

France

Investigating survey divergences with official GDP and employment data

- Private sector output growth may have been overstated by official GDP data
- Banque de France survey appears to have overstated output and employment relative to PMI and INSEE surveys in recent years

Recent official data on economic growth have diverged markedly from the PMI business survey data. However, a closer examination of the data shows the divergence to be less apparent than at first glance, attributable in part to the inclusion of the government sector in official data.

However, even after government spending is excluded, the GDP data have painted a somewhat more upbeat picture of the economy than the PMI. Our confidence in the weaker picture portrayed by the PMI is reinforced by the similar trends signalled by INSEE's own business survey, and also by the fact that the PMI trend is more consistent with recent disappointing employment trends than the GDP data.

It is noted that the Banque de France survey has signalled a more positive trend in the French economy than the PMI and INSEE surveys since early 2012. However, this survey has overstated employment growth in recent years, raising the suspicion that it has therefore also overstated output.

This analysis therefore suggests official GDP data may have overstated growth in the French economy since 2012.

Divergence less than it first seems

A divergence between the PMI and GDP has been evident since the third quarter of 2012. This is a period over which the official data have been volatile (see chart 1), making interpretation of the trend difficult. Up to the third quarter of 2013 (the latest available data point), GDP has risen 0.3%. This growth has helped bring the French economy to within 0.2% of its pre-crisis peak reached in the first quarter of 2008.

However, the PMI has painted a far weaker picture of the French economy (chart 1). The composite PMI,

Chart 1: GDP and the PMI

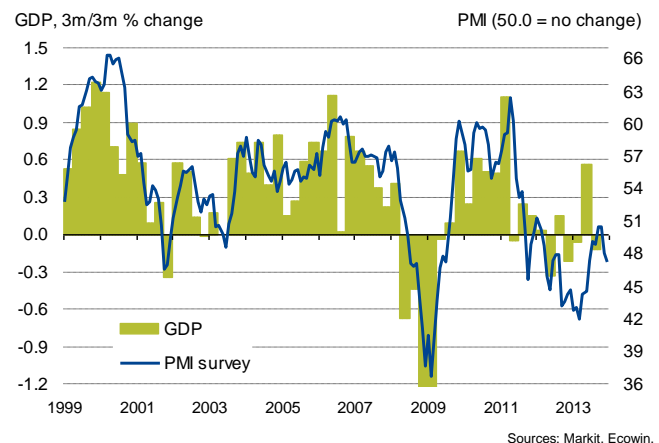


Chart 2: Non-government GDP and the PMI

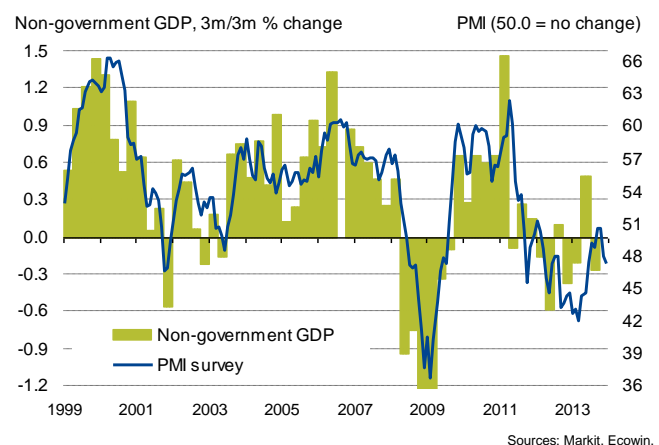


Table 1: Survey track records Output

Comparisons from start of each survey to Dec '11.

Non-government GDP

All sector survey data (GDP weighted averages of manufacturing and services indices) v quarterly % change in non-government GDP

PMI	INSEE	BdeF
0.80	0.56	0.70

Services GDP

Services survey activity indices v quarterly % change in tradable services GDP

PMI	INSEE	BdeF
0.76	0.52	0.64

Manufacturing output

Manufacturing survey output indices v quarterly % change in manufacturing output

PMI	INSEE	BdeF
0.76	0.63	0.63

which is a GDP-weighted average of the PMI surveys' manufacturing and services output measures, has been below 50 (thereby signalling falling output) in every month since March 2012 with the exceptions of September and October 2013. Furthermore, the rates of decline signalled by the PMI have been strong over much of this period – exceeding those seen in the prior survey history with the exception of the height of the financial crisis in 2008-9.

Importantly, much of this discrepancy can be accounted for by the fact that PMIs only cover private sector activity. The output of the government sector, which accounts for 25% of GDP, has grown 2.1% since the second quarter of 2012. Excluding the government sector, GDP is in fact 0.2% lower than the second quarter of 2012 and still some 3.2% below its pre-crisis peak. Stripping out government spend brings the GDP data more into line with the PMI (see chart 2).

The main divergence is the 0.5% expansion of GDP signalled in the second quarter of 2013, a period in which the PMI data suggest the French economy continued to contract at a substantial pace.

(Lagging) INSEE survey in line with PMI; Banque de France survey stronger

The recent (weaker) trends signalled by the PMI survey are confirmed by INSEE's own surveys of manufacturing and services. Chart 3 shows the PMI plotted against the GDP-weighted average of the two INSEE surveys, though note that the PMI is shown here with a two month lead on the INSEE survey, which tends to lag the PMI.

Chart 4, which plots the INSEE survey results against growth of non-government GDP, adds confirmation to the PMI message that the official data may have overstated growth in recent quarters.

The Banque de France surveys have meanwhile been stronger than the PMI and INSEE surveys over much of the past two years (see chart 5, which again uses GDP-weighted averages of the manufacturing and services surveys). However, the Banque de France survey often runs higher than the PMI (as was the case throughout much of 2004-2007).

We therefore calculate correlation coefficients to see which of the three surveys have historically been the most accurate trackers of official data. The correlations are shown in table 1. These are based on the survey histories up to the end of 2011 against comparable quarterly growth rates in official data.

Chart 3: PMI lagged by 2 months v INSEE survey*

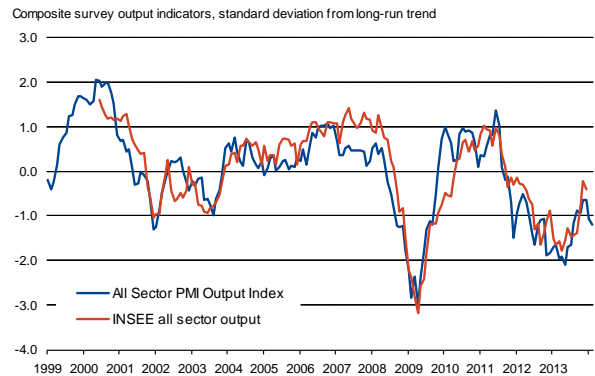


Chart 4: Non-government GDP and INSEE survey

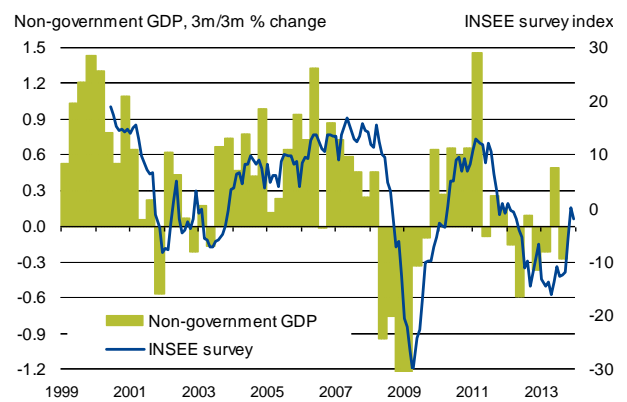


Chart 5: PMI v Banque de France survey*

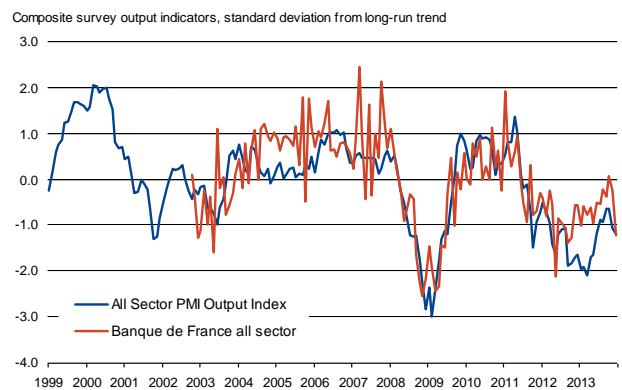
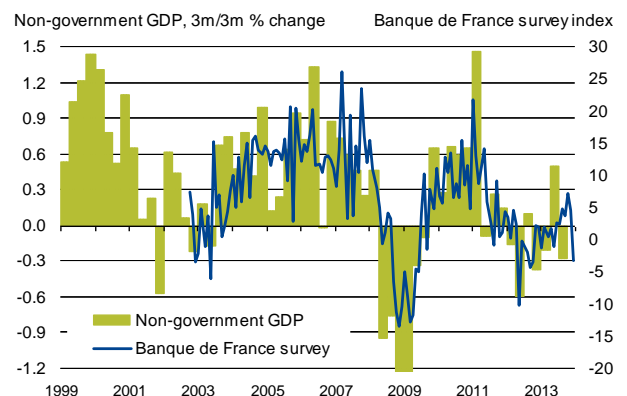


Chart 6: Non-government GDP and BdeF survey



Sources: Markit, Ecwin, INSEE.

* Chart uses GDP weighted averages of manufacturing and services survey indices, standardised using standard deviations from mean.

The PMI exhibits a much higher correlation with official data than both INSEE and Banque de France surveys, whether we look at manufacturing, services or a weighted combination of the two sectors.

The track record of the surveys therefore adds weight to the suggestion that the GDP data have been overstating the health of the economy since mid-2012.

GDP contrasts with weak labour market

The possible overstatement of economic growth by the official data and Banque de France surveys is also something which is indicated by the employment data.

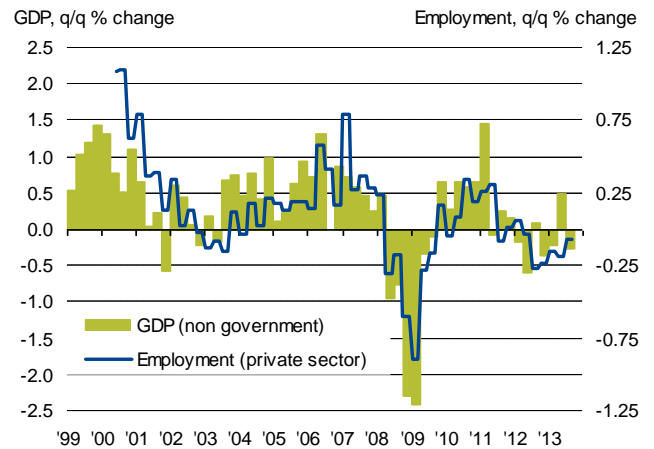
Chart 7 shows that a clear divergence between the official data on output and employment has become evident. Between mid-2012 and mid-2013, non-government GDP was flat but private sector employment dropped by 153k (0.9%). To put this in context, the fall in employment was the steepest seen over such a period in recent history (since 1999) with the exception of the height of the 2008-9 financial crisis.

Rather than concluding that the French economy has undergone a period of rapid productivity growth, it is possible that the fall in employment over this period is another indication that GDP data have overstated output. To investigate this more closely, we look at the survey data on employment. Here we can see that the survey that has corresponded most closely with the upbeat GDP data over the past two years – namely the Banque de France survey – appears to have overstated employment growth.

Importantly, the PMI survey data on employment have not diverged from the official data (see chart 8, which uses OLS regression analysis to estimate what the surveys imply for employment growth). The PMI has in fact exhibited a correlation of some 89% with private sector employment excluding agriculture since the survey data were first available in 1998, outperforming the INSEE and Banque de France surveys (table 2). Over the last five years, the correlation has remained very high, albeit dropping slightly to a still-high 86%.

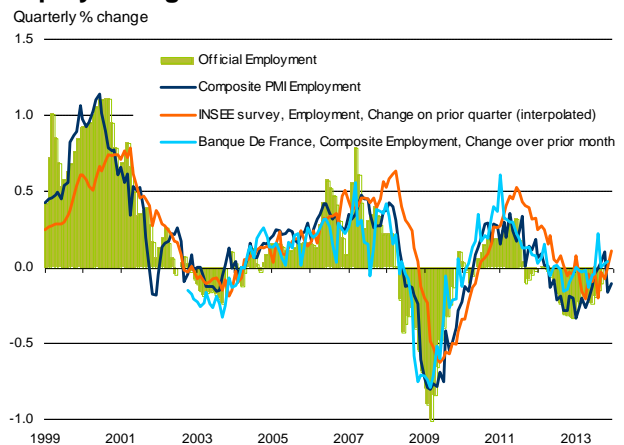
The analysis in chart 8 also shows that the Banque de France survey has overstated employment growth relative to the official data as well as the PMI and INSEE surveys in recent years. If the Banque de France survey has overstated employment growth, it is likely that it also overstated GDP. The big discrepancy is services (see appendix).

Chart 7: Official output and employment trends



Sources: Markit, Ecowin.

Chart 8: Business surveys and regression-derived employment growth rates



Sources: Markit, Ecowin, INSEE, Banque De France.

Table 2: Survey track record: employment

Comparisons from start of each survey to September 2013.

Non-government employment

All sector survey data (GDP weighted averages of manufacturing and services indices) v quarterly % change in non-government employment

PMI	INSEE	BdeF
0.89	0.73	0.84

Services (non-state) employment

Services survey employment indices v quarterly % change in tradable services employment

PMI	INSEE	BdeF
0.82	0.68	0.67

Manufacturing employment

Manufacturing survey employment indices v quarterly % change in manufacturing employment

PMI	INSEE	BdeF
0.77	0.87	0.44

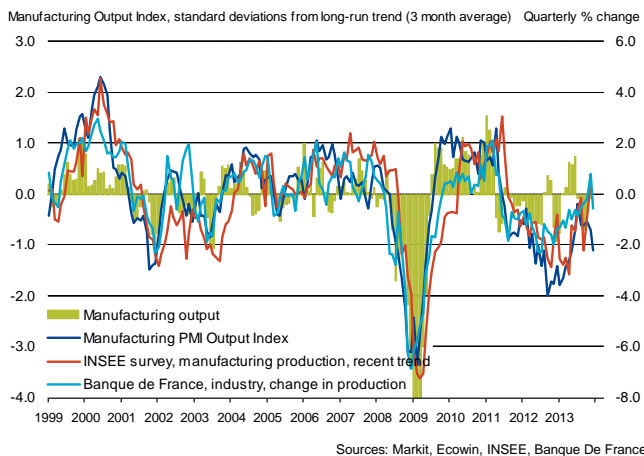
Appendix 1:

The charts below plot survey data from Markit (the PMI), INSEE and the Banque de France against the comparable official data from INSEE, the government’s statistical body. Survey indices are compared against the quarterly rate of change of manufacturing output and employment as recorded by INSEE.

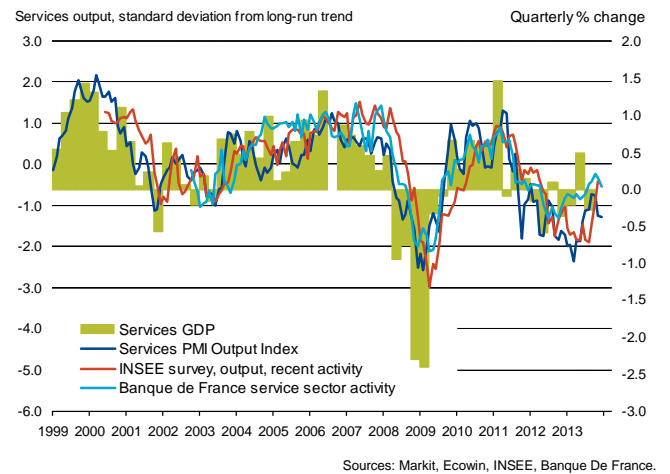
The three survey indices have been standardised by using standard deviations from long term trends rather than the raw survey data. All data are seasonally adjusted.

The correlations between the three surveys and the official data are shown in the tables 1 and 2.

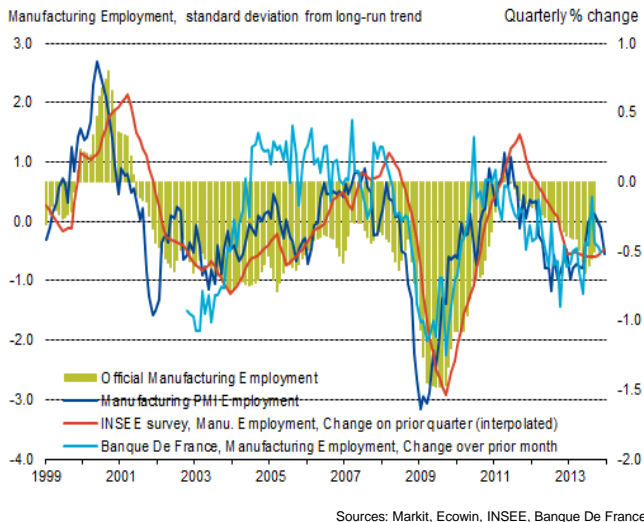
Manufacturing output



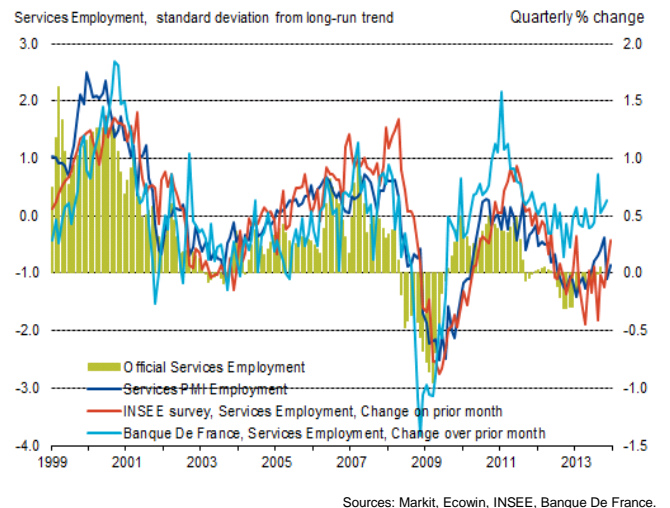
Services output



Manufacturing employment



Services employment



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