

**2006 - 2012:
Ailing Economy,
Failing Solutions**

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February 2013

Prime

2006 - 2012: Ailing Economy, Failing Solutions

By Jeremy Smith

In this report, PRIME compares the state of the UK labour market and economy in 2012 with that of 2006, and looks at the impacts on national productivity.

In this report we conclude that traditional productivity methodology has a fundamental flaw when it comes to measuring the performance of a national economy with a chronic high level of unemployment.

This is because productivity methodology ignores the wasted capacity of a nation's economically active, but unemployed, population.

Conclusions

- In 2012, UK GDP was just 1.1% greater than in 2006, whilst the population had grown by over 4%. This means that GDP per head of population has fallen by around 3% between the 6 years
- If GDP had grown by just 1.5% per year since 2006, it would be 8%, or c.£120 billion, greater in 2012 than the actual figure
- In 2012, the number of those in employment was 2% higher than in 2006, while the number of unemployed was 48% (800,000) higher
- Between 2006 and 2012, the UK workforce has undergone enormous changes; in particular, the number of those employed in manufacturing has fallen by 14%, and in construction by almost 12%
- Between 2006 and 2012, the increase in the working population (around 500,000) is almost entirely due to an increase in the number of self-employed; moreover, the number of part-timers (employed or self-employed) has risen by around 700,000
- In 2012, the UK's national 'productivity' as traditionally measured by overall output per hour has risen by around 0.5%, and when measured by output per worker or per job, it has in effect stagnated between 2006 and 2012
- Traditional productivity methodology has a fundamental flaw when it comes to measuring the performance of a national economy with a high level of unemployment. This is because productivity methodology ignores the wasted capacity of a nation's economically active, but unemployed, population
- In effect, traditional productivity methodology implicitly assumes that there is no unemployment, or that by reducing the volume of labour per unit of output, the displaced employees will quickly be more productively employed elsewhere in the economy – which is not borne out by reality
- We argue that by far the most significant measure of productivity for a national economy is the value of output divided by the economically active population, i.e. the sum of those in employment and those unemployed but seeking work
- On this measure, the output value per economically active person in the economy has fallen, between 2006 and 2012 by 3.24%
- Therefore, an economic policy that concentrates on improving productivity as traditionally measured, at the expense of generating employment through productive investment and activity, is fatally flawed
- To reboot the economy and enhance national productivity, the UK needs a major, labour-intensive infrastructure investment programme aimed at future sustainability

GDP and population

In 2011, UK GDP was just 1.10% higher than in 2006. On the ONS first estimate for 2012, GDP in 2012 is slightly below this, at 1.07% higher than in 2006. This represents an increase of under 0.2% per year.

Against this, the UK's population has been growing at an annual rate of around 0.7%. Since 2006, the population has risen by about 2.4 million, or 4.2%. Therefore, GDP per head of population has undoubtedly and substantially declined since 2006, by around 3% in 2012.

The UK workforce compared

PRIME has compared changes in jobs and in the workforce between 2006 and 2012 based on June and September data.

Between 2006 and 2012, total workforce jobs went up by between 0.72% to 1.10%.

Between 2006 and 2012, employee jobs went down by 0.73% or 0.92%, but self-employed jobs went up by 11.63% to 14.11%. The total increase in jobs in 2012 over 2006 was circa around 285,000.

Employee jobs in Q2 and Q3 2012 were lower by around 200,000. However, self-employment jobs went up by around 520,000 (average June/September). This represents a significant structural shift in the UK workforce and labour market.

The number of 'economically active' people, in effect the potential workforce, grew by over 1.4 million, an average of 236,000 per year. Employment has risen by circa 600,000, but unemployment is 800,000 higher in 2012 (2.49 million compared to 1.68 million in 2006). So while overall employment (taken in all its varieties) has in late 2012 reached record levels, it has not kept up with the increase in the potential workforce.

We also compared the profile of the workforce, with data from the Labour Force Survey, between the 2 years. Among the findings:

- The number of **self-employed** has risen by 430,000-500,000 compared to 2006.
- The number of those **working full-time**, whether as employees or self-employed, has fallen compared to 2006 by 57,000 – 228,000.
- The number of those **working part-time** has risen by around 700,000 (between 659,000 and 759,000) to around 8.1 million.
- The number of **full-time employees** fell by between 416,000 and 209,000 between 2006 and 2012.
- The number of **part-time employees** rose by an average of 350,000 between 2006 and 2012
- The number of **full-time self-employed** rose by an average of 150,000 between 2006 and 2012 to just over 3 million.

- The number of **part-time self-employed** rose by an average of 320,000 between 2006 and 2012 to around 1.2 million

Therefore, to produce approximately the same value of “output” (GDP) in both years, in 2012 over 500,000 more people were involved in work of some kind and duration. In effect the whole increase in the workforce is attributable to the self-employed.

But the biggest shift we see is that the number of part-timers of all kinds has increased by some 700,000 since 2006, in the context of a concurrent rise in people having second jobs.

The changing jobs profile

We have also compared changes in the broad profile of jobs between 2006 and 2012 (May-July), looking at each industry, and then at industrial sectors (subsets of industries) over the same period. The detailed results are set out in Annex 2.

We highlight in particular the following key changes by industry:

- Overall employment (employees and self-employed) in services grew by 3.83%
- The number of employees in services grew by 429,000, or 1.9%
- The number of self-employed in services grew by 542,000, or 19.79%
- Overall employment in manufacturing fell by 14.02%
- The number of employees in manufacturing fell by 397,000 or 14.28%
- The number of self-employed in manufacturing fell by 26,000 or 11.2%
- Overall employment in construction fell by 11.89%
- The number of employees in construction fell by 250,000 or 18.23%

Productivity

The number of hours worked in 2012 increased by up to 1.76% compared to 2012. However, *output per hour* increased only by between 0.3 and 0.7% between the years.

The overall *output per worker* for Q2 shows a slight fall in 2012 compared to 2006 of 0.4%. For Q3, it rose by +0.2%.

The *output per job* was 101.1 in 2006, and 100.5 and 101.2 respectively in 2012. Again there is virtually no difference between the two years on this.

While overall productivity was virtually unchanged, that of the manufacturing sector saw a rise, though in 2012 less so than 2011. However, productivity of the ‘market sector’ as a whole fell, meaning that the private service sector productivity saw a fall between the 6 years.

Real wages have fallen significantly compared to inflation, whether measured as CPI or the normally higher RPI, between 2009 and 2012. Chart 3, from ONS data, graphically shows the respective developments over the period.

2006 - 2012: Ailing economy, Failing Solutions

1. Introduction

Like others, PRIME has been gnawing at the bone of the UK labour market 'puzzle'. How come the numbers of those in employment has risen in recent months, while GDP is utterly stagnant? And does this mean "productivity" is in decline? What is happening in the labour market? What needs to be done? Those are the issues and questions we aim to address and answer, so far as we can.

A lot of chatter from the 'commentariat' has been about short term (quarterly) changes in employment levels over the last year. We in PRIME have till now rather concentrated mainly on a year-on-year comparison between mid-2011 and mid-2012 - see "*UK labour market - no 'puzzle', just more working for lower pay (reprise!)*" at <http://www.primeeconomics.org/?p=1294> for example.

For although there are some odd aspects of the current growth in jobs - especially the late-year increase in full-time employment - the overall position is not so strange when you look at the kind of economy we are developing. We have more economically active people, a large pool of unemployed, real wages have fallen behind, and the UK has one of the most 'flexible' (for employers) employment systems among higher income countries. Most people are struggling to survive economically, and so they are searching for work, taking jobs as employees where they can find them, and doing self-employed, often part-time, work of various kinds and intensities when they can't.

Meanwhile the coalition government refuses to heed calls to change economic direction and create demand in the economy despite the economic stasis, so the issue for everyone is how to gain some share of the fixed national economic pie. This means more people working longer hours between them at reduced real wages to produce no more output.

But rather than compare and contrast the labour market in late 2012 and early 2013 with the years since the financial and economic crisis began, we believe it is more useful and informative to look back to 2006. This was a year before the peak of 2007/08, and before the credit-driven crisis fully erupted in late 2008. And as we shall see, 2006 was in some ways remarkably similar to 2012, whilst in others seeming half a lifetime away. GDP, size of workforce, total hours worked, apparent productivity.. all these merit a close look.

In addition, looking back over the last 6 or 7 years gives a chance to stand back and see just how things have changed for the British people - as workers and would-be workers - in terms of the kind of work available to them.

2. UK GDP: up just 1% from 6 years ago

We also chose 2006 as the base year for comparison for another reason – UK GDP that year, as we show below, was very similar to that in 2011, and (from the first estimates for the 4th Quarter of 2012) to the level of GDP achieved in 2012. In fact, on the current estimate, there was zero increase in the value of economic activity in the UK between 2011 and 2012.

Table 1 sets out the annual GDP figures (in £ million, constant volume, base 2009) from ONS for the 10 years 2002 to 2012.

Table 1

	GDP	% difference from 2002	% difference from 2006	% difference from 2007 (peak)
2002	1262708			
2003	1310879	3.69		
2004	1349001	6.71		
2005	1386426	9.67		
2006	1422479	11.25		
2007	1474153	16.60	3.49	
2008	1459885	15.48	2.48	-1.02
2009	1401863	10.89	-1.59	-4.95
2010	1427087	12.88	0.18	-3.24
2011	1440150	13.92	1.10	-2.36
2012	1439755	13.88	1.07	-2.38

From the above, we can note that the 2011 figure was 1.1% higher than the 2006 figure, an average annual increase in real GDP of just 0.22% over the 5 years.

And looking at 2012, from the ONS first estimate for Q4, the final annual figure will be very similar to that for 2011, i.e. a GDP figure about 1.1% higher than in 2006, an average of less than 0.2% ‘growth’ per year.

At this point, we must record the usual caveats about GDP – it is an approximate measure of current economic activity, not a measure of wealth let alone well-being. It does not adequately allow for depreciation of existing assets, nor for the use and destruction of scarce resources, nor for environmental damage. When Hurricane Sandy damaged the Caribbean and US coastal cities and regions, repair and rebuilding work counts towards GDP – but the damage will not be recorded as a negative.

And finally, we need to note that the UK’s population has been growing, at an annual rate of around 0.7% in recent years (from 59.1m in 2001 to 63.2m in 2011). This means that since 2006, the population has risen by about 2.4 million, or 4.2%. Therefore, GDP per head of population has undoubtedly and substantially declined since 2006.

Thus with population in 2006 estimated at 60.8m, based on a “straight line” annual increase from 2001, the GDP per head was £23,396. In 2011 with a population of 63.2 the figure is £22,780, a fall of £616 per person or 2.63%. If 2012 population were 63.5m (assuming a similar increase), the loss of GDP was £723 per head, or 3.09%.

3. UK workforce jobs – similar levels in 2006 and 2012

The ONS provides data for the number of “workforce jobs”, on a quarterly basis. These are quite fluid so single snapshots may be misleading. The following two tables provide and compare the annual figures for 2006 and 2012 (a) using annual June figures for each year, and (b) the annual September figures over the same period. The job figures are in thousands.

Table 2(a) June jobs figures

	2006	2007	2008	2009	2010	2011	2012	06-12: % diff.
Self-empd	4 039	4 150	4 173	4 177	4 347	4 341	4 609	+14.11
Employees	27 292	27 434	27 667	27 117	26 780	26 663	27 092	-0.73
HM Forces	204	198	193	197	198	193	186	-8.82
Gov- supp'd trainees	54	47	50	57	64	31	16	-71.37
Total jobs	31 588	31 829	32 083	31 548	31 388	31 228	31 935	+1.10

Table 2(b) September jobs figures

	2006	2007	2008	2009	2010	2011	2012	06-12: % diff.
Self-empd	4 118	4 187	4 143	4 240	4 357	4 530	4 597	+11.63
Employees	27 342	27 536	27 673	26 919	26 699	26 671	27 150	-0.92
HM Forces	202	194	194	199	196	192	183	-9.41
Gov-supp trainees	56	51	52	57	53	21	16	-72.43
Total jobs	31 718	31 968	32 062	31 415	31 305	31 414	31 946	+0.72

Note that these numbers are for *jobs* not *people*, and do not divide jobs into full or part-time. But from them, as a broad picture, we see that between 2006 and 2012, total workforce jobs went up by 1.10% (June) or 0.72% (September).

Between 2006 and 2012, employee jobs went down by 0.73% or 0.92%, but self-employed jobs went up by a large percentage, 14.11% (June) or 11.63% (September).

The total increase in jobs in 2012 over 2006 was (a) 347,000 and (b) 228,000, an average of around 285,000.

In numbers, employee jobs in Q2 and Q3 2012 were lower in (a) by 200,000, and in (b) by 192,000. However, self-employment jobs more than made up the fall in employee jobs, going up under (a) by 570,000 and (b) by 478,000. This represents a significant structural shift in the UK workforce and labour market, further confirmed by analysis of the workforce profile, in the next section.

Before doing so, we need to show the relative positions between the two years (using September–November data for each) in terms of economic activity, as set out in Table 3 below. The data for this comes from the Labour Force Survey, a different source from above, but helps set the context for our comparison.

Table 3 (figures in 000)

	Over 16 population	Total economically active	Total in employment	Total unemployed	Economically inactive
2006	48399	30756	29078	1677	17643
2012	50655	32171	29681	2490	18484
Difference	2256	1415	603	813	841

From this we see that the potential workforce has grown by over 1.4 million, an average of 236,000 per year. Yet employment has risen by 600,000, leaving a gap which is reflected in the 800,000 higher unemployment figure for 2012 as compared with 2006, and also in the ‘economically inactive’ figure. So while overall employment (taken in all its varieties) has recently reached record levels, it has not kept up with the increase in size of the potential workforce.

Put another way, if the extra 800,000 unemployed could be put to work – thereby returning to the same (already high) unemployment figure as 2006 - and if each earned on average just £20,000 per year gross, this would amount to over £16 billion pounds, or over 1% of GDP. The Treasury would gain the tax revenues from their employment, and welfare payments would be dramatically reduced. This is without calculating the additional ‘multiplier’ benefits of their additional spending power for local communities. This new work should, moreover, add to the value of GDP, not simply spread the margarine (labour) more thinly across existing GDP.

4. Comparing the workforce profile: May-July 2006 and 2012

In order to be able to break down the data for full and part-time employees, and full and part-time self-employed etc., we have taken quarterly ONS data from Labour Market Statistics, which are compiled from the Labour Force Surveys (LFS). The total numbers are of *people* not *jobs*, and do not easily reconcile to the jobs data (summarised above) which comes from other sources (ONS explains the different sources in detail elsewhere; a major point is that many people have two or more jobs whether self-employed or as employees). However, the LFS data provide an internally consistent basis for assessing broad changes, and are broadly consistent with the jobs data.

For this purpose, we have looked at the statistics for employment and jobs for May-July 2006, and compared with May-July 2012 (all data is provided as 3 month average), and then done the same exercise for the September to November figures. The two periods are set out in Annex 1. Their trends are broadly similar, but the later (September to November) figures are somewhat nearer to the 2006 figures than the earlier ones. Taking both sets together and looking for broad trends, we can note the following key points:

1. The overall **workforce** in 2012 is around 500,000 to 600,000 greater than in 2006, an increase of around 2% in the respective sizes.
2. Of these, the actual number of **employees** is broadly constant, our periods ranging from -57,000 to +112,000. The percentage of employees in the workforce has declined by 1 – 2% to around 84.9%.
3. The number of **self-employed** has risen by 430,000-500,000 compared to 2006. The self-employed now form about 14% of the workforce, up more than 1% since 2006.
4. The number of those **working full-time**, whether as employees or self-employed, has fallen compared to 2006 by 57,000 – 228,000. The gap is much narrower in the later period. The percentage of full-timers in the workforce has fallen by 1.7-2.1% to around 72%.
5. The number of those **working part-time**, whether as employees or self-employed, has risen by around 700,000 average (between 659,000 and 759,000) to around 8.1 million. Part-timers form now about 27.5% of the workforce, up around 2% from 2006.
6. The number of **full-time employees** fell by between 416,000 and 209,000 between 2006 and 2012, or by 1–2.1%. Full-time employees are some 62% of the workforce, down around 2% of the total.
7. The number of **part-time employees** rose by an average of 350,000 between 2006 and 2012, around 22.7% of the total workforce. This is an increase of around 0.75% of the total.
8. The number of **full-time self-employed** rose by an average of 150,000 between 2006 and 2012 to just over 3 million; they form around 10.2% of the workforce, up by around 0.3% of the total.
9. The number of **part-time self-employed** rose by an average of 320,000 between 2006 and 2012 to around 1.2 million, a large percentage rise of over 33% between the years. Part-time self-employed now form some 4% of the workforce, up by say 0.5% of the total.
10. The number of **people with second jobs** has risen by an average of 63,000 (around 6%) between 2006 and 2012, the current number being around 1.12 million.

Conclusions from the comparisons

We see from this that the broad shape of the workforce has moved only slightly between 2006 and 2012. But that masks some really important shifts in numbers between different subsets of the workforce, even if their respective “share” of the workforce is only amended by a modest percentage.

In order to produce approximately the same value of “output” (GDP) in both years, in 2012 over 500,000 more people are involved in work of some kind and duration. Within this, the number of employees has marginally declined in absolute numbers, and in effect the whole increase in the workforce is attributable to the self-employed who have increased by around half a million – and two-thirds of this increase is attributable to part-timers.

While full-time employees fell by some 200,000 to 400,000, the number of part-time employees rose by a similar amount of around 350,000. We know that the number of full-time employees rose in late 2012, against a trend that has lasted for several years, so this indicator is to be closely monitored over the coming months.

But the biggest shift we can see is that the number of part-timers of all kinds has increased by some 700,000 since 2006, and this is also to be seen in the context of a concurrent rise in people having second jobs.

5. Comparing the jobs – 2006 and 2012

In November 2012, as part of our work to understand the labour market/productivity ‘puzzle’, PRIME undertook a study to compare the UK employee jobs by industry for the months of June 2006 and June 2012, and also the self-employed jobs by industry for the same period. The ONS industry categories are not always pellucid on what is included, but the broad patterns are very obvious. Whilst this is effectively a snapshot of the position at each date, we are confident that they are fairly representative of the overall picture, notwithstanding the improved employment statistics for late 2012.

We have however more recently looked at employment changes between June and September 2012 and have included updated information on the more significant movements over this period.

In addition to looking at each ‘industry’, we have also looked at the more detailed figures for each ‘industrial sector’ (subsets of industries) over the same period.

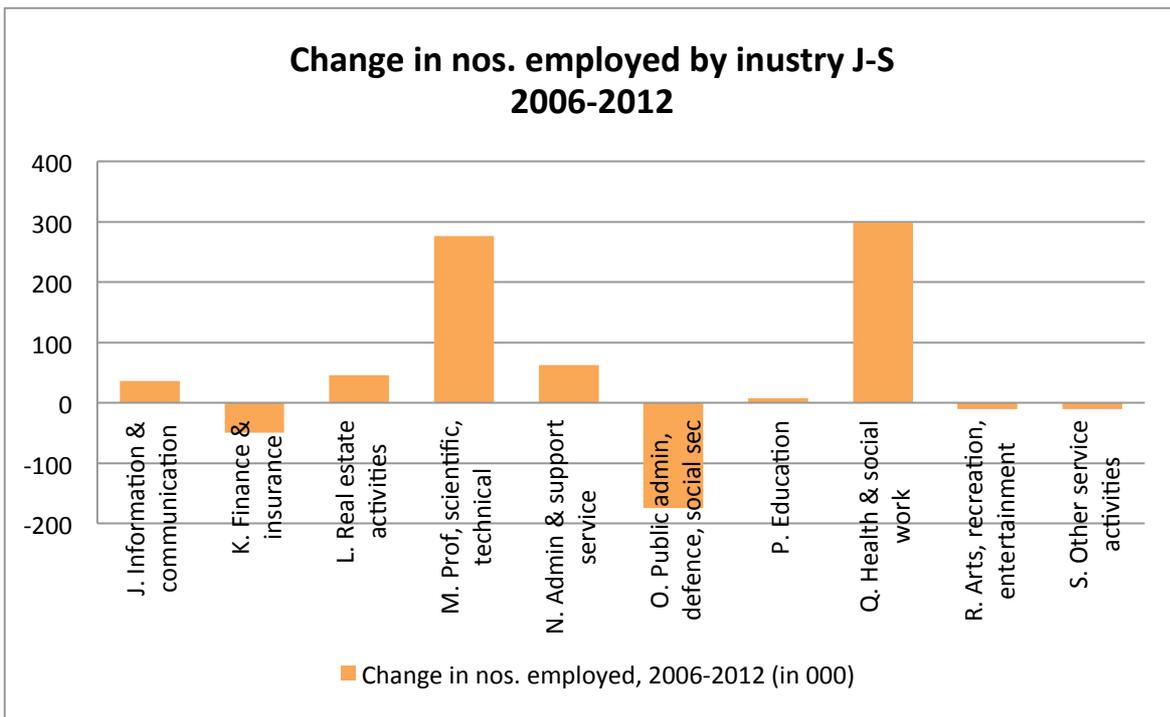
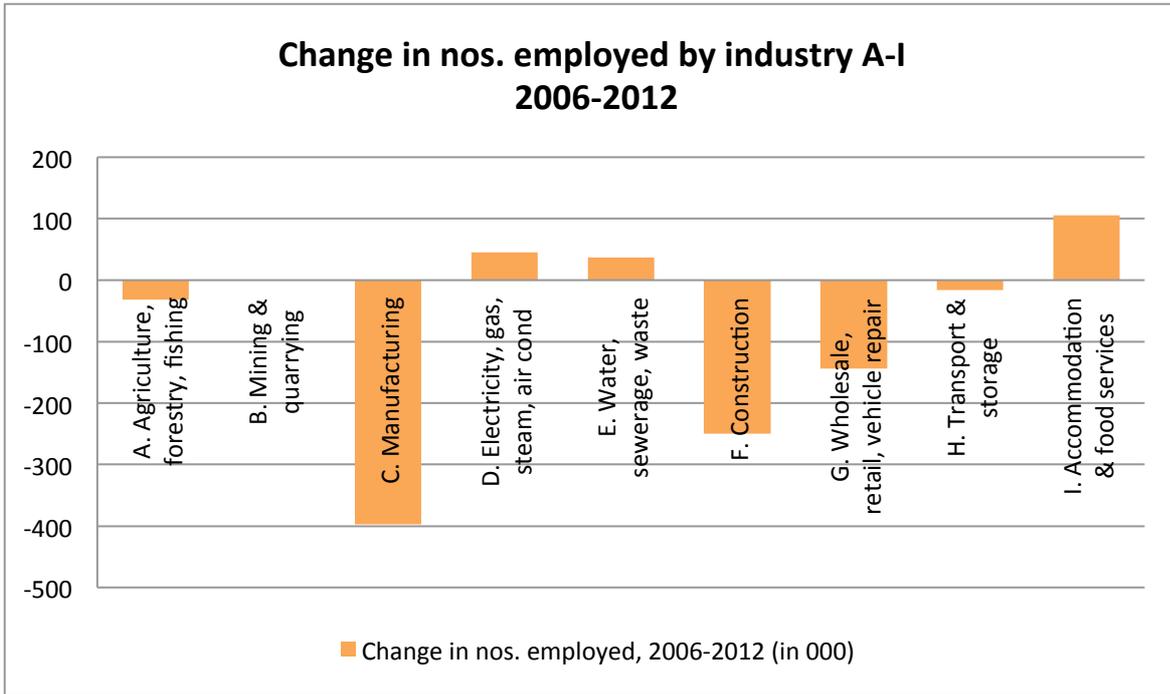
The results of this study, and detailed statistics for each industry and industrial sectors, are set out in Annex 2. We highlight in particular the following key changes by industry:

- Overall employment (employees plus self-employed) in services grew by 3.83%
- The number of employees in services grew by 429,000, or 1.9%
- The number of self-employed in services grew by 542,000, or 19.79%
- Overall employment in manufacturing fell by 14.02%
- The number of employees in manufacturing fell by 397,000 or 14.28%
- The number of self-employed in manufacturing fell by 26,000 or 11.2%
- Overall employment in construction fell by 11.89%
- The number of employees in construction fell by 250,000 or 18.23%
- The number of self-employed in construction fell by 19,000 or 2.13%

The changes in numbers of employees per industry between 2006 and 2012 are graphically set out in the following two charts (see next page).

And for a much longer-term comparison of overall numbers of employees and self-employed, we may note that compared to June 1962, or 50 years ago, the total workforce jobs in June 2012 has risen by 21.05%, the number of employees by 13.69%, and the number of self-employed by 123.52%.

Charts 1 and 2



7. A changing occupational mix

Reflecting the above changes in workforces and industry, the “standard occupational classifications” have also evolved substantially, as set out in the next Table (n.b. the sums do not fully add up as some respondents did not give their occupation).

Table 5

	<i>All (000)</i>	<i>Manager s Senior officials</i>	<i>Profess. Occupns</i>	<i>Assoc . Prof & tech</i>	<i>Admi n & sec</i>	<i>Skille d trade s</i>	<i>Pers. Service s</i>	<i>Sales & Custmr Services</i>	<i>Process Plant Machine operatvs</i>	<i>Elementary occupns</i>
Jul-Sep 2006	2917 4	4 379	3 764	4 094	3 509	3 240	2 331	2 264	2 150	3 387
Jul-Sep 2012	2969 2	4 821	3 945	4 495	3 130	2 995	2 585	2 228	1 887	3 425
No. change	+ 518	+442	+181	+401	-379	-245	+254	-36	-263	+38
% change	+1.78	+10.09	+4.81	+9.79	-10.8	-7.56	+10.9	-1.59	-12.23	+1.12

The figures are broken down by ONS in more detail elsewhere by type of job, but comparison between 2006 and 2012 is not easy due to changes in classification. What is striking however – from the above and from the industrial sector categories - is the increase in what appear to be senior management, professional and scientific posts, and the reduction in administrative posts and process plant operatives.

The increases are attributable, presumably, to the growth in ‘knowledge management’ jobs; and the decreases are caused in particular by technological change and the decline in the workforce (and work) in manufacturing and construction.

The increase in personal services is of course strongly related to health and social care, including the growing impact of the ‘ageing society.’ It is equally notable that the quantum of employment in ‘elementary occupations’ remains relatively constant, even if the content has shifted.

Thus in ‘elementary occupations’, the number of waiters has risen over the 6 years by 38,000, but postal workers are down by 45,000. Elementary construction workers are down by 86,000, but basic cleaning jobs are up by 19,000.

8. Working time and productivity

Hours worked

We have compared the figures for hours worked for 2 periods in 2006 and 2012, (a) May to July, and (b) September to November).

As regards (a), the number of hours worked is remarkably similar, when one compares May to July 2006 with the same period in 2012. In 2006, the total weekly hours were 927.8 million, compared to 934.9 million in 2012 – an increase of 0.77% from 2006 to 2012.

For the period in between, these figures compare with a peak of 944.2 million hours (May to July 2008) and a trough of 904.5 million hours (June to August 2009).

And taking (b), in 2006 the hours worked were 927.9, whilst the number for 2012 rose to 944.3, an increase of 1.77%.

The average actual hours of work per worker (combining the two periods) was 32.0 in 2006, and 31.7 in 2012. The average full-time worker worked 37.1 hours 2006, and 37.1 or 37.3 in 2012, the part-timers worked 15.6 hours in 2006 and 15.6 or 15.8 in 2012.

Productivity

(a) Overall

At its simplest level, if one takes productivity as the proportion of GDP generated per hour worked, then it appears that little will have changed between 2006 and 2012. This is due to the fact that 2012 GDP (if conformed at or close to the current estimate) will be around 1.1% higher than in 2006, while the number of hours worked was between 0.77% and 1.77% higher in 2012. This close correlation between the two years in both GDP and hours worked is perhaps surprising when we take into account the important structural shifts in the population and the nature of jobs and workforce, as described in the last section.

It is however borne out by the specific ONS data on labour productivity, which is calculated quarterly and based 100 = 2009. The Q2 2006 figure under “output per hour” is 99.5, and the Q2 figure for 2012 is 100.2, an increase of just 0.7%. The Q3 figure for 2006 was 99.7, and for 2012 100.0, a tiny increase of just 0.30%.

The overall output per worker for Q2 shows a slight fall in 2012 compared to 2006 of 0.4%. For Q3, it went from 100.9 in 2006 to 101.1 in 2009, or +0.3%.

The output per job was 101.1 in 2006, and 100.5 and 101.2 respectively in 2012. Again there is virtually no difference between the two years on this.

(b) Manufacturing

Manufacturing productivity (output per hour) has increased between the 6 years, from 96.6 in Q2 2006 to 105.1 in 2012, or +8.8%, and from 97.5 to 104.2 for Q3 (+6.87%). This masks major differences between manufacturing sub-categories, with textiles, wood and paper, chemicals and pharmaceuticals all being below 90, while transport equipment, and machinery and equipment, are (2012 Q2) at 147 and 136 respectively. And like the figures for output per job (see below) the 2012 figures are some 5% lower than in 2011.

Output per manufacturing job is well up in 2012 compared to 2006, Q2 107.00 and Q3 106.8, about 8 points up on 2006. This is however lower than in 2011 (the peak per job was 111.4 in Q3 2011). In its latest Economic Bulletin (January 2013), ONS comments that

“Manufacturing productivity (output per job) in the third quarter [2012] was more than 4 per cent lower than a year earlier. The variation in productivity varies widely between different parts of the manufacturing sector, with especially large falls in “textiles, wearing apparel and leather products”, “chemical and pharmaceutical products”, and “rubber and plastics products, etc.”, all of which have seen the combination of sharp falls in output and rising employment over the past year. In contrast, the “transport equipment” sector has seen output rising faster than employment.”

Unit wage costs are currently around 101.0 on a 2009=100 index. This is about 8 points higher than in 2006 and nearly 6 points higher than in 2011

(c) Services

But whilst manufacturing productivity has risen significantly, albeit with the caveat that it has fallen distinctly over the last year, service industry productivity – which in many areas is much harder to measure - has only very modestly increased. Measured as output per hour worked, in Q2 2006 the figure stood at 97.7, and in Q2 2012 it was 99.6 (Q3 98.1 and 99.5% respectively).

The comparison between the years for output per job is similar, with Q2 and 3 in 2006 being 99.0, and 100.0 and 100.8 in 2012.

Several service categories are today below 100 (the 2009 base), with finance and insurance being lowest, at 91, and transport and storage at 96. The highest current levels are administrative and support services (111), arts entertainment and recreation (105), and government services (104).

(d) Market sector

ONS gives what it calls ‘experimental’ figures for the market sector (broadly, private sector). The Q2 2006 figure was 100.8, compared to the Q2 2012 figure of 97.8 and Q3 97.9. We may reasonably infer therefore that productivity (as measured) in the public and other non-market sector has increased, since there has been an overall increase in output per hour, including in manufacturing.

If the market sector figures are correct, it means that the main productivity “problem” lies in the services private sector. However, the many definitional and measurement issues involved make firm conclusions difficult.

Moreover, the relevance of ‘productivity’ in the whole economy, as traditionally defined and calculated, is open to question in a period of high unemployment, i.e. when the economy is stuck in a state of undesirable equilibrium characterized by long-term large-scale unemployment – which we still have (over 2.4 million at the end of January 2012).

As Keynes put it in a letter on the multiplier to The Times on 5th May 1935,

“I can only find the answer [to those who did not accept the effect of the multiplier] in the fact that all our ideas about economics, instilled into us by education and atmosphere and tradition, are...soaked with theoretical presuppositions which are only properly applicable to a society which is in equilibrium, with all its productive resources already employed. Many people are trying to solve the problem of unemployment with a theory which is based on a theory that there is no unemployment.”

We live in a society whose economy is stuck in a wrong equilibrium, yet national productivity is looked at from the perspective of a theory which implicitly assumes full employment, since it measures what is produced by the currently employed workforce, and not by the currently available workforce; moreover it ignores the waste inherent in a huge labour resource available for productive purposes but un-deployed.

We return to this point in the final section.

9. Real wages compared to inflation

Back in July 2012, the apparent disconnect between rising employment numbers and stagnant or falling GDP started to be debated publicly.

Thus Sunday Times economist David Smith wrote In his Economonitor blog of 22nd July, entitled “UK: Gloomy Growth Numbers – But Not So Miserable Now” argued that it was hard to reconcile the recent positive growth in employment– including full-time employment – with the generally gloomy forecasts for GDP growth. He believed that the GDP figures for this year would in due course be revised upwards. He referred to the rise in employment whilst the number of unemployed had declined, and claimed:

“These figures were inconsistent with even a mild recession. They speak of a growing economy.”

We disagreed. On the same day we replied in our PRIME website article “UK economy – employment up, but real wages falling”:

“According to the ONS Labour Market Statistics for July 2012, average total pay in both private sector and public sectors, in the 3 months to May, rose by 1.5% on a year earlier. CPI annual inflation for those 3 months was 3.5%, 3% and 2.8% respectively, let’s say 3.1% average... that means in effect an annualised cut in the value of wages or salaries of around 1.6%. Under the RPI, let us recall, inflation is still higher, by about an extra 0.3%.

The increase in employment in the 3 months (March-May) of 181,000 – 133,000 full-time – represents an increase of 0.6% for this period over the previous quarter, which if maintained for a year would come in at 2.4%. But in fact, employment for the same 3 month period in 2011 was 29.28 million, which means that over a whole year, employment has scarcely grown (just 0.1%), whilst the purchasing power of wages declined (against inflation) by at least 1.6%....

The increase in employment over the last 6 months, and around 0.6% compared to the previous 3 months and 0.8% over the last 6 months, might have been expected to have increased overall workers’ spending capacity in the economy to a limited extent, other things being equal. But in reality, this has probably not occurred, since wage and salaries as a whole are rising at a rate significantly below the annual rate of inflation measured by the CPI, and even further below that measured by the RPI.

Therefore, it is unlikely that the 2nd Quarter GDP figures will be enhanced by the impact of increased employment over the last 6 months (up 1.62% annualised), offset by a similar rate of annual decline (also around 1.6%) in real wages across the whole workforce.”

In fact, the Q2 GDP figure came in at -0.4%, but given the royal holidays, Olympics etc. this was probably equivalent to a small fall of -0.2%. So we remain confident that our explanation around falling wages was indeed the reason for this. We returned to the theme in August, when more and more pundits were expressing their “puzzlement” at the apparent mismatch between GDP and increasing employment numbers:

“Compare these wage increases with inflation. The annual CPI inflation for July 2012 is 2.6% (up from 2.4% in June), and RPI inflation is 3.2% (up from 2.8% in June). Average CPI inflation over 2011 was around 4.5%, and for 2010 around 3.3%. Increases in wages were well below these figures throughout the period 2010 to 2012.

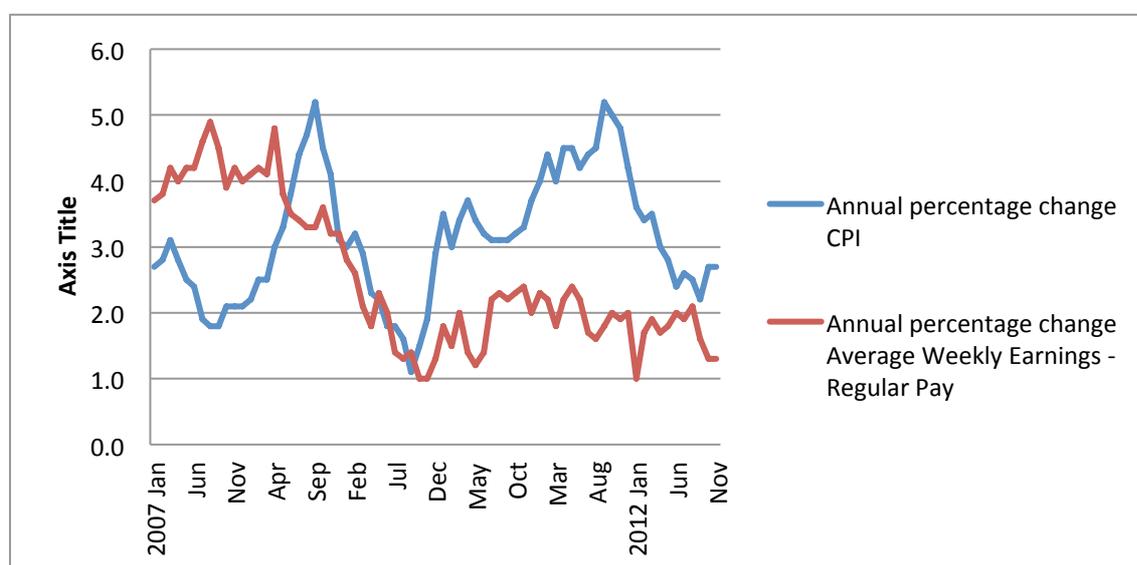
We can fairly conclude that on average, real wages are rising at a significantly lesser rate than inflation, whether CPI or RPI, and this gap appears to be between 1.0% and 1.6%. Since the overall workforce – which includes the increasing numbers of self-

employed – grew by 0.86% over the last year, remuneration of the workforce has clearly declined.”

This is more than borne out by the following data and graph reconstructed from the table in ONS’s January 2013 Economic Bulletin. This shows the gap between CPI inflation and regular wages from 2007 to November 2012, with CPI exceeding wages from 2009 onwards.

It in fact shows a bigger gap than we had referred to above, because we were using total pay, not regular pay, figures. The ONS chart shows however just how far regular pay earnings have strayed behind CPI inflation, let alone RPI, since the financial crisis began; total pay (including bonuses for some) is still less than CPI or RPI for almost all of the last 3 years.

Chart 3



Our conclusion is that the reduction in real earnings – which may be greater than we have reckoned because of the growth of self-employment – is the principal driver behind the increase in employment allied to no increase in the overall GDP value. With more employment – whether as employees or self-employed – in the wide mix of service industries, with more ‘flexibility’ and insecurity in the job market, with shifts in benefit patterns, and with household incomes squeezed, people are shifting their life patterns to try to make ends meet. But since overall people do not have more to spend, little or no more ‘value of stuff’ is being created in the economy as a whole.

9. Conclusions

The level of economic activity of the UK, as measured in our GDP, is about 1.1% greater in 2011 and 2012 than it was back in 2006.

It is startling to calculate that if GDP had grown just 1.5% per year since 2006 – surely not an excessive assumption - it would at the end of 2012 be 9% higher than in 2006. This means that we have “lost” almost 6½% of GDP in 2011 and 8% of GDP in 2012 through reliance on policies that have failed. The amount of GDP ‘missing’ on this basis for the last 2 years is around £220 billion, of which £120 billion in 2012.

Although the data vary slightly depending on which quarter is looked at, or whether it comes from the Labour Force Survey or from business surveys, it seems that the number of those engaged in late 2012 in the labour market was around 500,000 or 600,000 more than in the same period of 2006, an increase of around 2%. Thus we are employing (in all its forms) about 2% more people to produce just over 1% additional GDP.

However, a greater proportion of the workforce is working part-time than in 2006, whether as employees or as self-employed – the increase is somewhere between 650,000 to 750,000. And part-time employees’ earnings are on average only around two-thirds those of full-time workers, as appears from ONS data. Nor should we ignore the now 1.2 million part-time self-employed, up by over 300,000 since 2006, who have no minimum wage protection even in theory, and many of whom may be earning very little from their work.

From the number of hours actually worked in each year, we see that there was an increase in 2012 of 0.77% for June, and 1.77% for September, over the same periods in 2006. This reflects very closely the increase in GDP of 1.1% between the years.

The overall productivity figures from also ONS reflect this close correlation - whether output per hour, per job, or per worker, there is almost no change. Within this, manufacturing productivity has increased, whilst that of the whole ‘market sector’ (mainly private sector) has declined.

So we are back to the issue: the same level of GDP being created by a slightly larger workforce which works slightly longer total hours than in 2006, for lower average real wages, at a very similar level of productivity, as traditionally analysed.

Yet behind this, there still stands a much higher pool of unemployed people than in 2006 – the difference being around 800,000. This is a wasted, and costly, resource to maintain in idleness when almost all of them want to work (and many who are in work wish to work longer hours). It is not as if the 2006 level of unemployment was low - it was still over 1.5 million, a level once seen as socially dangerous.

Traditional ‘productivity’ – a flawed measure for national economic performance

Productivity is undoubtedly a useful and necessary concept and measurement tool for individual firms, and for industrial subsectors. But should the same methodology (output per worker etc.) apply to measuring the productivity of output of national economy? Economists and commentators take it for granted that the answer is ‘yes’. We differ, in particular for an economy stuck in the wrong equilibrium.

To explain why, let us take the argument for the traditional approach set out in the ONS’s Handbook on Productivity. We find the following statements which both link and differentiate ‘productivity’ and ‘improved living standards’:

“Improving productivity results in improved living standards. This is because an increase in productivity translates into an increase in output (amount and quality) without any increase in input (labour and materials). In this context, labour can be seen as the amount of effort required to produce something.

Productivity growth occurs through improved efficiency, such as using fewer inputs to produce the same outputs, or through inputs being used more effectively to produce outputs of greater value...

Over the long term, increased productivity is the key determinant of economic growth, and together with higher employment is the primary route to higher living standards. Prosperity is usually measured by gross domestic product (GDP) per person: the total output of the economy relative to the UK population. There are essentially two ways of increasing GDP per person:

1. to have a higher level of employment or hours, so that the total labour input in the economy increases
2. to increase the amount of output each person produces: that is, increase their productivity.

Given potential limitations on the rise of the UK’s labour force, boosting UK productivity growth is generally accepted as the primary route to improving our future standard of living in the long term.

The Government has therefore, for some years, targeted improved UK productivity and competitiveness performance.”

In short, the division here set out by the ONS is between ‘productivity’ in terms of output per unit of labour employed, and ‘prosperity’, to be measured as GDP per head of population. Then they say:

Enhanced productivity + higher employment = main contributions to higher living standards

The problem is, enhanced productivity may lead to fewer jobs (e.g. in the manufacturing industries) and higher unemployment. Alternatively, as we see

recently, more jobs but at reduced overall real wages may lead to a decline in productivity as measured.

Moreover, one may have slightly enhanced productivity and higher employment – comparing 2012 with 2006 – with a decline in living standards, in terms of GDP per head of population. As noted earlier, the whole population has grown by at least 4% since 2006, whilst GDP has grown by a little over 1% since then.

Curiously, the one measure of our national economy’s productivity that seems to us the most appropriate is one not even mentioned by the ONS, nor does it feature in most discussions around the ‘puzzle’ of the UK economy. That is, to measure national productivity not as “value of outputs divided by labour input (in its various forms)” but as “value of outputs divided by the sum of actual and potential labour inputs”, i.e. adding in the (wasted) potential of the unemployed, or that part of it which can be estimated as available for work. In other words, dividing total output by the total labour and potential labour of the economically active, not by the total labour of those in employment.

After all, if you improve productivity by reducing the workforce, and without there being new ‘demand’ creating new employment for all those displaced, the level of unemployment will rise, and the amount of benefits will increase. Moreover, having a large pool of longer-term unemployed is likely to give rise to many other financial and non-financial costs to society. This process, in a society and economy in the “wrong equilibrium”, while benefiting the firms which enhance their own labour productivity, and potentially enhancing that part of GDP generated by exports, actually worsens the overall position of the economy financially and socially unless there is a rapid escape from this “wrong equilibrium”. Something which we have not experienced over the last 6 years, and something which looks unlikely, given existing government policies allied to recent and prospective technological developments (see for example the FT Alphaville discussions on whether or how far human labour is going to be replaced by robots).

Let us take the actual figures from 2006 and 2012 and calculate ‘national productivity’ on the basis of GDP / potential labour. Of course, a more detailed analysis would look at factors such as differential male-female unemployment rates, and the lower average hours which would on average be worked by women if employed. But the basic figures speak for themselves, we believe. Here is Table 3 again:

Table 6 (figures in 000)

	Over 16 population	Total economically active	Total in employment	Total unemployed	Economically inactive
2006	48399	30756	29078	1677	17643
2012	50655	32171	29681	2490	18484
Difference	2256	1415	603	813	841

We note that unemployment in 2006 was 1.677 million, and in 2012 it was 2.490 million. So although 603,000 more were working in 2012 than 2006, the increase in unemployment of 813,000 pushes the growth in the economically active population to 1.415 million.

If we take the 2006 GDP value of £1,422,479 million and divide by the total economically active population of 30.756 million, we get a value per potential worker of £46,250.46

And if we take the 2012 provisional GDP value of £1,439,755 and divide it by the total economically active of 32.171 million, we get a value per potential worker of £44,753.19.

That is to say, the output value per economically active person in the economy has fallen, between 2006 and 2012, by £1,497.27 or by 3.24%. If one assumed that there is an irreducible amount of unemployment (people between jobs etc.) of say 500,000, one could also reduce the divisor (number of economically active) by this amount, but this would not affect the logic or broad outcome.

There is, we accept, a negative consequence of this way of looking at the national economy – it does not matter, from this perspective, whether just one person is employed to produce the country's total economic value (simplified here as GDP), with the rest of the economically active unemployed, or whether there is zero unemployment, all together producing the same value output. But under traditional productivity analysis, the position is worse - it would be a positive triumph of productivity for one person to produce 100% of national output!

In the real world, the number and proportion of those in employment and unemployed is of course of great importance. It is why most people have welcomed the recent increase in employment, even though this has meant more people working at lower average real wages to produce roughly the same value of output. Yet from a traditional productivity perspective, this outcome is 'bad'. A 'better' outcome in terms of productivity, if no more value is to be produced, is to reduce the labour input even though more unemployment results.

This is because the theory of productivity, when taken at national economic level, is implicitly based on flawed classical economic theories which do not fit the facts – namely low unemployment. As Keynes said in the letter cited above:

“Many people are trying to solve the problem of unemployment with a theory which is based on a theory that there is no unemployment.”

We would paraphrase Keynes:

“Many people are trying to solve the puzzle of productivity with a theory which is based on a theory that there is no unemployment.”

We need to be careful here for another reason. A modest percentage reduction in high unemployment, if based on an overall legal system of labour insecurity and an economy of falling real wages, which produces no greater economic value than before, is not self-evidently 'better' than a system of greater protection for workers which keeps unemployment at a modestly higher level and maintains real wages. The extra individuals in employment will probably be slightly better off than before, but overall there is a reduction in average real earnings.

Moreover, the increase in job insecurity and lack of employment protection for all (e.g. zero hour contracts) does not logically create a society with 'improved living standards', whether measured against financial or non-financial indicators, since it combines enhanced insecurity for the majority with lower real incomes.

What has to be done?

We are still stuck in the Wrong Equilibrium, which has just as dire consequences for the country as the Wrong Trousers had for Wallace. Absent heroic Gromit, the way out of the economic conundrum is to concentrate on the creation of jobs and on productive investment, faster than the economically active population increases. We have an economic system and theory which focuses on the need for reductions in labour and/or real wages to enhance competitiveness, and politically focused on the red herrings of public sector deficits and debt. Yet given the present policies, the deficit is not declining, manufacturing and construction have declined rather than grown, and our trade balance remains dire. In 2012, the economy generated £120 billion less value than it would have if we had seen just a 1.5% annual increase in GDP since 2006. It is time to change course.

If it is difficult to swiftly rebuild the scale of manufacturing jobs in the economy, the same is not true of construction, where the loss of jobs since 2006 is around 250,000. The reduction in publicly funded investment in our infrastructure was a grave error by the present government – what is urgently required as a first step is a labour intensive, capital investment programme of major scale, and focused on sustainable development goals, as for example recommended in the Green New Deal. An initial programme of £60 to £90 billion, for example, or 4-6% of GDP, would go some way to bridging the current 8% 'gap' caused by the non-increase in GDP from 2006.

We do not believe there is a 'structural deficit' of any scale in the UK public finances due to the permanent impairment of the UK economy, in particular due to the downgrading impact of a long period of high-level unemployment (called 'hysteresis'). There are supply-side improvements in terms of matching education and skills to the likely world and jobs of the future. There is a need for an industrial strategy to co-ordinate investment and development, and (to mention the unmentionable) to include import substitution policies where appropriate, given Britain's severe and chronic trade deficit.

But in the end it is front-end economic activity ('effective demand') that is lacking in the UK, and if other sectors cannot provide it, it is government's task to act. Our

unemployment is still almost 2.5 million, even though it has come down from the recent peaks. This is a financial as well as social and human waste.

ANNEX 1

Comparing the workforce between 2006 and 2012

(A) May-July statistics 2006/2012 compared:

- In 2012 there were 29.560 million **people in 'employment'** (whether or not employees), compared to 29.030m in 2006. This is an increase of those in employment of 530,000 or 1.83%.
- In 2012 there were 25.071m **employees**, compared to 25.128 in 2006. This is a decrease of 57,000, or -0.23%.
- In 2012, employees comprised 84.81% of all in employment, compared to 86.56% in 2006, i.e. the percentage of employees decreased by 1.75.
- In 2012 there were 4.223m **self-employed**, compared to 3.714m in 2006. This is an increase of 509,000 or 13.70%.
- In 2012 the self-employed comprised 14.29% of all in employment, compared to 12.79% in 2006, i.e. the percentage of self-employed rose by 1.50.
- In 2012, there were 21.438m **working full-time** (whether employees or self-employed), compared to 21.666m in 2006. This is a decrease of 228,000, or 1.05%.
- In 2012, those working full-time comprised 72.52% of all in employment, compared to 74.63% in 2006, i.e. the percentage of full-timers fell by 2.11.
- In 2012, there were 8.123m **working part-time** (whether employees or self-employed), compared to 7.364 in 2006. This is an increase of 759,000 or 10.31%.
- In 2012, those working part-time comprised 27.48% of all in employment, compared to 25.37% in 2006, i.e. the percentage of part-timers rose by 2.11.
- In 2012, there were 18.328m **full-time employees**, compared to 18.754m in 2006. This is a decrease of 416,000, or -2.27%.
- In 2012, full-time employees comprise 62.00% of all in employment, compared to 64.60% in 2006, i.e. the percentage of full-time employees decreased by 2.60.
- In 2012, there were 6.743m **part-time employees**, compared to 6.374m in 2006. This is an increase of 369,000, or 5.79%.
- In 2012, part-time employees comprised 22.81% of all in employment, compared to 21.96% in 2006, i.e. the percentage of part-time employees increased by 0.85.
- In 2012, there were 3.017m **full-time self-employed**, compared to 2.847m in 2006. This is an increase of 170,000, or 5.97%.

- In 2012, the full-time self-employed comprised 10.21% of all in employment, compared to 9.81% in 2006, i.e. the percentage of full-time self-employed increased by 0.40.
- In 2012, there were 1.206m **part-time self-employed**, compared to 867,000 in 2006. This is an increase of 339,000, or 39.10%.
- In 2012, the part-time self-employed comprised 3.78% of all in employment, compared to 3.61% in 2006, i.e. the percentage of part-time self-employed increased by 0.17.
- In 2012, there were 113,000 **unpaid family workers**, compared to 98,000 in 2006. This is an increase of 15,000, or 15.31%.
- In 2012, there were 152,000 in government-supported **training/employment programmes**, compared to 90,000 in 2006. This is an increase of 62,000, or 68.89%.
- In 2012, there were 1.424 people working part-time because they could not find full-time work, compared to 632,000 in 2006. This is an increase of 792,000, or 125.32%.
- In 2012, 17.9% of part-time workers could not find full-time work, compared to 8.7% in 2006.
- In 2012, there were 1.118m people with **second jobs**, compared to 1.048m in 2006. This is an increase of 70,000, or 6.68%.

(B) September-November statistics 2006/2012 compared

- In 2012 there were 29.681 million **people in 'employment'** (whether or not employees), compared to 29.078m in 2006. This is an increase of those in employment of 603,000 or 2.07%.
- In 2012 there were 25.201m **employees**, compared to 25.089 in 2006. This is an increase of 112,000, or +0.45%. [compare with reduction on May to July figures]
- In 2012, employees comprised 84.9% of all in employment, compared to 86.28% in 2006, i.e. the percentage of employees decreased by 1.38.
- In 2012 there were 4.203m **self-employed**, compared to 3.773m in 2006. This is an increase of 430,000 or 11.4%.
- In 2012 the self-employed comprised 14.16% of all in employment, compared to 12.98% in 2006, i.e. the percentage of self-employed rose by 1.18.
- In 2012, there were 21.574m **working full-time** (whether employees or self-employed), compared to 21.631m in 2006. This is a decrease of 57,000, or 0.27%.
- In 2012, those working full-time comprised 72.68% of all in employment, compared to 74.39% in 2006, i.e. the percentage of full-timers fell by 1.71.
- In 2012, there were 8.106m **working part-time** (whether employees or self-employed), compared to 7.447 in 2006. This is an increase of 659,000 or 8.85%.
- In 2012, those working part-time comprised 27.32% of all in employment, compared to 25.61% in 2006, i.e. the percentage of part-timers rose by 1.71.

- In 2012, there were 18.468m **full-time employees**, compared to 18.677m in 2006. This is a decrease of 209,000, or -1.12%.
- In 2012, full-time employees comprise 62.22% of all in employment, compared to 64.23% in 2006, i.e. the percentage of full-time employees decreased by 2.01.
- In 2012, there were 6.733m **part-time employees**, compared to 6.412m in 2006. This is an increase of 321,000, or 5.01%.
- In 2012, part-time employees comprised 22.68% of all in employment, compared to 22.05% in 2006, i.e. the percentage of part-time employees increased by 0.63.
- In 2012, there were 3.015m **full-time self-employed**, compared to 2.883m in 2006. This is an increase of 132,000, or 4.58%.
- In 2012, the full-time self-employed comprised 10.16% of all in employment, compared to 9.91% in 2006, i.e. the percentage of full-time self-employed increased by 0.25.
- In 2012, there were 1.188m **part-time self-employed**, compared to 890,000 in 2006. This is an increase of 298,000, or 33.48%.
- In 2012, the part-time self-employed comprised 4.0% of all in employment, compared to 3.06% in 2006, i.e. the percentage of part-time self-employed increased by 0.94.
- In 2012, there were 111,000 **unpaid family workers**, compared to 101,000 in 2006. This is an increase of 10,000, or 9.9%.
- In 2012, there were 116,000 in government-supported **training/employment programmes**, compared to 165,000 in 2006. This is an increase of 49,000, or 42.24%.
- In 2012, there were 1.120m people with **second jobs**, compared to 1.064m in 2006. This is an increase of 56,000, or 5.26%.

ANNEX 2

Changes between 2006 and 2012 in numbers of those in employment

The overall industrial categories are as follows, and we give the changes in numbers (all in 000) and percentages for both employees and self-employed. The data are for June in both years.

Table 7

Industry	2006 employees	2012 employees	change in nos. emp'ee	% emp'ee change	2006 self-emp'd	2012 self-emp'd	Change In nos. s/e	% s/e change	Total (emp + s/e) % change
A. Agriculture, forestry, fishing	237	205	-32	-13.50	155	209	+54	+34.84	+5.61
B. Mining & quarrying	57	57	0	0	7	15	+8	+114.3	+12.50
C. Manufacturing	2781	2384	-397	-14.28	236	210	-26	-11.02	-14.02
D. Electricity, gas, steam, air conditioning supply	75	120	+45	+60.00	2	6	+4	+300.0	+63.64
E. Water supply, sewerage, waste & remediation	151	188	+37	+24.50	10	16	+6	+60.00	+26.71
F. Construction	1371	1121	-250	-18.23	891	872	-19	-2.13	-11.89
G. Wholesale & retail trade, repair of vehicles	4544	4400	-144	-3.17	421	448	+27	+6.41	-2.36
H. Transport & storage	1263	1247	-16	-1.27	255	268	+13	+5.10	-0.20
I. Accommodation & food services	1846	1951	+105	+5.69	132	163	+31	+23.48	+6.88
J. Information & communication	1013	1049	+36	+3.55	187	219	+32	+17.11	+5.67
K. Finance & insurance	1099	1049	-50	-4.55	49	96	+47	+95.92	-0.29
L. Real estate activities	325	371	+46	+14.15	59	67	+8	+13.56	+14.06
M. Professional, scientific & technical	1724	2000	+276	+16.00	406	558	+152	+37.44	+20.09
N. Admin. & support service	2165	2228	+63	+2.91	229	340	+111	+48.47	+7.27
O. Public admin. & defence, social	1553	1379	-174	-11.20	27	36	+9	+33.33	-10.44

security									
P. Education	2437	2445	+8	+0.33	152	242	+90	+59.21	+4.02
Q. Health & social work	3377	3675	+298	+8.82	295	319	+24	+8.14	+8.77
R. Arts, recreation, entertainment	670	660	-10	-1.49	219	236	+17	+7.76	+0.79
S. Other service activities	604	594	-10	-1.66	308	289	-19	-6.17	+3.18
Total services G to S	22620	23049	+429	+1.90	2739	3281	+542	+19.79	+3.83
Manufacturing + Construction	4152	3505	-647	-15.58	1127	1082	-45	-3.99	-13.11
All jobs	27292	27124	-168	-0.62	4039	4609	+570	+14.11	+1.28

Looking at the September 2012 statistics for employee jobs by industry, they show the following important changes (over +/-10,000 variation) from June 2012:

H. Transport & storage: land transportation	+10000
I. Accommodation and food: food	+19000
J. Information & Communication: computer programming	+16000
M. Professional, scientific & technical	+31000
Activities of head offices, management consultancy	-14000
N. Admin & support services: employment activities	+29000
Security & investigation	+12000
Services to buildings/landscape	+13000
Office admin & business support	+14000
O. Public admin & defence, social security	-13000
P. Education	-54000
Q. Health & social work: human health	+23000
Social work	-10000
S. Membership organisations	-14000

Despite these important variations, the total change in service employee jobs, from the September data, is just 32,000 from June, and the overall change in employee jobs is just 28,000. Out of interest, there were similar changes in both service and total jobs between June and September in 2006.

Looking at self-employment job changes between June and September, the following significant changes appear:

A. Agriculture	-18000
G. Wholesale & retail trade: retail trade	-29000
J. Information & communication: Publishing -5000, movies,TV etc. +8000,	+12000

computer programming +9000	
K. Finance & insurance:	-11000
L. Real estate	+17000
Q. Health & social work: health	+10000

The overall figure for self-employment service jobs showed no change at all from June, and the total of all self-employment jobs was down 22,000.

Industry sub-categories - employees

Some of the above industrial sectors are sub-divided in the ONS statistics, so we can in some respects see a more detailed picture of the changes that have occurred over the last 6 years. Manufacturing allows the most detailed look, with 23 categories, and other industry sectors have several categories.

Some changes are relatively easily explained by changes in technology; others would need further analysis, since for example there may be some redefinition of what falls under which headings. And the figures are in any event broken down in far more detail for manufacturing sectors than for most service sectors. Here we set out the number of people in 2012 engaged in each of the specified industrial sub-categories, together with the percentage change from 2006 (taking June figures for each year). This enables us to see both where today's jobs are mainly situated in terms of industrial sectors, and also the areas where there has been significant change over the relatively short period of 6 years.

Industrial sub-sector	No. employed 2012	% change from 2006
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B. Manufacturing:

Food products	355,000	-5.08%
Printing & reproduction of recorded media	122,000	-26.04%
Chemicals & chemical products	103,000	-21.97%
Rubber & plastic products	145,000	-26.40%
Fabricated metal products	288,000	-8.28%
Computer, electronic & optical products	124,000	-16.78%
Machinery & equipment not elsewhere classified	190,000	-9.52%
Motor vehicles, trailers	133,000	-26.52%
Furniture	62,000	-30.34%

Just three manufacturing categories have seen increases in employees since 2006:

Coke & refined petroleum products	12,000	+50.00%
Other transport equipment	135,000	+21.62%

Repair & installation of machinery/equipment	111,000	+1.83%
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G. Wholesale & retail

Wholesale & retail & repair of motor vehicles	435,000	-14.03%
Wholesale trade (other than motor)	1,083,000	-4.16%
Retail (other than motor)	2,856,000	-0.59%

H. Transport & storage

Land transport & pipeline transport	494,000	--9.52%
Warehousing & support for transportation	420,000	+25.00%
Postal & courier	240,000	-11.44%

I. Accommodation & food services

Accommodation	395,000	+/-0.00
Food & beverage	1,567,000	+6.82%

J. Information & communication

Computer programming, consultancy & related	528,000	+13.55%
Publishing	152,000	+13.55%
Telecommunications	212,000	-4.07%

K. Financial & insurance

Financial services (save insurance & pension)	524,000	-17.09%
Insurance, reinsurance, pension funding	118,000	-27.61%
Activities auxiliary to financial/insurance services	407,000	+33.84%

M. Professional, scientific & technical

Professional, scientific & technical activities	603,000	+16.18%
Head office activities,	541,000	+31.31%

management consultancy		
Architect/engineering activities, technical testing	392,000	+11.36%
Scientific research & development	114,000	+6.54%
Advertising & market research	184,000	+33.33%
Other professional, scientific, technical	122,000	-19.74%

N. Administrative & support services

Rental & leasing	133,000	-20.83%
Employment activities	813,000	+6.00%
Travel agency, tour operator & related	95,000	-16.67%
Security & investigation	184,000	+5.14%
Services to buildings & landscape activities	638,000	+14.34%
Office admin., office & other business support	354,000	-6.85%

Q. Health & social work

Human health	2,104,000	+7.40%
Residential care	663,000	+4.08%
Social work without accommodation	908,000	+16.26%

R. Arts, recreation, entertainment

Creative arts & entertainment	65,000	-27.78%
Libraries, archives, museums, other cultural	102,000	-8.93%
Gambling & betting	91,000	-13.34%
Sports, amusement, recreation activities	404,000	+8.89%

S. Other service activities

Washing & (dry) cleaning textiles/furs	295,000	-8.39%
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Industry sub-categories – self-employed

F. Construction

The figures within construction show only modest overall change (-19,000), but the sub-categories have seen major change (which we assume may be mainly due to definitional rather than structural changes). Under “construction of buildings” the numbers have gone up from 32,000 to 310,000, whilst the numbers for “specific construction activities” have gone down by 330,000 to 529,000. The numbers of self-employed in civil engineering has risen from 0 to 33,000.

Wholesale & Retail

Wholesale & retail & repair of motor vehicles	97,000	+16.87%
Wholesale trade (other than motor)	81,000	+14.08%
Retail (other than motor)	270,000	+1.12%

I. Accommodation & food services

Accommodation	43,000	+53.57%
Food & beverages	122,000	+17.31%

J. Information & communication

Publishing	47,000	+34.29%
Programming & broadcasting	14,000	[in 2006, zero]
Computer programming, consultancy & related	108,000	+24.14%

K. Financial & Insurance

Activities auxiliary to financial/insurance services	61,000	+165.22%
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M. Professional, scientific & technical

Professional, scientific & technical activities	153,000	-12.07%
Head office activities, management consultancy	111,000	+70.77%
Architect/engineering activities, technical testing	93,000	-8.82%
Scientific research & development	114,000	+6.54%
Advertising & market research	40,000	+42.86%

Other professional, scientific, technical	141,000	+540.91%

N. Administrative & support services

Services to buildings & landscape activities	252,000	+223.01%
Office admin., office & other business support	25,000	-56.14%

Q. Health & social work

Human health	184,000	+3.37%
Social work without accommodation	112,000	+8.74%

S. Other service activities

Repair of computers, personal & h/hold goods	46,000	+187.50%
Washing & (dry) cleaning textiles/furs	211,000	-21.85%

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