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Employment Growth and Contraction in NI Businesses

High Growth Firms: Update Bulletin 3
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Stimulating
Innovation,
enterprise and
competitiveness

Contents

SUMMARY

Recently published research[1] applied the Organisation for Economic Cooperation and Development (OECD) measure of High Growth, defined as any business experiencing an annualised 20% growth in either employment or turnover over a 3-year period compared to a baseline year, to businesses in the Northern Ireland economy between 1998 and 2013.

Whilst that research focused on businesses experiencing High Growth, it highlighted the reality that net job change within any given period reflects the balance between total job growth and total job contraction by businesses in NI regardless of whether the change in employment within any given business and in any period met any particular definition of High Growth.

Using the database created for the original High Growth research with the addition of the latest 2011/14 data, businesses in each 4 year period between 1998/01 and 2011/14 who experienced an increase or decrease in employment numbers between the base year and final year of each period were identified. The database excludes all public sector organisations and, within each time period, includes only businesses which were present on the Inter Departmental Business Register in each of the 4 years of each observation period and defined as 'in scope' for the purposes of these analyses.

Two broad approaches to the subsequent analyses were conducted, firstly a focus on the net effects of the number of businesses experiencing either employment growth or contraction and their associated business characteristics. Given that jobs are not evenly distributed between businesses with different characteristics, a second analytical approach focused on the number of jobs that were created or contracted, the net effects and associated business characteristics.

EMPLOYMENT GROWTH AND EMPLOYMENT CONTRACTING BUSINESSES

Between 1998/01 and 2006/09 the number of businesses experiencing job growth exceeded the number of businesses experiencing contraction of employment with the net effect being positive in terms of the number of businesses experiencing job growth. Between 2007/10 and 2010/13, the number of businesses in each period experiencing contraction of employment was greater than the number of businesses experiencing job growth. The latest period (2011/14) saw a return to a positive balance between the number of businesses experiencing employment growth or contraction.

Positive outcomes in terms of the balance between the number of businesses growing or contracting employment were particularly accounted for by: businesses with a turnover of between £100k and £999k and businesses with a small turnover of less than £100k; very small businesses employing between 1 and 4 people; and (although a more nuanced picture) businesses within the human health and social work, all other activities, and agriculture industrial sectors.

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[1] See: http://www.detini.gov.uk/index/what-we-do/deti-stats-index/economic-research/measuring-nis-high-growth-firms.htm

Negative outcomes in terms of the balance between the number of businesses growing or contracting employment were particularly accounted for by: businesses with a turnover of between £100k and £999k; businesses employing between 5 and 9 people or businesses employing between 10 and 19; and, particularly post 2007/10, businesses within the construction, accommodation and food, all other activities, and professional and scientific industrial sectors.

Focusing on 2011/14, and by combining industrial sector with business size to create 60 discrete analytical business groups, the top 10 groups of employment growth businesses accounted for almost two-thirds (65%) of all businesses experiencing employment growth. The top 5 employment growth business groups comprised very small businesses employing between 1 and 4 people in the wholesale and retail, construction, all other activity, agriculture, and professional and scientific sectors, contributing almost half (49%) of all those businesses experiencing employment growth.

Industrial sector and business size groups of employment growth businesses (2011/14)

Rank	Industrial sector of employment growth business	Business Size	Number of businesses	%	Cumulative %
1	Wholesale and retail trade, repair of motor vehicles and motorcycles	1-4	1635	12%	12%
2	Construction	1-4	1445	11%	23%
3	All other activities	1-4	1435	11%	34%
4	Agriculture, Forestry and Fishing	1-4	1430	11%	44%
5	Professional, scientific and technical activities	1-4	685	5%	49%
6	Wholesale and retail trade, repair of motor vehicles and motorcycles	5-9	525	4%	53%
7	Manufacturing	1-4	460	3%	57%
8	Accommodation and food service activities	1-4	385	3%	60%
9	Administrative and support service activities	1-4	370	3%	62%
10	Wholesale and retail trade, repair of motor vehicles and motorcycles	10-19	350	3%	65%

In terms of those businesses experiencing employment contraction in 2011/14, the top 10 groups of employment contracting businesses accounted for 57% of all businesses experiencing employment contraction with again smaller businesses predominating in the top 5 accounting for 37% of all businesses experiencing employment contraction.

Industrial sector and business size groups of employment contracting businesses (2011/14)

Rank	Industrial sector of employment contracting business	Business Size	Number of businesses	%	Cumulative %
1	Construction	1-4	1150	10%	10%
2	Wholesale and retail trade, repair of motor vehicles and motorcycles	1-4	925	8%	17%
3	Agriculture, Forestry and Fishing	1-4	820	7%	24%
4	Wholesale and retail trade, repair of motor vehicles and motorcycles	5-9	820	7%	31%
5	All other activities	1-4	725	6%	37%
6	Construction	5-9	635	5%	42%
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	10-19	470	4%	46%
8	All other activities	5-9	465	4%	50%
9	Professional, scientific and technical activities	1-4	420	4%	54%
10	Accommodation and food service activities	5-9	375	3%	57%

GROWING AND CONTRACTING JOBS

Given that employment is not evenly distributed amongst businesses of different characteristics, analyses were subsequently conducted focusing on the jobs grown or contracted and the business characteristics associated with them.

Between 1998/01 and 2011/14 the number of jobs created by businesses in each period exceeded the number of jobs contracted with the net effect being positive in terms of job growth, with the exception of 2009/12. That is, when the analytical focus is on jobs rather than businesses, the picture of net change over the entire period between 1998/01 and 2011/14 is rather more positive.

Positive outcomes in terms of the balance between the number of jobs grown or contracted were particularly accounted for by jobs within: businesses with a turnover of between £100k and £999k, or turnover between £1m and £4.99m, and £5m and over; very small businesses employing between 1 and 4 people; and businesses in the wholesale and retail, human health and social work, all other activities, and administrative and support sectors.

Negative outcomes in terms of the balance between the number of jobs grown or contracted were particularly accounted for by jobs within: businesses with a turnover of between £100k and £999k; businesses employing between 10 and 19, or 250 or more people; and businesses in the construction sector.

Focusing on jobs grown or contracted in 2011/14, and by combining the industrial sector with business size to create 60 discrete analytical business groups, the top 10 employment growth business groups accounted for 44% of jobs grown in 2011/14. However, very small businesses employing between 1 and 4 people within this top 10 accounted for almost half of the total jobs created by the top 10 analytical business groups.

Job growth industrial sector and business size groups (2011/14)

Rank	Industrial sector of job growth	Business Size	Number of Jobs	%	Cumulative %
1	Administrative and support service activities	250+	6810	9%	9%
2	All other activities	1-4	4025	5%	14%
3	Wholesale and retail trade, repair of motor vehicles and motorcycles	1-4	3700	5%	19%
4	Manufacturing	250+	3535	5%	23%
5	Administrative and support service activities	50-249	3425	4%	28%
6	Construction	1-4	3235	4%	32%
7	Manufacturing	50-249	2550	3%	35%
8	Agriculture, Forestry and Fishing	1-4	2435	3%	38%
9	Wholesale and retail trade, repair of motor vehicles and motorcycles	50-249	2290	3%	41%
10	Professional, scientific and technical activities	1-4	2140	3%	44%

In terms of the quantum of jobs contracted in 2011/14, the top 10 groups of businesses accounted for 47% of all jobs contracted in 2011/14. In terms of the quantum of jobs contracted, large businesses employing 250 or more people represented 4 of the top 5 analytical business groups accounting for some 32% of all jobs contracted in 2011/14.

Job contraction industrial sector and business size groups (2011/14)

Rank	Industrial sector of job contraction	Business Size	Number of Jobs	%	Cumulative %
1	Wholesale and retail trade, repair of motor vehicles and motorcycles	250+	5905	11%	11%
2	Administrative and support service activities	250+	4275	8%	18%
3	All other activities	250+	3390	6%	24%
4	Wholesale and retail trade, repair of motor vehicles and motorcycles	50-249	2705	5%	29%
5	Manufacturing	250+	1755	3%	32%
6	Construction	5-9	1750	3%	35%
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	10-19	1655	3%	38%
8	Wholesale and retail trade, repair of motor vehicles and motorcycles	5-9	1655	3%	41%
9	Wholesale and retail trade, repair of motor vehicles and motorcycles	20-49	1630	3%	44%
10	Construction	1-4	1560	3%	47%

1. BACKGROUND

Recently published research[2] into Northern Ireland's High Growth Businesses between 1998 and 2013 applied the Organisation for Economic Cooperation and Development (OECD) measure of High Growth representing any business employing 10 or more which experienced an annualised 20% growth in either employment or turnover over a 3-year period compared to a baseline year.

Utilising the Inter Departmental Business Register (IDBR) a database was constructed covering the periods 1998/01 to 2010/13 from which it was possible to identify, within any given period, the number of High Growth businesses employing 10 or more. The database excluded all public sector organisations and, within each time period, included only businesses which were present on the Inter Departmental Business Register in each of the 4 years of each observation period. This approach was also extended to businesses employing less than 10. On that basis, 12 distinct observation time periods were constructed ranging from 1998/01 to 2010/13 (excluding 1999/02 as data was unavailable for 1999).

In brief, that research concluded that taking the longer view between the periods 1998/01 and 2010/13, the contribution of High Growth businesses to the NI economy remains important on the basis that, in each period examined, a relatively small number of businesses accounted for a disproportionate share of business employment and turnover. The longer term view between 1998/01 and 2010/13 also indicated that the scale and impact of High Growth Firms employing 10 or more in the NI economy had broadly declined over time. In terms of the overall High Growth measure itself, increase in business turnover was the main driver underpinning the identification of a business as experiencing High Growth.

Whilst this research focused on businesses experiencing High Growth, it also highlighted the reality that net job change within any given period reflected the balance between total job growth and total job contraction by businesses in NI regardless of whether the change in employment within any given business and in any given period met any particular definition of High Growth. For the most part between 1998/01 and 2010/13, that balance resulted in positive employment growth for the cohorts of business examined. The one exception to this outcome was in the 2009/12 period where job contraction was greater than job growth resulting in a net negative outcome. Similar to the approach taken in examining the characteristics and experience over time of High Growth businesses, this update bulletin focuses specifically on those businesses which experienced either job growth or job contraction in employment irrespective of the level of growth or contraction in terms of the associated business characteristics.

2. ANALYTICS

Using the database created for the original High Growth research, businesses in each period between 1998/01 and 2010/13 who experienced a net increase or decrease in employment numbers between the base year and final year of each period were identified. Effectively this enabled

[2] See: http://www.detini.gov.uk/index/what-we-do/deti-stats-index/economic-research/measuring-nis-high-growth-firms.htm

analyses of a range of businesses characteristics associated with employment contraction and growth available from the IDBR (business turnover, business size, and industrial sector). The analyses conducted utilised data for total employment within each business which could include owners/proprietors rather than focusing on the number of employees. In practice, the differences between the two available variables on the IDBR (employment and employees) are negligible, particularly in terms of the higher level analyses conducted here.

Two broad approaches to the analyses were conducted, firstly, a focus on the net effects of businesses experiencing either employment growth or contraction and their associated business characteristics. Given that jobs are not evenly distributed between businesses with different characteristics, a second analytical approach focused on the jobs that were grown or contracted, the net effects and associated business characteristics. Effectively the first analytical approach examines the quantum of businesses experiencing employment growth or contraction and the net effect whilst the second analytical approach focuses on the quantum of jobs grown or contracted and the net effect.

For both analytic approaches, the business characteristics related to those recorded in the baseline period. So, for example, in the 1998/01 period, the business characteristics for any given businesses recorded in the 1998 baseline year were reported on in the analyses conducted in terms of the business characteristics associated with employment growth or contraction as reflected by the difference in employment in 2001 compared to the 1998 baseline employment level.

Finally, and consistent with the High Growth work completed to date, the businesses included from the IDBR in each period examined (1998/01 to 2011/14) excludes the public sector and are those businesses which had data in each of the years within each observation period and were termed 'in scope' in the original research. On that basis, for example, businesses which were born or ceased trading, or were not included on the IDBR for any year within each observation period, were not included in the cohort of businesses within each observation period.

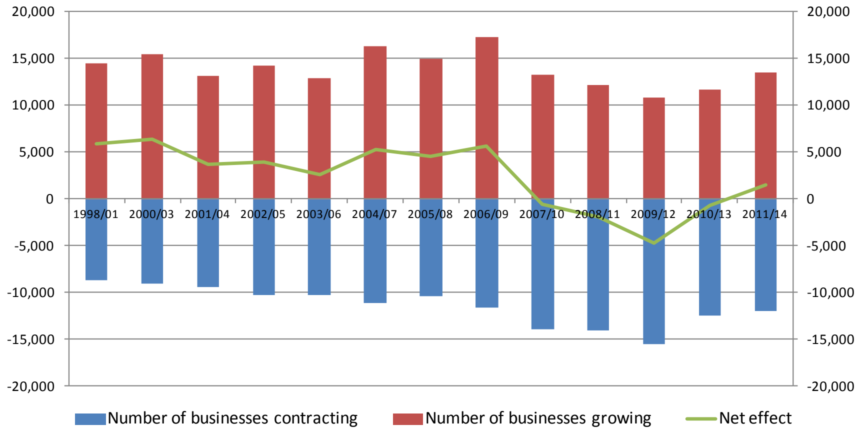
All whole numbers within this report, both within text or tables, have been rounded to the nearest 5 and figures may not sum to totals. A full set of supporting tables can be found in Appendix A.

3. RESULTS

3.1 EMPLOYMENT GROWTH AND EMPLOYMENT CONTRACTING BUSINESSES

Between 1998/01 and 2006/09 the number of businesses experiencing job growth in each period exceeded the number of businesses experiencing contraction of employment with the net effect being positive. In 1998/01, for example, 8,635 businesses experienced employment contraction compared to 14,495 business experiencing job growth. Between 2007/10 and 2010/13 however, the number of businesses in each period experiencing contraction of employment was greater than the number of businesses experiencing job growth with the net effect being negative. In the 2009/12 period, for example, 15,520 businesses experienced employment contraction compared to 10,840 businesses experiencing job growth (Figure 1). The most recent period (2011/14) saw a return to a net positive difference between the number of businesses experiencing job contraction (11,955) and those experiencing job growth (13,420).

Figure 1: Businesses with job growth or contraction and net effects

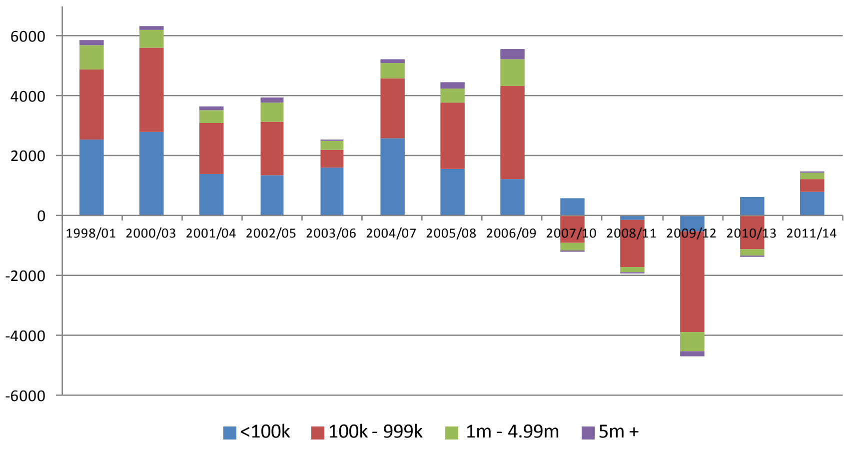


The following analyses explore the composition of the net difference between businesses employment growth and contraction in terms of their characteristics.

Turnover: Over the entire period 1998/01 to 2011/14 and, at an average of 56%, businesses with a turnover of between £100k and £999k comprised the single greatest share of all businesses experiencing employment growth followed by businesses with a smaller turnover of less than £100k who on average comprised a 26% share of businesses experiencing employment growth (Figure 2). The share of employment growing businesses by those with a turnover of between £100k to £999k, exceeded their average 43% share of all businesses, whilst the share of employment growing businesses accounted for those with a turnover of less than £100k was consistently below their average 47% share of all businesses.

Businesses with a turnover of between £100k and £999k also accounted for a higher proportion of businesses experiencing employment contraction at an average of 61% of all contracting businesses. In terms of business turnover, and over the entire period, employment growth and contraction and the net effects of these amongst businesses with a turnover of between £100k and £999k have been mainly responsible for the overall positive or negative net effect in each period.

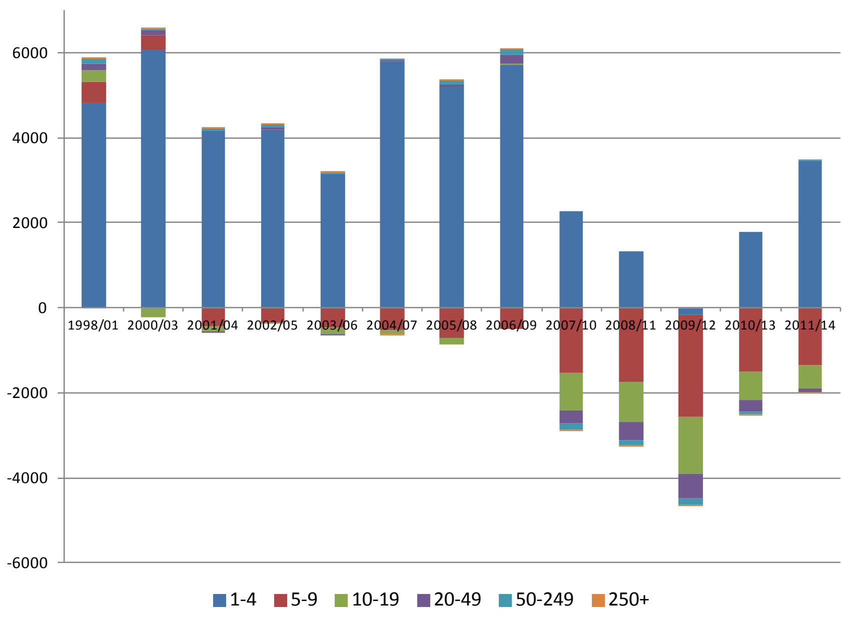
Figure 2: Net effect of business employment growth and contraction by busines turnover



Interestingly, the return to a positive net effect in 2011/14 was in large part due to employment growth in businesses with a turnover of less than £100k. The balance of growth and contraction for businesses with a small turnover of less than £100k was, in the main, positive over the entire period although a net (albeit relatively small) negative employment contraction was seen for these businesses in both 2008/11 and 2009/12.

Business Size: In terms of the businesses base in Northern Ireland, very small businesses employing between 1 and 4 people predominate in the economy representing on average just over 70% of all businesses. Businesses employing between 5 and 9 people comprise around 14% of all businesses. In terms of the shares of employment growth businesses, those employing between 1 and 4 people averaged a 60% share, somewhat below their businesses population share. The share of employment growing businesses by the remaining business size groups were either the same or slightly elevated in comparison to their share of all businesses.

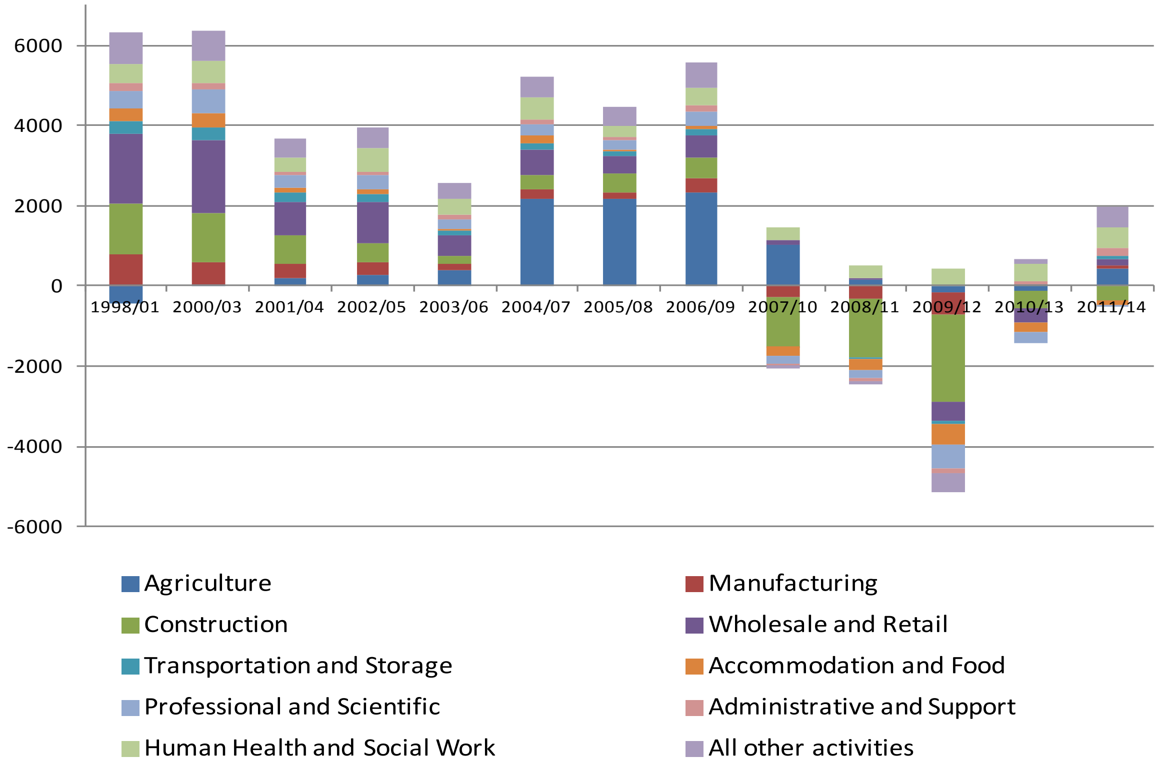
Figure 3: Net effect of business employment growth and contraction by busines size



Very small businesses employing between 1 and 4 people experienced a broadly positive net balance between the numbers of businesses of that size experiencing employment growth or contraction with 2009/12 proving the one period of exception (Figure 3). Quite clearly, the net positive outcome for businesses between those experiencing employment growth and contraction over time is hugely reliant on these very small businesses. The net balance between businesses growing and contracting who employed between 5 and 9 people, by contrast, was broadly negative over the entire period particularly between 2007/10 and 2011/14. Similarly, the net balance between employment growth and contraction for businesses employing between 10 and 19 people was negative with the exception of 1998/01 and 2000/03. Without exception, in the most recent periods between 2007/10 and 2011/14, businesses employing between 5 and 9 people and larger businesses experienced a negative balance in terms of the numbers of businesses experiencing employment growth or contraction.

Industrial Sector: Businesses in the agriculture sector comprise the single largest proportion of all businesses in the economy averaging 28% of all businesses between 1998/01 and 2011/14, followed by businesses in the wholesale and retail (19%), construction (9%) and all other activities (12%) sectors. In comparison, the greatest share of those businesses experiencing employment growth was, on average, accounted for by businesses in the wholesale and retail (23%), construction (16%), all other activities (13%) and agriculture (12%) sectors.

Figure 4: Net effect of business employment growth and contraction by industrial sector



In terms of the balance between the number of businesses experiencing employment growth and contraction, businesses in the construction sector experienced a net positive balance between 1998/01 and 2006/09 but a net negative balance between 2007/10 to date (Figure 4). Of note, and somewhat at odds with most of the periods, is the strong net positive balance between growth and contraction within businesses in the agriculture sector between 2004/07 and 2006/09. In terms of the most recent period of 2011/14, more businesses in the construction sector experienced contraction than growth, whilst more businesses within the human health and social work sector, agriculture, and all other activities sectors experienced employment growth than contraction.

The relatively positive outcome seen in 2011/14 in terms of the balance between businesses growing and contracting was spread over a range of industrial sectors with the exception of businesses in the construction and accommodation and food sectors. In order to explore the relatively positive outcome for 2011/14 in more detail, the broad industrial sector of each business experiencing employment growth or contraction was combined with its business size to enable a profile to be made of those types of businesses accounting for employment growth (Table 1) or contraction (Table 2) and to rank these in terms of their respective contributions.

Combining industrial sector (10 categories) by business size (6 categories) produced 60 individual and discrete analytical business groups.

In terms of those groups of businesses experiencing employment growth (Table 1), the top 10 contributing groups of businesses, accounted for almost two-thirds (65%) of all businesses experiencing employment growth. The top 5 contributing groups of businesses comprised very small businesses employing between 1 and 4 people in the wholesale and retail, construction, all other activity, agriculture, and professional and scientific sectors, contributing almost half (49%) of all those businesses experiencing employment growth.

Altogether, 20 of the 60 business groupings of industrial sector and business size accounted for just over 80% of all businesses experiencing business growth in the 2011/14 period.

Table 1: Industrial sector and business size groups of employment growth businesses (2011/14)

Rank	Industrial sector of employment growth business	Business Size	Number of businesses	%	Cumulative %
1	Wholesale and retail trade, repair of motor vehicles and motorcycles	1-4	1635	12%	12%
2	Construction	1-4	1445	11%	23%
3	All other activities	1-4	1435	11%	34%
4	Agriculture, Forestry and Fishing	1-4	1430	11%	44%
5	Professional, scientific and technical activities	1-4	680	5%	49%
6	Wholesale and retail trade, repair of motor vehicles and motorcycles	5-9	525	4%	53%
7	Manufacturing	1-4	460	3%	57%
8	Accommodation and food service activities	1-4	385	3%	60%
9	Administrative and support service activities	1-4	370	3%	62%
10	Wholesale and retail trade, repair of motor vehicles and motorcycles	10-19	350	3%	65%
11	Human health and social work activities	1-4	350	2%	67%
12	All other activities	5-9	325	2%	70%
13	Human health and social work activities	5-9	300	2%	72%
14	Transportation and storage	1-4	270	2%	74%
15	Human health and social work activities	10-19	250	2%	76%
16	Accommodation and food service activities	5-9	225	2%	78%
17	Wholesale and retail trade, repair of motor vehicles and motorcycles	20-49	200	1%	79%
18	Manufacturing	5-9	180	1%	80%
19	All other activities	10-19	175	1%	82%
20	Professional, scientific and technical activities	5-9	170	1%	83%

In terms of those businesses experiencing employment contraction in 2011/14 (Table 2), the top 10 analytical business groups accounted for 57% of all businesses experiencing employment contraction, indicating that employment contraction amongst businesses was somewhat less concentrated compared to businesses experiencing employment growth. The top 5 analytical groups of businesses experiencing employment contraction which accounted for over one third (37%) of all employment contracting businesses comprised very small businesses employing between 1 and 4 people in the construction, wholesale and retail, agriculture and all other activities sectors, together with employment contracting businesses in the wholesale and retail sector employing between 5 and 9 people.

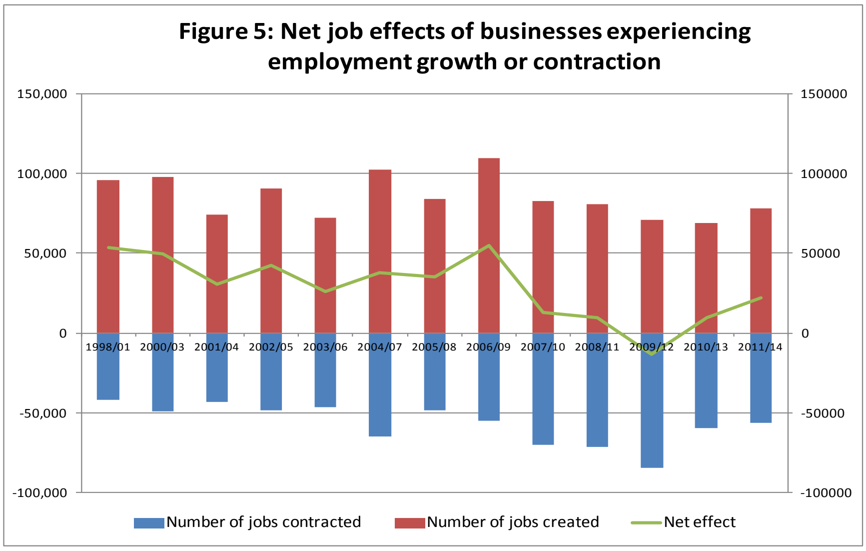
In total, 20 of the 60 business groups examined accounted for 78% of all businesses experiencing employment contraction in 2011/14.

Table 2: Industrial sector and business size groups of employment contracting businesses (2011/14)

Rank	**Industrial sector of employment contracting business**	**Business Size**	**Number of businesses**	%	**Cumulative %**
1	Construction	1-4	1150	10%	10%
2	Wholesale and retail trade, repair of motor vehicles and motorcycles	1-4	925	8%	17%
3	Agriculture, Forestry and Fishing	1-4	820	7%	24%
4	Wholesale and retail trade, repair of motor vehicles and motorcycles	5-9	820	7%	31%
5	All other activities	1-4	725	6%	37%
6	Construction	5-9	635	5%	42%
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	10-19	470	4%	46%
8	All other activities	5-9	465	4%	50%
9	Professional, scientific and technical activities	1-4	420	4%	54%
10	Accommodation and food service activities	5-9	375	3%	57%
11	Professional, scientific and technical activities	5-9	335	3%	60%
12	Manufacturing	1-4	290	2%	62%
13	Manufacturing	5-9	285	2%	64%
14	Agriculture, Forestry and Fishing	5-9	275	2%	67%
15	Accommodation and food service activities	10-19	265	2%	69%
16	Wholesale and retail trade, repair of motor vehicles and motorcycles	20-49	260	2%	71%
17	Construction	10-19	230	2%	73%
18	All other activities	10-19	220	2%	75%
19	Professional, scientific and technical activities	10-19	215	2%	77%
20	Accommodation and food service activities	1-4	190	2%	78%

3.2 GROWING AND CONTRACTING JOBS

The previous analyses had examined the number of businesses experiencing employment growth or contraction and the net effect. Given that employment is not distributed evenly between different types of businesses, a focus on growing or contracting businesses will not indicate how the underlying employment in terms of jobs is affected. The focus of the following analyses is therefore the jobs that were grown or contracted in terms of the businesses characteristics associated with them.



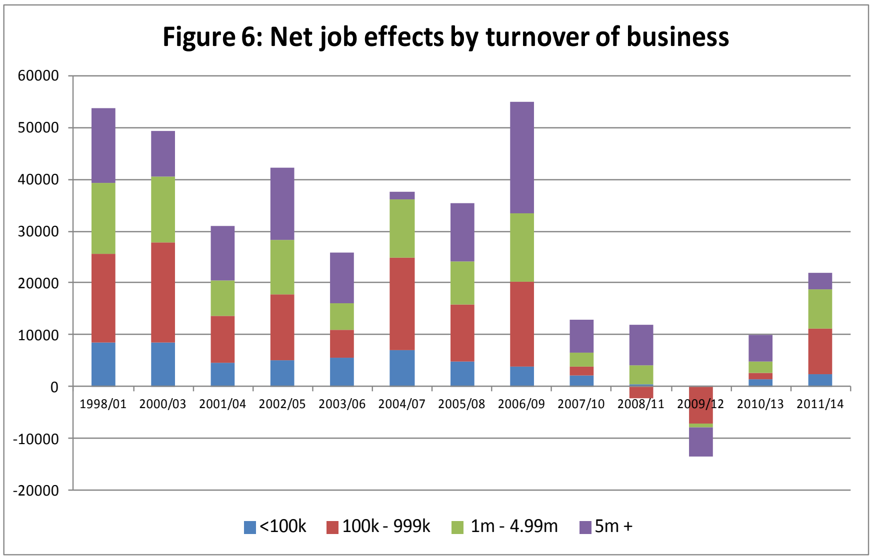
Between 1998/01 and 2011/14 the number of jobs created by businesses in each period exceeded the number of jobs contracted with the net effect being positive with the exception of 2009/12 (Figure 5).

In contrast to the four periods of net negative outcomes between 2007/10 and 2011/14 seen with the number of businesses experiencing employment growth or contraction, a focus here on the balance between the number of jobs created or contracted results in one period of net negative job outcomes in 2009/12. The peak in terms of the balance between job growth and contraction was seen in 2006/09 with 54,870 net jobs generated reflecting the balance between 109,870 jobs created and 54,995 jobs contracted. In 2009/12 by contrast, the net outcome of 13,200 jobs contracted reflected the balance between 70,895 jobs created and 84,095 jobs contracted.

The following analyses explore the composition of the net difference between job growth and job contraction in terms of the associated business characteristics.

Turnover: Over the entire period between 1998/01 and 2011/14, whilst accounting for a relatively small amount of all jobs created and contracted within each period, the net effect for jobs accounted for by businesses which had a small turnover of less than £100k remained positive (Figure 6).

In terms of the net effect of job growth and contraction, the relatively small number of businesses with turnover of between £1m and £4.99m and of £5m which together account for around 10% of all businesses, had a disproportionate impact on both the numbers of jobs grown and contracted and the net balance between them.

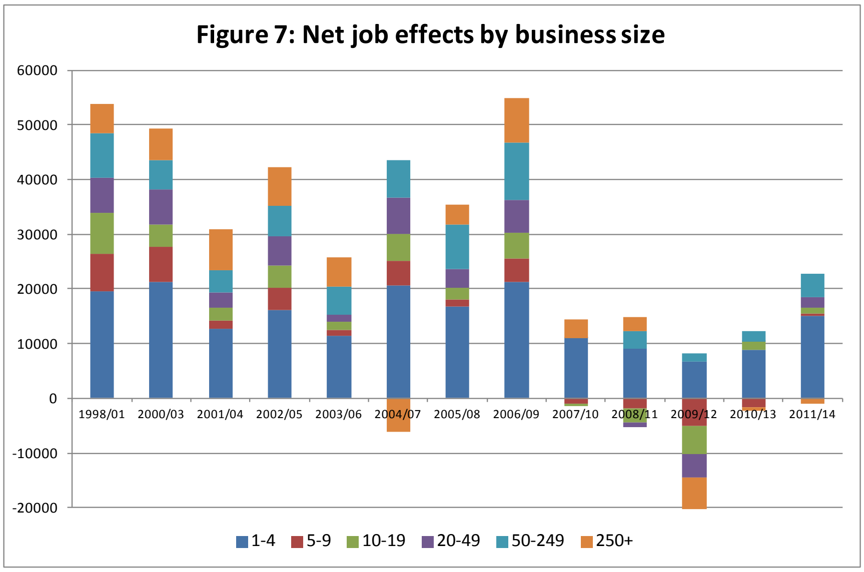


In 2011/14, the positive balance between jobs created and contracted was in the main accounted for by jobs created within businesses with a turnover of between £100k and £999k which accounted for 40% of the net jobs created. Jobs created in businesses with a turnover of between £1m and £4.99m accounted for a further 35% of the net jobs created in 2011/14.

Business Size: Over the entire period between 1998/01 and 2011/14, the net effect of job growth and contraction was positive for those jobs accounted for by very small businesses employing between 1 and 4 people although they comprised a relatively small proportion of all jobs in the economy (Figure 7). Particularly striking is the extent to which the net generation of jobs in each period between 2007/10 and 2011/14 accounted for by these very small businesses was entirely protective in terms of the overall net balance between job growth and contraction.

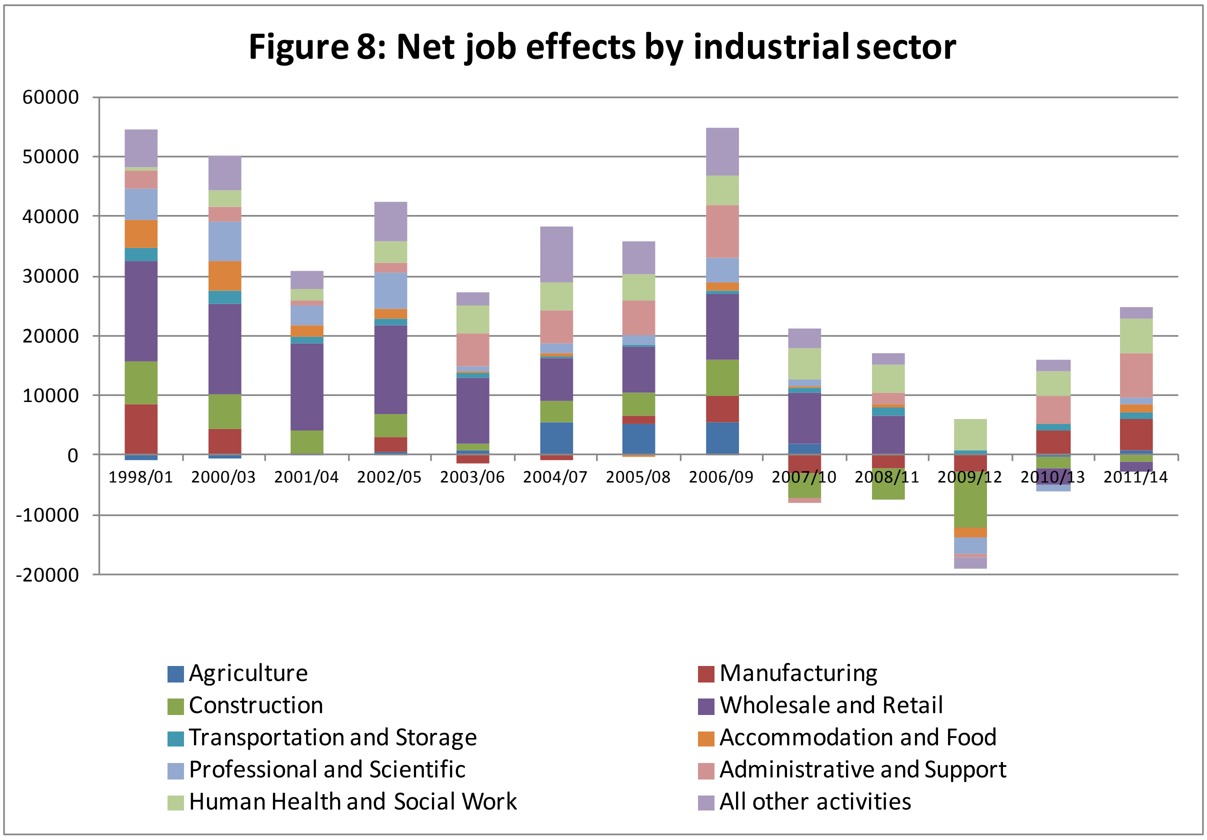
Remarkably, the balance between jobs created and contracted accounted for by businesses employing between 50 and 249 people remained positive between 1998/01 and 2011/14.

Net job contraction in 2009/12 was spread over a number of business size groups including those businesses employing between 5 and 9, between 10 and 19, between 20 and 49 and 250 or more.



The relative strengthening recovery in the balance between the number of jobs created and contracted seen in 2011/14 was, in the main, accounted for by very small businesses employing between 1 and 4 people.

Industrial Sector: Between 1998/01 and 2006/09, the net positive balance between employment creation and contraction was broadly accounted for by businesses in the wholesale and retail, all other activities, administrative and support, construction, manufacturing and human health and social work sectors (Figure 8). The less positive net outcome for jobs seen between 2007/10 and 2010/13 were largely accounted for by net jobs contracted in the construction sector. The more positive net job outcomes seen in 2011/14 were largely accounted for by net positive job creation within businesses in the manufacturing, administrative and support, and human health and social work sectors.



In order to explore the relatively positive outcome for 2011/14 in more detail, all jobs either grown or contracted during 2011/14 were linked to the associated broad industrial sector of each business and business size to enable a profile to be made of those types of businesses accounting for job growth (Table 3) or contraction (Table 4) and to rank these in terms of their respective contributions. As with the previous business-level analyses, combining industrial sector (10 categories) with business size (6 categories) in this manner produces 60 individual discrete analytical groups.

In terms of the quantum of job growth (Table 3), and compared to the business-level analyses previously, the top 10 analytical business groups accounted for 44% of jobs grown in 2011/14 and were a more diverse group of businesses, particularly in terms of business size. However, very small businesses employing between 1 and 4 people within this top 10, accounted for almost half of the total jobs created by the top 10 analytical business groups.

Almost two thirds (64%) of jobs created in 2011/14 were created by the top 20 analytical business groups indicating that the quantum of job growth, in comparison to the quantum of businesses experiencing job growth, was accounted for by a broader range of businesses.

Table 3: Job growth industrial sector and business size groups (2011/14)

Rank	Industrial sector of job growth	Business Size	Number of Jobs	%	Cumulative %
1	Administrative and support service activities	250+	6810	9%	9%
2	All other activities	1-4	4025	5%	14%
3	Wholesale and retail trade, repair of motor vehicles and motorcycles	1-4	3700	5%	19%
4	Manufacturing	250+	3535	5%	23%
5	Administrative and support service activities	50-249	3425	4%	28%
6	Construction	1-4	3235	4%	32%
7	Manufacturing	50-249	2550	3%	35%
8	Agriculture, Forestry and Fishing	1-4	2435	3%	38%
9	Wholesale and retail trade, repair of motor vehicles and motorcycles	50-249	2290	3%	41%
10	Professional, scientific and technical activities	1-4	2140	3%	44%
11	Human health and social work activities	50-249	1840	2%	46%
12	Wholesale and retail trade, repair of motor vehicles and motorcycles	5-9	1805	2%	49%
13	Wholesale and retail trade, repair of motor vehicles and motorcycles	10-19	1795	2%	51%
14	Wholesale and retail trade, repair of motor vehicles and motorcycles	20-49	1770	2%	53%
15	Human health and social work activities	250+	1770	2%	55%
16	Wholesale and retail trade, repair of motor vehicles and motorcycles	250+	1625	2%	57%
17	All other activities	20-49	1480	2%	59%
18	Accommodation and food service activities	1-4	1390	2%	61%
19	All other activities	50-249	1350	2%	63%
20	Manufacturing	1-4	1275	2%	64%

In terms of the quantum of job contraction (Table 4), and compared to the business-level analyses previously, the top 10 analytical business groups accounted for 47% of all jobs contracted in 2011/14. In contrast to the previous business-level analyses, only one group comprised of very small businesses employing between 1 and 4 people in the construction sector featured in the top 10 analytical business groups.

In terms of the quantum of jobs contracted, large businesses employing 250 or more people represented 4 of the top 5 analytical business groups accounting for some 32% of all jobs contracted in 2011/14. In total, two thirds (67%) of all jobs contracted in 2011/14 were accounted for by the top 20 analytical business groups. In comparison to the business-level analyses previously, this indicates that the quantum of job contraction is spread over a broader range of businesses groups.

Table 4: Job contraction industrial sector and business size groups (2011/14)

Rank	Industrial sector of job contraction	Business Size	Number of Jobs	%	Cumulative %
1	Wholesale and retail trade, repair of motor vehicles and motorcycles	250+	5905	11%	11%
2	Administrative and support service activities	250+	4275	8%	18%
3	All other activities	250+	3390	6%	24%
4	Wholesale and retail trade, repair of motor vehicles and motorcycles	50-249	2705	5%	29%
5	Manufacturing	250+	1755	3%	32%
6	Construction	5-9	1750	3%	35%
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	10-19	1655	3%	38%
8	Wholesale and retail trade, repair of motor vehicles and motorcycles	5-9	1655	3%	41%
9	Wholesale and retail trade, repair of motor vehicles and motorcycles	20-49	1630	3%	44%
10	Construction	1-4	1560	3%	47%
11	Accommodation and food service activities	50-249	1510	3%	50%
12	Construction	10-19	1220	2%	52%
13	All other activities	50-249	1200	2%	54%
14	Wholesale and retail trade, repair of motor vehicles and motorcycles	1-4	1180	2%	56%
15	Construction	50-249	1175	2%	58%
16	Accommodation and food service activities	10-19	1090	2%	60%
17	Administrative and support service activities	50-249	1050	2%	62%
18	All other activities	5-9	1030	2%	64%
19	Agriculture, Forestry and Fishing	1-4	970	2%	66%
20	All other activities	10-19	945	2%	67%

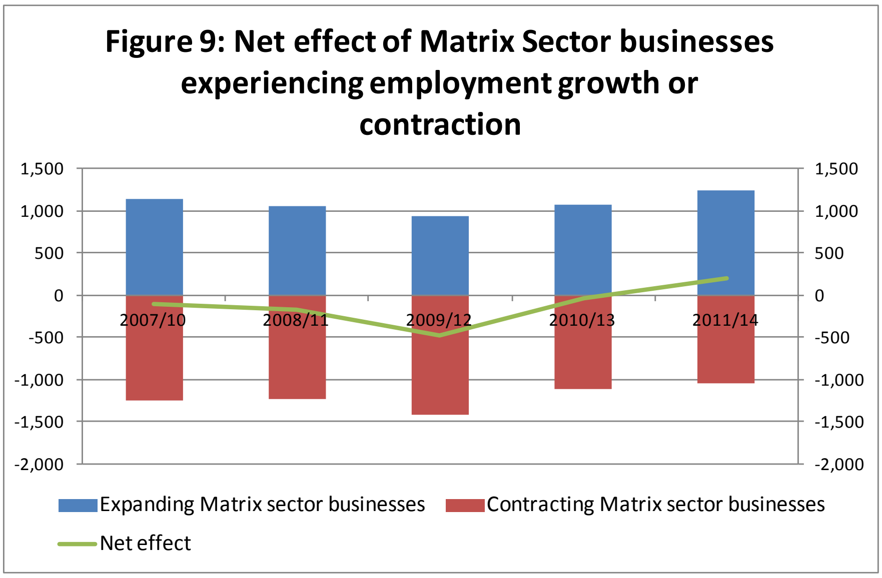
3.3 SECTORAL PERSPECTIVES

The overarching goal of the Northern Ireland Economic Strategy[3] is to improve the economic competitiveness of the Northern Ireland economy by strengthening competitiveness through a focus on export led economic growth. In support of this goal there was an accepted need to deepen and diversify the export base in order to increase employment and wealth across Northern Ireland with the key drivers being seen as innovation, R&D and workforce skills. In support of the NI Economic Strategy, there is particular interest in business activity and outcomes in relation to science and technology and what has been referred to as the Knowledge Economy.

MATRIX: The Northern Ireland Science Industry Panel (known as MATRIX[4]), is a business led expert panel formed primarily to advise government, industry and academia on the commercial exploitation of R&D and science and technology in Northern Ireland. Matrix help to champion the role of science and technology as one of the key drivers of economic growth in Northern Ireland. The science/industry MATRIX panel identified a number of markets and business areas to look to further exploit:

- Telecommunications & ICT
- Life & Health Sciences
- Agrifood
- Advanced Materials
- Advanced Engineering
- Sustainable energy

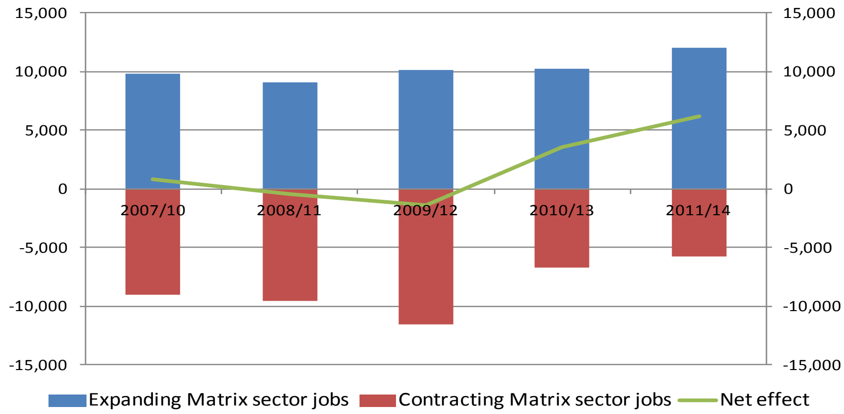
It was possible, on the basis of the Standard Industrial Classification (SIC 07) of business, to identify employment growth and contraction amongst a discrete group of businesses which fell within the area of interest of the Matrix panel. Given the changes which had occurred to the Standard Industrial Classification in 2007 and the relatively small numbers of businesses captured within the area of interest of the Matrix panel, the focus here is primarily on the period 2007/10 to date.



[3] See: http://www.detini.gov.uk/index/what-we-do/deti-eco-dev-index/eco-dev-newpage-27.htm
[4] See: http://www.matrix-ni.org/

Between 2007/10 and 2010/13, the balance between the number of Matrix-defined businesses which were growing or contracting their employment was negative with marginally more businesses contracting than growing. For example in 2007/10, 1,240 Matrix-defined businesses experienced employment contraction whilst 1,140 Matrix-defined businesses experienced employment growth (Figure 9).

Figure 10: Net job effect of Matrix Sector businesses experiencing employment growth or contraction



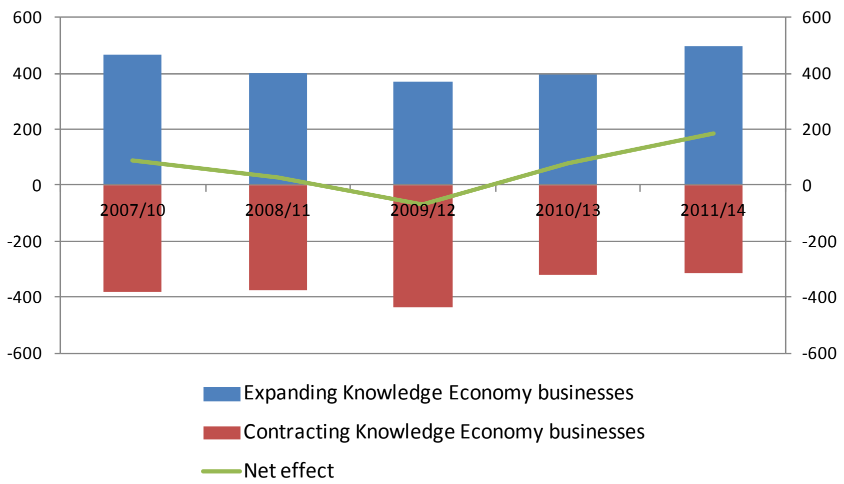
In 2011/14, the net balance between the number of businesses experiencing job growth or contraction amongst Matrix-defined businesses became positive with 1,250 businesses experiencing employment growth whilst 1,040 experienced employment contraction.

Looking specifically at the jobs associated with employment growth and contraction amongst Matrix-defined businesses (Figure 10), the net job balance between employment growth and contraction has become rather more positive in the latest two periods of 2010/13 and 2011/14.

In 2011/14 for example, 11,985 jobs were accounted for by growth in Matrix-defined businesses whilst 5,765 jobs were accounted for by employment contraction in Matrix-defined businesses.

Knowledge Economy: A similar approach to defining groups of businesses using their Industrial Sector Classification was completed for businesses deemed to be within scope of what has been referred to as the Knowledge Economy. Compared to the types of businesses covered by the Matrix-defined areas of interest, those businesses identified as within the Knowledge Economy are rather more discrete in number and include business in the creative, pharmacological, communications,

Figure 11: Net effect of Knowledge Economy businesses experiencing employment growth or contraction



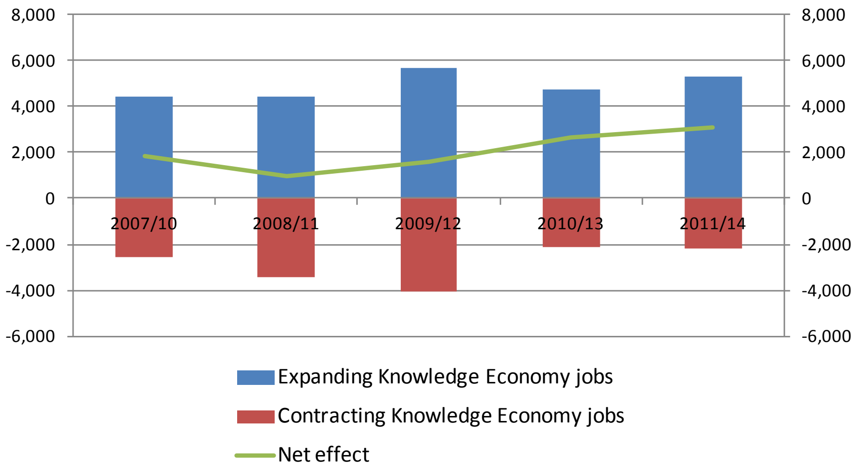
computing, aerospace, IT services, and technical consultancy services sectors.

In terms of the balance of the number of businesses experiencing employment growth or contraction within the Knowledge Economy, only in 2009/12 did the net effect prove to be negative with 440 Knowledge Economy businesses experiencing employment contraction and 370 job growth. The latest 2011/14 period saw 500 Knowledge Economy businesses growing employment whilst 315 contracted (Figure 11).

In terms of the associated jobs within Knowledge Economy businesses, the net balance between growth and contraction remained positive for every period between 2007/10 and 2011/14.

In 2011/14, some 5,275 jobs were grown by Knowledge Economy businesses compared to 2,165 jobs contracted resulting in a net positive increase of 3,115 jobs accounted for by businesses within the Knowledge Economy (Figure 12).

Figure 12: Net job effect of Knowledge Economy businesses experiencing employment growth or contraction



APPENDIX A: SUPPORTING TABLES

All whole numbers within supporting tables have been rounded to the nearest 5 and figures may not sum to totals.

All in scope businesses													
	1998/01	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
In scope businesses	49,620	50,380	50,800	51,695	52,275	52,850	55,035	56,490	57,235	56,335	54,520	53,885	54,175
Number of businesses expanding	14,495	15,405	13,125	14,205	12,815	16,285	14,915	17,245	13,270	12,115	10,840	11,700	13,420
Number of businesses contracting	8,635	9,050	9,470	10,250	10,255	11,070	10,435	11,665	13,885	14,050	15,520	12,440	11,955
Number of businesses unchanged	26,490	25,925	28,205	27,240	29,205	25,490	29,685	27,580	30,080	30,175	28,160	29,745	28,800

All in scope businesses by business turnover													
	1998/01	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
<100k	26,835	26,850	26,150	26,070	26,115	25,365	24,950	25,120	24,990	23,850	23,195	23,835	23,950
100k - 999k	19,030	19,580	20,210	20,950	21,455	22,620	24,620	25,650	26,125	26,135	25,180	24,215	24,600
1m - 4.99m	3,020	3,150	3,505	3,685	3,685	3,820	4,230	4,415	4,725	4,870	4,685	4,470	4,255
5m +	735	805	935	995	1,015	1,040	1,230	1,305	1,400	1,480	1,455	1,365	1,365
Total	49,620	50,380	50,800	51,695	52,275	52,850	55,035	56,490	57,235	56,335	54,520	53,885	54,175

All in scope businesses by business size													
	1998/01	2000/03	2001/04	2002/05	2003/06	2004/07	2005/08	2006/09	2007/10	2008/11	2009/12	2010/13	2011/14
1-4	37,220	37,210	36,540	37,365	37,235	38,135	39,640	41,020	41,170	40,565	38,640	38,980	39,805
5-9	6,625	6,985	7,405	7,540	7,895	7,790	8,080	8,250	8,625	8,450	8,240	7,855	7,530
10-19	3,205	3,380	3,800	3,745	3,910	3,765	4,025	4,025	4,160	4,070	4,135	3,775	3,775
20-49	1,690	1,825	1,975	1,950	2,080	2,035	2,100	2,045	2,085	2,050	2,255	2,075	1,850
50-249	750	830	935	945	975	945	1,015	990	1,040	1,045	1,055	1,005	1,020
250+	130	155	150	150	170	170	175	165	155	160	185	195	200
Total	49,620	50,380	50,800	51,695	52,275	52,850	55,035	56,490	57,235	56,335	54,520	53,885	54,175

All in scope businesses by industrial sector													
	1998/01	2000/03	2001/04	2002/05	2003/06	2004/07	2005/08	2006/09	2007/10	2008/11	2009/12	2010/13	2011/14
Agriculture	16,360	15,555	15,270	15,130	15,030	14,830	14,985	15,000	14,930	14,490	14,350	14,255	14,390
Manufacturing	3,390	3,415	3,470	3,465	3,375	3,310	3,430	3,445	3,595	3,330	3,235	3,160	3,140
Construction	6,675	7,340	7,580	8,005	7,770	8,015	8,650	9,150	9,300	8,870	8,060	7,720	7,450
Wholesale and Retail	10,125	10,080	9,990	10,010	9,695	9,690	9,990	10,150	10,225	10,115	9,725	9,690	9,615
Transportation and Storage	1,510	1,650	1,695	1,735	1,765	1,820	1,900	1,930	1,910	1,845	1,725	1,680	1,690
Accommodation and Food	2,055	2,105	2,350	2,375	2,455	2,510	2,675	2,795	2,845	2,790	2,680	2,625	2,645
Professional and Scientific	2,160	2,430	2,575	2,670	3,170	3,320	3,475	3,655	3,715	3,765	3,695	3,730	3,830
Administrative and Support	955	945	935	995	1,125	1,165	1,225	1,320	1,245	1,715	1,860	1,770	1,885
Human Health and Social Work	1,585	1,820	1,940	2,010	2,105	2,150	2,255	2,300	2,275	2,280	2,255	2,355	2,410
All other activities	4,810	5,045	4,995	5,310	5,785	6,040	6,450	6,750	7,190	7,130	6,935	6,900	7,120
Total	49,620	50,380	50,800	51,695	52,275	52,850	55,035	56,490	57,235	56,335	54,520	53,885	54,175

Figure 1 Businesses with job growth or contraction and net effects													
	1998/01	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
Number of businesses expanding	14,495	15,405	13,125	14,205	12,815	16,285	14,915	17,245	13,270	12,115	10,840	11,700	13,420
Number of businesses contracting	8,635	9,050	9,470	10,250	10,255	11,070	10,435	11,665	13,885	14,050	15,520	12,440	11,955
Net effect	5,860	6,355	3,655	3,950	2,560	5,215	4,475	5,575	-615	-1,935	-4,680	-740	1,465

Figure 2 Net effect of business employment growth and contraction by business turnover													
Employment growth businesses	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
<100k	4,585	4,930	3,635	3,830	3,675	4,750	3,475	3,785	3,070	2,450	2,420	3,040	3,385
100k - 999k	7,715	8,300	7,315	7,850	6,935	9,030	8,760	10,295	7,700	7,055	6,160	6,410	7,540
1m - 4.99m	1,760	1,730	1,670	1,960	1,705	1,950	2,000	2,375	1,880	1,940	1,670	1,645	1,865
5m +	435	450	505	565	500	555	675	785	620	665	590	600	635
Total	14,495	15,405	13,125	14,205	12,815	16,285	14,915	17,245	13,270	12,115	10,840	11,700	13,420
Employment contracting businesses	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
<100k	2,050	2,115	2,250	2,495	2,045	2,155	1,900	2,555	2,475	2,565	2,955	2,425	2,570
100k - 999k	5,370	5,510	5,585	6,065	6,360	7,050	6,565	7,175	8,615	8,650	9,515	7,520	7,120
1m - 4.99m	955	1,105	1,260	1,300	1,405	1,430	1,525	1,480	2,120	2,125	2,285	1,875	1,670
5m +	260	320	375	395	445	435	450	450	680	705	760	620	595
Total	8,635	9,050	9,470	10,250	10,255	11,070	10,435	11,665	13,885	14,050	15,520	12,440	11,955
Net effect	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
<100k	2,540	2,820	1,385	1,335	1,630	2,595	1,575	1,225	595	-115	-535	620	815
100k - 999k	2,345	2,785	1,730	1,785	575	1,980	2,195	3,120	-910	-1,595	-3,355	-1,110	420
1m - 4.99m	805	620	410	660	300	520	475	895	-240	-180	-620	-230	195
5m +	175	125	130	170	55	120	225	335	-60	-40	-170	-20	35
Total	5,860	6,355	3,655	3,950	2,560	5,215	4,475	5,575	-615	-1,935	-4,680	-740	1,465

Figure 3 Net effect of business employment growth and contraction by business size													
Employment growth businesses	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
1-4	8,595	9,555	7,560	8,140	7,015	10,150	9,020	10,610	7,950	7,115	6,250	7,010	8,430
5-9	2,945	3,000	2,540	2,890	2,710	2,950	2,665	3,125	2,560	2,375	2,110	2,090	2,195
10-19	1,580	1,415	1,560	1,650	1,575	1,645	1,625	1,815	1,425	1,345	1,195	1,215	1,400
20-49	885	920	900	950	945	980	980	1,055	830	755	770	835	790
50-249	425	435	475	495	485	485	530	550	430	445	435	455	505
250+	65	85	85	80	85	80	90	90	75	75	75	90	95
Total	14,495	15,405	13,125	14,205	12,815	16,285	14,915	17,245	13,270	12,115	10,840	11,700	13,420
Employment contracting businesses	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
1-4	3,780	3,470	3,415	3,960	3,865	4,360	3,820	4,890	5,675	5,790	6,405	5,235	4,975
5-9	2,460	2,670	2,995	3,235	3,170	3,485	3,365	3,620	4,100	4,125	4,525	3,590	3,545
10-19	1,310	1,645	1,665	1,660	1,725	1,740	1,800	1,790	2,305	2,280	2,530	1,900	1,940
20-49	710	810	910	895	960	950	930	860	1,135	1,185	1,350	1,090	900
50-249	315	385	425	435	460	445	440	430	590	575	595	525	490
250+	65	70	65	70	80	95	80	75	80	85	115	100	100
Total	8,635	9,050	9,470	10,250	10,255	11,070	10,435	11,665	13,885	14,050	15,520	12,440	11,955
Net effect	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
1-4	4,815	6,085	4,150	4,180	3,150	5,785	5,200	5,715	2,275	1,325	-155	1,775	3,455
5-9	490	330	-450	-340	-460	-535	-700	-490	-1,540	-1,750	-2,415	-1,500	-1,350
10-19	270	-230	-105	-10	-150	-95	-175	25	-880	-935	-1,335	-685	-540
20-49	175	105	-5	55	-15	30	50	195	-305	-430	-580	-255	-110
50-249	110	50	50	60	25	40	90	120	-160	-130	-160	-65	15
250+	5	15	20	10	5	-15	10	15	-5	-10	-40	-15	-5
Total	5,860	6,355	3,655	3,950	2,560	5,215	4,475	5,575	-615	-1,935	-4,680	-740	1,465

Figure 4 Net effect of business employment growth and contraction by industrial sector													
Employment growth businesses	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
Agriculture	770	960	940	990	1,075	2,705	2,685	2,895	2,150	1,525	1,410	1,455	1,630
Manufacturing	1,660	1,550	1,355	1,370	1,190	1,305	1,195	1,390	1,025	910	805	980	1,030
Construction	2,600	2,860	2,440	2,510	2,140	2,590	2,410	2,850	1,855	1,625	1,050	1,825	1,780
Wholesale and Retail	3,975	4,090	3,320	3,590	3,035	3,380	3,020	3,430	2,905	2,825	2,600	2,420	2,820
Transportation and Storage	580	650	570	575	500	590	540	590	490	460	410	410	470
Accommodation and Food	950	1,005	920	985	900	1,065	960	1,145	915	850	740	750	905
Professional and Scientific	920	1,095	910	1,020	1,000	1,160	1,025	1,245	895	910	750	770	1,025
Administrative and Support	385	365	305	325	355	405	380	470	335	370	415	435	565
Human Health and Social Work	820	965	845	1,040	930	1,065	875	1,070	900	895	1,035	1,025	1,095
All other activities	1,835	1,865	1,515	1,805	1,685	2,015	1,820	2,160	1,805	1,745	1,620	1,630	2,110
Total	14,495	15,405	13,120	14,210	12,810	16,280	14,910	17,245	13,275	12,115	10,835	11,700	13,421
Employment contracting businesses	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
Agriculture	1,225	920	745	710	665	515	520	550	1,125	1,365	1,580	1,590	1,195
Manufacturing	855	1,000	1,005	1,070	1,045	1,085	1,010	1,035	1,310	1,235	1,330	980	945
Construction	1,340	1,625	1,730	2,020	1,955	2,230	1,970	2,360	3,085	3,070	3,255	2,260	2,140
Wholesale and Retail	2,255	2,295	2,480	2,570	2,490	2,735	2,565	2,855	2,770	2,770	3,045	2,745	2,665
Transportation and Storage	235	295	330	365	385	455	405	460	490	500	510	390	390
Accommodation and Food	635	650	810	860	875	875	920	1,040	1,155	1,135	1,260	1,015	1,020
Professional and Scientific	515	530	605	690	765	880	800	880	1,090	1,105	1,355	1,020	1,045
Administrative and Support	175	200	220	225	245	290	290	335	365	455	510	345	380
Human Health and Social Work	360	405	465	445	520	520	610	630	595	595	585	580	565
All other activities	1,035	1,130	1,075	1,295	1,300	1,485	1,345	1,520	1,895	1,810	2,085	1,510	1,605
Total	8,635	9,050	9,470	10,250	10,255	11,070	10,435	11,665	13,885	14,050	15,520	12,440	11,955
Net effect	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
Agriculture	-455	35	195	285	410	2,190	2,165	2,345	1,025	155	-175	-140	435
Manufacturing	800	550	350	295	145	220	185	355	-285	-325	-525	0	85
Construction	1,260	1,235	710	490	185	365	435	490	-1,235	-1,445	-2,205	-435	-365
Wholesale and Retail	1,720	1,795	840	1,015	540	645	455	575	135	50	-445	-325	150
Transportation and Storage	340	355	245	210	115	135	135	130	-5	-40	-100	20	75
Accommodation and Food	315	355	105	125	25	190	40	105	-240	-285	-520	-265	-115
Professional and Scientific	405	565	305	325	235	280	225	365	-195	-195	-605	-255	-20
Administrative and Support	210	165	85	100	105	115	95	130	-30	-85	-95	90	185
Human Health and Social Work	460	560	375	595	410	545	270	440	300	295	450	445	530
All other activities	800	735	440	510	385	530	475	640	-90	-65	-465	120	510
Total	5,860	6,355	3,655	3,950	2,560	5,215	4,475	5,575	-615	-1,935	-4,680	-740	1,465

Figure 5 Net job effects of businesses experiencing job growth or contraction													
	1998/01	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
Number of jobs grown	95,560	98,105	74,140	90,455	72,205	102,525	83,825	109,860	82,720	80,915	70,895	69,235	77,895
Number of jobs contracted	41,855	48,715	43,195	48,175	46,425	64,985	48,365	54,995	69,705	71,155	84,095	59,345	56,015
Net effect	53,710	49,390	30,945	42,280	25,780	37,545	35,460	54,870	13,020	9,755	-13,200	9,890	21,880

Figure 6 Net job effects by turnover of business													
Job growth	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
<100k	12,815	13,035	8,830	10,495	9,340	10,920	8,130	8,475	6,715	5,335	5,495	5,815	6,910
100k - 999k	34,340	35,350	23,240	29,735	21,985	37,085	27,355	36,130	25,320	22,250	19,885	18,880	26,465
1m - 4.99m	22,755	22,440	15,905	21,135	14,895	24,155	19,370	24,805	19,070	19,275	18,520	15,030	18,710
5m +	25,650	27,280	26,165	29,090	25,980	30,365	28,970	40,450	31,615	34,050	26,995	29,510	25,810
Total	95,560	98,105	74,140	90,455	72,205	102,525	83,825	109,860	82,720	80,915	70,895	69,235	77,895
Job contraction	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
<100k	4,315	4,495	4,170	5,285	3,865	3,930	3,280	4,705	4,465	4,775	5,255	4,285	4,610
100k - 999k	17,185	15,985	14,355	17,190	16,420	19,305	16,325	19,660	23,605	24,555	26,960	17,635	17,625
1m - 4.99m	9,040	9,950	8,930	10,690	9,955	12,735	11,205	11,635	16,355	15,600	19,390	12,925	10,975
5m +	11,310	18,285	15,740	15,015	16,190	29,010	17,555	18,990	25,280	26,230	32,490	24,500	22,810
Total	41,855	48,715	43,195	48,175	46,425	64,985	48,365	54,995	69,705	71,155	84,095	59,345	56,015
Net effect	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
<100k	8,495	8,540	4,660	5,205	5,475	6,990	4,850	3,770	2,255	560	240	1,530	2,300
100k - 999k	17,155	19,365	8,885	12,545	5,565	17,780	11,030	16,470	1,715	-2,300	-7,075	1,245	8,840
1m - 4.99m	13,715	12,490	6,980	10,450	4,940	11,420	8,165	13,170	2,715	3,680	-870	2,105	7,740
5m +	14,340	8,995	10,425	14,080	9,795	1,355	11,415	21,460	6,335	7,820	-5,495	5,010	3,000
Total	53,710	49,390	30,945	42,280	25,780	37,545	35,460	54,870	13,020	9,755	-13,200	9,890	21,880

Figure 7 Net job effects by business size													
Job growth	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
1-4	24,330	25,700	16,800	21,185	16,260	26,355	21,555	27,610	18,285	16,645	15,270	15,655	21,455
5-9	12,685	12,635	7,905	11,330	7,865	12,645	8,545	12,870	9,110	8,445	6,920	6,320	8,655
10-19	13,270	11,460	8,290	11,050	7,635	12,530	9,060	12,550	10,430	8,415	6,795	8,490	9,070
20-49	12,575	13,215	8,645	12,545	8,190	14,830	10,155	13,345	10,255	10,095	8,780	8,175	8,330
50-249	17,850	16,310	14,660	18,520	14,080	19,580	17,815	21,615	15,775	19,255	17,525	13,950	14,115
250+	14,860	18,785	17,840	15,825	18,180	16,590	16,700	21,875	18,870	18,055	15,605	16,645	16,275
Total	95,560	98,105	74,140	90,455	72,205	102,525	83,825	109,860	82,720	80,915	70,895	69,235	77,895
Job contraction	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
1-4	4,825	4,390	4,170	4,970	4,835	5,690	4,870	6,320	7,380	7,525	8,595	6,745	6,395
5-9	5,835	6,145	6,355	7,350	6,700	8,200	7,210	8,590	10,070	10,245	11,880	8,045	8,135
10-19	5,690	7,500	6,000	7,010	6,290	7,495	6,895	7,830	10,780	10,945	12,115	7,125	8,035
20-49	6,210	6,870	5,795	7,250	6,780	8,380	6,635	7,445	10,235	10,925	12,865	7,980	6,455
50-249	9,590	10,945	10,465	12,910	9,020	12,575	9,660	10,965	15,610	16,135	15,940	12,165	9,810
250+	9,705	12,870	10,410	8,685	12,800	22,640	13,090	13,840	15,630	15,385	22,700	17,285	17,190
Total	41,855	48,715	43,195	48,175	46,425	64,985	48,365	54,995	69,705	71,155	84,095	59,345	56,015
Net effect	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
1-4	19,505	21,310	12,625	16,215	11,420	20,665	16,685	21,285	10,900	9,125	6,675	8,905	15,060
5-9	6,845	6,490	1,550	3,980	1,165	4,445	1,335	4,280	-960	-1,800	-4,955	-1,720	520
10-19	7,575	3,965	2,290	4,040	1,345	5,035	2,165	4,715	-350	-2,525	-5,320	1,360	1,035
20-49	6,365	6,350	2,850	5,295	1,405	6,450	3,515	5,900	25	-830	-4,085	195	1,875
50-249	8,265	5,365	4,200	5,615	5,060	7,000	8,150	10,650	165	3,125	1,585	1,790	4,305
250+	5,155	5,915	7,430	7,140	5,380	-6,050	3,605	8,035	3,240	2,670	-7,095	-640	-915
Total	53,710	49,390	30,945	42,280	25,780	37,545	35,460	54,870	13,020	9,755	-13,200	9,890	21,880

Figure 8 Net job effects by industrial sector													
Job growth	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
Agriculture	1,445	1,620	1,630	1,770	1,955	6,400	6,175	6,785	4,345	3,130	3,095	3,065	3,315
Manufacturing	17,400	16,925	11,415	12,160	9,090	13,565	10,270	13,915	7,515	7,325	6,995	8,790	10,170
Construction	11,725	11,705	8,805	10,700	6,985	11,265	9,360	12,365	6,560	5,785	4,445	5,315	5,675
Wholesale and Retail	26,180	27,340	24,905	25,910	19,370	20,660	18,645	24,305	21,375	20,750	16,345	12,810	12,980
Transportation and Storage	2,950	3,560	2,355	3,280	2,660	2,975	2,455	3,055	3,210	3,725	3,020	2,815	2,650
Accommodation and Food	8,010	8,220	6,295	6,670	4,755	7,075	5,730	8,450	6,900	7,080	5,465	5,400	6,460
Professional and Scientific	7,535	8,715	5,515	9,105	2,860	4,395	3,675	6,215	3,825	3,605	2,465	2,480	4,450
Administrative and Support	3,800	3,595	1,940	2,965	7,740	10,585	8,785	12,915	9,225	10,370	9,720	11,875	13,715
Human Health and Social Work	5,305	5,640	4,060	6,380	7,625	8,325	6,870	7,760	8,440	7,575	7,965	6,930	8,150
All other activities	11,215	10,785	7,215	11,515	9,170	17,280	11,855	14,100	11,320	11,575	11,375	9,760	10,330
Total	95,560	98,105	74,140	90,455	72,205	102,525	83,825	109,860	82,720	80,915	70,895	69,235	77,895
Job contraction	**1998/01**	**2000/03**	**2001/04**	**2002/05**	**2003/06**	**2004/07**	**2005/08**	**2006/09**	**2007/10**	**2008/11**	**2009/12**	**2010/13**	**2011/14**
Agriculture	2,355	2,285	1,285	1,295	1,085	1,010	1,030	1,220	2,445	2,830	3,175	3,290	2,405
Manufacturing	9,015	12,670	11,375	9,640	10,595	14,300	8,700	9,465	10,635	9,430	9,790	4,780	5,030
Construction	4,340	5,750	5,155	6,890	5,890	7,460	5,710	6,525	10,685	11,020	13,615	7,300	6,765
Wholesale and Retail	9,335	12,280	10,320	10,920	8,305	13,715	10,725	13,295	12,965	14,460	16,585	15,615	14,730
Transportation and Storage	865	1,185	1,245	2,150	1,940	2,530	2,335	2,385	2,225	2,345	2,145	1,615	1,480
Accommodation and Food	3,355	3,445	4,250	5,065	4,575	6,685	6,115	7,115	6,560	6,510	7,035	5,345	5,270
Professional and Scientific	2,215	2,040	2,185	3,020	1,990	2,630	2,050	2,095	2,915	3,495	5,125	3,545	3,205
Administrative and Support	895	1,025	1,130	1,465	2,205	5,190	2,880	4,165	10,040	8,530	10,290	7,350	6,305
Human Health and Social Work	4,600	2,835	2,265	2,750	2,880	3,450	2,425	2,785	3,065	2,940	2,930	2,810	2,415
All other activities	4,880	5,195	3,975	4,980	6,965	8,025	6,395	5,940	8,170	9,595	13,410	7,685	8,410
Total	41,855	48,715	43,195	48,175	46,425	64,985	48,365	54,995	69,705	71,155	84,095	59,345	56,015

Net effect	1998/01	2000/03	2001/04	2002/05	2003/06	2004/07	2005/08	2006/09	2007/10	2008/11	2009/12	2010/13	2011/14
Agriculture	-905	-665	345	475	875	5,390	5,145	5,565	1,905	300	-80	-230	910
Manufacturing	8,385	4,255	40	2,520	-1,505	-730	1,565	4,445	-3,120	-2,105	-2,795	4,010	5,140
Construction	7,385	5,950	3,650	3,810	1,095	3,805	3,645	5,840	-4,125	-5,235	-9,165	-1,985	-1,090
Wholesale and Retail	16,845	15,060	14,585	14,990	11,070	6,945	7,920	11,010	8,410	6,290	-235	-2,805	-1,750
Transportation and Storage	2,080	2,375	1,105	1,130	720	445	120	670	990	1,380	875	1,200	1,170
Accommodation and Food	4,655	4,775	2,045	1,600	180	390	-385	1,335	340	565	-1,565	55	1,190
Professional and Scientific	5,320	6,675	3,330	6,085	870	1,765	1,630	4,120	910	110	-2,665	-1,065	1,245
Administrative and Support	2,900	2,570	810	1,500	5,535	5,395	5,905	8,750	-815	1,835	-570	4,530	7,410
Human Health and Social Work	705	2,805	1,795	3,630	4,740	4,880	4,450	4,970	5,375	4,630	5,040	4,115	5,735
All other activities	6,335	5,590	3,240	6,535	2,205	9,255	5,465	8,160	3,155	1,980	-2,035	2,075	1,920
Total	53,710	49,390	30,945	42,280	25,780	37,545	35,460	54,870	13,020	9,755	-13,200	9,890	21,880

Figure 9 Net effect of Matrix sector businesses experiencing employment growth or contraction

	2007/10	2008/11	2009/12	2010/13	2011/14
Total Matrix businesses in base year	5,085	5,230	5,135	5,075	5,095
Expanding Matrix sector businesses	1,140	1,050	935	1,065	1,250
Contracting Matrix sector businesses	-1,240	-1,230	-1,415	-1,105	-1,040
Net effect	-100	-180	-480	-40	210

Figure 10 Net job effect of Matrix sector businesses experiencing employment growth or contraction					
	2007/10	2008/11	2009/12	2010/13	2011/14
Total Matrix jobs in base year	84,420	86,020	92,610	86,105	81,965
Expanding Matrix sector jobs	9,760	9,115	10,160	10,285	11,985
Contracting Matrix sector jobs	-8,980	-9,580	-11,560	-6,715	-5,765
Net effect	780	-465	-1,400	3,570	6,220

Figure 11 Net effect of Knowledge Economy businesses experiencing employment growth or contraction					
	2007/10	2008/11	2009/12	2010/13	2011/14
Total Knowledge businesses in base year	2,210	2,195	2,175	2,135	2,215
Expanding Knowledge Economy businesses	465	405	370	395	495
Contracting Knowledge Economy businesses	-380	-375	-440	-320	-315
Net effect	90	30	-70	80	185

Figure 12 Net job effect of Knowledge Economy businesses experiencing employment growth or contraction					
	2007/10	2008/11	2009/12	2010/13	2011/14
Total Knowledge jobs in base year	31,985	34,770	35,180	32,480	31,865
Expanding Knowledge Economy jobs	4,425	4,425	5,655	4,745	5,275
Contracting Knowledge Economy jobs	-2,580	-3,460	-4,040	-2,110	-2,165
Net effect	1,845	965	1,615	2,635	3,115

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