between the quarterly variations in employment based on the two sources (households and employers) shows that the magnitude of the divergence is particularly pronounced in the third quarter of 2017, with the variations even moving in opposite directions (Chart 1). However, it should be noted that this deviation was reversed in the previous quarter, with employment increasing by around 200 thousand according to the Labour Force Survey and approximately 90 thousand according to administrative sources based on employer returns. Over a longer period, we can see more limited deviations with both negative and positive signs.

Indeed, smoothing the series from the two source types over four quarters reveals closer employment variation profiles (see Chart 2).

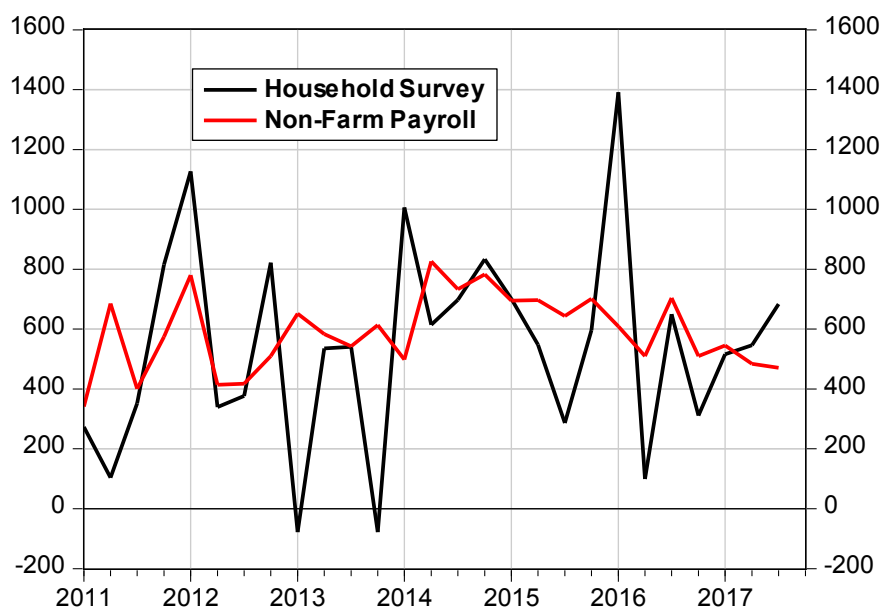
*Chart 2: variations in employment in France (smoothed over four quarters), in thousands of jobs*



Source: Insee, authors' calculations for employment based on the Labour Force Survey.

Monthly employment and joblessness statistics from the United States, which also come from two sources – the Household Survey and the Non-Farm Payroll – also reveal divergences in quarterly variations in employment (Chart 3). Therefore, in the United States – as in France – situations can arise in which employment and joblessness both increase from one quarter to the next, without necessarily being a result of changes in the labour force.

*Chart 3: quarterly variations in employment in the United States, in thousands of jobs (based on monthly series)*



Source: The US Bureau of Labor Statistics' Employment Situation.

### **Household surveys are inevitably less accurate**

In France – as in the United States – employment figures based on household survey measurements are far more volatile. This volatility is a result of the reduced accuracy of employment-level estimates, and even more their variations, taken from household surveys, which rely on far smaller sample sizes than surveys or administrative sources based on employer returns.

In fact, that is the reason why employment series obtained from household surveys are not published in France and are rarely commented on in the United States. However, they do provide statistical data that are entirely consistent with the unemployment and labour force series taken from the same sources, which allows us to calculate the unemployment rate.