

BIS | Department for Business
Innovation & Skills

**JOB CREATION AND
DESTRUCTION IN THE UK : 1998-
2010**

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Prepared by

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Of course, the usual disclaimer applies and all errors in the interpretation of the data are the responsibility of the research team.

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Executive Summary

Background, Aims and Approach

- *This report provides BIS with an analysis of how the business stock in the private sector in the UK has changed between 1998 and 2010, and looks specifically at the key dynamics of job creation and destruction. These metrics help us to understand the level of turbulence in jobs and to analyse the type of firms which most contribute to job creation / destruction in the UK.*
- *To undertake the analysis we used the Business Structure Database; linking these annual snapshots (which are drawn from the Inter Departmental Business Register) to create a longitudinal database of employment records spanning the 1998-2010 period.*
- *Using employee data, we examined the average annual job creation and destruction rates between 1998-2010, as well as entry and exit rates, and disaggregated both these by sector, size, age and region.*
- *Job creation can be broadly defined as the positive gross change in employment, summed over all businesses that expand or start up between two points in time. Likewise job destruction is the negative gross change in employment summed over all businesses that contract or close between two points in time.*
- *We also considered the job reallocation rates which show the sum of job creation and destruction to provide an indication of the degree to which jobs are 'reshuffled' across business 'locations'.*

Key Findings:

Business Stock

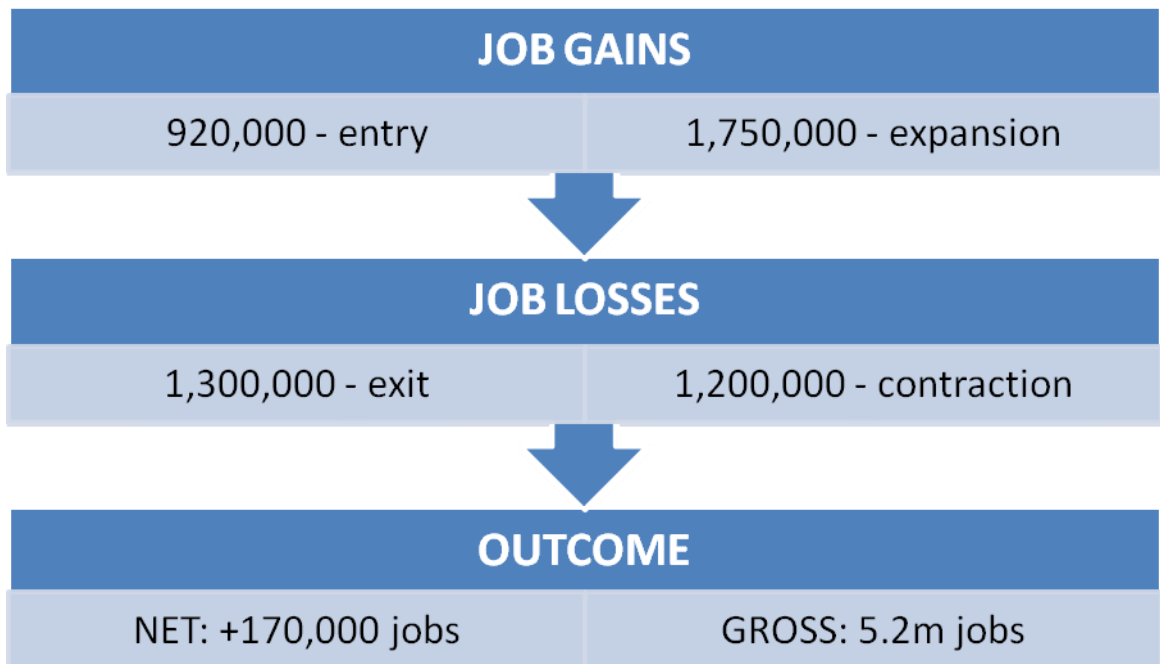
- *Between 1998 and 2010, the stock of private sector businesses in the UK (with at least one employee) experienced a net employment increase of 7.6 per cent (1.3 million jobs). There were ~1.52 million firms (with at least one employee) in the private sector in the UK employing 18.6 million people in 2010.*
- *Over the decade, the birth rate exceeded the death rate on average; as a result of this excess of business births over deaths, there was an increase in the business stock of ~ 20 per cent – an additional ~250,000 firms.*
- *More than 200,000 firms were born each year over the period (except in 2010 when there were 183,000), of which around 60 per cent were single employee*

firms. In contrast, less than 1.5 per cent of business births had 25 or more employees.

- The business birth rate in 2008 (17.6 per cent) was lower than it was in 1999 (19.2 per cent) while the death rate, which is more cyclical, was slightly higher. However, in most years (all except 2000 and 2002), the birth rate exceeded the death rate so the stock has generally been rising. With the UK moving into recession in late 2008 the birth rate in 2009 and 2010 fell dramatically while the death rate registered a small decrease remaining around the 2008 level.
- On average over the period, around 60 per cent of firms remained the same size from one year to the next; 15 per cent expanded and 13 per cent contracted. Firms with fewer than 50 employees at birth expanded their employment by more than the average rate.

Job Creation, Destruction and Reallocation Rates

- Just over a quarter (28.0 per cent) of all jobs in the private sector were either destroyed or created over a typical 12 month period – a remarkable level of turbulence in the UK economy. Analysis of the process of job creation and destruction shows that, on average, 5.2 million jobs in the UK were either created or destroyed each year between 1998 and 2008. The process is summarized by this graphic.



- *It is important to understand the way in which this level of churn takes place: On average each year there were 920,000 jobs in the UK created through firm entry and 1.75 million jobs created through the expansion of existing firms.*
- *By contrast, exiting firms destroyed on average 1.3 million jobs in the UK each year while the contraction of existing firms accounted for a further 1.2 million jobs.*
- *Since 2008, the major change has been the sharp fall in the number of jobs created through entry – it averaged 590,000 in 2009 and 2010. In total, therefore, around **4.8 million jobs** in the UK economy were either created or destroyed on average in 2009 and 2010. A further 1.7 million jobs were created through the expansion of existing firms during the recession. By contrast, exiting firms in 2009 and 2010 destroyed on average 1.1 million jobs each year while the contraction of firms accounted for a further 1.4 million job destructions.*
- *Excess job reallocation averaged 27.5 per cent of employment per year between 1998-2010, suggesting that every year over one quarter of employment opportunities changed locations – that is, the employee had a new employer.*

Analysis by Size

- *The majority of jobs in the UK were created by small firms; they also demonstrated the greatest levels of churn. Out of a total of 2.61 million jobs created on average each year between 1998 and 2010 existing small firms (i.e., less than 50 employees) contributed 34 per cent (i.e., ~870,000 jobs) while start-ups (of which nine out of 10 employ less than five people at birth) contributed a further third (33 per cent) – another 870,000 jobs.*
- *Smaller firms have been increasing their share of total employment year on year and in 2010 their share was triple that in 1998. Single employee firms increased from three per cent of the total employment in 1998 to 10 per cent in 2010, whilst at the large end the share of 250+ employee firms fell from 49 per cent to 40 per cent over the same period.*

Analysis by Sector and Region

- *Few differences were found between broad sector groups. Most notable is that the lowest levels of job reallocation were found in the distribution and manufacturing sectors followed by hotels and restaurants.*
- *All English regions (with the exception of West Midlands) as well as the three devolved administrations, recorded a small positive net employment change on average each year between 1998 and 2010.*

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1 Introduction

Background

- 1.1 This project is designed to replicate for the United Kingdom the methodology on job creation and destruction in the United States published by Davis *et al.*, (2008); “Turmoil and Growth: Young Businesses, Economic Churning and Productivity Gains”.
- 1.2 One of the main challenges facing any study of job creation and destruction is access to a longitudinal firm-level database which permits the identification of the ‘demographic’ events of entry, exit and the growth/decline of survivors. Until recently, such a database did not exist for the UK but, working under a EU directive, the Office for National Statistics (ONS) has created and made available a longitudinal enterprise and plant-level database for the thirteen years since 1998. This database is called the Business Structure Database (BSD) and is accessible through the ONS Virtual Micro-Data Lab (VML)¹.
- 1.3 The BSD draws on the Inter Departmental Business Register (IDBR) which in turn relies heavily on data collected by Her Majesty’s Revenue and Customs (mainly VAT and PAYE returns). The BSD itself consists of a series of annual snapshots (March each year) of the IDBR which we have linked together to form firm-level longitudinal records. The resulting dataset has advantages and disadvantages. The main advantage is that it is relatively up to date – the IDBR is a ‘live register’ which is updated more or less continuously (and the data is then picked up by the BSD every March). However, because the IDBR is a ‘live’ register the March snapshots are not a conventional time series – they do not necessarily record data which reports activity levels **for** March, they are **data as at** March.
- 1.4 Virtually all UK firms with employees are covered by the BSD (which contains all VAT and/or PAYE registered enterprises) and, for multi-plant firms, there is plant level information too. Our longitudinal firm-level dataset covering the years 1998 to 2010 contains almost five million firm-level records², where each firm-level record provides information on number of employees, value of turnover, sector and location. From this dataset we are able to construct metrics on job creation and destruction based on demographic events (entries, exits and survival) that can be

¹ For a more detailed description see Evans, P and Welpton, R (2009) Business Structure Database. *Economic and Labour Market Review*, 3:71–75.

² The number of records refers to firms which were alive for at least one year between 1998 and 2010, and is, therefore, considerably larger than the number of firms alive in 2010.

identified³. At present, however, we are not able to make, with any confidence, certain important distinctions. For example, we cannot distinguish between expansion by merger and 'organic' expansion; or between exit and the sale of the firm to another business.

- 1.5 The data does not distinguish between part-time and full-time workers nor provide a breakdown between skill levels or functions (management, office workers or operatives). In brief, the analysis simply treats a job as an employee in the business irrespective of their role and skill level.

Our Approach

- 1.6 We use our longitudinal firm-level dataset covering the 13 years 1998 to 2010 to provide a summary of average annual rates of job creation and destruction, entry, exit and reallocation rates in the UK disaggregated by:

- sector
- size
- age of business
- region

- 1.7 This allows analysis of the extent to which different types of business contribute to the creation and destruction of jobs. We are also able to undertake a closer look at the processes of job creation and destruction through the recent recession and in particular for the period from 2007 onwards.

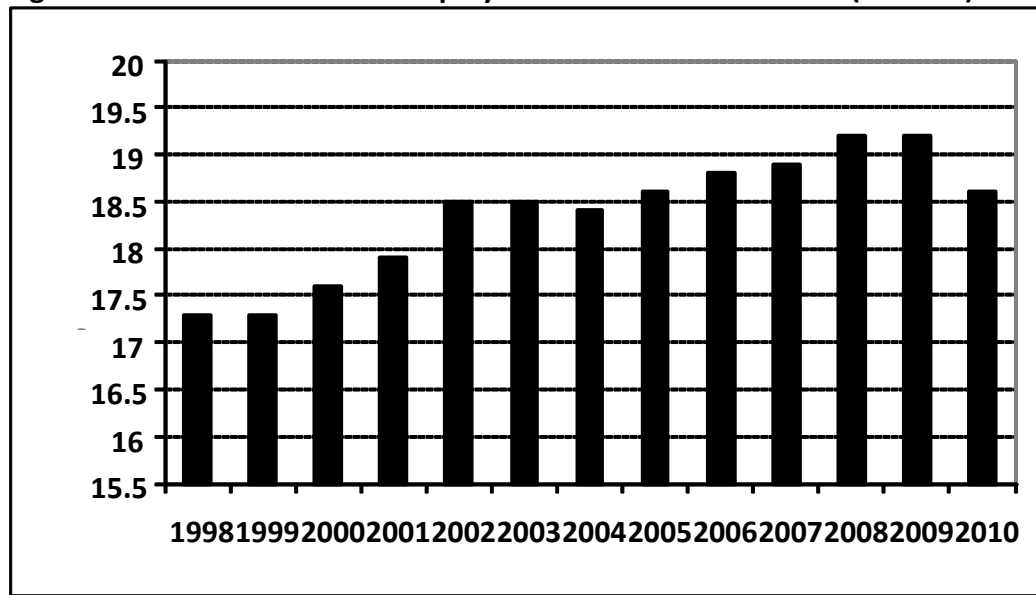
³ We have dated demographic events ('birth' and 'death') using employee data supplemented with the active/inactive flag from the BSD; we do not distinguish birth and death from a firm's appearance/disappearance following its sale, acquisition or merger. Since we use the presence of an employee to detect a firm birth, the first year for which we can properly assign a birth date is 1998.

2 Trends in Business Stock and Employment

Introduction

2.1 Between 1998 and 2010 private sector employment (in firms with one or more employees) in the UK increased by 7.6 per cent from 17.3 million to 18.6 million jobs (Figure 1 and Table 1). Since 2008⁴ private sector employment fell by three per cent (-553,271 jobs). The number of firms increased by about 20 per cent since 1998, with 250.1 thousand more firms in 2010 than 13 years earlier. Since 2008, however, the overall stock of firms in the private sector has decreased slightly: by 93,647 or ~6 per cent. The aggregate increase of 1.3 million net jobs since 1998, and indeed the slight decrease since before the recession, masks the true scale of job creation and destruction in the UK economy. The remainder of this section sets out the key findings for all private sector businesses in the UK⁵ and we make comparisons with the 1998-2008 period for reference.

Figure 1: Total Private Sector Employment in the UK 1998-2010 (millions)



Source: ONS Business Structure Database

⁴ The data here refers to March 2008 and therefore we can treat this year as a base year prior to the onset of the global economic downturn in the final quarter of that year.

⁵ We have constructed a longitudinal firm-level dataset for the *private sector* in the UK from the annual BSD datasets. This is defined as SIC 2003 codes 10-74 & 90-93 and excludes the public sector.

Table 1: Firms and Employment: 1998 and 2010

	1998	2010	2010/1998 Difference	2010/1998 Ratio	2008	2008/1998 Ratio
Firms with 1+ employee (‘000)	1273.6	1,523.7	250.1	1.20	1573.6	1.24
Employment (million)	17.3	18.6	1.3	1.08	19.2	1.11

Source: ONS Business Structure Database

Growth of the Business Stock

- 2.2 The evolution of the business stock depends on what happens to surviving firms and how many firms enter and exit the market. As part of the background analysis we can report that up to 2008 the birth rate exceeded the death rate on average each year: 16.4 per cent compared to 14.6 per cent (measured as a proportion of the business stock). We can also report that, on average, almost three-fifths of firms (59.9 per cent) remained the same size from one year to the next. A further 13.8 per cent of firms expanded and 10.3 per cent contracted on average each year between 1998 and 2010.
- 2.3 Let us look more closely at the growth in the stock of firms by size-band. Table 2 records the ratio of the number in 2010 to that in 1998. The baseline for comparisons is the all firms ratio of 1.2, and we can see that only the very smallest, one employee, firms have expanded by more, but in their case by very much more: in 2010 there were 1.73 times as many as in 1998, an extra 330 thousand.

Table 2: Firms: Stocks by Size-Band at Birth: 1998 and 2010

Employee Size-Band	1998 (‘000s)	2008 (‘000s)	2010 (‘000s)	2010/1998 Ratio	2008/1998 Ratio	2010/2008 Ratio
1	447.5	776.8	775.5	1.73	1.74	1.00
2	254.7	293.4	270.8	1.06	1.15	0.92
3	122.2	129.1	118.5	0.97	1.06	0.92
4	86.8	80.6	74.1	0.85	0.93	0.92
5-9	181.5	163.8	149.8	0.83	0.9	0.91
10-24	115.8	95.6	89	0.77	0.83	0.93
25-49	33.1	25.8	24.3	0.73	0.78	0.94
50-249	25.5	19.1	17.6	0.69	0.75	0.92
250+	6.6	4.6	4.2	0.64	0.7	0.91
All	1273.6	1588.8	1523.7	1.2	1.25	0.96

Source: ONS Business Structure Database

- 2.4 The other size-band showing an increase (i.e., 2 employees at birth) does so to a very small extent. Indeed, the pattern of change varies systematically by size-band, the ratio is negatively related to size, and in the 250+ size-band in 2010 there are almost 35 per cent fewer firms than in 1998. A by-product of this differential is a systematic shift in the relative proportions of different sized firms; firms born with 1 employee accounted for about 35 per cent of the stock in 1998, by 2010 it is just over 50 per cent, and at the other end of the size distribution, the share of 250+ firms roughly halved from 0.5 to 0.3 per cent.

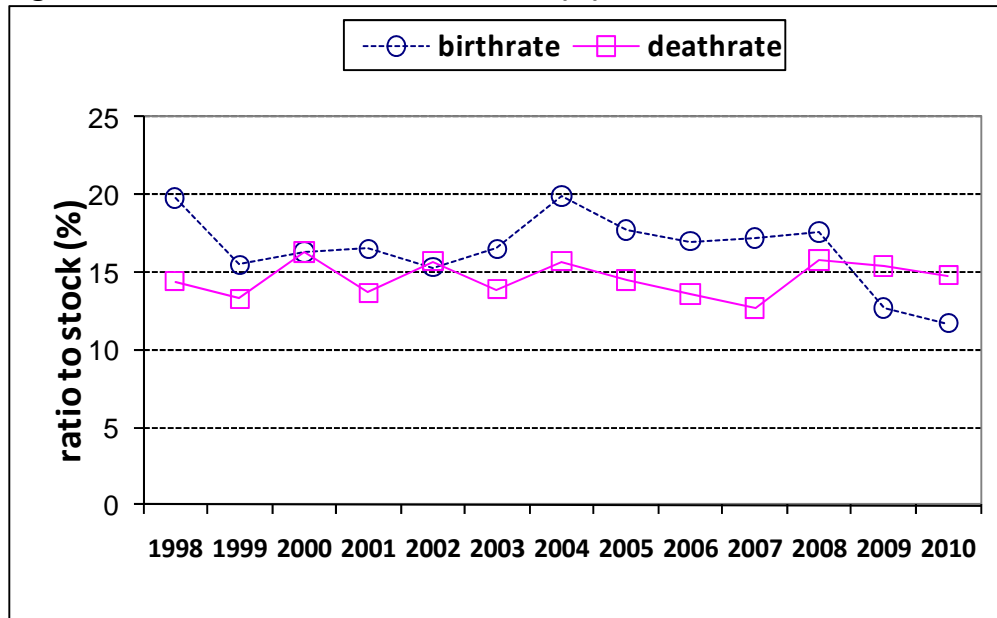
Firm Births and Deaths

- 2.5 We define the 'birth rate' as the ratio of births in a year to the stock of firms at the end of the previous year and the 'death rate' can be defined in a similar way – the number of firms which die in a year expressed as a ratio to the stock of firms at the end of the previous year.

From 1998 to 2003, about 210 thousand firms were born each year, since 2004 the number has been about 60 thousand larger reaching a peak of 280 thousand in 2008 – the majority of the post-2003 increase is in single employee firms. Since 2008 the number of births has fallen dramatically to 205 thousand in 2009 and 183 thousand in 2010.

- 2.6 On average, over the 13 years, about 60 per cent of the births each year are accounted for by one employee firms. Taken together with firms born with less than five employees they comprise 89 per cent of the total. Very few firms are born with 25 or more employees (less than 1.5 per cent) and in the largest category (250+ employees) the number of births has been around 265 per year (and falling) since 2004. In 2009 and 2010 there were 90 and 63 firms born in this category compared to 127 in 2008.
- 2.7 The birth rate in 2008 (17.6 per cent) was lower than it was in 1999 (19.2 per cent) while the death rate, which is more cyclical, was slightly higher: 15.8 per cent in 2008 compared to 14.4 per cent in 1998 (Figure 2). However, in most years (all except 2000 and 2002), the birth rate exceeded the death rate so the stock has generally been rising. With the UK moving into recession in late 2008 the birth rate in 2009 and 2010 fell dramatically while the death rate registered a small decrease remaining around the 2008 level.

Figure 2: Birth and Death Rates in the UK (%): 1998-2010



Source: ONS Business Structure Database

Employment

- 2.8 As we saw in Table 1 employment expanded in the UK by about eight per cent over the 13 years from 1998 to 2010; there were 1.3 million more employees in 2010 than there were in 1998. Here we investigate the contribution of firms, born in different size-bands, to that increase. Data for 1998, 2008 and 2010 are laid out in Table 3. The employment trajectories by size-band resemble those discussed above for firms: employment in small firms expanded much more than in large, with the rate of expansion falling (almost) consistently as we move up the size-bands.

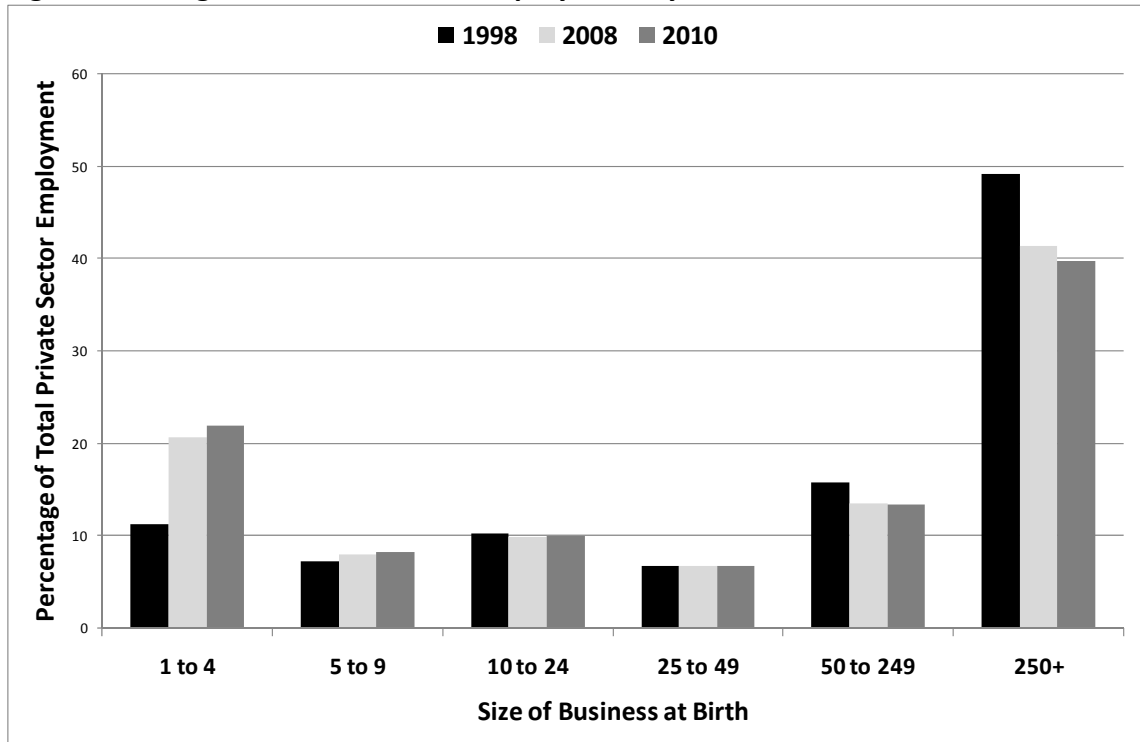
Table 3: Employment: by Size-Band at Birth: 1998 and 2010

Employee Size-Band	1998 (emp. '000s)	1998 (% share of total employment)	2010 (emp. '000s)	2010 (% share of total employment)	2010/1998 Ratio	2008 (emp. '000s)	2008/1998 Ratio
1	582.4	3.4%	1869.1	10.0%	3.21	1753.2	3.01
2	581.4	3.4%	1068.0	5.7%	1.84	1021.0	1.76
3	393.0	2.3%	660.5	3.5%	1.68	653.5	1.66
4	368.3	2.1%	505.4	2.7%	1.37	516.0	1.4
5-9	1246.2	7.2%	1531.8	8.2%	1.23	1534.1	1.23
10-24	1756.6	10.2%	1857.9	10.0%	1.06	1886.3	1.07
25-49	1156.6	6.7%	1250.1	6.7%	1.08	1272.6	1.1
50-249	2707.3	15.7%	2469.5	13.3%	0.91	2593.5	0.96
250+	8504.3	49.2%	7401.4	39.8%	0.87	7936.7	0.93
All	17296.1	100.0%	18613.8	100.0%	1.08	19167.0	1.11

Source: ONS Business Structure Database

- 2.9 All small firms (less than 50 employees at birth) expanded their employment but larger firms (50 or more employees at birth) had somewhat fewer employees in 2010 than in 1998. These differences in growth translate into pronounced changes in shares of employment by size-band (Figure 3): at the small end the share of single employee firms increased from three per cent to ten per cent, whilst at the large end the share of 250+ employee firms fell from 49 per cent to 40 per cent. In other words, the smallest firms have been increasing their share of total employment year on year and in 2010 their share was triple that in 1998.

Figure 3: Changes in Private Sector Employment by Size of Business, 1998-2010



Source: ONS Business Structure Database

3 Job Creation and Destruction

Defining Job Creation and Destruction Metrics

- 3.1 The job creation and destruction rates presented here are defined in the conventional way:

Job Creation – employment changes summed over all businesses that expand or start up in a given year.

Job Destruction – employment changes summed over all businesses that contract or exit in a year

These job creation and destruction figures are expressed as rates by dividing by employment averaged over the current and previous year (businesses with no change in employment do not contribute to either job creation or job destruction).

- 3.2 So the change in employment between two years – often referred to as the net employment change – is equal to the difference between job creation and job destruction over the period and the net employment *rate* equals the job creation *rate* less the job destruction *rate*
- 3.3 The sum of the job creation rate and the job destruction rate is referred to as the **job reallocation rate**. It summarises the overall volume of change and in essence represents the ‘reshuffling of job opportunities across locations’ (Davis *et al.*, 1996)⁶.
- 3.4 Finally, we have a metric which summarises the relationship between the volume of change in the labour market – the job reallocation rate – and the change in the level of employment – net employment. The difference between the job reallocation rate and the net employment rate – called **excess job reallocation rate** - is an indicator the extent of ‘churn’ in the labour market, since it measures the extent to which job destruction exceeds the amount necessary to produce the observed net employment change.

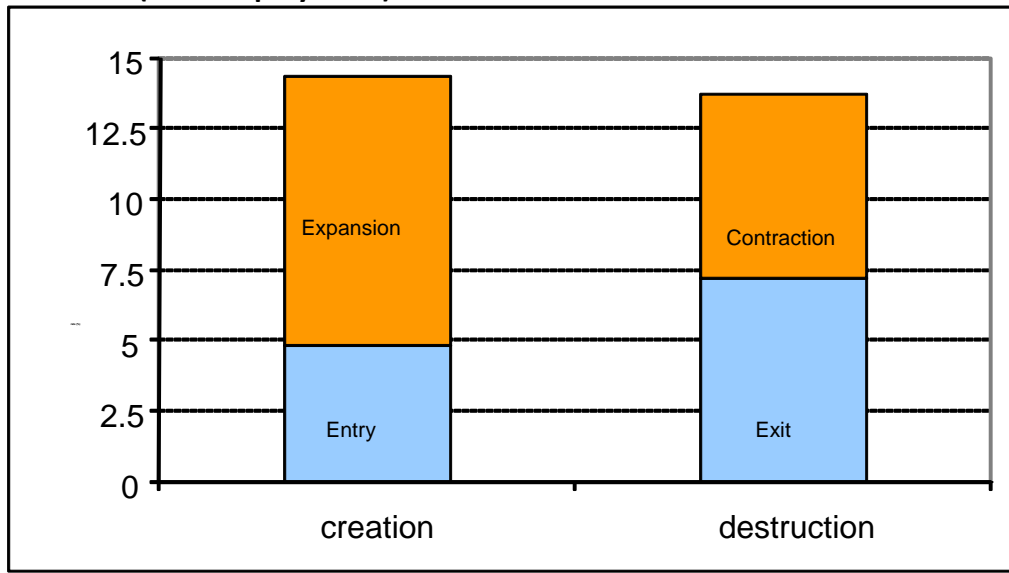
⁶ Davis et al., (1996) *Job Creation and Destruction*, MIT Press: Cambridge Mass.

Job Creation and Destruction Rates

- 3.5 Figure 4 shows that over the thirteen years? 1998 to 2010 the net employment change of an additional 1.3 million jobs (in firms with one1 or more employees) hides a much larger magnitude of gross job flows. On average, 13.4 per cent of private sector jobs were destroyed annually during the 1998-2008 period. The comparable figure for job creation is slightly higher at 15 per cent⁷, which reflects the small average net annual increase in private sector employment over the 13 years of 1.6 per cent (see Figure 5 below).
- 3.6 Looking at the average annual job creation and destruction rates for 1998-2010 more closely reveals the following key points (Figure 4):
- The expansion and contraction of surviving businesses are responsible for much of the job turbulence in the UK.
 - Just over two-thirds (66.4 per cent) of job creations are in expanding firms while just under half (47.4 per cent) of job destructions were in contracting firms.
 - One-third of job creation (33.6 per cent) is due to the entry of new firms.
 - Over half (52.6 per cent) of job destruction took place in exiting firms.

⁷ Davis *et al.*, (2008) report remarkably similar rates for the US, although for the period 1975-05. The US job destruction rate is just under 15 per cent and job creation rate is just under 18 per cent. Thus the headline metric of 'churn' looks much the same in the UK as it does in the US, albeit over different time periods. In the UK around a third of job creation is through entry (~6 per cent) which is similar to the US. With respect to job destruction it is broadly 50:50 between exit and contraction in the UK whereas in the US it is contraction which is the dominant mechanism of job destruction

**Figure 4: Average Annual Job Creation and Destruction in the UK, 1998-2010
(% of Employment)**



Source: ONS Business Structure Database

Note: For definitions of rates see paras 2.10 – 2.13

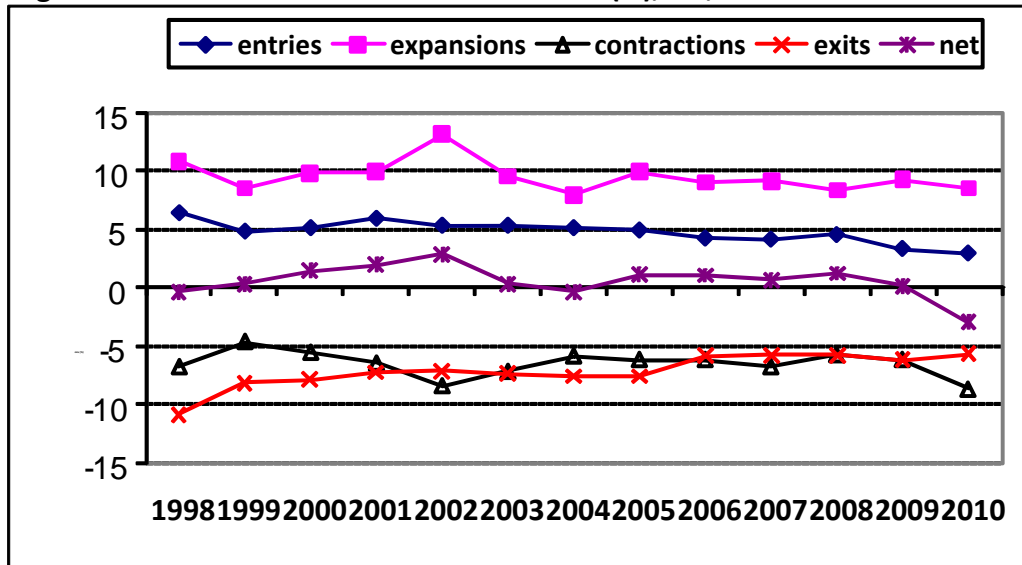
3.7 From the annual data on job creation and destruction (Figure 5) we can see that there are two dimensions to discuss. First, what was happening to the metrics in the 11 years to 2008 as the private sector grew in employment terms? Second, to understand the relative contribution of the metrics as the private sector began to decline in the post-2008 period.

3.8 Overall, there was very little variation in these rates of job creation and destruction over the decade 1998-2008. However, there are some points worth noting - especially:

- The relatively rapid increase in private sector employment between 1998 and 2002 would appear to be driven by relatively lower levels of job destruction through exit and contraction than in the period as a whole. In 1998, job creation through expansion was higher than the period average. There was a higher than average rate of expansion in 2002.
- Between 2003 and 2008, which marked the beginning of the economic downturn in the UK, the various job creation and destruction metrics were relatively stable.
- Since 2008, there have been two marked changes. First, as we noted above, entry rates fell to less than five 5 per cent. Second,

there was a rise in the rate of contraction from just over five per cent to just under ten per cent between 2009 and 2010. Interestingly, the exit rate shows little change from the pre-recession period and in fact is lower now than what it was for much of the previous decade.

Figure 5: Job Creation and Destruction Rates (%), UK, 1998-2010



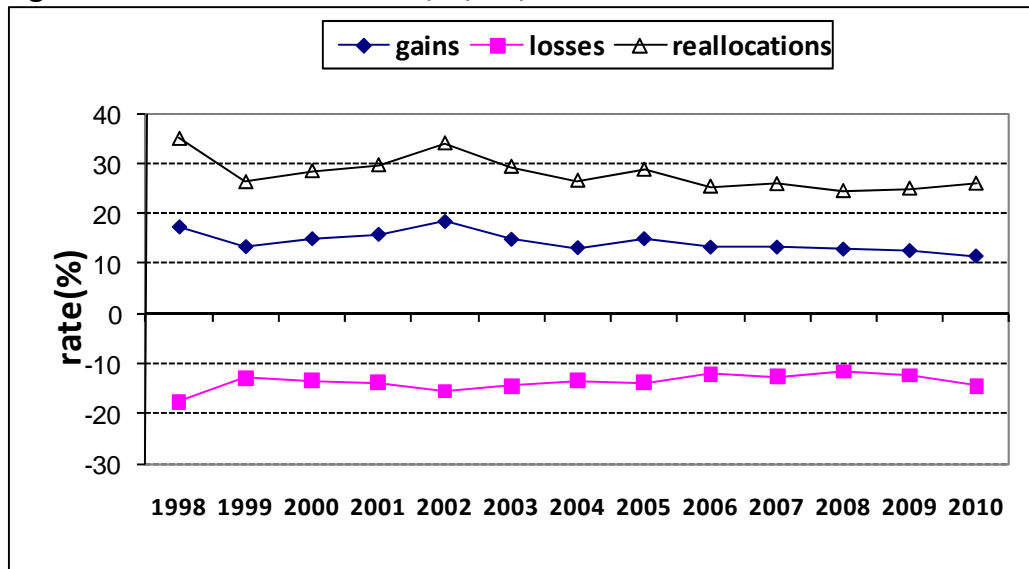
Source: ONS Business Structure Database

Note: For definitions of rates see paras. 2.10 – 2.13

Job Reallocation Rates

3.9 Summing the job creation and destruction rates to obtain the job reallocation rate reveals that, between 1998-2008 over a quarter (28.5%) of all jobs in the private sector were either destroyed or created over an average 12 month period – a remarkable level of turbulence in the UK economy in a decade of almost constant economic growth (Figure 6). Perhaps even more remarkable was that the rate rose only very slightly in the post-2008 recessionary period: a rise of around one percentage point. Putting this in context we observe that the level of turbulence in 2010 was, on average, lower than in 2000-2002 period when the private sector was growing in employment terms.

Figure 6: Job Reallocation Rates, %, UK, 1998-2010



Source: ONS Business Structure Database

Note: For definitions of rates see paras 2.10 – 2.13

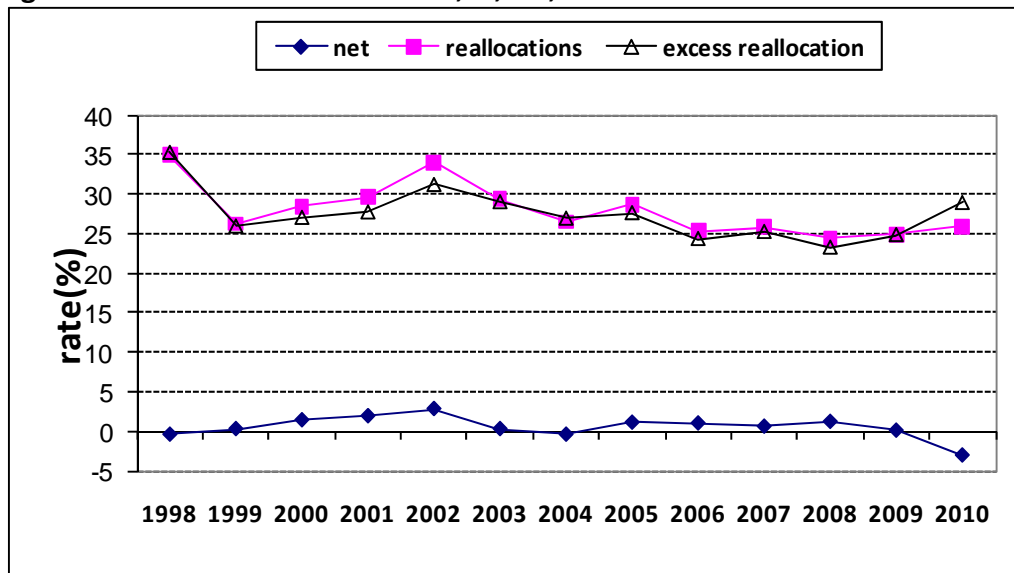
3.10 Expressing this as the actual number of jobs emphasises the point more clearly. We consider the 11 years to 2008 period first and then focus on the period of difficult economic conditions during 2009 and 2010. On average each year between 1998 and 2008 there were 0.92 million jobs created through firm entry and 1.75 million created through the expansion of existing firms. By contrast, exiting firms destroyed on average 1.3 million jobs each year while the contraction of firms accounted for a further 1.2 million job destructions. In total, therefore, around **5.2 million jobs** in the UK economy were either created or destroyed each year between 1998 and 2008.

3.11 This contrasts to the post-2008 period when, on average in each of the two years, 0.59 million jobs were created through firm entry and 1.68 million created through the expansion of existing firms. Over this period, exiting firms in 2009 and 2010 destroyed on average 1.1 million jobs each year while the contraction of firms accounted for a further 1.4 million job destructions. In total, therefore, around **4.8 million jobs** in the UK economy were either created or destroyed in 2009 and 2010.

3.12 A closer look at 2010 is warranted as the scale of job creation and destruction is very different from 2009: job created through firm entry was only 553,000 (100,000 jobs less than in 2009) and job contractions stood at just over 1.65 million jobs (450,000 jobs more than in 2009).

- 3.13 Taking this analysis further we can now calculate an excess job reallocation rate to provide an indication of the implications of this large-scale job reallocation activity in the private sector. Excess job reallocation is total job reallocation minus the minimum amount required to accommodate the net change in private sector employment - in brief, a measure of churn over that needed to account for the net change in the number of jobs.
- 3.14 The results show that excess job reallocation averages 27.5 per cent of employment per year over the whole period (Figure 7). In other words, even during years with almost unchanged total employment (post-2002 to 2008) over a quarter of employment opportunities change ‘locations’ – that is, a new employer for the employee. The excess reallocation rate has fallen from a peak rate of 35.3 per cent in 1998 and 31.2 per cent 2002 to a low of 23.2 per cent in 2008: so the rate of ‘churn’ in the labour market fell over the decade. Since 2008 it has risen again and now stands at 28.9 per cent in 2010.
- 3.15 In two very different economic contexts we observe a rise in the excess reallocation rate. First, as the private sector was growing rapidly over a decade ago and second as it went into recession at the towards the period studied. On both these occasions around 30 per cent of jobs in the UK private sector changed locations. This was above the period average.

Figure 7: Selected Allocation Rates, %, UK, 1998-2010



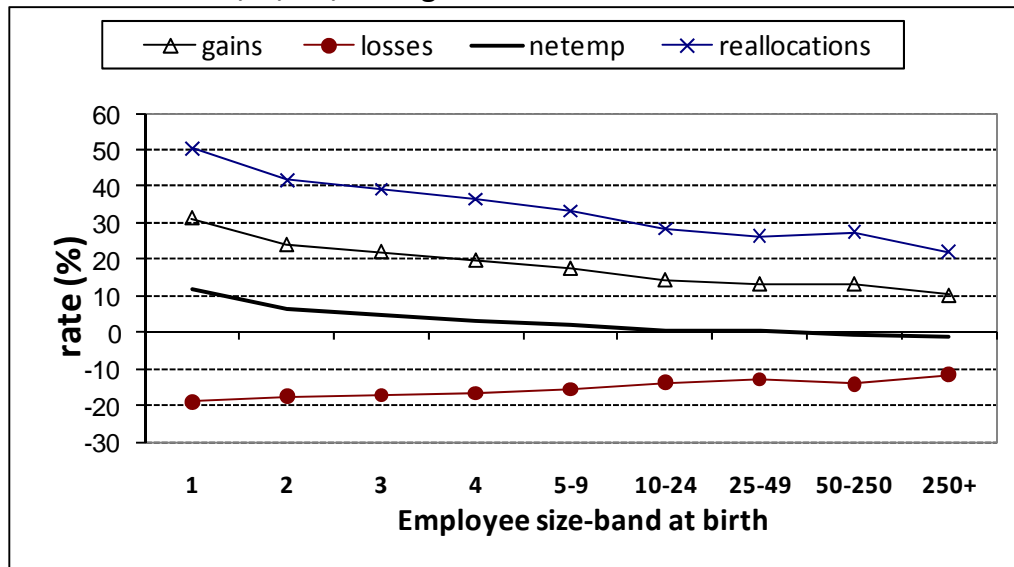
Source: ONS Business Structure Database

Note: For definitions of rates see paras 2.10 – 2.13

Job Creation and Destruction by Size of Firm

3.16 Figures 8 and 9 clearly show that the components of job creation and destruction vary by size band and highlight the source of the negative relationship between size and net job creation. For example, firms employing more than 50 persons exhibited little net annual employment change whereas for micro-enterprises (less than ten employees) it is positive - between two and 12 per cent (Figure 8). Of course, 'reallocations', the other line on the chart is strongly negatively related to size too, the reallocation rate for micro-enterprises is around twice that of the 250+ firms at the other end of the size distribution.

Figure 8: Job Creation and Destruction, Aggregated Components by Size-Band at Birth, %, UK, average 1998-2010



Source: Business Structure Database (ONS)

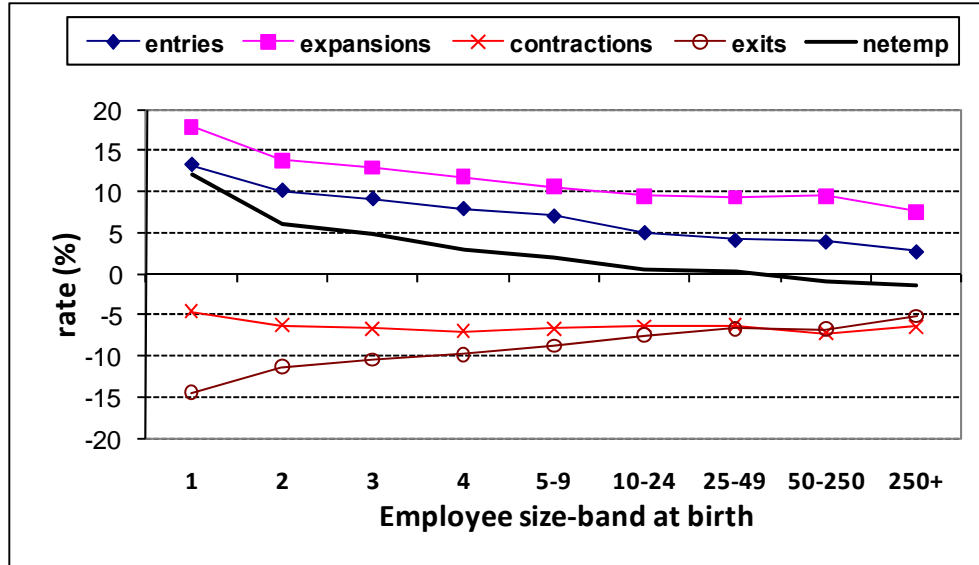
Note: For definitions of rates see paras 2.10 – 2.13

3.17 Both the components of job creation – entry and expansion – are negatively related to size-band at birth; both are about two to three times larger for micro-enterprises than they are for firms born with 250+ employees (Figure 9). At every size-band expansion is between four and five percentage points more important than entry as a source of job creation.

3.18 Whilst exits are close to being a mirror image of entries, falling from around 15 per cent for micro-enterprises to five per cent for the largest (i.e., the 250+ employee category), contractions are almost entirely

independent of size (only one or two percentage points lower at the small end than the large).

Figure 9: Job Creation and Destruction, Components by Size-Band at Birth, %, UK, average 1998-2010



Source: Business Structure Database (ONS)

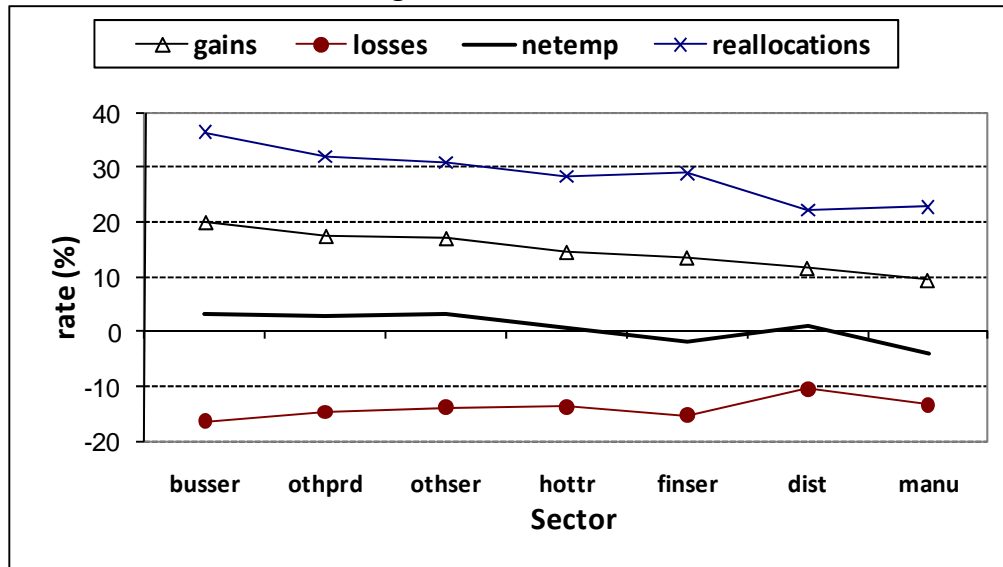
Note: For definitions of rates see paras 2.10 – 2.13

Job Creation and Destruction by Sector

3.19 Firms have been classified into seven broad sectors according to their SIC92 code at birth: Manufacturing (SIC92, 15-32); Other Production (SIC92, 40-45); Distribution (SIC92, 50-52); Hotels & Transport (SIC92, 55-64); Financial Services (SIC92, 65-67); Business Services (SIC92, 70-74); Other services (SIC92, 90-93). The components of job creation and destruction by sector are set out in Figures 10 and 11 and the overall pattern – the relationship between the different components – has some familiar features.

3.20 The lowest levels of job reallocation (~22 per cent) are observed in the distribution and manufacturing sectors followed by hotels and restaurants (~28 per cent) while all the other sectors have a rate over 30 per cent – with Business Services recording a rate of 36 per cent (Figure 10). In the manufacturing sector, which has declined in net terms over the 13 years, the reallocation rate was one of the lowest in 2008 (18%) but has risen to 23.2 per cent in 2010 due primarily to an almost doubling in the scale of job contractions – an increase of over 100,000 jobs lost between 2009 and 2010.

Figure 10: Job Creation and Destruction Rates, Aggregated Components by Sector, %, UK, Average 1998-2010



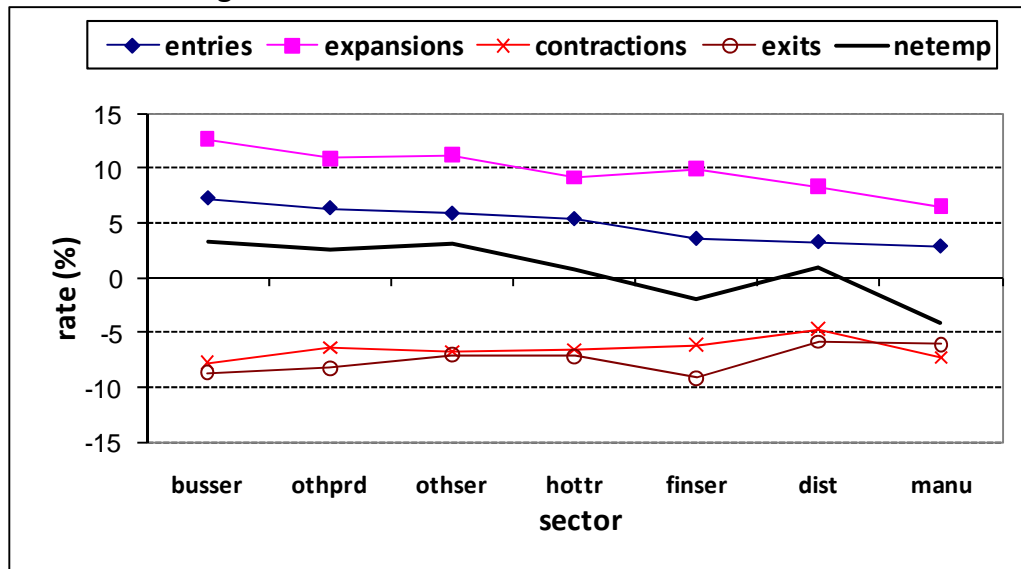
Source: Business Structure Database (ONS)

Note: For definitions of rates see paras 2.10 – 2.13

Key to sectors: busser, business services; othser, other services; othprd, other production; Dist, wholesale and retail distribution and transport and communication; hottr, hotels and restaurants; finser, financial services; manu, manufacturing

3.21 There is quite a close relationship between expansion rates and entry rates by sector, but expansion rates are about three to five percentage points larger (Figure 11). Similarly, contraction rates and exit rates are quite similar in magnitude and do not vary much across sector.

Figure 11: Job Creation and Destruction Rates, Components by Sector, %, UK, Average 1998-2010



Source: Business Structure Database (ONS)

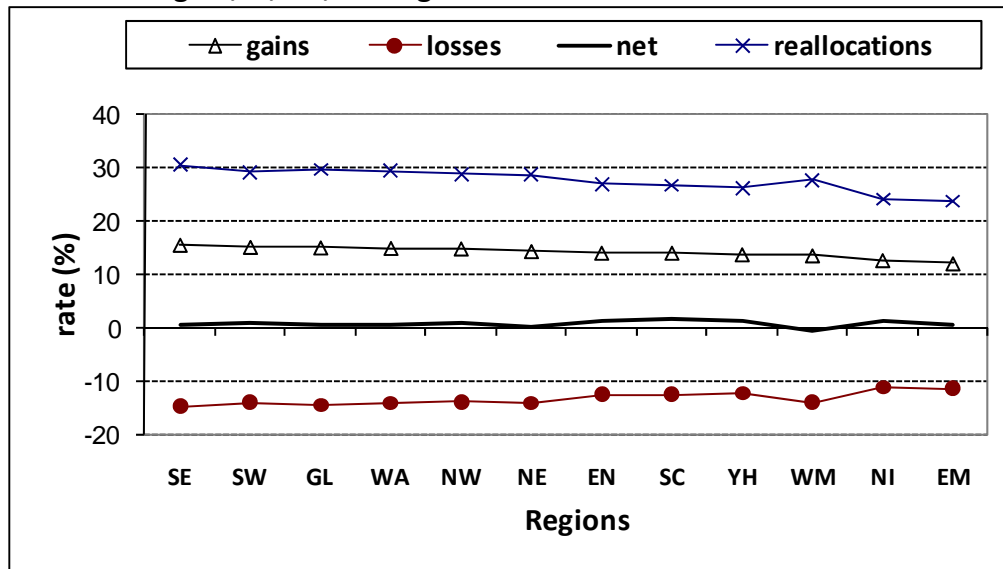
Note: For definitions of rates see paras 2.10 – 2.13

Key to sectors: busser, business services; othser, other services; othprod, other production; Dist, wholesale and retail distribution and transport and communication; hottr, hotels and restaurants; finser, financial services; manu, manufacturing

Job Creation and Destruction by Region

- 3.22 Figures 12 and 13 present the job creation and destruction metrics for the nine English regions and the three devolved administrations of Scotland, Wales and Northern Ireland. An examination of the aggregate components shows that all regions, with the exception of the West Midlands, recorded a small positive net employment change on average each year between 1998 and 2010 (Figure 12).
- 3.23 However, some regions arrive at this outcome through a slightly higher rate of gross job gains and losses (Figure 12). For example, the South East West has the highest rate of gross job gains and losses while the East Midlands has the lowest. The reallocation rate illustrates this well with a number of regions having above the UK average of 28.5 per cent. These regions with an above average rate can be grouped together into the South East, South West, Greater London, Wales and the North West.

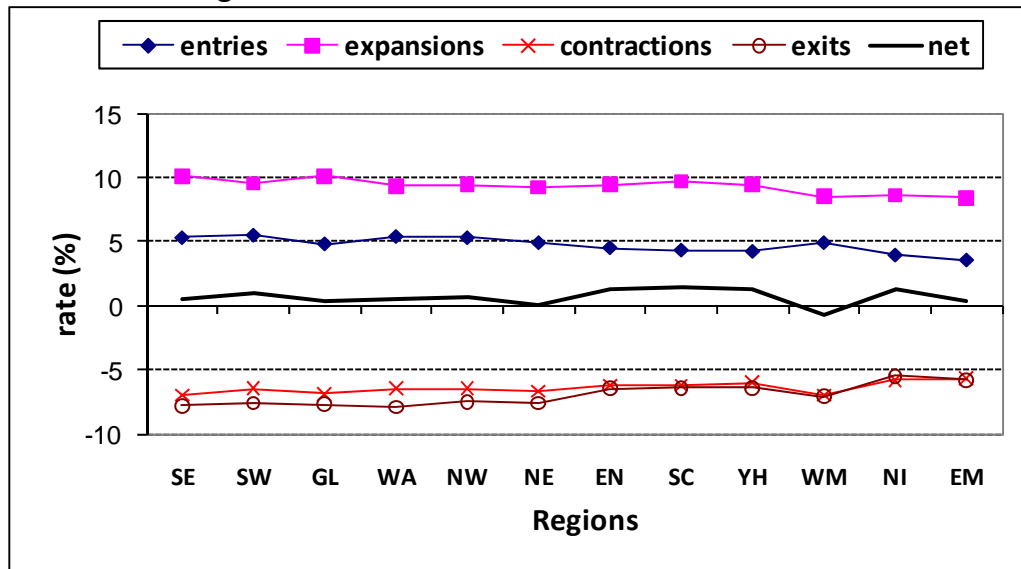
Figure 12: Job Creation and Destruction Rates, Aggregated Components by Region, %, UK, Average 1998-2010



Source: Business Structure Database (ONS)
 Note: For definitions of rates see paras 2.10 – 2.13

3.24 From the more disaggregated components we are able to identify some differences in the regional dynamics of job creation and destruction (Figure 13). East Midlands and the South East provide a useful comparison as they have and almost identical average annual net employment increase (0.4% and 0.5% respectively) yet they occupy position as the two extremes of the regional distribution. The reason is related to the fact that East Midlands has lower exit and contraction rates when compared to the South East which compensates for its lower entry and expansion rates.

Figure 13: Job Creation and Destruction Rates, Components by Region, %, UK, Average 1998-2010



Source: Business Structure Database (ONS)

Note: For definitions of rates see paras 2.10 – 2.13

4 Small Firms and Job Creation

Introduction

- 4.1 A particular interest of policymakers is the relative contribution of small firms to the job generation process. This is an interest which has its antecedents over 30 years ago in the original work of David Birch in 1979 who set out to examine which firms create the most jobs. An apparently simple question has provoked considerable discussion, debate and controversy over the years. We set out below some pertinent analysis for the UK based on data that has only recently become readily available.

Average Annual Job Creation 1998-2010

- 4.2 Figure 14 highlights the contribution of small firms, and in particular micro-enterprises, to job creation. It displays the annual average gross job gains and losses by firm size at birth for start-ups and existing businesses⁸ and the contribution of contractions and exits to losses. Some more detail is provided by Table 4 which records the shares of aggregated components.

Table 4: Job Creation and Destruction by Size of Firm at birth, average annual, 1998-2010

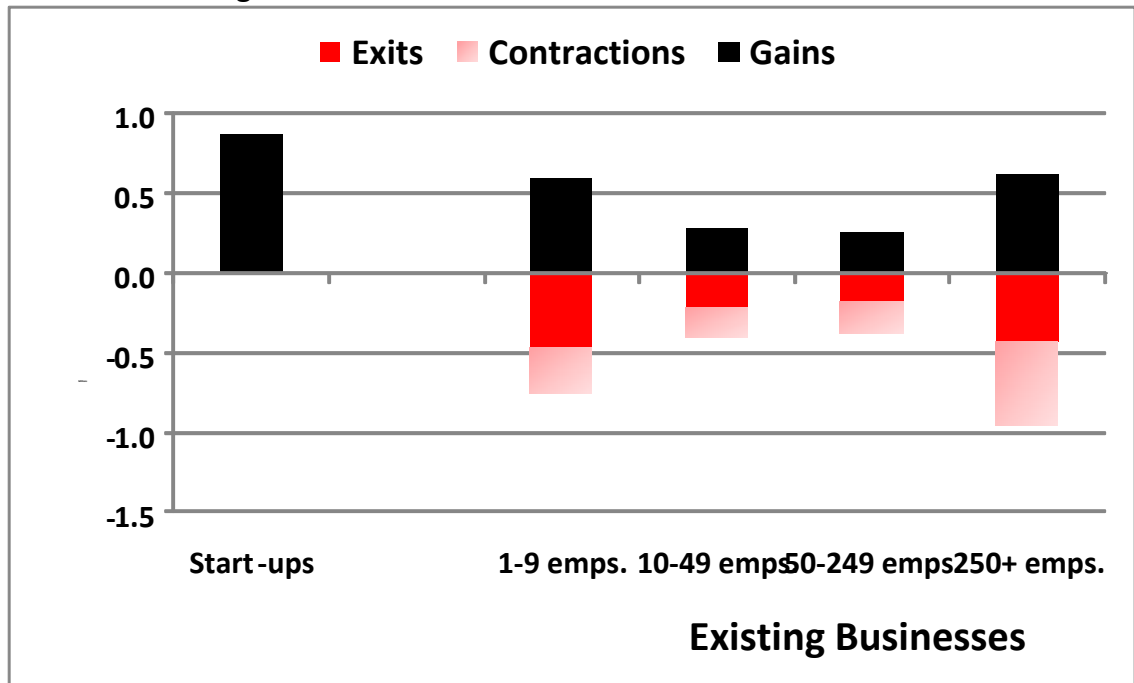
	Size at birth	Losses		Gains	
		jobs(mill)	%	jobs(mill)	%
Start-ups	All sizes			0.87	33
Existing Businesses	1-9 employees	0.76	30	0.59	23
	10-49 employees	0.41	16	0.28	11
	50-249 employees	0.38	15	0.25	10
	250 employees	0.96	38	0.62	24
All	All	2.51	100	2.61	100

Source: Business Structure Database (ONS)

Note: For definitions of terms see paras 2.10 – 2.13

⁸ For a more detailed discussion of which firms create jobs in the UK see Anyadike-Danes, M; Hart, M and Bonner, K (2010) "Who Creates the Jobs?" *Significance*, March 2010, pp-5-8 (Royal Statistical Society).

Figure 14: Job Creation and Destruction by Size of Firm at Birth, Millions, Average 1998-2010



Source: Business Structure Database (ONS)
 Note: For definitions of terms see paras 2.10 – 2.13

4.3 The majority of jobs each year in the UK are created by small firms. Out of a total of 2.61 million jobs created on average each year between 1998 and 2010 existing small firms (less than 50 employees) contributed 34 per cent (0.87 million jobs) while start-ups contributed a further third (33 per cent) – another 0.87 million jobs. We have already discussed that, on average over the decade, about 60 per cent of start-ups are accounted for by one employee firms. Taken together firms born with less than five employees comprise 89 per cent of the total. Very few firms are born with 25 or more employees (less than 1.5 per cent) and in the largest category (250+ employees) numbers have been less than 265 per year (and falling) since 2004. In 2009 and 2010 there were 90 and 63 firms born in this category compared to 127 in 2008.

4.4 In terms of job losses, firms employing more than 250 employees are responsible for two-fifths (38%) of all job losses on average each year – almost 1 million jobs out of a total of 2.5 million job losses. Small firms employing less than 50 employees are responsible for a slightly higher proportion of the total ~46 per cent or 1.2 million jobs.

Small Firms and the Economic Downturn

- 4.5 Once again a closer look at the last two years serves to provide an indication of which firms are creating and destroying jobs during the recent period of difficult economic conditions. Overall, average annual job losses increased only slightly from 2.51 million to 2.55 million post-2008, while job gains fell from 2.61 million to 2.28 million. Table 5 and Figure 15 show that there were some significant changes in the pattern of job losses and job gains that were relatively stable in the period to 2008.

Table 5: Job Creation and Destruction by Size of Firm at birth, average annual, 2009 and 2010

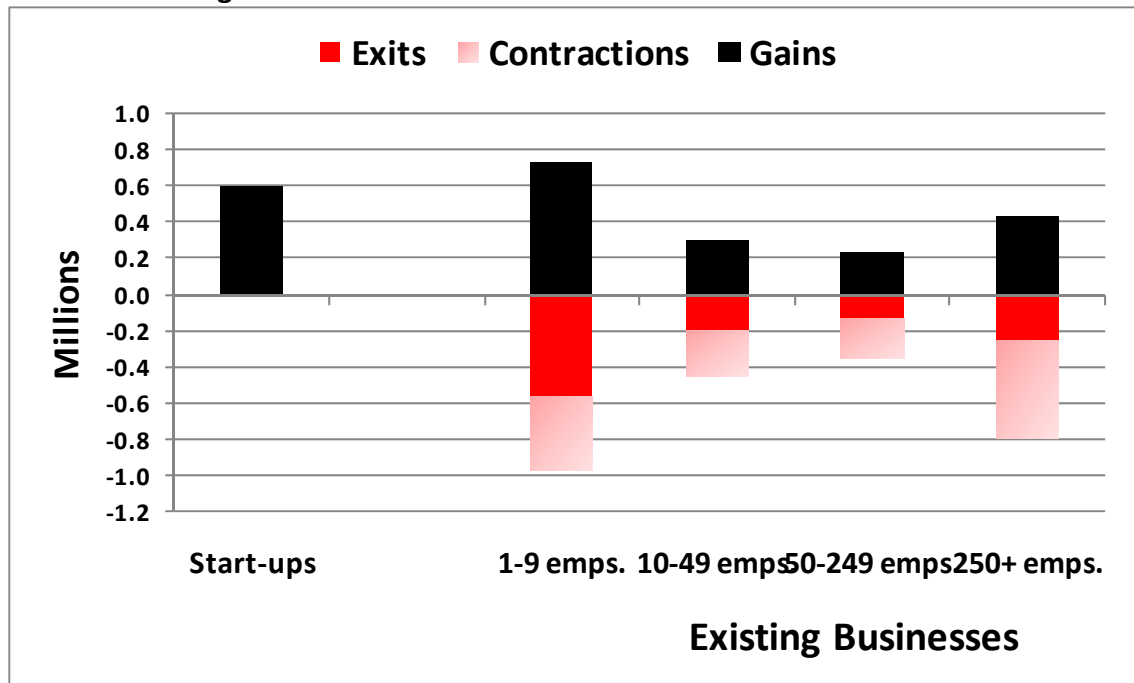
	Size at birth	Losses		Gains	
		jobs(mill)	%	jobs(mill)	%
Start-ups	All sizes			0.60	26
Existing Businesses	1-9 employees	0.98	38	0.73	32
	10-49 employees	0.45	17	0.30	13
	50-249 employees	0.35	14	0.23	10
	250 employees	0.79	31	0.43	19
All	All	2.55	100	2.28	100

Source: Business Structure Database (ONS)

Note: For definitions of terms see paras 2.10 – 2.13

- 4.6 A number of points are worth noting. First, job gains through start-ups declined by ~300,000 in both 2009 and 2010. Second, micro-enterprises have higher levels of churn than they had previously although there are still more likely to lose jobs than create them (Figure 15). Third, large firms (i.e., 250 employees or more) did not lose as many jobs in these two years but they were less likely to create them compared to pre-recession years. Therefore, during the economic downturn the majority of gross jobs (71%) were being created by start-ups and small firms - a total of 1.63 million jobs.
- 4.7 In terms of job losses, micro-enterprises are now responsible for two-fifths (38%) of all job losses on average in 2009 and 2010 – almost 1 million jobs out of a total of 2.55 million job losses. Overall, small firms employing less than 50 employees are responsible for a slightly higher proportion of the total ~55 per cent or 1.4 million jobs.

Figure 15: Job Creation and Destruction by Size of Firm at Birth, Millions, Average: Economic Downturn - 2009 and 2010



Source: Business Structure Database (ONS)

Note: For definitions of terms see paras 2.10 – 2.13

4.8 Finally, there are some marked differences between 2009 and 2010. First, there was a sharp rise in the number of jobs lost through contraction by large firms (i.e., 250 employees or more) – a rise of ~250,000 jobs. Second medium-sized business (50-249 employees) also shed more jobs through contraction than in 2009 – an additional ~100,000 jobs. So the rise in almost 450,000 jobs lost through contraction in 2010 across the whole of the private sector was primarily a result of the behaviour of medium-sized and large firms (i.e., 78% of the total).

5 Conclusion

Key Findings

- 5.1 Against the background of a stock of private sector businesses which had a net employment increase of 7.6 per cent (1.3 million jobs) between 1998 and 2010 we have shown that just over one in four jobs (28.0 per cent) of all jobs in the private sector were either destroyed or created over an average 12 month period – a remarkable level of turbulence in the UK economy.
- 5.2 In the 11 years to 2008 ~5.2 million jobs in the UK economy were either created or destroyed each year. It is important to understand the processes by which this level of churn takes place:
- On average each year there were 0.92 million jobs in the UK created through firm entry and 1.75 million jobs created through the expansion of existing firms.
 - By contrast, exiting firms destroyed on average 1.3 million jobs in the UK each year while the contraction of firms accounted for a further 1.2 million jobs.
- 5.3 There is very little variation between broad sector groups. There are some regional differences of note which are a result of variations in exit rates.
- 5.4 The majority of jobs each year in the UK are created by small firms. Their rate of job creation and destruction, particularly within micro-enterprises, is much greater than larger firms. Out of a total of 2.61 million jobs created on average each year between 1998 and 2010 existing small firms (i.e., less than 50 employees) contributed 33 per cent (i.e., 0.87 million jobs) while start-ups contributed a further third (34%) – approximately another 0.87 million jobs.

Job Creation and the Economic Downturn

- 5.5 In total, around **4.8 million jobs** in the UK economy were either created or destroyed on average each year in 2009 and 2010. This is lower than in the previous 11 years due mainly to a fall in jobs through start-up. Overall, 0.59 million jobs were created through firm entry and 1.68 million created through the expansion of existing firms. By contrast, exiting firms in 2009 and 2010 destroyed on average 1.1 million jobs each year while the contraction of firms accounted for a further 1.4 million job destructions.
- 5.6 Job gains through start-ups declined by ~300,000 in both 2009 and 2010. Nevertheless, during the recession the majority of gross jobs (71%) were being created by start-ups and small firms - a total of 1.63 million jobs.
- 5.7 In terms of job losses, micro-enterprises were responsible for two-fifths (38%) of all job losses on average in 2009 and 2010 – almost 1 million jobs out of a total of 2.55 million job losses. Overall, small firms employing less than 50 employees are responsible for a slightly higher proportion of the total number of job losses ~55 per cent or 1.4 million jobs.
- 5.8 Firms employing more than 250 employees lost jobs at much the same rate as pre-2008 but they were significantly less likely to create jobs - ~200,000 fewer jobs in each of the years 2009 and 2010.

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