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Skills Oracle 2010

The Petroleum Industry

May 2010

Cogent Sector Skills Council
Skills Oracle 2010

Skills Oracle Report for the Petroleum Industry

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Note that in some instances responses apply to a single site rather than as the company as a whole.

1.0 Executive Summary

This report reproduces some of the industry wide findings from the Skills Oracle survey for 2009, and follows the broad format of the individualized reports supplied to participating employers, but without the benchmarked company data.

The headline findings for the Petroleum industry are:

1. Annual average company turnover in employment is approximately 15%.

2. 78% of petroleum employers report professional scientists and engineers vacancies are 'hard to fill'.

3. Petroleum has the highest average annual spend on training per employee at £1,170, followed by the Nuclear Sector (£1,160). This could partly be due to the common critical safety aspects of the two sectors. In addition to this, companies may incur additional cost such as travel, subsistence, internal training and mentoring, the maintenance cost of training facilities as well as maintaining productivity during training.

4. Petroleum employers were satisfied with the coverage of qualifications across the sector. Satisfaction ratings were highest for 'Apprenticeships', 'Accessibility' of provision, 'Flexibility' of provision and 'Competence Based' qualifications.

5. Health, Safety and Environment (HSE) was the most frequently reported training undertaken, when viewed across both internal and external training requirements. Petroleum companies tended to resource externally for specialist training, such as, 'Technical', 'HSE' and 'Professional'.

6. 100% of petroleum employers use 'Private Training' Providers; 90% use 'FE' providers; and 60% use 'HE' providers.

7. For private training providers, satisfaction levels tended to be extremely high in all areas of; 'Cost', 'Relevance', 'Flexibility', 'Location' and 'Quality' of provision. This reflects the highly tailored provision offer by private training providers.

8. The satisfaction ratings for FE and HE were also significant (ranging between 50% and 75%), with the lower of these ratings referring to cost and location of provision. This suggests that while employers value such provision, there is scope for FE and HE to innovate in flexible and accessible provision, and that there is a role for the Sector Skills Council in facilitating this.

9. The majority of petroleum employers (90%) place a high level of importance on the supply of Apprentices and Graduates to their workforce (10% of the skills supply recruited were Apprentices; 3% of the skills supply recruited were Graduates).

10. 100% of petroleum employers invest in 'Competence Based' and 'Technical' training of the existing workforce, with 90% of employers investing in 'Professional/Higher Level' training of the workforce.

11. 60% of petroleum employers reported skills gaps among existing employees had 'some impact'; and 89% of employers reported that the shortage of skilled individuals when recruiting has had 'some impact' on business performance.

12. 90% of petroleum employers report that competence based skills needs have increased in the 12 months preceding the survey. Employers expected the demand for leadership and management, technical and competence based skills to increase in the 12 months following the survey.

13. Looking ahead, Petroleum employers were split in concluding that the economic situation for their businesses would 'improve' (30%), 'remain static' (30%), or 'worsen' (30%) within the year. 10% of petroleum employers were 'undecided'.

14. Most Petroleum employers predicted 'no significant change' or a 'decrease' in employment in the short term (2 years ahead).

15. Designing National Occupational Standards, improving access to training courses and securing funding, are viewed by petroleum employers as the highest priorities for a Sector Skills Council.

Should you wish to take part in the next Skills Oracle survey 2010 please email Julie Plumbley at: julie.plumbley@cogent-ssc.com

2.0 "Skills Oracle": Primary Labour Market Intelligence (LMI)

During 2009 Cogent implemented 'Skills Oracle', a unique, online project surveying, over time, a significant and consistent sample of employers in each of the Cogent industries. The project collates annual returns from a large employer panel, via a web based questionnaire, to generate primary Labour Market Intelligence (LMI).

This in turn will lead to:

- a **skills 'ftse'** – an index that is a barometer of skills in the sector
- a **skills benchmark** – a collective measure against which employers can assess their skills position in relation to other companies
- a **skills voice** – a report of measures and opinions, supported by a body of evidence from a substantial and consistent expert panel of employers

The survey generates two distinct outputs. Firstly, it provides Cogent with valuable LMI not captured by national data sources, which will provide sector skills data through factsheets and extended reports. Secondly, those completing the survey receive a bespoke benchmarked analysis against returns for their industry. This will then enable companies to:

- identify 'Hot Spot' areas – for example, of excellence or, conversely, under provision
- identify areas of similarity and difference within the industry, and across the Cogent footprint
- identify areas where new and improved business processes can be implemented

3.0 The Petroleum Sector

This section portrays the results for the Petroleum industry generally and the Cogent sector, based on data collected during quarter 4 2009.

A 40% return delivered 69 respondents from companies across the five Cogent sectors[1] (figure 1). Petroleum made up 14% of the sample of employers, with various sectors of Petroleum represented.

3.1 Petroleum Industry and Employment

Petroleum sites in the main were large with 250 employees or over, with 88 industrial sites across the UK represented (see figure 2 for the reported number of sites and companies across the Cogent footprint).

The Petroleum sites that responded to the survey collectively employed 3,500 people, while their parent companies employed over 173,700 people worldwide.

By the UK employee measure, the survey represents of the order of 3% of the Cogent Petroleum UK workforce[2] and less than 1% of the Cogent UK workforce of 550,000 employees[3].

These Petroleum sites reported, on average, employing 390 people, with a maximum of 950 and a minimum of 20.

[1] Chemicals, Pharmaceuticals, Nuclear, Petroleum and Polymers – not including Oil & Gas or Petroleum Forecourt Retail
[2] Cogent Petroleum Fact Sheet (2007)
[3] Cogent Industry Fact Sheets (2007) – excluding Oil & Gas and Petroleum Forecourt Retail

Figure 1: Respondents by Industry

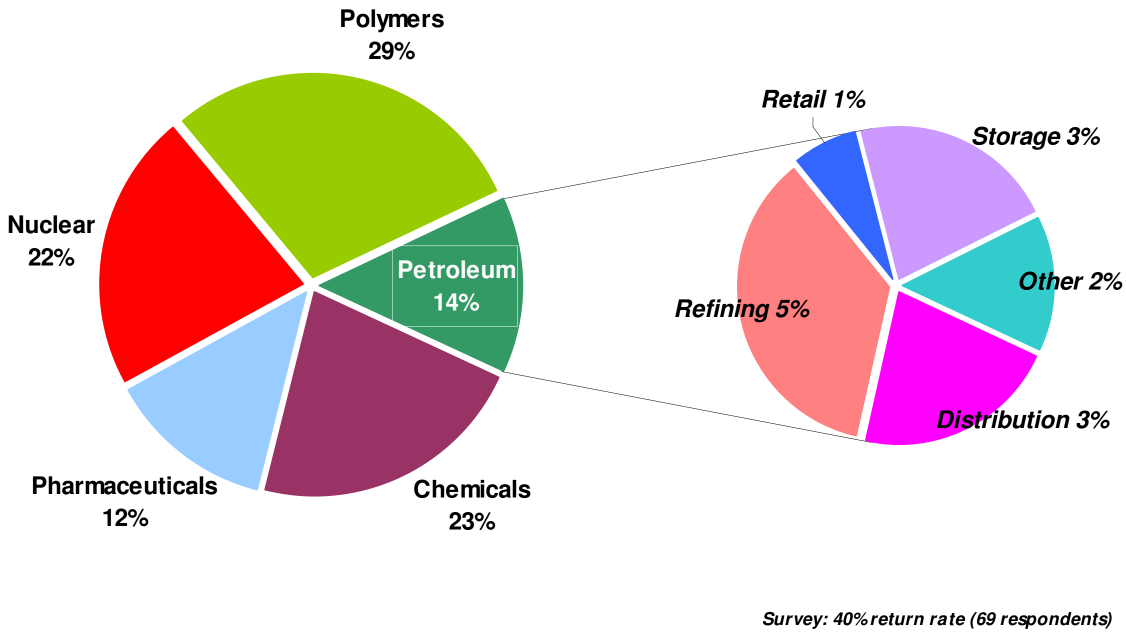
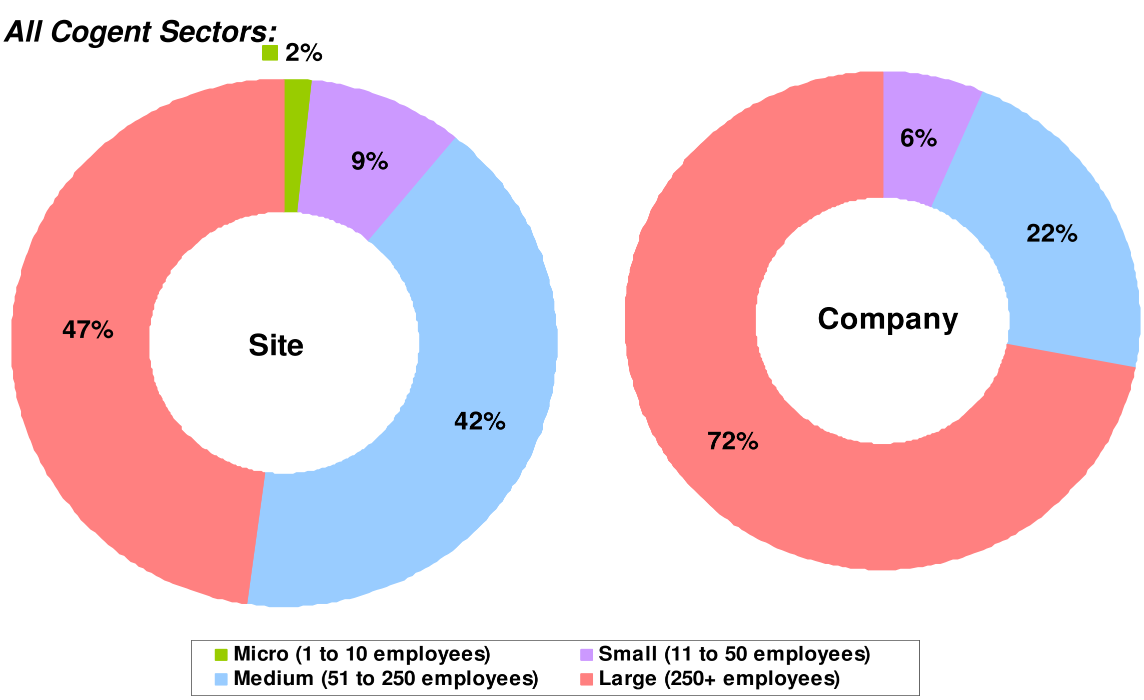


Figure 2: Cogent Respondents by Size of Employer



3.2 Recruitment and Staff Turnover

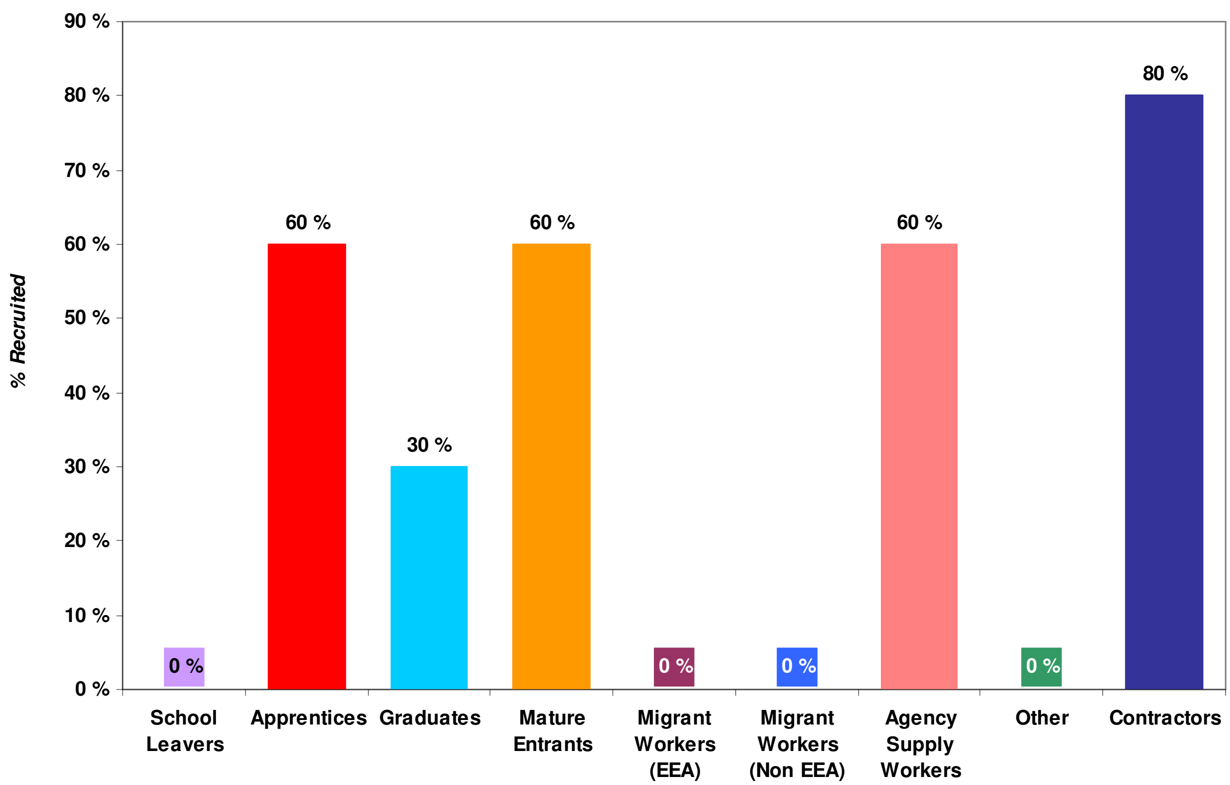
In total for the survey, 405 people were recruited. In addition at least 1,450 were employed via contractors. The main recruitment routes into the sector were surveyed according to the categories of: 'Apprentices' (60%), 'Mature Entrants' (60%) and 'Agency' (60%). Across the sector, 80% of employers reported dependence on contractors for routine operations (figure 3 displays the proportion recruited in the Petroleum sector).

This could be attributed to this sector carrying a small number of maintenance personnel to carry out routine operations, yet employing a large number of 'Term Contractors' employed on a fixed term basis.

For the Petroleum sites surveyed, the proportion of those employed directly suggests an annual sector turnover of 15%[4] in employment. Analysis of the entrants and leavers by occupation gives a profile of *in-demand occupations*.

There was a reported increase in: (a) Professional Scientists and Engineering occupations; (b) Craft and Technician occupations; (c) Operations and Productions occupations; and (d) Commercial and Marketing occupations. Manager occupations indicated a stable profile, with Administration and Secretarial occupations indicating a decline (figure 4 displays employment turnover).

Figure 3: Proportion Recruited by the Petroleum Sector



[4] Calculated using the number of those recruited and the number of those leaving the Petroleum industry (n=525)

Vacancies for 'Professional Scientists and Engineers' were reported by 78% of Petroleum employers as the most 'hard to fill', followed by 'Managers' (44%); 'Craft and Technician' (33%); 'Commercial and Marketing' (22%); and to a lesser degree 'Occupation and Productions' (11%). All other occupations across the Petroleum sector were reported, on balance, as not hard to fill (figure 5 displays reported hard to fill vacancies by occupation).

Excluding Contractor recruitment, the inflow of employment indicated that most Petroleum companies recruited Agency Supply Workers (60%) and Mature Entrants (27%). The smallest proportion recruited by Petroleum companies were Graduates (3%).

The outflow of employment was recorded in categories of 'Retirement', 'Redundancies' and 'Other'. Most Petroleum employers listed 'other' as the main departure route for employees (54%), followed by retirements (43%) and redundancies (3%).

The inflow and outflow of employment are charted below (figure 6).

The Petroleum sector reports low levels of redundancy (3%). This may be a reflection of the level of skills investment to become suitably experienced or the age profile of the sector.

Figure 4: Employment Turnover

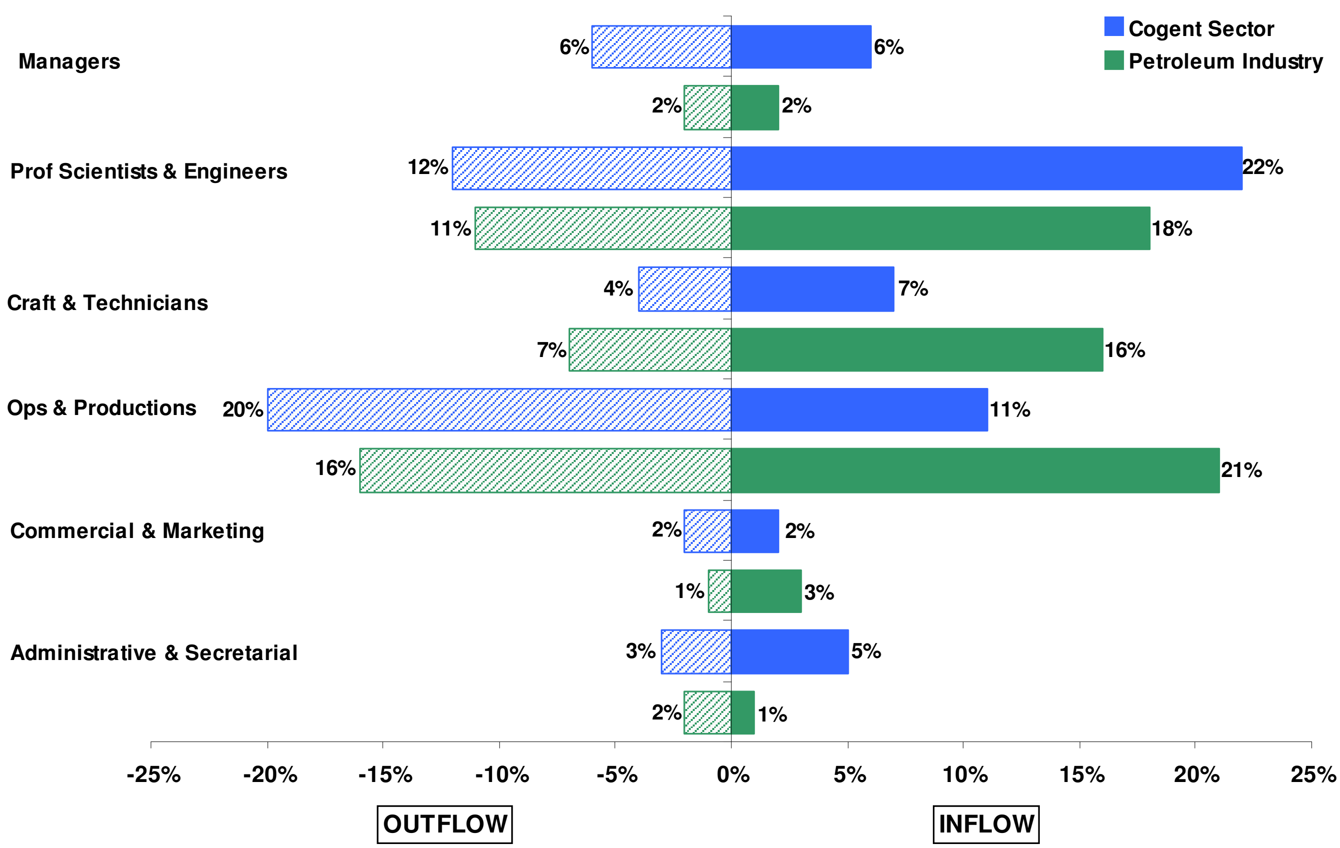


Figure 5: Hard-to-Fill Vacancies

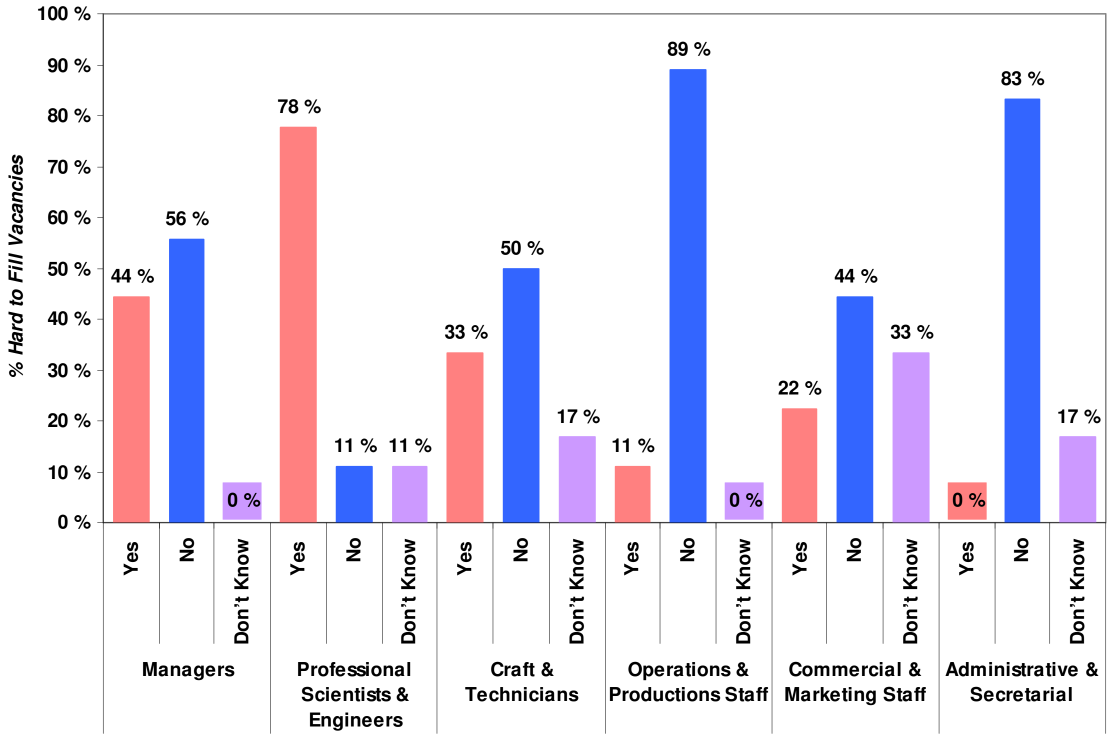
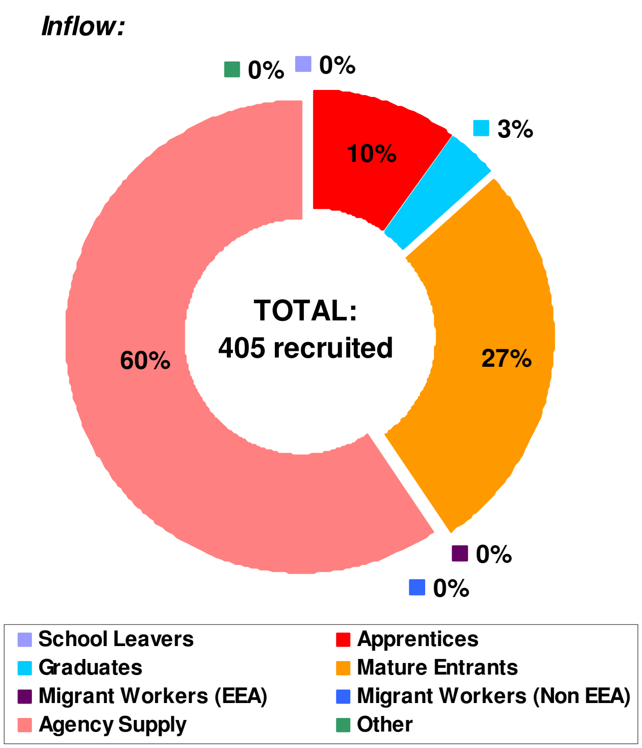
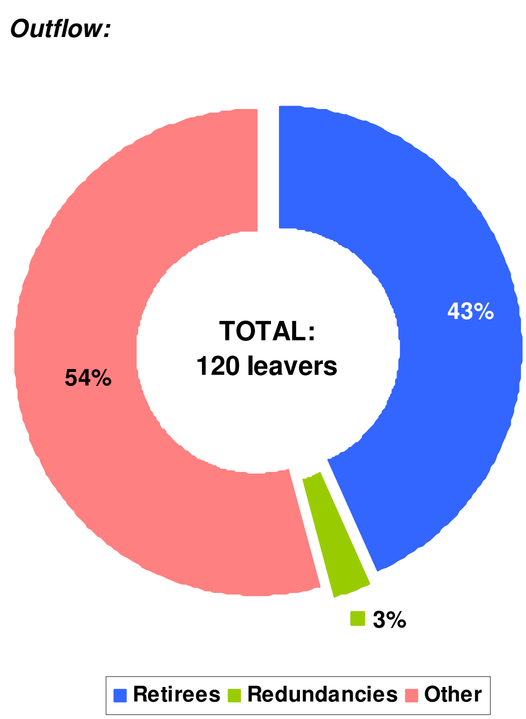


Figure 6: Inflow & Outflow of Employment reported by the Petroleum sector





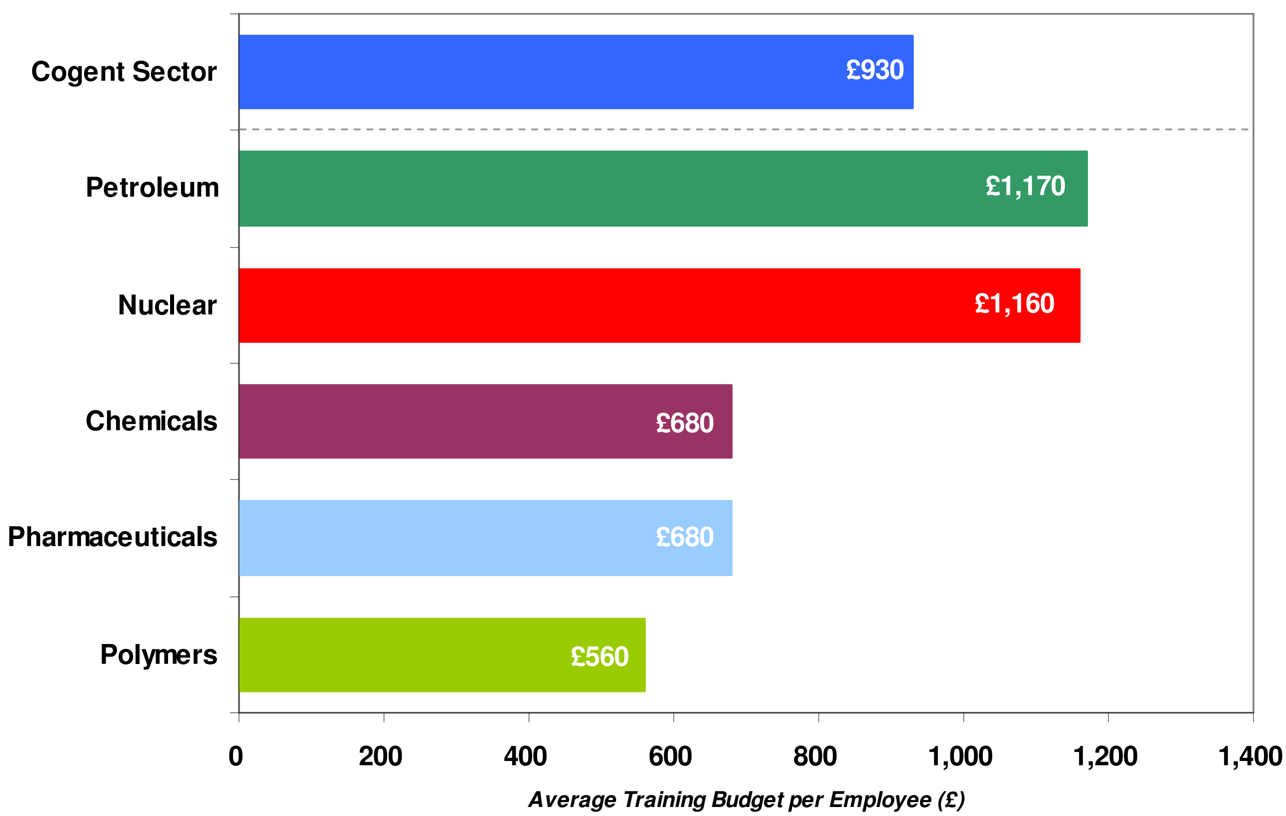
3.3 Training Budgets

All Petroleum sites that took part in the survey reported having a training budget. The average was just over £376,000, with a maximum reported of £1,950,000. Of the Cogent industries represented in the survey, Petroleum has the second highest average reported training budget.

Despite the recession, Petroleum sites were split in concluding that they expected their training budgets would remain the same (33%); increase (33%) or be cut (33%). Of the Cogent industries represented in the survey, Petroleum has the highest average annual spend on **training per employee** at £1,170 (figure 7).

The average figures presented are in reality an underestimate of the spend on technical training for three reasons: 1) the figure on spend takes no account of cost of 'down time' for training; 2) the spend relates to all workforce training with an expectation that Technical training would be more costly; and, 3) the figure does not account for investment in internal training and training facilities.

Figure 7: Average Training Budget (£)



3.4 Qualifications – the Employers View

In general, petroleum employers were satisfied with the coverage of qualifications across the sector. Satisfaction ratings were highest for 'Apprenticeships', 'Accessibility' of provision; 'Flexibility' of provision; and the use of 'Competence Based' qualifications (respectively 70%, 70%, 67% and 60% majorities over the contrary opinion). Half of those that responded were satisfied that the petroleum sector is well served by 'Academic' qualifications.

3.5 Training

Health, Safety and Environment (HSE) was the most frequently reported training undertaken, when viewed across both internal and external training requirements. Petroleum companies tended to resource externally for specialist training needs ('Technical', 100%; 'HSE', 90%; and 'Professional', 90%). (Figure 8).

When training needs are more directly related to a job, training tends to be internally resourced ('HSE', 90%; 'Job Specific', 90%; and 'Competence', 80%). (Figure 9).

Figure 8: Reported External Training

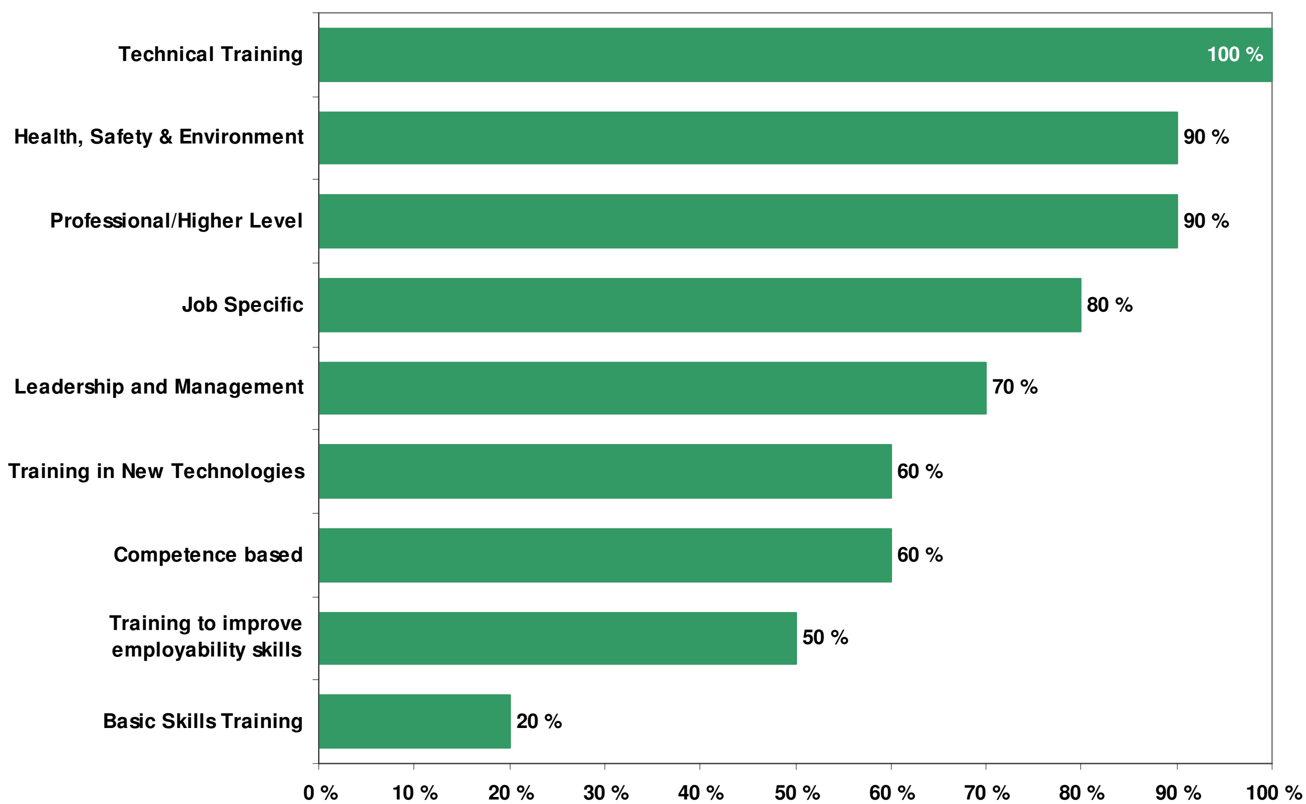
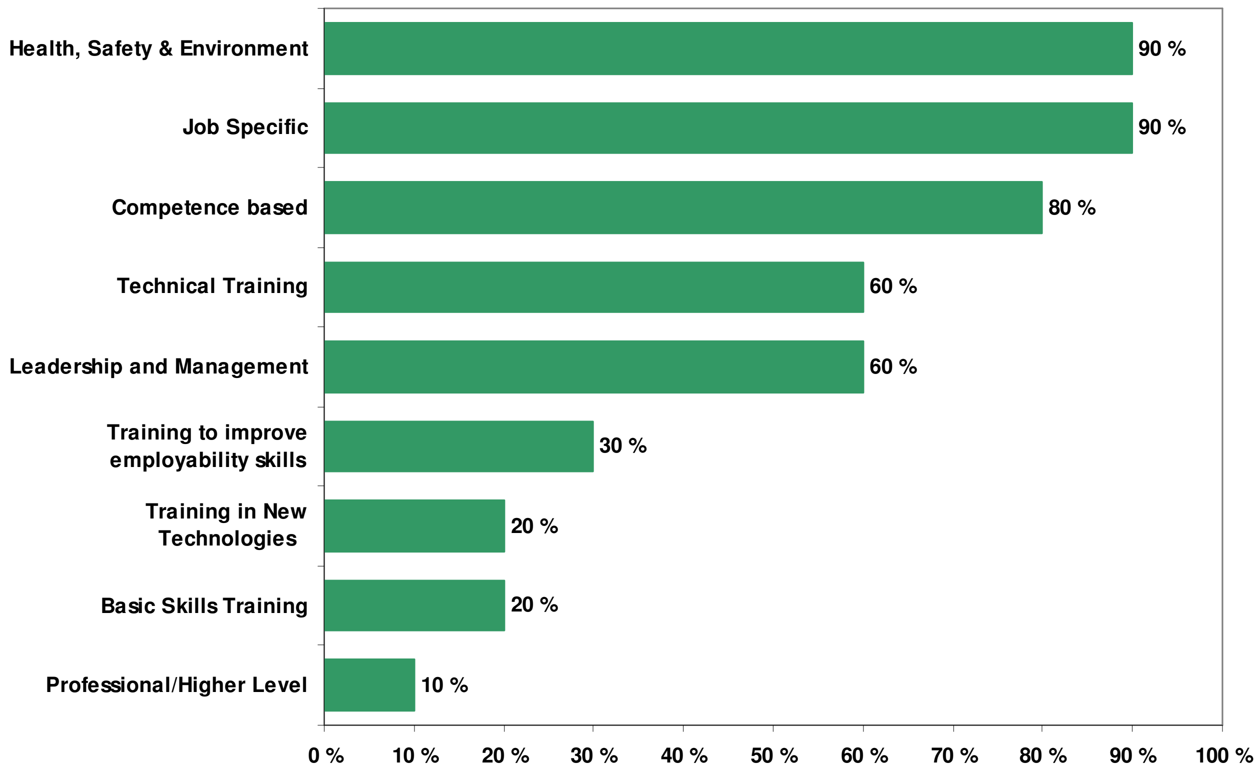


Figure 9: Reported Internal Training



3.6 Providers of Education & Training

For workforce development, petroleum employers made use of a range of private and public providers. The frequency of the use of providers is: private sector (100% of employers), FE sector (90% of employers), HE sector (60% of employers).

Satisfaction ratings with each type of provider was measured for 'Cost', 'Relevance' of provision, 'Flexibility' of provision, 'Location' of provision, and the 'Quality' of those delivering education or training. For private training providers, satisfaction levels tended to be extremely high in all areas, ranging from, the lowest of 70% satisfied (on Cost) to the highest level of satisfaction of 100% (on Relevance of course content; Flexibility of training; and Quality of trainers). In the main, this reflects the highly tailored provision that private training providers must produce in order to secure a business offer.

The satisfaction in FE and HE were also significant, with all satisfaction levels between 50% and 75%. The lowest of these ratings referred to cost and location of training. This portrays the constraints of qualifications in a training context, as well as geographical coverage. The results suggest that while employers value such provision, there is scope for FE and HE to innovate in flexible and accessible provision, and that there is a role for the Sector Skills Council in facilitating this.

3.7 Education Supply

Petroleum employers expectations of the skills presented by ‘School Leavers’, ‘Apprentices’ and ‘Graduates’ were captured. For School Leavers, in the main, petroleum employers were neither satisfied nor dissatisfied with their basic skills (for example, ICT, literacy and numeracy); employability skills (for example, team working, problem solving etc); knowledge of their chosen job/career; or business awareness.

Petroleum employers that took part in the survey placed a high level of importance on Apprentices (10% of the skills supply recruited were Apprentices, fig.6), with a rating of 90% of employers. Petroleum employers expressed clear levels of satisfaction in many of the categories detailing what may be expected from an Apprentice. In priority order, employers valued ‘Practical skills’ followed by ‘Employability Skills’, ‘Basic skills’; and ‘Technical Skills’.

All petroleum employers that took part in the survey also placed a high level of importance on Graduates (3% of the skills supply recruited were Apprentices, fig.6), with a rating of 90% of employers. High levels of expectation were placed on ‘Core Subject Knowledge’, ‘Employability Skills’, and ‘Higher Level ICT, Literacy and Numeracy’ skills. 86% of petroleum employers were ‘satisfied’ or ‘very satisfied’ with STEM (Science, Technology, Engineering and Mathematics) subject skills, while 14% were very dissatisfied.

3.8 Workforce Development

The degree of workforce development for the ‘Existing Workforce’ and the supply of ‘School Leavers’, ‘Apprentices’ and ‘Graduates’ was assessed for the skills categories of ‘Basic’, ‘Competence’, ‘Technical’ and ‘Professional’. Competence based and Technical training of the existing workforce was reported by all petroleum employers, while 90% of petroleum employers invested in Professional/Higher Level training of the workforce. A smaller proportion of petroleum employers (60%) invested in basic skills training of the existing workforce. Technical training was the most prevalent training reported across all categories of employment, with a significant proportion of petroleum employers engaging in technical training for Apprentices (70%) and Graduates (60%).

3.9 Skills Gaps, Shortages and Future Skills Needs

In the opinion of a significant majority of Petroleum employers, skills gaps and shortages over the past 12 months had ‘some impact’ on business performance; as 60% of employers reported skills gaps among existing employees had ‘some impact’; and 89% of employers reported that the shortage of skilled individuals when recruiting has had ‘some impact’ on business performance (figure 10 displays skills gaps and shortages).

Most Petroleum employers (70%) stated that the ‘Basic Skills’ needs of their workforce had remained ‘constant’ relative to the previous 12 months. Similarly the ‘Professional/Higher level’ (78%), and ‘Leadership and Management’ (67%) skills needs of their workforce also remained constant.

Employers also stated that over the past 12 months, most skills needs had ‘increased’ in the areas of ‘Competence-Based Skills’ (90%); and ‘Technical’ (60%). Looking a year ahead, the same areas remained relevant but with an expectancy of a continued increase in the skills development required for ‘Leadership and Management’; ‘Technical’; and ‘Competence Based Skills’.

Skills needs are charted below (figure 11 & figure 12).

Figure 10: Skills Gaps and Shortages

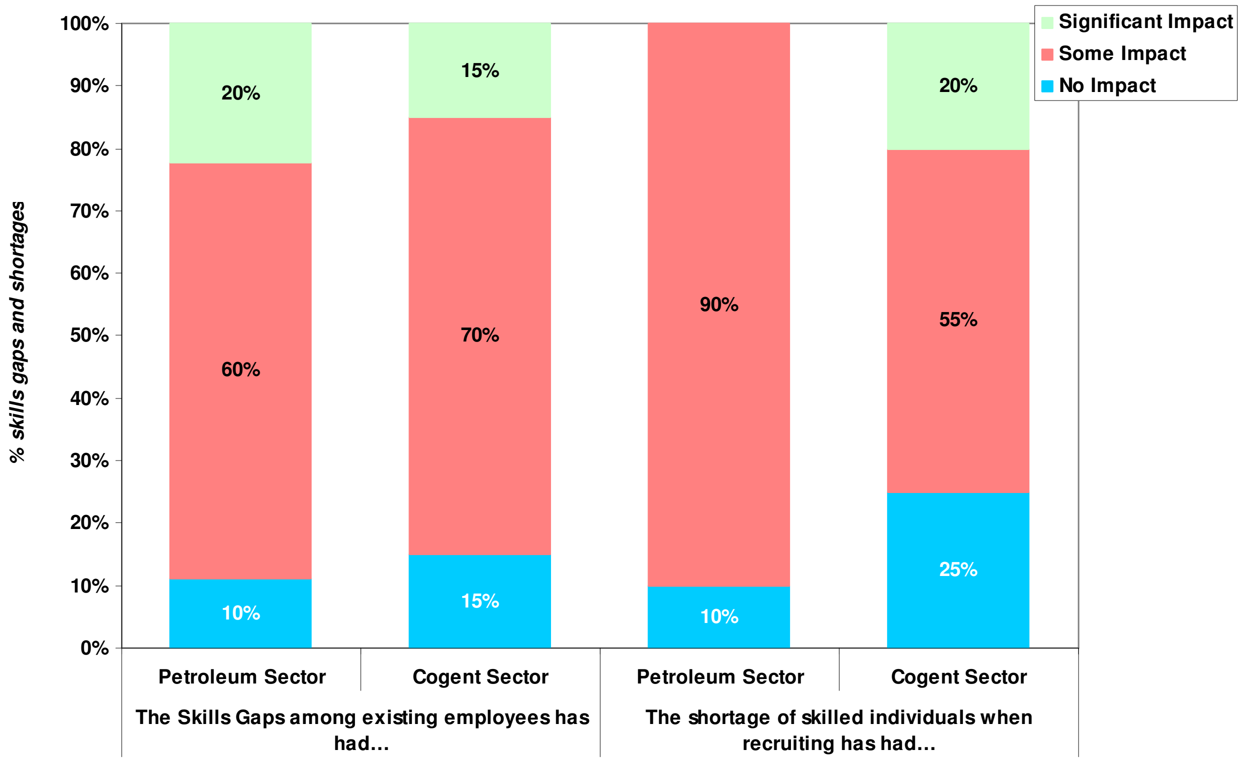


Figure 11: Skills Needs (last 12 months)

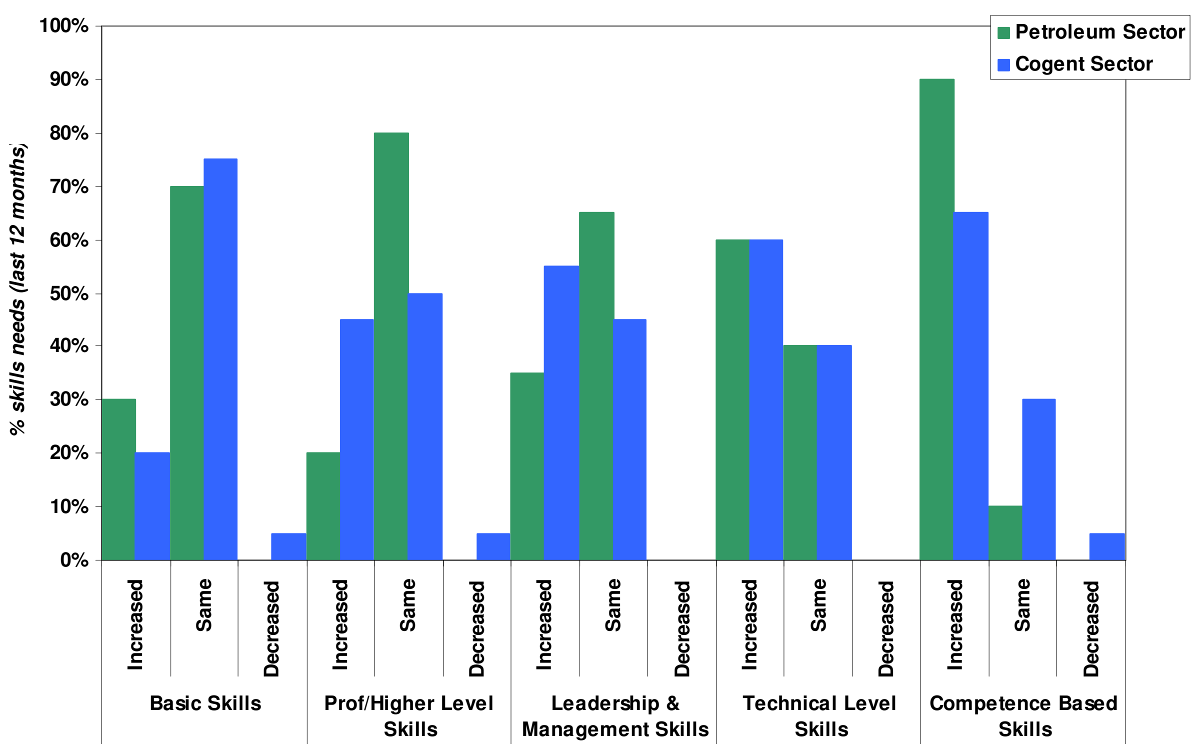
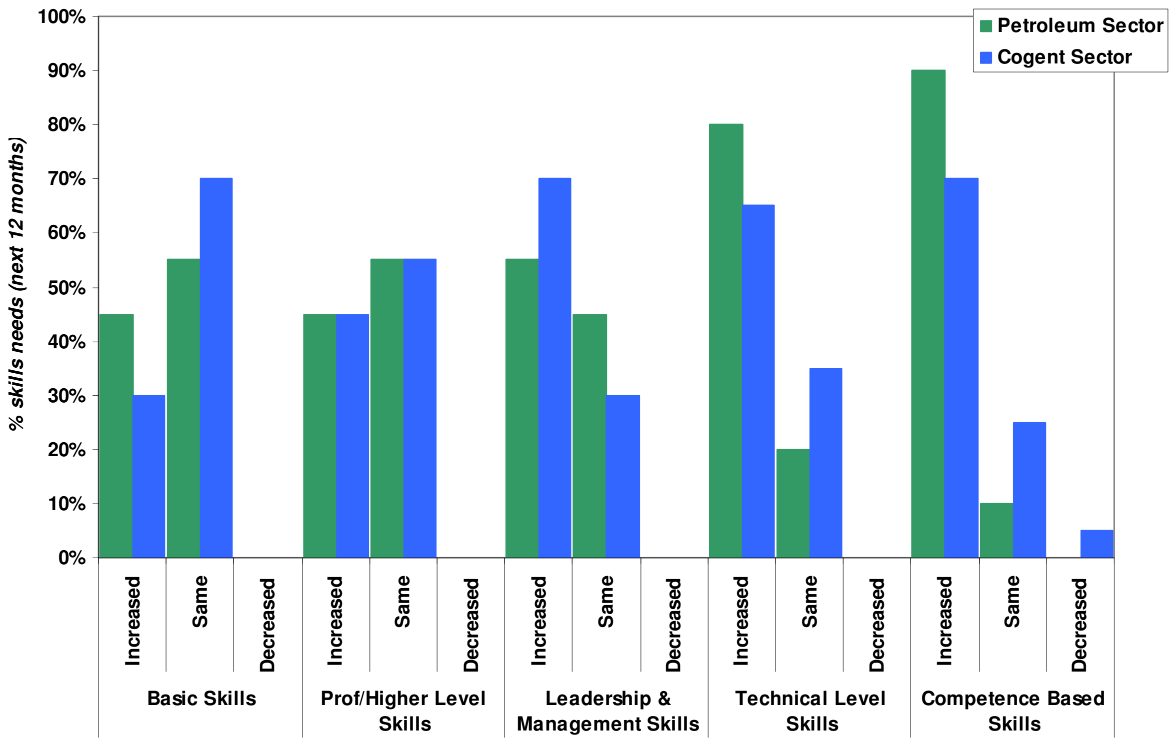


Figure 12: Skills Needs (next 12 months)



4.0 Skills and the Economy

Unsurprisingly, 95% of employers across the Cogent sector reported that the general economy had either ‘some impact’ or a ‘significant impact’ on their businesses. 100% of petroleum employers also reported that the economy had ‘some impact’ or a ‘significant impact’ on business.

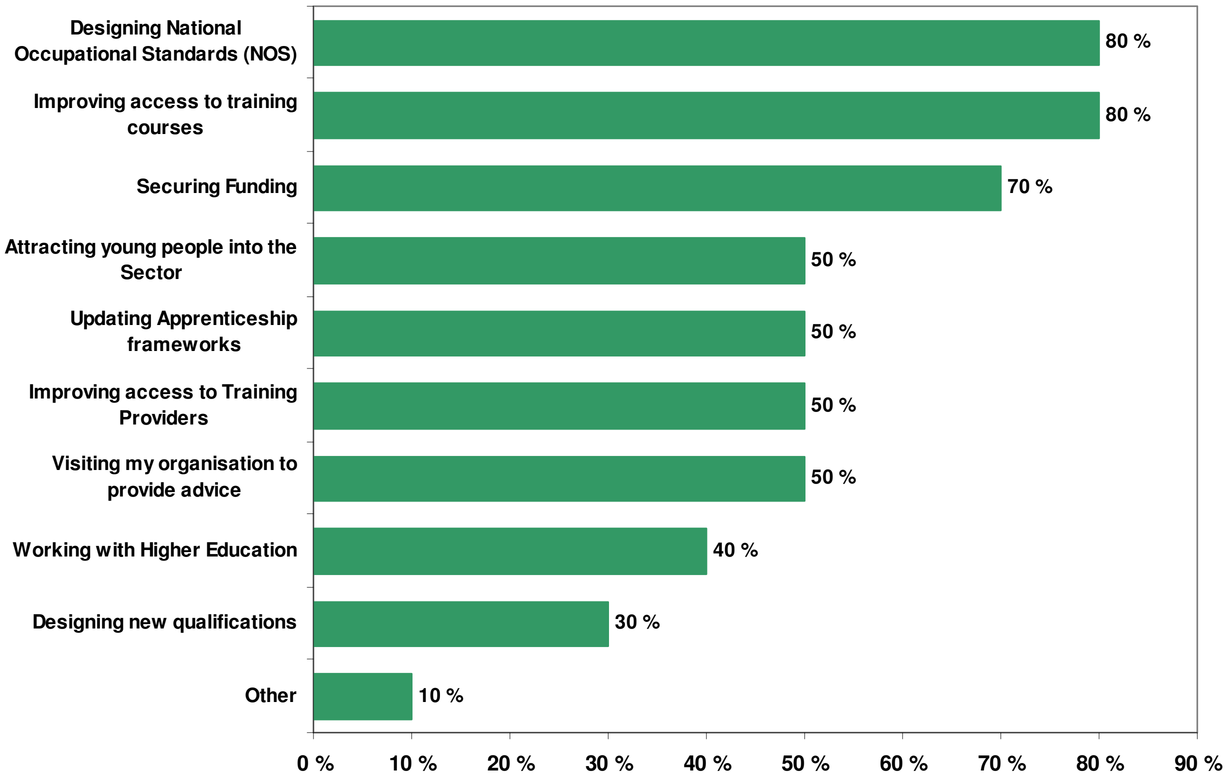
Looking ahead, Petroleum employers were split in concluding that the economic situation for their businesses would ‘improve’ (30%), ‘remain static’ (30%), or ‘worsen’ (30%) within the year. 10% of petroleum employers were ‘undecided’.

Most Petroleum employers predicted ‘no significant change’ or a ‘decrease’ in employment in the short term (2 years ahead).

4.1 What Petroleum Employers want from a Sector Skills Council

From a defined list of SSC activities, Petroleum employers were asked to select those they consider would be most beneficial to their businesses and industry. This gives, in effect, a demand chart of the skills activities of the SSC that employers endorse. Figure 13 shows the relative importance of each activity reported by employers. Designing National Occupational Standards (NOS) and improving access to training courses were top priority for Petroleum employers.

Figure 13: What Petroleum Employers want from a Sector Skills Council



5.0 Concluding Remarks

The data provided in this report is a unique snapshot of the industry from a sizable cross section of employers. The intention is that the first Skills Oracle will provide a datum for the development of trend Labour Market Intelligence on an annual basis.

As noted in the introduction, the role of the project is two fold; providing a benchmark for individual companies, while also generating sector wide data, absent from national sources, but crucial to directing skill interventions over the longer term. Future Skills Oracle for the Petroleum industry will build on the information gathered in 2009 to enable the development of trend analysis.

Cogent welcomes comment on any aspect of the survey or the report.

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Should you wish to take part in the 2010 Skills Oracle, or would like some information please do not hesitate to contact Julie Plumbley by email at: Julie.plumbley@cogent-ssc.com

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The strategic skills alliance for the Process Industries