

JOBS AUDIT

Measuring labour market
temperature

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Introduction

Those economists who have been proved right to be pessimistic about prospects for UK economic growth following the recession of 2008-09 have nonetheless been surprised by what's happened to the labour market. Previous experience suggested that unemployment would rise above 3 million in the wake of the deep 2008-09 recession remain elevated during the subsequent weak recovery and probably rise again when the economy relapsed back into mild recession in 2011-12. In the event unemployment peaked at below 2.7 million and has fallen during 2012. The unemployment rate, which had been widely forecast to reach 8.7% by the end of 2012 will probably end the year at below 8%.

It would be wrong, however, to conclude that this means the labour market has got off relatively lightly in the period since the financial crisis first broke. On the contrary, the degree of pain inflicted on the labour market has been as severe as expected it's just that the pain has been felt in a different way. In particular, an unprecedented post-war slump in real earnings – caused by a mix of below inflation pay rises and shorter hours working, has served to spread pain throughout the workforce rather than, as in previous recessions, seen it concentrated on the unemployed.

Consequently, while unemployment remains the key central indicator of the overall balance of supply and demand in the labour market it doesn't provide a full temperature reading. Given that unemployment, hours of work and earnings are related variables and can thus trade-off against each other it isn't possible to construct a single distress measure. This *Jobs Audit* therefore uses official labour market statistics to construct two additional labour market distress measures, the Work Shortage Rate and the Labour Market Temperature Index. Taken together with the unemployment rate these measures offer a more rounded picture of the overall state of the labour market than any single measure taken in isolation.

The Work Shortage rate

The simplest way to gauge whether people feel they are short of work is to ask them. The Labour Force Survey (LFS) does this by asking people if they are unemployed and actively seeking work or are employed and working fewer hours than they want to. In addition the LFS asks people who are neither employed nor unemployed and actively seeking work if they want a paid job.

Each month the Office for National Statistics (ONS) publishes updated LFS figures for the number of people unemployed and actively seeking work and the number of people without work who want a paid job. The ONS has also recently started to publish regular updates of the number of people working fewer hours than they want to (a group known as the underemployed).

Table 1 shows these numbers for the period Q2 (April-June) 2000 to Q2 2012, the latter being the latest available quarter for which the ONS has published estimates of underemployment. Figure 1 shows the same numbers but expressed as a proportion of the total workforce.

At Q2 2012, 7.99 million people in the UK with an expressed desire to work were either entirely without work or short of work. The total is comprised of 2.56 million unemployed people, 3.05 million underemployed and 2.38 million economically inactive people who want a paid job.

The combined unemployment and underemployment rate is 17.5% of the economically active population. The overall Work Shortage rate (measured as all people without or short of work as a percentage of the economically active population plus economically inactive people who want a paid job) is 23.2%.

The 2012 Work Shortage rate is three times higher than the unemployment rate. The total number of people short of work increased by 375,000 in the year to Q2 2012, the period including the double dip recession, more than six times the corresponding rise in unemployment. The total in Q2

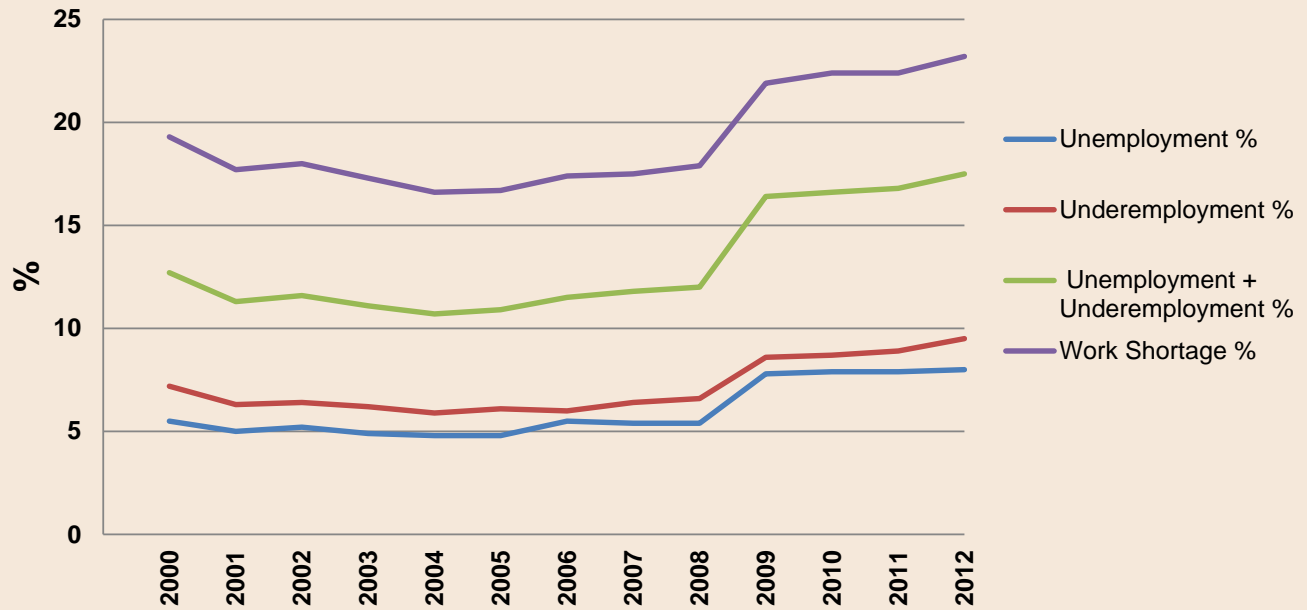
2012 is 2 million higher than in Q2 2008, an increase of one third (33.6%). Two thirds of this increase occurred during the deep recession of 2008-09.

Table 1 Measures of Work Shortage, 2000-2012 (UK,000s, Q2 each year)

	<i>Unemployment</i>	<i>Underemployment</i>	<i>Want Work</i>	<i>Work Shortage</i>
2000	1599	2084	2397	6080
2001	1468	1826	2260	5554
2002	1519	1870	2315	5704
2003	1467	1837	2222	5526
2004	1439	1783	2079	5301
2005	1439	1840	2142	5421
2006	1686	1867	2155	5708
2007	1655	1963	2164	5782
2008	1674	2069	2242	5985
2009	2435	2697	2218	7350
2010	2471	2740	2342	7553
2011	2513	2826	2285	7624
2012	2564	3049	2386	7999

Source: ONS, Labour Force Survey

Figure 1: Measures of UK Work Shortage



The Labour Market Temperature Index

The Labour Market Temperature Index (LMTI) is a variant on the well-known Economic Misery Index first devised by economist Arthur Okun in the 1960s. The original Misery Index was calculated by adding the unemployment rate to the consumer price inflation rate. The labour market variant instead adds the unemployment rate to the rate of change of real earnings.

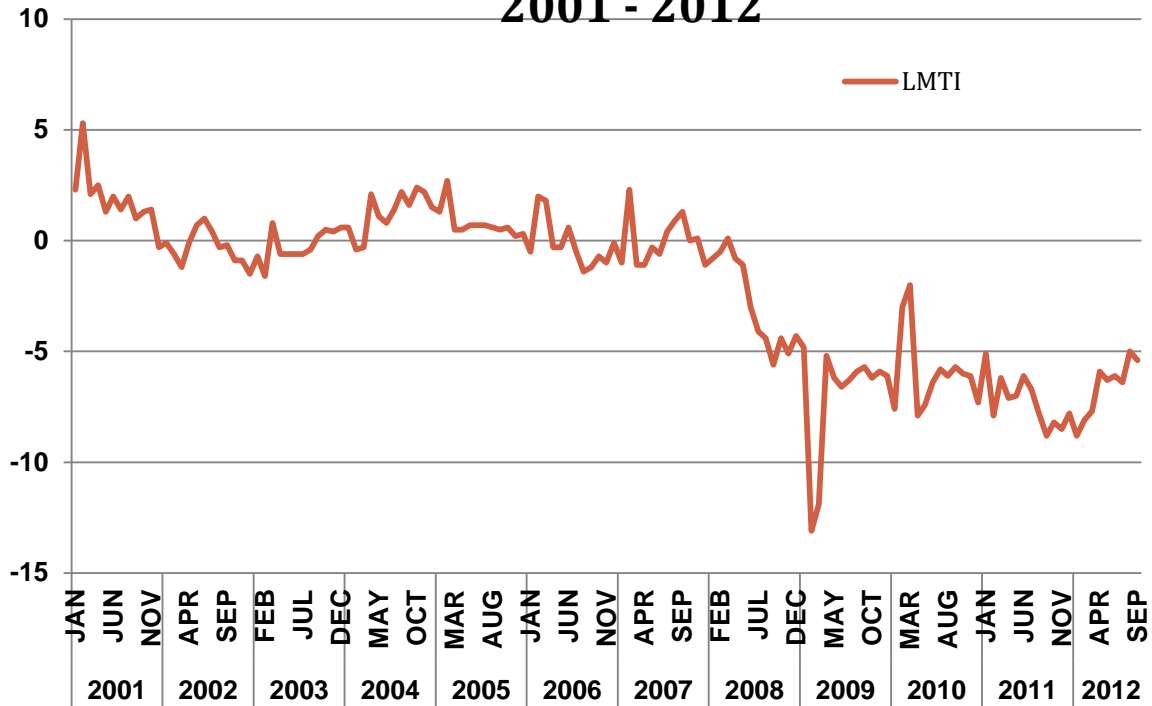
The LMTI takes into account the impact of (CPI) price inflation, nominal pay increases and changes in average hours worked per person, the latter two variables determining the rate of growth of average weekly earnings. The index is in turn benchmarked against an even temperature reading for the labour market, set at zero. A sub-zero reading is a measure of deficient demand for labour assuming that the chosen even temperature benchmark reflects the sustainable (or structural) rate of unemployment and the sustainable rate of average real weekly wage growth. Sustainable in this context means the rates consistent with the official policy target of 2% CPI inflation, which on the basis of estimates currently implicit in economic modeling by the independent Office for Budget

Responsibility (OBR) corresponds to an assumed sustainable rate of unemployment of around 5% and sustainable real average weekly wage growth of around 2%.

The LMTI should be considered a temperature index rather than a misery index since its purpose is to gauge fluctuation in the demand side strength or weakness of the labour market rather than measure the precise extent of human distress or misery this causes. Although any sub-zero LMTI reading will increase misery, the same overall temperature reading can give rise to a variety of configurations between pay, hours of work and unemployment, with those resulting in higher unemployment generally thought to be the source of greater misery. The post 2008 configuration is therefore likely to have been associated with less misery than the higher unemployment configurations witnessed in the wake of the 1980s and 1990s recessions.

Figure 2 shows how the UK's LMTI has fluctuated since 2000. Prior to the recession of 2008-9 the overall temperature reading was close to or above zero. Unemployment at that time was likely to have been close to its underlying structural rate, with the strength of demand for labour resulting in higher real wage growth for people in work. Since then mounting labour market weakness has shown up in a combination of higher unemployment, shorter working hours and real wage reductions. Comparing 2008 and 2012 the net reduction in demand for labour as measured by the fall in the LMTI is more than twice that indicated by the rise in unemployment. The cooling shown by the LMTI is thus more indicative of the overall degree of pain inflicted on the labour market since the start of the financial crisis.

**Figure 2. Labour Market Temperature Index
2001 - 2012**



The labour market was at its coldest in February 2009 with a LMTI reading of -13. Things warmed up a little in early 2010 but cooled again in 2011. Though the labour market temperature has improved in 2012 in response to a fall in unemployment and moderation in the squeeze on real earnings, sub-zero conditions continue. Indeed, a projection of the LMTI based on the latest OBR economic forecast (published in December 2012) suggests a further period of cooling in the near term with subsequent warming to 2018 doing no more than easing the chill (figure 3). If the OBR forecast proves correct the UK labour market will eventually have suffered a sub-zero decade, still be feeling cold, and some distance from returning to the pre-financial crisis climate.