



GE HIGH TECH MANUFACTURING INDEX

Third Wave

Winter 2011

Background

Every six months GE undertakes a survey of senior executives working in the UK high tech manufacturing sector. The first survey took place in November/December 2010, the second survey followed in June 2011. In late November and December of this year, 362 interviews were conducted by ORB (Opinion Research Business) for the third wave of this survey.

Companies questioned in the survey manufacture a wide range of high tech components and products - for example, medical instruments and devices, laser optics, industrial sensing equipment, specialist telecoms equipment, industrial ceramics, precision components, aviation controls and components, engineering cutting tools, industrial and specialist gases. A definition of high tech manufacturing businesses can be found in appendix 1.

Summary

This latest survey wave shows that despite the continuing economic uncertainty, including issues with the Eurozone, UK high tech manufacturers remain confident about the prospects of their own businesses as well as the industry sector in 2012.

1. UK high tech manufacturing – still a growth story

When asked how much they expected their businesses to have grown through 2011, the average percentage growth cited was 9% - so significantly above GDP figures. Over a quarter of firms (26%) predicted final figures for the year showing growth of over 10%.

Only 8% are expecting 2011 figures to be lower than those seen in 2010, but 26% say they are expecting no growth.

The strongest average growth is among medium sized companies (defined either by turnover or employees). Those with a high proportion of their goods exported, experienced higher growth in 2011 (by around three percentage points on average) than those who are more dependent on UK custom.

When asked about what they believed the prospects for 2012 were, the majority of high tech manufacturing business leaders questioned said they expected growth in 2012 with 26% expecting growth of over 10%. Only 5% expected further decline through 2012.

There is a strong correlation between those who have experienced growth in 2011 and those who expect to see growth in 2012, and it should be noted that there are highly successful high tech manufacturing businesses in the market who are sustaining their growth trajectory.

Expectations of growth in 2012
-by growth in 2011

		Growth in 2011					
		All	Negative	Zero	0-5%	5-10%	10%+
Expected growth in 2012	Negative	5%	24%	6%	0%	5%	0%
	Zero	18%	27%	44%	8%	4%	6%
	0-5%	26%	27%	23%	70%	7%	10%
	5-10%	19%	12%	6%	14%	59%	12%
	10% +	26%	4%	15%	4%	17%	69%
	Refused / Don't know	7%	8%	5%	4%	6%	3%

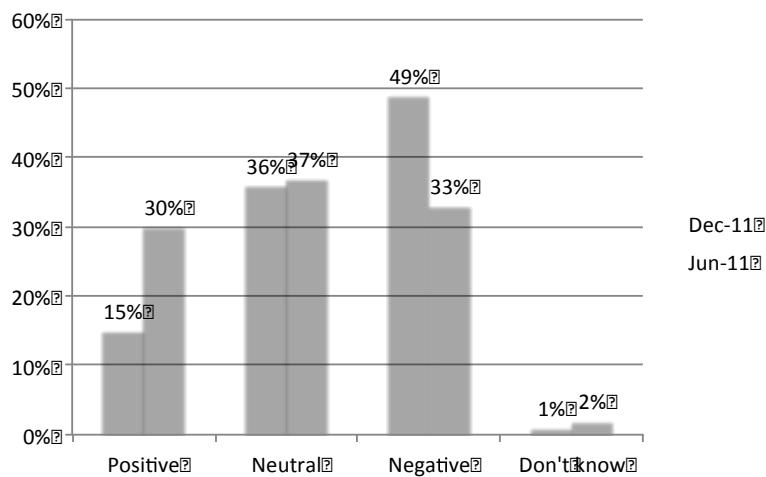
2. Economic Outlook

When asked 'Taking everything into account how do you feel about the current situation as regards the general economic situation in the UK?', only 15% of the high tech manufacturing leaders questioned expressed optimism, compared to 31% in December

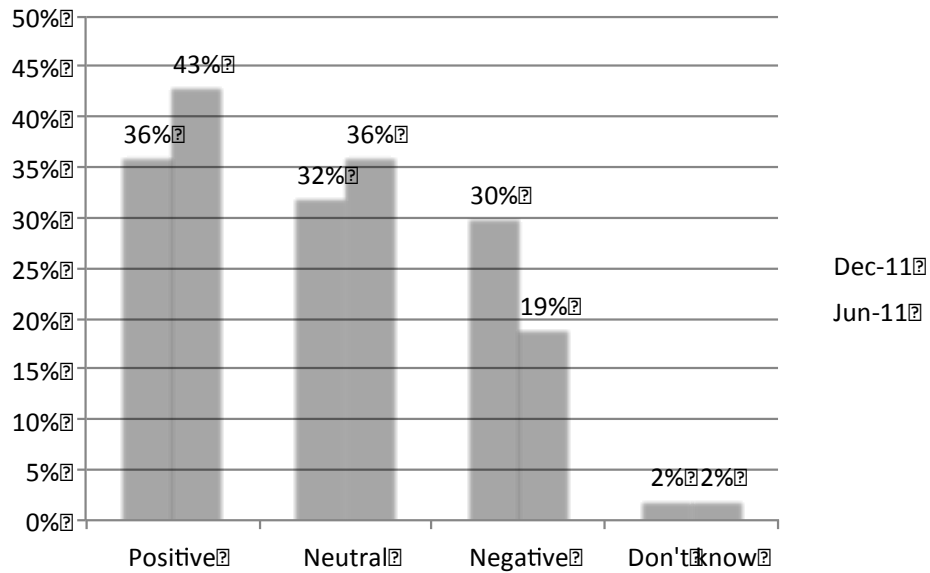
2010 and 30% in June 2011. Nearly half of respondents expressed a negative view of the economic situation.

36% of those questioned said they felt positive about the UK high tech manufacturing sector although this was lower than the proportion saying they felt positive in June 2011(42%).

Sentiments about the general economic situation in the UK

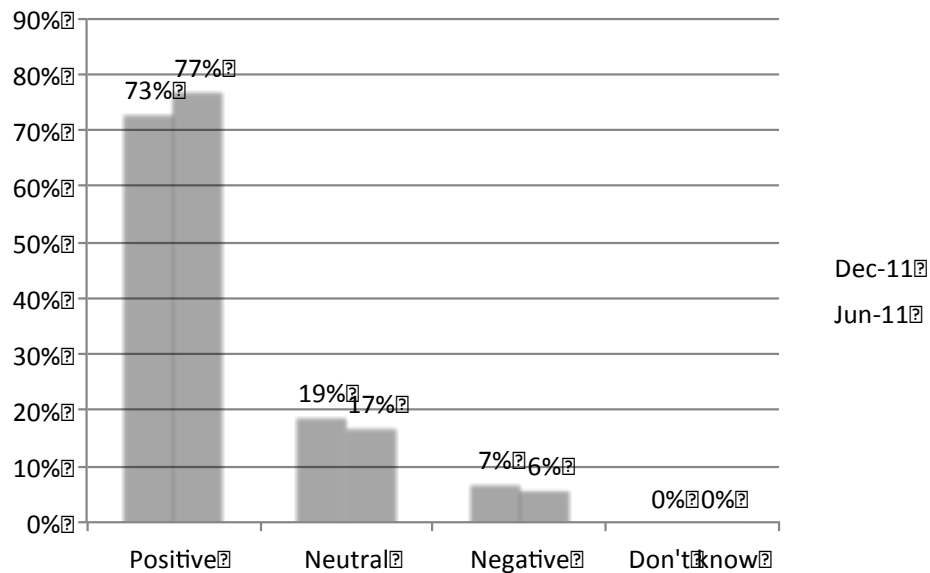


Sentiments About the High-tech Sector



73% of businesses were positive about the position of their own business, but again this is down compared to earlier in the year. When asked the question “Taking everything into account how do you feel about the current situation as regards the performance of your own business?” in June 2011, 77% of hi-tech business leaders were fairly or very positive about the position of their own business.

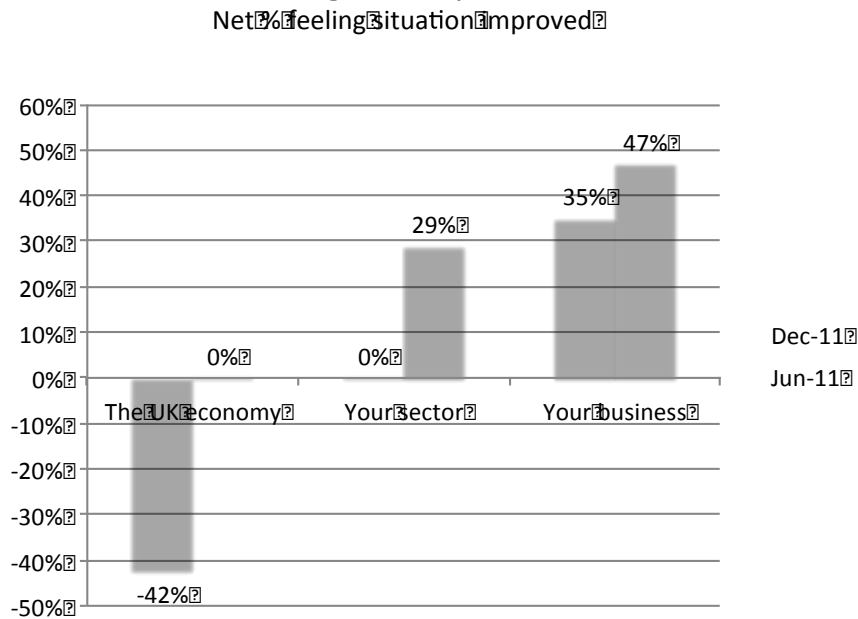
Sentiments about the performance of their own business



The sentiments about the current situation reflect high tech leaders' experience of the performance of the economy, their markets and their own business over the past 12 months. 11% felt the UK economy had improved over the previous 12 months, while 54% thought it had got worse – giving a net figure of minus 42%. With regards to their own industry sector, there was a net figure of zero - as many felt it had improved as got worse over the previous 12 months, and with respect to their own business, a net figure of plus 35% thought their situation had improved over the last 12 months.

Comparing the figures from June 2011 and December 2011 shows high tech manufacturers becoming increasingly gloomy about the overall UK economy. At the same time though, they remained relatively optimistic, about the UK high tech manufacturing sector.

Views of change over past 12 months



3. Prospects for 2012 – economic uncertainty

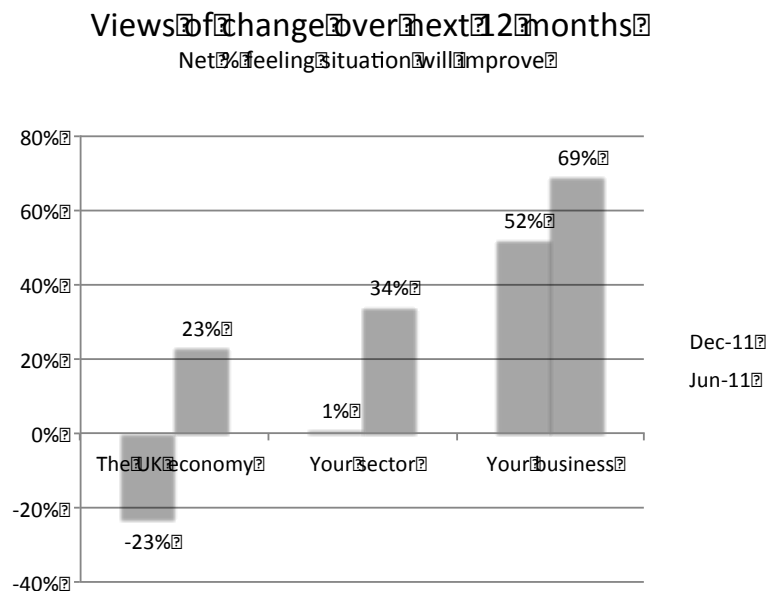
Reflecting the growing pessimism regarding the current economic outlook, there are declining expectations among the high tech manufacturers questioned of an improvement in the situation over the next 12 months.

Only 20% of those high tech manufacturers questioned expect the economy to improve, compared to 43% who expect it to worsen – giving a net figure of minus 23%. This compares to a net positive figure of 23% in June 2011 – a rapid and significant change over a short period of time.

When asked specifically how much they expected the economy to grow in 2012, 38% said they thought the economy would decline or be flat over the next 12 months, with a further 38% expecting growth, but growth of less than 1%.

With regards to their own sector, as many are positive as are negative.

The majority still believes that their own business prospects will improve over the next 12 months (net figure of plus 52%). However this is a much less optimistic view than high tech manufacturers were taking six months ago. The mood has changed.



Among those who are optimistic about the future of their business, the reasons why they are optimistic fall in to three main categories;

1. Improvement in demand:

25% say they have seen a rise in customer enquiries and new business.

2. Internal improvements in products and services:

20% say improved products, research and development are driving optimism.

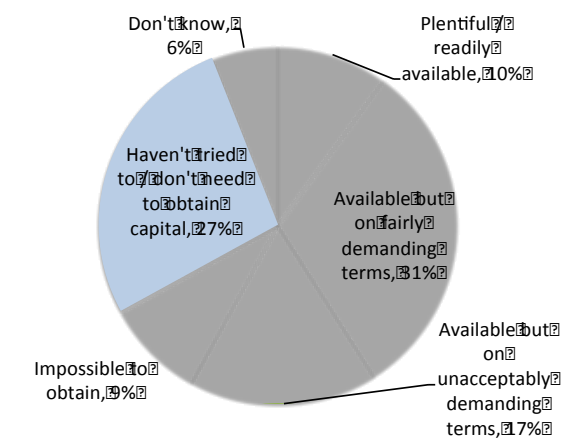
3. Changes in the business environment:

19% say an increase in exports (relative to the exchange rate) is behind their optimism.

Almost all those who are pessimistic about prospects for their own business over the next 12 months, put this pessimism down to the external environment; the economy (40%), lack of demand (26%) and sector cut-backs (9%).

A further 9% say that their pessimism is due to funding constraints. High tech business leaders were asked in more depth about constraints on business finance, and they painted a mixed picture of availability and cost of new finance; 41% of high tech business leaders say finance is available albeit on fairly demanding terms, while 26% say it is either impossible to obtain or obtainable only on unacceptable terms.

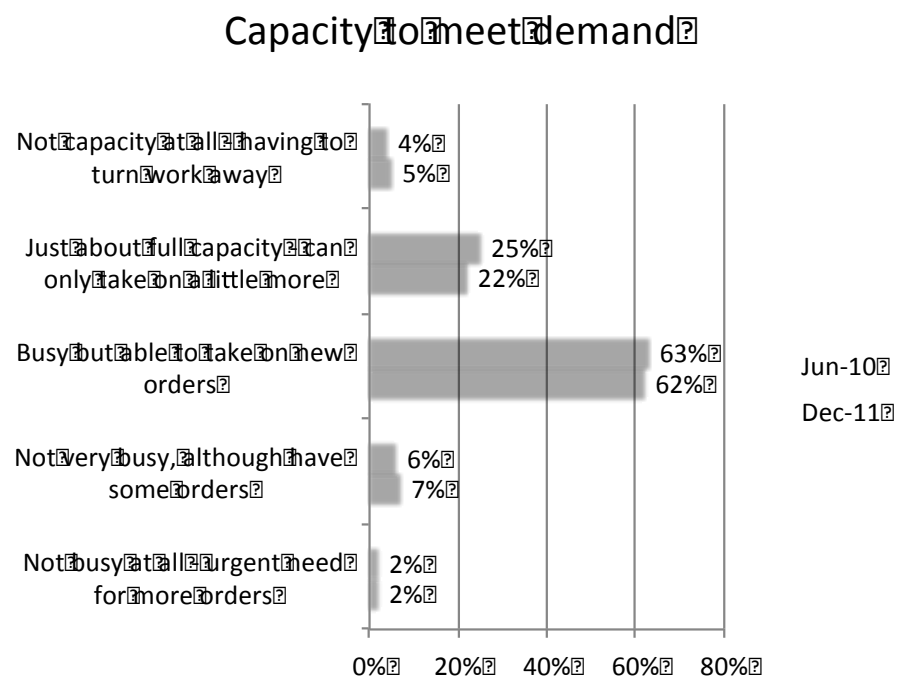
Current availability of bank funding for businesses such as yours?



4. Capacity to meet demand

Encouragingly many of the high tech businesses questioned were operating at near or full capacity. 28% said they had no or very little spare capacity at the moment (a similar number to that recorded in the June 2011 survey (29%)). Very few (9%) said they were not busy. This report on their capacity was closely tied to their business's turnover growth through 2011 i.e. there was a strong correlation between growth during 2011 and how close they were to full capacity. The reported levels of spare capacity have changed little since earlier surveys.

Among those who are nearing full capacity, 73% said they were planning to increase capacity, with 53% already in the process of making arrangements to expand. Although this is promising, as the responses to questions on availability of funding show, financing this capacity may prove a stumbling block for a number of high tech manufacturers in 2012.



5. How the world has changed since the credit crunch

After another turbulent and uncertain year the survey also asked UK high tech manufacturing leaders to consider how their world has moved on since the first credit crunch in 2007/8. They highlighted a range of issues including access to capital, increasingly high raw material costs and high energy costs are also having an impact.

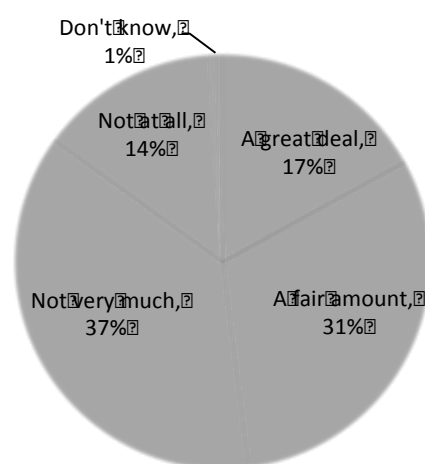
Most of the high tech manufacturing business leaders questioned felt that the various efforts by the UK government, central banks and European institutions have had very little impact in mitigating the current difficulties.

When asked in an open question what new challenges or concerns they face now, compared to before the 2007 economic problems emerged, the most frequent comments

related to the export environment (20%). In addition to this, the lack of investment / help from banks (13%) and the rise of material costs (13%) were also noted.

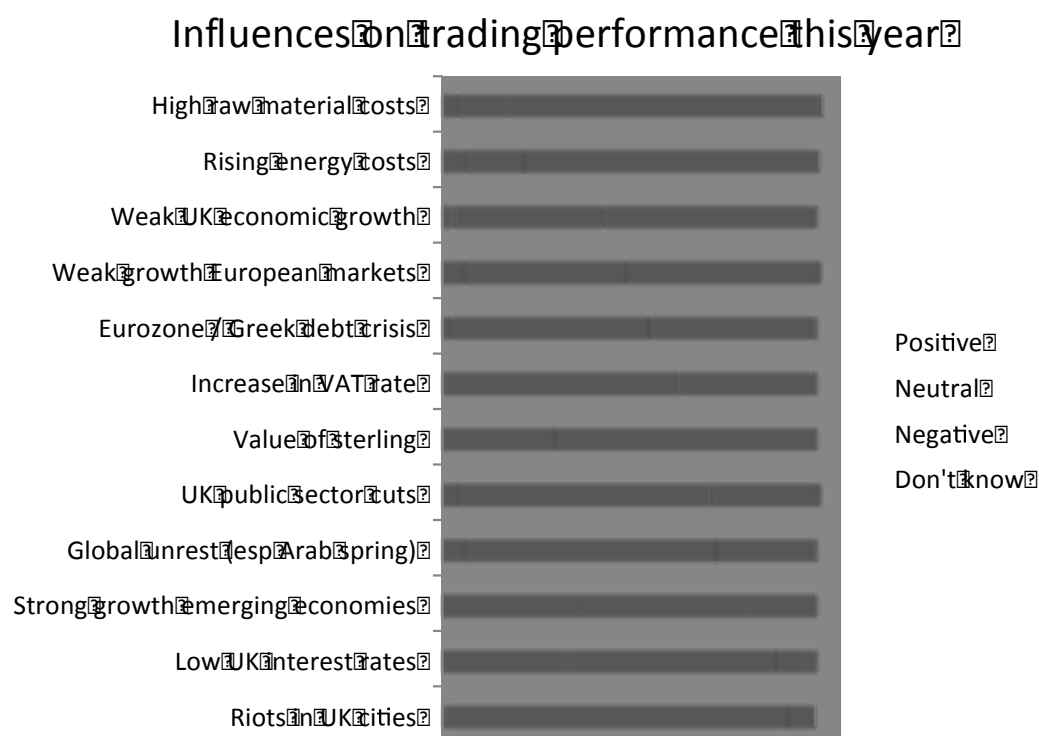
When specifically probed on whether different events, policies or economic developments had been positive, neutral or negative to the trading performance of the business, rising material costs emerged as the most significant negative factor - 84% of businesses said these had been a negative factor. 78% of businesses also said rising energy costs had been a negative factor; and when probed in more detail about how much of a concern rising energy costs were, 27% said they were concerned a great deal and a further 42% said they were concerned a fair amount. In another question, 48% said rising energy costs had affected the competitiveness of their business.

Impact of energy costs on the competitiveness of their business



The next three factors seen as most negative were all macro-economic issues - weak UK growth (56%), weak European growth (51%) and the Eurozone / Greek debt crisis (43%). When probed in more detail on the impact of the Eurozone / Greek debt crisis, 11% said it had impacted 'a great deal' or a 'fair amount' on demand for their products. 12% said it had a 'great deal' or a 'fair amount' of impact with regards to delays in confirmation of orders from Europe. A further 9% said it had had a great deal or some effect on them,

with respect to Eurozone companies more aggressively 'fighting for orders.' Many more companies said the crisis had some impact on them, but not to such a great extent.

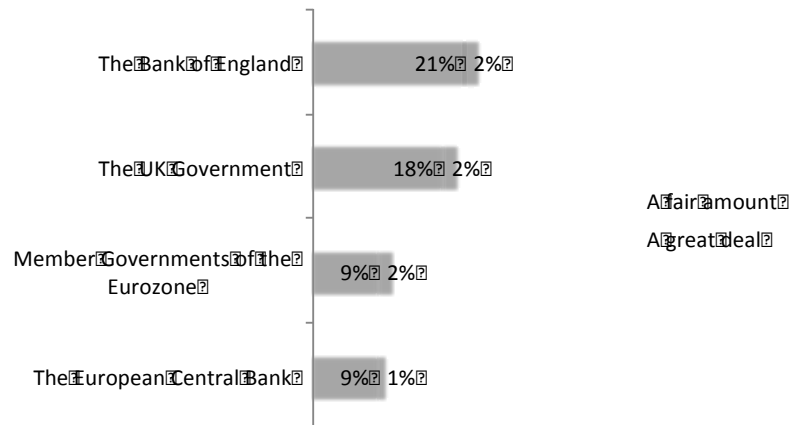


The most widely acclaimed positive factors were low interest rates, the value of sterling, and continued strong growth in emerging economies. The vast majority of high tech business leaders said the riots in the summer of 2011 had no impact on their business (91%).

The high tech manufacturers questioned were underwhelmed by the efforts of European institutions and other policy makers as they battle to deal with the crisis.

Only 11% believe the member Governments of the Eurozone have had any impact on current problems, 20% believe the UK government has had some positive effect on economic growth and solving other current difficulties; 23% think the Bank of England has helped, while only 10% think the Central European Bank has been effective in the current crisis.

To what extent do you think initiatives being taken by the following are helping to stimulate economic growth or at least mitigate the impact of current initiatives?

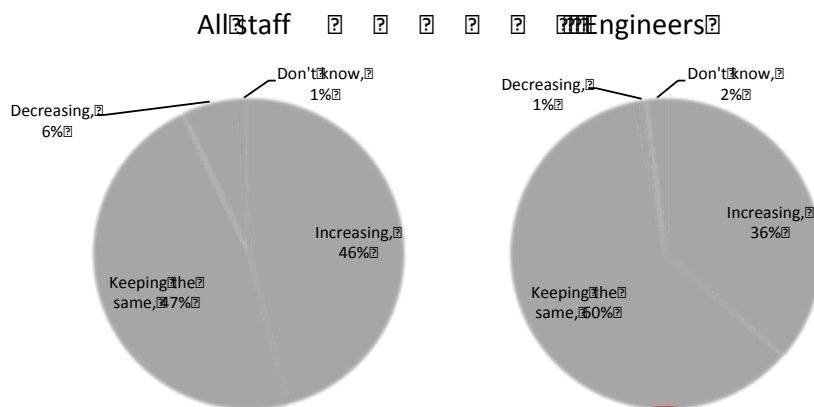


6. Recruitment

Despite the economic difficulties many high tech manufacturing businesses are planning to hire new staff in 2012.

Of the business leaders surveyed, only 6% said they would be decreasing the number of employees that had over the next 12 months, but 46% said they would be increasing their staff numbers, on average by 12%. Smaller businesses (less than 50 employees) who are planning to increase staff numbers are on average expecting an increase of 14%, while those with more than 50 staff are planning an increase of 8%.

Plans to increase staff in next 12 months?

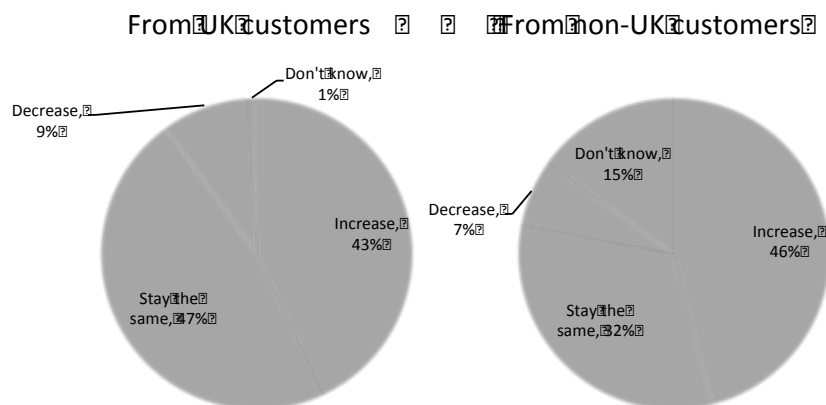


7. Internationalisation of markets

International trade is an everyday reality for most of the high tech manufacturing firms questioned in the survey, both in terms of sales and their supply network.

87% of those business leaders interviewed export some of their products and services, with 29% of them saying exports account for more than 50% of their turnover. While 43% of firms expect orders from UK customers to increase in the next 12 months (by on average 18%), 46% of firms expect orders from outside the UK to increase (by on average 20%), suggesting a continued move towards globalisation.

Expectation for orders over the next 12 months



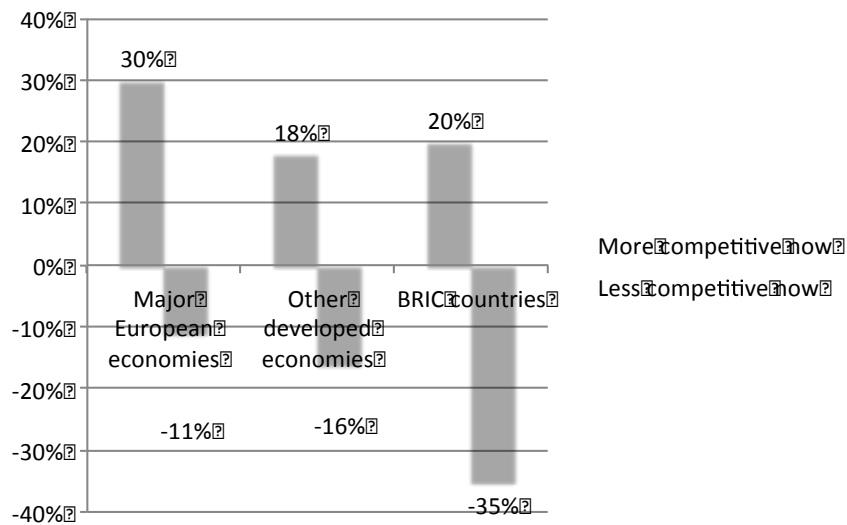
Internationalisation is clearly a two way street; as well as opening up markets to UK based high tech businesses, competition for UK customers becomes increasingly open to overseas businesses. While 34% of high tech businesses say their fiercest competition for orders is currently out of the UK, 14% say the USA is where their fiercest competition comes from, 13% say China and 12% say Germany. Overall, 50% of businesses say their fiercest competition is from overseas.

When probed on where new competitors have emerged from over the past year or two, the top 4 regions (outside of the UK) are China (14%), Far East (5%), India (3%) and Germany (3%).

One impact of the Eurozone crisis is that a good number of the UK high tech manufacturers (19%) thought UK firms were now more competitive than similar firms in major European economies 12 months ago. However, the survey also showed that UK high tech manufacturers still fret about overall global competitiveness and believe that the UK is becoming increasingly less competitive in comparison to emerging economies such as the BRIC (Brazil, Russia, India and China) nations.

The UK hi-tech sector over the past 12 months

More competitive or less competitive, compared to...



This pattern is expected to continue over the next 12 months; a net plus 16% think the UK high tech manufacturing sector will become more competitive with companies in major European economies; a net plus 9% think UK companies will become more competitive with those in other developed economies; a net minus 17% think UK companies will increase competitiveness with those in BRIC countries.

Appendix 1 - A diverse sector

Since the GE High Tech Manufacturing Index launched 12 months ago the six monthly survey has highlighted how high tech manufacturing in the UK embraces a wide variety of businesses, large and small, and in a myriad of different industries and sectors.

The transformers

Despite their current focus on advanced technologies, many of the companies surveyed in the Index have a long history. In the first survey wave in late 2010 businesses were asked about their history. 27% of the businesses polled had been in existence since the 1960s with 11% of the businesses surveyed founded before 1945, and 5% dating back to pre 1900. The mean average year in which the

businesses polled were established as a trading entity was 1972. Many of the businesses surveyed have evolved and responded to changing demand with 44% saying they had 'developed over time from being a traditional to an advanced/high tech manufacturer'.

The 'lab coat' entrepreneurs

Other younger businesses had often been established by entrepreneurs who had an original idea (20%) or set up by directors who had previously worked in another high tech business (22%). 55% of those questioned in the launch survey said that on balance the business had been established by entrepreneurial academics, scientists or engineers who went into business, while 30% said the business had been set up by business people making an investment, with 13% commenting that it was a mix of the both or the business had been set up in a different way. Interestingly just 2% said they had specifically been spun out of a university department or research project.

The meteors

Some of the businesses questioned are extremely fast growing. In the latest survey in November/December 2011, despite the current economic conditions , 26% of those questioned said they expected growth of over 10% while 9% said they expected to grow by 20-50%. In the latest survey wave 25% said they expected their business to grow by more than 25% this year. Generally the sector is much more buoyant and optimistic than other UK sectors.

The globetrotters

Another feature of many of these businesses is a highly international customer base. In the latest survey wave 87% of businesses questioned said they exported some of their products and services, with 29% of them saying exports account for more than 50% of the turnover. When asked to name markets to which they export to more than 50 countries and regions were cited. Unsurprisingly the weak pound is regarded as a strong positive factor for growth for these businesses.

The niche players

Each wave of the survey highlights how many of these UK high tech manufacturing businesses operate in very specialist and sometimes esoteric business areas. Mainstream sectors represented in each survey include aviation, automotive, chemicals, healthcare, electronics, energy, agriculture, marine and construction.

However when asked to describe 'what does your business do?' a myriad number of niche specialisms were mentioned.

One interesting sub-set identified in the Index has been businesses involved in seemingly traditional activities, now with a high tech twist. Good examples are sail making, fishing boat builders and producers of high tech and specialised milking machinery.

There were also many examples of the more unusual and esoteric areas that UK high tech manufacturers operate in. Manufacturers surveyed for the Index have made products as diverse as aircraft interiors, specialised optical and dental equipment for dentists and opticians, products to service laboratory 'clean rooms', high tech crash barriers and traffic light systems, advanced artificial knee joints and hip joints, high specification marine navigational equipment, motorcycle chassis and suspension systems and many others.

Appendix 2 - Survey details

362 interviews were conducted by ORB (The Opinion Research Business) among senior executives of high tech businesses. Interviews were conducted by telephone in November and December 2011.

All businesses had at least 10 employees and were characterised as high tech manufacturers on the basis that they:

A: To at least some degree "use a high level of design or scientific skills to produce technologically complex products and processes - usually of a high value."

B: Are a primary manufacturer of components, equipment or products rather than an assembler of components that are sourced entirely from external suppliers.

C: Are characterised by at least three of the following attributes:

- Has a highly skilled workforce
- Produces technically complex (Hi-Tech) products
- Uses advanced, innovative or cutting-edge technology to produce its products
- Produces products with a high added-value
- Utilises a high level of design, innovation or creativity
- Makes extensive use of computer, high-precision and information technologies
- Engages in a large amount of Research & Development (R&D)
- Has high levels of productivity i.e. not necessarily high volume but efficient production processes / high value of output per employee etc
- Provides consultancy and/ or advisory services in relation to its products

Companies questioned manufactured a wide range of high tech components and products - for example, medical instruments and devices, laser optics, industrial sensing equipment, specialist telecoms equipment, industrial ceramics, precision components, aviation controls and components, engineering cutting tools, industrial and specialist gases.

Survey issued January 2012