

MANUFACTURING ADVANTAGE

HOW MANUFACTURERS ARE
FOCUSING STRATEGICALLY
IN AN UNCERTAIN WORLD



‘Now that manufacturing and the wider economy appears to be through the worst, this survey makes an assessment of how UK manufacturers see global growth along with the future challenges and opportunities playing out, once the recovery has become established...’

Foreword

This latest report in our Manufacturing Advantage series comes at a time of enormous economic uncertainty. The rapid contraction in activity across the world now looks set to be followed by a long road back to recovery. However, the fog of the financial crisis has diverted attention from the more productive sectors of our economy.

This series of reports from EEF and BDO LLP has shown previously how UK manufacturers have demonstrated their agility in responding to the challenges of increased global competition and tapping into new market opportunities.

This report, based on a survey of 300 companies from across manufacturing, shows that while the world economy has been through 18 turbulent months, firms' ambitions and strategic priorities have not been knocked off course by the global recession.

Indeed, the downturn may have provided a significant, but temporary, disruption to world trade flows, but manufacturers are not expecting a fundamental shift in the balance of global threats and opportunities over the next five years. Nor do they plan to refocus away from the innovation and customer service-led strategies that had supported growth and productivity before the recession.

Similarly, the rise of low labour-cost economies that spurred companies to develop new sources of competitive advantage in the last decade and offered new production and supply chain opportunities, is widely expected to continue play a significant role in global value chains.

But the UK will continue to be a primary location for high-value manufacturing functions – including production and innovation. The skills, infrastructure and quality of the supplier network, while not perfect, make the UK an attractive proposition for manufacturers. And while companies will need stability and certainty in the business environment as the economy moves from recession to recovery, there is still work to do on reducing the regulatory environment and increasingly the competitiveness of the tax system.

Once the world economy returns to growth, companies do not expect activities to entirely return to business as usual. The recession has spotlighted supply chain risks and management. The combination of significant constraints on cashflow and credit combined with the collapse in world demand has raised concerns about the emergence of holes in supply chain networks as demand begins to recover. And a majority of companies have identified the need to rethink how they manage supplier risks, including checking up on the strength of their supply chain more regularly.

While it will be some time before manufacturing output returns to pre-recession levels – and not just in the UK – this report provides confidence in UK manufacturers' continued agility and adaptability in the face of a dynamic industrial landscape.

During this recession we have seen companies focus their efforts on preserving skills, process improvements and cost reductions. Together with some of the UK's inherent advantages in global value chains, an innovative and competitive manufacturing sector should emerge from recession.

**Tom Lawton, Head of Manufacturing at BDO LLP and
Stephen Radley, Director of Policy and External Affairs at EEF.**

Summary

Global markets have been buoyant for much of the last decade, with world trade expanding at double-digit pace, and UK companies capitalising on the rise in global opportunities for growth. However, this period has also not been without its challenges. As previous reports in this series have shown, UK manufacturers have faced a significant rise in competitive pressures from rapidly-industrialising emerging economies; an increased impetus to reduce their cost base and increased volatility in the price of key inputs.

The more recent upheaval in global markets and the reverberations of the financial crisis across the globe have had a profound impact on manufacturing around the world. Trade flows went rapidly into reverse and in some sectors output has fallen more than 30% below pre-recession peaks.

Now that manufacturing and the wider economy appears to be through the worst, this survey makes an assessment of how UK manufacturers see global growth along with the future challenges and opportunities playing out, once the recovery has become established.

Challengers and new opportunities continue to move eastwards

UK manufacturers continue to expect the balance of growth to be tilted towards emerging economies, particularly in Asia. While the robust rates of growth in these markets during much of this decade stalled in 2008, economies such as China and India are seeing a much faster return to growth than Europe and North America. And with this, the main competitive challengers are still expected to come from low labour-cost economies.

However, brighter growth prospects in these regions will also offer greater growth opportunities. We raised the prospect of some re-balancing across the global economy in our earlier report – *Manufacturing Advantage: Changing the ground rules of global competition*.

Rising incomes in emerging markets and the need for both the developed world and emerging economies to address trade balances, point to a potential, long-term shift in demand. Our survey points to this shift being a gradual one; a continuation of the trend we have seen over the past five years. However, it also suggests that smaller

companies are more cautious about venturing into new markets, at least in the short term.

To respond to the threats and opportunities that manufacturers will face over the course of the global recovery and beyond, companies plan to stick with the formula of design, development, quality and customer service that had delivered benefits before the downturn.

Indeed, the competitive advantage from innovation and the provision of services alongside products is set to become an even greater priority for UK firms in the next five years. Rather than derailing companies' strategic objectives, the recession has led them to place an even greater emphasis on these areas.

The UK in global value chains

Low labour cost economies have been more than competitive challengers, they have provided companies with more opportunities to diversify activities and reduce costs. UK companies have drawn on production and sourcing opportunities in Eastern Europe and Asia over the past decade; but our survey confirms that manufacturing activities remain rooted in the UK for a large proportion of companies. Indeed, while fewer claim to compete purely on their production functions, increasingly, UK manufacturing is more than the sum of its parts.

UK-owned companies keep production and innovation close together in the UK and many foreign investors have located some of their research functions in the UK, alongside production and assembly. The UK's business environment – including the skills base, sophisticated supply networks and infrastructure – supports the factors on which companies based here will compete over the next five years.

Indeed our survey shows that, for some companies, offshoring production to low labour cost economies has *undermined* – rather than supported – these efforts, and some activities have trickled back to the UK in recent years. Higher than expected costs and quality problems have been the main reasons behind some companies moving production back in-house.

That said, many more companies have achieved cost savings through locating production in emerging economies and have used overseas facilities to tap into fast-growing market opportunities. And the

move of some manufacturing functions eastwards is expected to continue over the next few years, with the growth potential of these markets an important driver.

It follows, therefore, that companies plan to establish more of their sales and distribution functions outside the UK. Innovation, in contrast, is more likely to stay put in the UK. While there are advantages in locating research, design and development activities near to the markets being served, moving innovation abroad is nevertheless a riskier proposition.

Supply chain globalisation, risks and management

The focus on high-value added activities in the UK has led companies to diversify their suppliers. In the past two years nearly two-fifths of companies have increased their use of suppliers outside the UK. Manufacturers are drawing on a combination of suppliers in the UK, developed world and emerging economies to meet increasingly sophisticated product and production needs. Furthermore, nearly one in three plan to increase the diversity of non-UK suppliers in the next few years.

Despite a more fragmented supplier base, fewer firms report difficulties in managing activities across many geographical boundaries, when compared with our 2007 survey¹. Previous EEF research² showed manufacturers directing increased resources to IT investment to support supply chain management and demand forecasting. While this may have helped companies manage supply functions more effectively, it appears that gaps remain in companies' approach to monitoring and evaluating supply chain risks.

In this respect, the global recession has had an impact on how companies will manage and structure supply chains in future. At the height of the recession, manufacturers had raised concerns about how the health of UK-based and overseas suppliers might weaken their ability to take advantage of the eventual recovery. And this latest survey shows that over half of companies agreed that the impact of the recession has led them to re-evaluate supply chain strategies.

Companies have identified a number of areas of risk in relation to their supply chains, particularly in emerging markets, including energy costs, supplier disruption and strategic failure. However, firms without a formal approach to managing their immediate suppliers or those further down the supply chain, identified fewer potential supply chain failures. Without a systematic approach to assessing and monitoring supply chain risks, companies may be unprepared should they be faced with a significant disruption.

¹EEF/BDO LLP (Feb 2008) Global Challenge survey

²EEF/Infor (Nov 2008) Manufacturing IT – Boosting productivity by managing performance

Shifting challenges and opportunities

The recession may have had a significant impact on demand and trade flow across the world, but it has not dented companies' future growth ambitions or their views on where challenges and opportunities will come from in future. We've been gathering views from manufacturers on how globalisation has been changing the nature of competitive challenges and opportunities over the past five years.

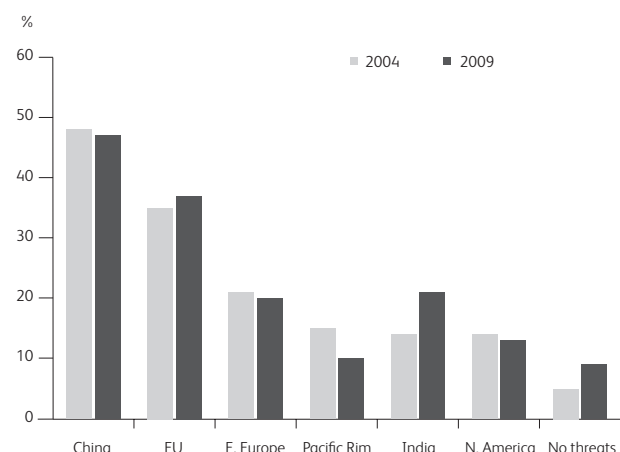
The emergence of low-labour cost economies on the world stage, more than a decade ago, has had a considerable bearing on company strategies in the developed world. We've seen a sea change in how companies compete, with the focus shifting to value-addition, quality and service.

Over the past five years, the balance of competitive threat has not significantly altered. China's low-cost workforce and rapidly-growing industrial base continue to top the list of challengers and is expected to retain the top spot over the next five years. However, UK companies continue to compete with European neighbours in global value chains, where innovation is also more important than just price.

Chart 1

China and Europe remain key challengers...

% of companies citing as current competitive challenge



Source: EEF/GfK NOP Global Value Chains survey

The most notable change in manufacturers' view of competitive threats is the rise of India up the rankings. Over a fifth of companies cite India as a current challenger, rising to a third for those expecting it to pose a threat in the next five years.

The proportion of companies seeing a threat from India is particularly high in the transport equipment and metals sectors. These have been among the fastest-growing industrial sectors in India and both have increased their relative share in the economy since 2000. Inward investment in the UK by Indian conglomerates in these sectors over the past few years is also likely to have influenced firms' views.

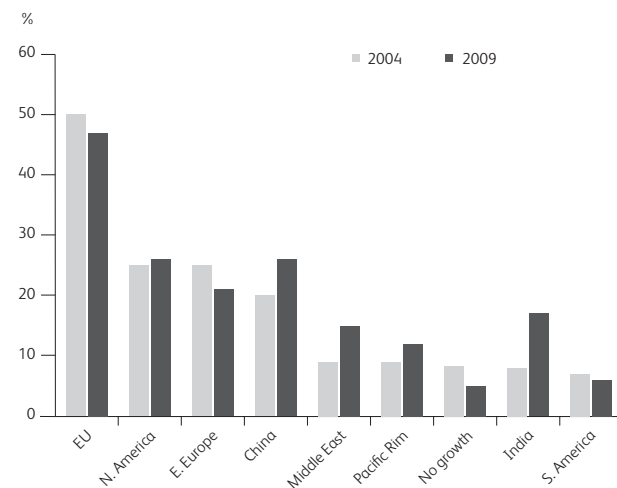
However, growth in the proportion of companies also seeking to tap into these fast-growing markets has been more gradual. Around two-thirds of the companies surveyed identified at least one emerging economy as a current opportunity, but relatively few are tapping into multiple markets at present.

Despite the significant decline in world trade flows from the end of 2008, UK exports to emerging Asia have been relatively stable. But these markets continue to account for a relatively small share of overall trade. As the next section will show, however, there has been an increase in the proportion of companies locating sales and distribution functions in these markets, as well as a steady increase in companies establishing manufacturing facilities closer to these larger, fast-growing markets.

Chart 2

...But balance of new opportunities moves East

% of companies citing as business opportunity



Source: EEF/GfK NOP Global Value Chains survey

While emerging economies have rebounded faster than expected and short-term growth prospects look much brighter than in the developed world, some companies continue to face hurdles as they seek to capitalise on these markets. And the significant economic shock may also have led some companies – particularly smaller ones – to adopt a more cautious approach to new market entry, focusing more on the EU and Eastern Europe.

But looking ahead to the next decade, more manufacturers expect to be taking advantage of the opportunities that Asian and Middle Eastern economies might offer.

Emerging economies set to race ahead

% annual change in output

	2009	2010	2011
World	-1.9	2.4	4.5
European Union	-4.1	0.1	2.0
Emerging Asia	2.3	6.1	7.5
US	-3.0	1.5	3.9

Source: Oxford Economics

While companies are increasingly exploring new market opportunities, globalisation has offered more significant opportunities in other areas. The rest of this report will look at how companies are maximising global value chains through dispersed supply chains and production functions. That said, despite the significant downturn the UK has faced – both in manufacturing and across the economy as a whole – it remains an attractive proposition for manufacturers as a base to serve global markets and produce innovative high-value products and services.

The global landscape and the structure of industry in the UK

Despite the significant turbulence in global markets this year, manufacturers' views on the balances of threats to their competitiveness and new opportunities have not been radically altered. We know that emerging economies, like China, want even greater traction in high value sectors of the global economy. Manufacturers will need to continue with their productivity and competitiveness strategies to withstand threats from these motivated emerging economies.

Previous research from EEF and BDO LLP has shown that key factors in maintaining a competitive manufacturing base include design, product and process innovation; service provision, cutting-edge capital equipment and capitalising on growth markets. Prior to the recession, building a competitive position depended on the right combination of these factors to allow companies to respond to, and take advantage of, shifting opportunities.

Our latest research shows that despite these ongoing threats and the (not insignificant) recession, companies' strategic priorities remain the same. They report that design and development, service provision and production and assembly are the top three areas to help them to stand out from the competition – the same top three as 2007. Whilst the aspirations of China are strong, for now their position in the current global manufacturing value chain remains one of a low-cost, mass producer.

Manufacturing is much more than just the physical production of goods. Substantially fewer companies cite production and assembly as a source of competitive advantage compared with just two years ago, with the proportion falling from 65% in 2007 to 47% this year. The relative importance of production may have dropped, but its value is still significant to companies and the link with product innovation, research and development and service provision is considerable. And these links determine how the location of functions is structured.

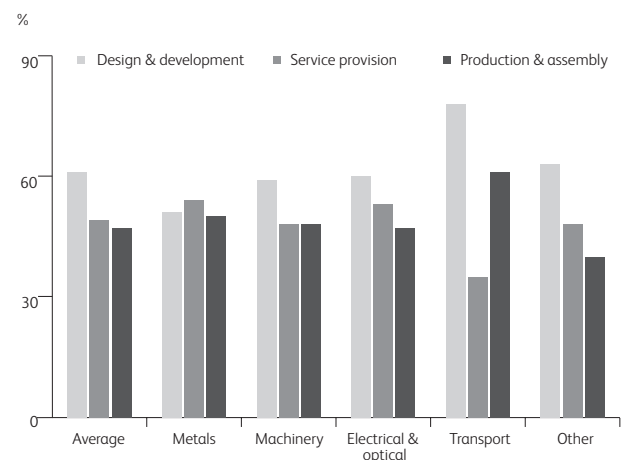
However, there are sector differences. Companies in the transport equipment sector – which includes motor vehicles, aerospace and ship-building – consider design and development, production and assembly particularly important. Just over three in five companies cite that production and assembly gives them competitive advantage compared with half or under in other manufacturing sectors (chart 3).

Automotive production is, for example, one of the most capital-intensive sectors in manufacturing and it also relies on a highly-skilled workforce. This reduces the relevance of labour costs to an extent and makes the process of production more important. And in aerospace, for example, the close connection between production expertise and services reinforce the importance of both elements in companies' competitiveness.

Chart 3

Sector differences in manufacturers' competitive advantage

top 3 areas of competitive advantage by sector (%)



Source: EEF/GfK NOP Global Value Chains survey

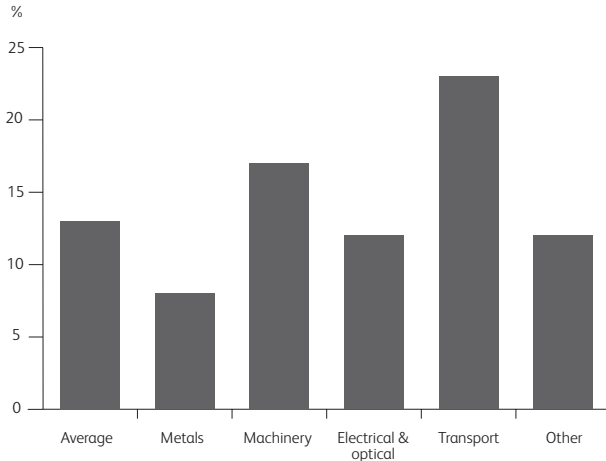
Service provision continues to be an important feature of many modern manufacturing companies in adding value to activities. As well as a revenue generator and differentiator, manufacturers derive significant value-added from service provision. During the recession, service provision has helped companies to bring in revenue during a time of falling orders and destocking, as customers look to increase the lifetime of products with maintenance and upgrade of parts.

On average, 12% of manufacturers' revenue is derived from services; in some sectors service provision is more prevalent than others, those in the transport equipment and machinery and equipment sectors receive above-average revenue from providing services (chart 4).

Chart 4

Service provision helps bolster revenue

service provision as average % of annual turnover by sector



Source: EEF/GfK NOP Global Value Chains survey

The EEF/BDO LLP *Global Challenge Survey* showed that firms see innovation as the primary means of responding to a range of competitive pressures over options such as price cutting and offshoring. Innovation has become a core function in manufacturing – extending beyond new and improved products and services and across internal processes such as marketing, distribution and organisational models.

Innovation is about much more than research and development, but there has been a shift in the importance of research as a competing factor – the proportion of companies citing it as a key factor in competitiveness doubled in the past two years from 10% to 21%. Research is extremely important in generating new ideas and solutions – particularly in emerging sectors such as the low-carbon market.

Large companies (with 250 or more employees) are more likely to cite design and development and research as giving them a competitive advantage, but these companies are key in driving new research and innovation down through the supply chain.

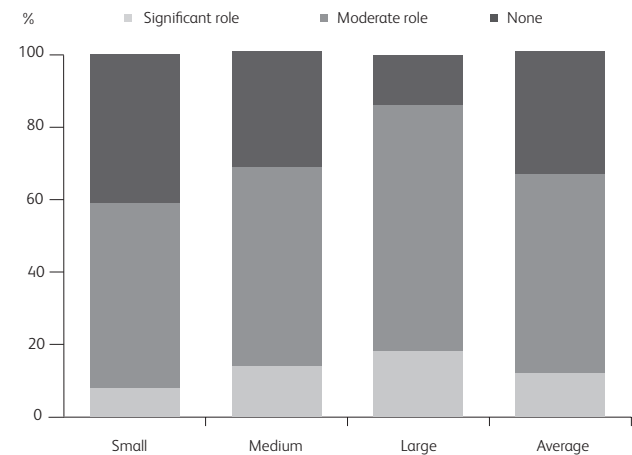
EEF's recent *Innovation Monitor* showed how important collaboration through the supply chain is in generating new, innovative ideas (chart 5). Increased specialisation within companies, greater

customisation and shorter product life cycles means companies must work with both customer and suppliers to get new ideas to market.

Chart 5

Supply chain plays important role in innovative ideas

% of companies citing role by company size



Source: EEF Innovation Monitor 2009

Locating for success

High-value production activities – encompassing not just manufacturing, but complementary innovation, services and sales function – provide a manufacturing advantage. Our survey explored how firms structured these operations to gain the maximum advantage and the relative importance of the UK in global value chains.

Manufacturing has become increasingly mobile over the past decade, in response to new markets and significant variations in costs and tax structures. But for most UK-owned companies, production and assembly remains concentrated in the UK. Over four-fifths of domestic manufacturers only manufacture in the UK and fewer than one in ten has more than half of their production elsewhere.

For companies that produce abroad the most popular destination is the EU – with over three in five choosing it for production facilities. The EU offers proximity to the UK, meaning shorter transport times for quick product turnaround and production quality. Producing in the EU also offers proximity

to the UK’s biggest market and it is where half of companies expect growth opportunities in the next five years.

Just under half are choosing China for production, which offers a large labour base, low-cost, mass production and a large domestic market. India has also become a manufacturing destination of choice for around a third of companies we surveyed, for similar reasons. Choosing to manufacture parts in emerging economies can offer the production sites based in developed economies the chance to concentrate on the high value-added items of production as well as research and development and innovation.

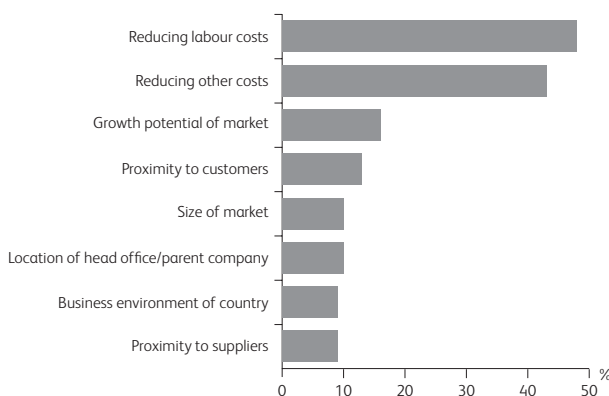
Cost continues to be cited as the top reason why manufacturers produce abroad – reducing labour costs was quoted by nearly half and reducing other costs by just over two-fifths of respondents. This cements the view that whilst the ambitions of emerging economies are great, they are still viewed at present as an area for low cost, mass production.

With the world as a global marketplace, manufacturers can pick and choose where to best make and assemble products. Emerging markets offer the chance for cost savings whilst developed economies can offer the skills and experience for higher value-added manufacturing activities.

Chart 6

Cost savings still a driver for producing outside the UK

% of companies citing driver



Source: EEF/GfK NOP Global Value Chains survey

Of course setting up production facilities outside the UK is not the only way to take advantage of the cost savings available from emerging markets. We know that around two-fifths of companies outsource the manufacture of parts and components to other companies based overseas³ and supply chains have become globalised.

Growth and sales potential are also important factors, and why many companies see opportunities in countries which also pose a large threat. Growth potential was the third most common reason for producing abroad, with proximity to customers and the size of market also becoming more important (chart 6).

As stated in our previous report⁴, anecdotal evidence showed that some production had returned to the UK from overseas and that emerging market production has not suited every company. The recession has put pressure on companies to evaluate where is best for manufacturing functions and if previous decisions on location have been successful or need to be reconsidered. The survey shows that 14% of companies have brought production back to the UK from abroad in the past two years.

As the anecdotal reports suggested, there were three main reasons; first, that cost savings were not as great as expected, secondly that the required quality was unachievable and finally that the speed of getting products to market was not good enough.

Manufacturers had been dealing with raw materials prices at record levels – in the second quarter of 2008 the oil price rose by more than a quarter in just three months. Freight, metals and energy prices had been following a similar trend. Transport costs, especially freight costs, also hit highs, eroding the low-cost advantage that outsourcing production can provide. These movements, coupled with the long delivery times experienced as a result of congested Asian ports, can impact on cashflow. This has led some companies to revisit sourcing and investment decisions.

³EEF/BDO LLP (Feb 2008) Global Challenge survey

⁴EEF/BDO LLP (Jun 2009) Manufacturing Advantage – Challenges in a global marketplace

Cost savings are achievable but lower labour costs may not be enough to balance out rising transport and freight costs as well as the less tangible costs, such as the need for increased supply chain management and monitoring. The solution for most is to bring that production back in-house in the UK – this provides companies with the control and management they need, especially for quality dependent products.

Globalisation meant that a valve manufacturer in the South East found themselves defending a position in the market which was almost not defensible. Change was needed – focus was put on ensuring that the company had presence close to customers and main markets with production sites in the UK, Italy and Germany, as well as establishing a joint venture in the Czech Republic.

Proximity to customers means they can react quickly to rapidly-changing globalised markets. An identical production facility in each location allows the flexibility to move capacity and resources between factories. A presence in Italy also allows the company to be at the heart of worldwide valve production, taking advantage of the breadth and knowledge of the supply chain.

A plan to source finished products in China was unfeasible, with product quality, long lead times and the lack of intellectual property protection unacceptable. Setting up their own facility to produce components there means the company now has control over all these aspects. Value is added in sites in developed countries where bespoke, quality goods tailored to customers' requirements are produced. Customers of the company are assured of quality with a 'manufactured in the UK' label – something that 'made in China' has yet to be synonymous with.

Importance of innovation in UK manufacturing

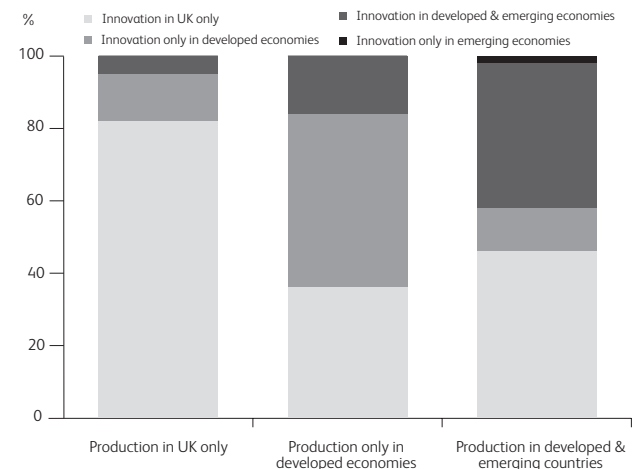
It is not just the total cost of production activities and time to market that make manufacturing decisions critical – it can also be a factor in the location of other functions. Our research highlights the complementary nature of production, innovation and service provision.

Most innovation activity is carried out in developed economies and is very much linked to production location, with product, process and service innovation reinforcing each other (chart 7). For those companies that produce only in the UK, the majority of their innovation is here too; and where there is production in developed or both developed and emerging economies, some innovation will take place there too. Intellectual property protection concerns have been raised previously and this will inevitably put some off locating higher-value functions in lower cost economies.

Chart 7

Innovation very much linked to production location

innovation location by production location (%)



Source: EEF/GfK NOP Global Value Chains survey

Nevertheless, conducting innovation in markets other than the domestic one allows manufacturers to develop products (especially for that country) to precise specifications and needs in a timely manner, and by doing so, achieve a high level of success. However, companies doing this remain in the minority – only 10% of UK-owned companies carry out innovation outside of the UK.

The ownership of companies can also impact greatly on where innovation takes place. A quarter of manufacturers say that innovation occurs outside the UK due to the location of a head office or a parent company. Only 11% of UK-owned companies have research and development activities located abroad compared with 57% of foreign-owned companies.

So whilst innovation is rooted to the home country location there are still benefits for foreign owned companies to innovate in the UK – section 4 will look at the UK business environment in more detail.

The structure of service provision follows a similar pattern to innovation. The majority of companies manufacturing only in the UK offer services only in developed markets – primarily the European Union (including UK). And those manufacturing in both developed and emerging economies provide a service proposition across both these markets. This again highlights the close connection between production and the service offerings.

Locating both production and innovation in other countries can enhance a firm's ability to sell into those markets. The opportunities to tap into the home market of some emerging economies should not be underestimated.

However, with intellectual property protection an issue, as well as problems with product quality, setting up a sales and marketing function within a country can be seen as a lower risk option or the first step in order to break into new markets. Over two-thirds of companies have sales functions based outside the UK. Indeed, half of companies with production only in the UK have sales functions in both developed and emerging economies.

As shown in a report last year, the type of high-value, innovative, niche manufacturing that is carried out in the UK is not just low-volume production for local markets. Niches are on a global scale and niche manufacturers are as export-reliant as other manufacturers.

What does the future hold?

With an uncertain path ahead out of recession, what does the future hold for manufacturing in the UK? The trend towards globalisation will continue – the growth opportunities available in emerging markets are too great for manufacturers to ignore but the risks and benefits are being carefully weighed. Emerging markets differ greatly in their economic outlook and position in the global value chains.

Increasing sales presence abroad may be seen as the low-risk, gateway option to boost overall presence in new markets. This allows companies to test the market with products and first gain a foothold – before possibly setting up other functions overseas to further expand and service customers.

Sales and marketing is the function that the largest percentage of companies expect the proportion located outside the UK to expand in the next two years. Just less than half of companies expect it to increase with none expecting a decrease.

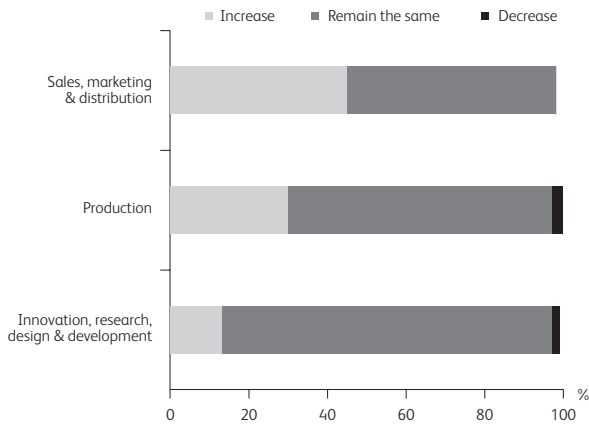
A fifth of small companies expect production abroad to increase in the next two years compared with half of large companies. As we have seen in previous surveys, this will be a combination of increasing overall capacity as well as replacing some UK capacity. A small number expect a decrease and the trickle of companies bringing back production to the UK will probably continue – a small number of companies said they were planning or considering doing this.

However this does not mean that they will be undoing their decision to produce abroad. It may mean that the best place to manufacture certain products is not always in low-cost emerging economies – products that rely on quality often need to be manufactured in high-value locations such as the UK.

Chart 8

Lower risk functions most likely to head abroad

% of companies expecting change in function undertaken outside UK



Source: EEF/GfK NOP Global Value Chains survey

Innovation is here to stay and embedded in UK industry – with the majority expecting the proportion of innovation in the UK to stay the same in the next two years (85%). The recession has allowed manufacturers to invest in organisational improvements through a wide range of innovations.

Our research shows that companies have concentrated on process, organisational and marketing innovations in order to improve quality, focus on customer service and reduce environmental costs⁵. The efficiency gains resulting from this will provide a platform for a shift towards product and service innovations in the next three years; such manufacturers will be rewarded as the increased attention on customer service increases the likelihood that they will survive the intense competition within the global value chain.

As we have shown, companies in the UK have a broad presence across the value chain and are involved in all aspects – innovating, designing, developing, producing, selling and servicing. This breadth will continue to allow companies to carve niches, attract customers and remain competitive in a global marketplace.

⁵EEF (Sept 2009) Creating the Playing Field: Innovation Monitor 2009

Measure, monitor, evaluate – Supply chain strategies

A combination of competing on high-value products and services, catering for niche markets and providing customised solutions has increased the complexity of manufacturers' operations. In addition, product life-cycles have become shorter, new market opportunities have emerged and pressures to reduce costs (as lower labour cost economies continue to grow in prominence) is putting increasing pressure on companies to derive maximum value and efficiency from global supply chains.

UK manufacturers are striving to maximise profitability and add value, not just through reducing costs and cutting prices. Strategic supply chain management can enhance companies' ability to achieve this, but as the recession has shown, risk cannot be overlooked.

In response, operations have become increasingly specialised and manufacturing functions have become ever more globalised. Companies have established overseas production facilities to reduce costs and tap into new markets; and sales and distribution functions outside the UK have grown in the past two years. Supply chains have also become more international. Over the past 15 years, imports of intermediate goods and components to the UK have more than doubled as manufacturers have broadened their supply networks.

At the same time, guaranteeing quality, the need for tight inventory management and getting products to market on time have all become a great deal more important for companies meeting competitive challenges head on.

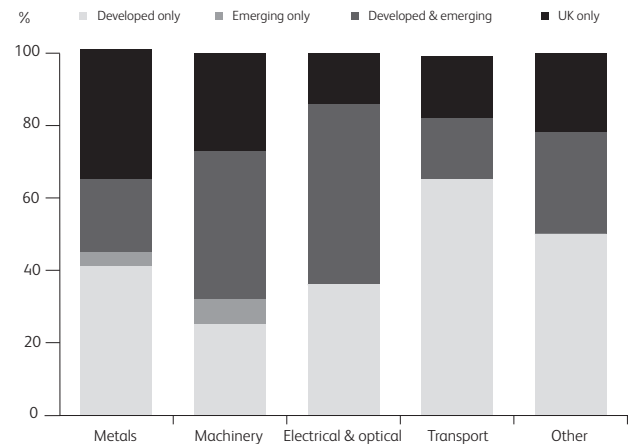
Across all parts of manufacturing, companies are using a combination of suppliers in the UK, developed economies and lower labour cost emerging markets. And in the past two years, around two-fifths of UK-based companies have increased their use of non-UK suppliers.

The UK is still a significant player in global supply chains with around 75% of companies sourcing some inputs from UK-based suppliers. This is the case for companies of all sizes, sectors and ownership. Indeed, as the next section will show, deep and sophisticated supply networks contribute to the UK's attractiveness as a base for manufacturing.

Chart 9

Supplier locations become dispersed

% of companies having suppliers in each location by sector



Source: EEF/GfK NOP Global Value Chains Survey

Inevitably, some parts of the supply chain cannot be cost-effectively located in a high labour cost economy, such as the UK, and capacity in some industries has diminished. As chart 9 illustrates, different approaches are being deployed by different manufacturing sectors.

Europe plays an important role in supply chains for UK production. Nearly three in five companies of all sizes have some suppliers in the European Union. While only a small minority of companies source only from emerging economies, our survey shows the extent of the integration of countries such as China and India. Around 20% and 6% of companies surveyed use suppliers in China and India respectively. But most companies complement the use of lower cost suppliers with networks in the UK and other developed economies.

The combination of developed and emerging economy suppliers is most prevalent in the electrical and optical equipment sector. The rapid growth of this sector, especially in the Asia Pacific region plus the declining price of components, have both played a large part in this shift.

In contrast the lion's share of output in the transport sector remains in the developed world, explaining the relatively smaller share of companies using suppliers outside of Europe and North America.

While capacity in emerging markets is growing, the balance of UK-based companies are not expecting a significant change in the structure and location of supply chains in the short term.

It is a different story across other parts of manufacturing. Over half of electrical and optical manufacturers, and around two-fifths of companies in mechanical equipment, intend to increase their use of overseas suppliers in the next few years. This chimes with our *Global Challenge survey*⁶, which showed that more companies in these sectors were planning to source components and parts from overseas locations compared with other manufacturing sectors.

Inevitably, the location of companies' activities across the world has a bearing on supply chain strategies. Those with production in a range of developed and emerging economies have had a greater tendency to source suppliers from outside the UK. This is as a result of looking for suppliers in the country of production as well as greater experience of those markets.

Approaches to supplier management

While suppliers and companies' own functions have become more dispersed, relatively few reported difficulties in managing functions across multiple locations. This may be due, in part, to the increased investment in IT solutions to manage both customer and supplier relationships.

EEF's research on IT investment in 2008⁷ showed that over 40% of companies had directed new IT investment towards supply chain management in the previous two years. In particular, this had led to tangible improvements in on-time delivery and stock management.

However, our more recent research points to some gaps in companies' approach to supply chain monitoring and risk assessment. While the majority of companies source suppliers across a range of global locations, there are differences in how they approach risk assessment and how frequently supply chain strategies are assessed. While the majority of companies monitor at least their immediate suppliers, more than 10% never engage in any formal assessment of risk across their supply chain.

⁶EEF/BDO LLP (Feb 2008) Global Challenge survey

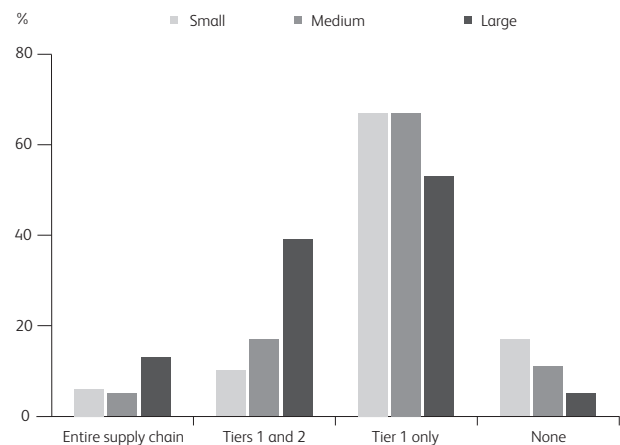
⁷EEF/Infor (Nov 2008) Manufacturing IT – Boosting productivity by managing performance

Larger companies are, not surprisingly, more likely to take a broader overview of what is happening right across their supply chain and also do so more frequently. More than 40% of larger companies, which tend to have more dispersed supply chains, engage in risk assessments on at least a quarterly basis. Across firms of all sizes, an assessment takes place at least once a year. While smaller companies may be further down the supply chain themselves, one in six does not engage in a formal assessment of supply chain risk at all. This is particularly true for companies that only use UK-based suppliers.

Chart 10

Narrow approach to supplier monitoring

% of companies managing tier of supply chain



Source: EEF/GfK NOP Global Value Chains Survey

Recession and risk

The severity of the recession is causing some companies to rethink this approach. An EEF survey earlier in the year showed that companies had become increasingly concerned about the health of both domestic and overseas suppliers as a consequence of the recession.

Overall, one in five companies reported significant concerns about the health of their UK supply base and three in five expressed significant or moderate concerns about overseas suppliers. Clearly there may be potential risks to manufacturers' ability to take advantage of an eventual recovery if their supply base has been eroded.

Our latest survey shows that nearly two-thirds of companies are planning to re-evaluate their supply chain strategies as a direct consequence of the global recession. In addition, some of the factors that were in train before recession hit – such as soaring commodity prices and increased or unpredictable transportation times – are also likely to be contributing to any rethink on the structure and monitoring of supply chains, particularly where emerging market suppliers are concerned.

Case study:

One mid-tier components supplier in the North East has a mixed view of supply chain health. Supply into multiple sectors has risks and benefits, particularly in a recession. But in this instance it also provides less in the way of supplier monitoring.

Part of the business supplies into the automotive sector – hit hard over the past year by a rapid and significant slump in demand. But the top of the supply chain has been actively monitoring risks across the whole chain. It has communicated with all partners about the outlook for demand and how volatility in output and orders was being managed from the top. This has meant that companies further up and down the value chain have survived the worst of the recession and will be in a position to respond when conditions improve.

However, other industries that they supply to have adopted a less rigorous approach to supplier monitoring and evaluation. They are beginning to find an erosion of supply networks, which is, in turn, starting to cause problems as demand picks up. The companies response to this is to go more global in their search for suppliers – broadening both their supply base and reach into markets.

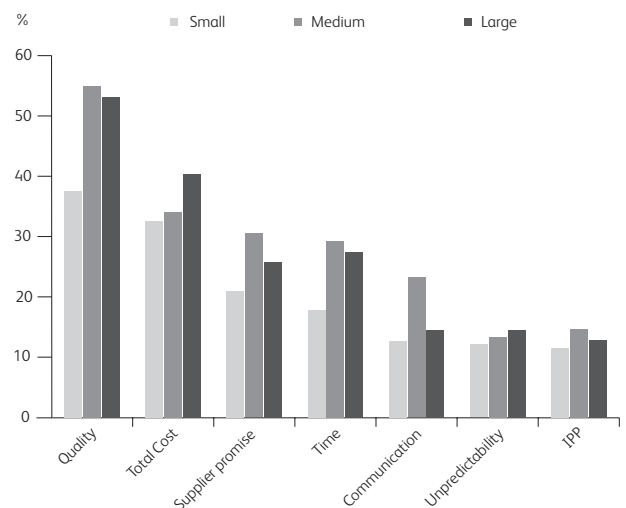
Indeed, companies have identified a range of potential challenges in dealing with supply chains in low cost economies. The majority of concerns centre around reliability – whether that be in terms of quality, delivery times or the ability of suppliers to do what was promised. Quality and reliability of lower cost suppliers has been a theme across this research series. While the effects of the recession, in terms of significantly reduced trade flows, will have reduced freight times and cost – these concerns will inevitably return as the global economy recovers.

For firms of all sizes, however, concerns about the total landed cost of components and other inputs comes near the top. Labour rates may be significantly lower, but pre-recession double digit rates of growth in the cost of raw materials and freight prices more than offset any gains from lower wage costs in emerging markets. Increased scarcity in some resources means that any price falls are only temporary.

Chart 11

Quality and cost again top list of concerns

% of companies identifying problems with emerging market suppliers



Source: EEF/GfK NOP Global Value Chains Survey

Managing risk across the supply chain

While many manufacturers are particularly exposed to supplier risks in lower labour cost economies, companies have identified wider risks across their global supply chains – some of these are likely to be particularly acute as the economy moves from recession to recovery.

Exchange rate volatility, for example, has a significant bearing on firms' supply chain strategies. Nearly a third of manufacturers trade in sterling, and a fifth have no formal foreign exchange management policy⁸. Sterling's weakness has added to the cost of imports over the past year and with a great deal of uncertainty about the road to recovery and how the imbalances across the global economy will play out, further volatility is likely. This can only add to the complexity in managing sourcing strategies.

In the short-term, holes are likely to appear in supply chains (and will become more visible as demand returns) as the result of a rise in insolvencies – both in developed and emerging economies. But our survey raises questions about the extent to which companies are prepared for future supply chain disruptions. Looking ahead to the next five years, our survey reveals a range of anticipated supply chain risks, illustrated in chart 12.

After competition, cost concerns top the list of risks – the price of oil, for example, has risen from around \$50 per barrel to nearly \$80 since the beginning of the year, which will impact not just production costs, but also transportation costs.

Forecasts on the future path of oil prices in the medium term vary significantly, but our central forecast points to prices heading north of \$80 in the next five years. In addition, future international agreements on climate change and individual nations' actions to reduce carbon issues will lead to higher energy costs in future. More countries are looking at carbon taxes, emissions trading or the possibility of border tax adjustments – which would increase the cost of production and imports.

Outweighing cost concerns are practical issues associated with receiving the right goods at the right time. With companies currently dealing with the loss of some key suppliers, the continued risk of supplier disruption is at the forefront of many firms' minds.

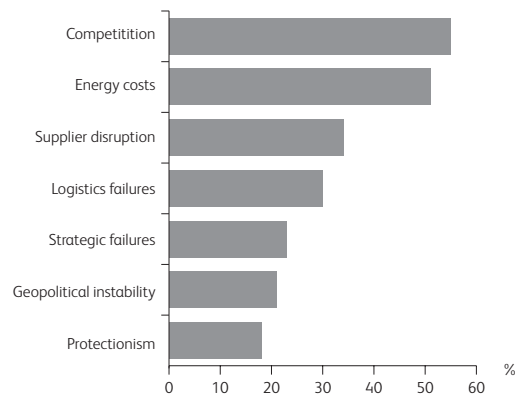
Just over a third of companies identified supplier disruption as an issue that could potentially impact their business in the next few years. Logistics failures and strategic problems – such as the wrong shipment at the wrong time – are also being planned for.

The increased diversity in UK manufacturers' supply networks should shield companies from some of these risks as few appear to be wholly reliant on a small number of suppliers or a limited number of locations. However, risks such as geopolitical instability or protectionism, identified by relatively fewer companies, are more difficult to hedge against.

Chart 12

Future supply chain challenges identified

% of companies citing future supply chain risks



Source: EEF/GfK NOP Global Value Chains Survey

Our results point to few differences in perceived supply chain risks across companies of different sizes or sectors. What is notable is that companies that monitor their supply chain more frequently are more likely to have identified a greater number of potential threats to their supply chain security than companies with no formal monitoring process. Risks to supply chain resilience can be managed, to an extent, with a diverse supply base, but increasing the globalisation of supply chains could raise the potential of systematic failures.

Manufacturers are increasingly focused on quality and customer service and are structuring their global chains to support this at the lowest cost. However, in some cases supply monitoring is running to catch up with the more complex and globalised nature of supply networks. Putting formal monitoring strategies in place could reduce significant disruptions in future.

⁸EEF Export survey 2009

UK's place in the global landscape

As emerging economies push harder to achieve their high-reaching ambitions, the UK faces more competition in attracting and retaining investment and manufacturing activities. The retention of production and a high degree of interconnection with innovation activities and services are plus points for the UK.

Shifting capital-intensive operations is a significant undertaking, but large mobile companies have tilted the balance of their activities away from the UK in recent years and some supply chain capability has been lost. With companies expecting further internationalisation of their activities in the next few years, how well placed is the UK to attract and retain a dynamic and durable industrial base? We asked companies how they viewed the UK as a place to do business and to compete effectively in the global landscape.

From an overall perspective, nearly seven in ten companies agree that the UK is a competitive location for their manufacturing activities, with nearly a third agreeing strongly. This is a big jump from 2007 when only 43% were positive about the UK's business environment for manufacturing. Many of the components that support high-value manufacturing – good skills levels, sophisticated supply networks and robust IP protection – are viewed reasonably positively.

The World Economic Forum's *Global Competitiveness Report* gives an insight into how competitive countries are on a range of factors, and it backs up the views reflected in our survey. The report rates the UK as an innovation-driven economy and ranks it 13 out of 133 countries for competitiveness. It rates highly for labour market efficiency, technological readiness and market size. It also makes clear that emerging markets still have some way to catch up. China ranks 29th, well ahead of the other three BRIC economies: India at 49th; Russia 63rd; and Brazil 56th. In particular, China faces challenges to maintain its competitiveness, combining continued rapid growth with shifting to higher-value activities. In order to do this, the quality of products must be a top priority and productivity must rise in line with rising prices and wages.

What can the UK offer manufacturers?

We know that the UK has a broad presence across the value chain and companies are involved in all aspects of it – innovating, designing, developing, producing, selling and servicing. The UK provides access to sophisticated networks that manufacturers can benefit from.

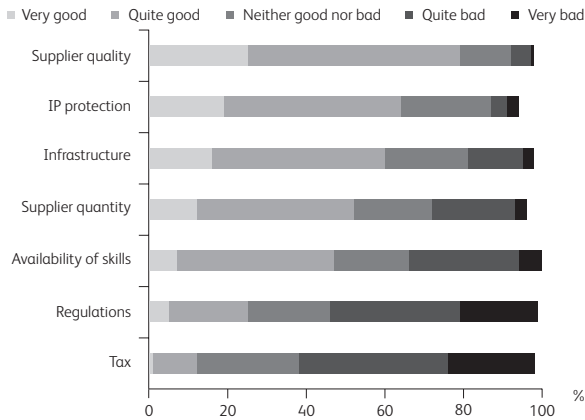
Of all the aspects of the business environment we explored, supplier quality was the top-rated area, with nearly four-fifths saying this was good compared with only 6% seeing it as bad. Product and service quality is at the core of manufacturers' competitiveness and one of the biggest challenges associated with lower labour cost suppliers. Companies in the transport sector rated supplier quality as particularly good, with nine in ten responding positively. The presence of large car manufacturers and aerospace companies has supported the growth of a strong supply base.

Breadth, as well as depth, is important across the supply chain. And on this measure the UK scored somewhat less favourably. Increased specialism has raised the requirement for diversity, in addition to quality, in the supply base. Just over half of companies were positive about the quantity of suppliers – as we've identified in previous reports, the shake out of suppliers in some industries over the past decade has been a factor in the greater use of overseas suppliers – particularly in lower-value added products. All sectors had a similar view, with those in the metals sector and machinery and equipment sector being the most negative.

Chart 13

Rating the UK as a place to do business

% of companies rating area



Source: EEF/GfK NOP Global Value Chains survey

Respondents rated intellectual property protection in the UK positively with over three-fifths seeing the UK as good and less than 10% as bad. Larger companies, while more positive are more likely to have more experience with the process. They are also more likely to be foreign-owned companies choosing to innovate and carry out research and development in the UK.

While many smaller companies did not express strong views in either direction, infringement of intellectual property rights can be a lengthy and costly process. As such, these concerns are continually cited as a problem associated with manufacturing in emerging economies. Indeed, nearly a fifth of those companies who had brought back production to the UK from overseas did so because of this.

The ability to attract and retain skills in the UK has long been a contentious issue – from the quality of schooling to the number of science and engineering graduates coming out of UK universities. While these are issues in the UK, most other developed economies are currently facing similar challenges. And in an international context, the overall picture on skills was fairly positive, with just under half rating as good and a third as bad.

However there were divergent views when looking at companies by sector. Two sectors stood out – a balance of 37% of respondents in the transport equipment sector rated the availability of skills as good but for those in the machinery and equipment sector the corresponding figure was -2%.

Large companies in the transport equipment sector are likely to have their own specialised training courses whilst companies in the machinery and equipment sector are more likely to be niche and therefore in need of more specific skills requirements, which are more difficult to meet with the current skill architecture.

This mixed picture underlines the problems faced on skills, but there is room for optimism. Many manufacturers, valuing the skills their workforce hold, have taken positive steps to ensure they retain them (despite the recession) by implementing short-time working schemes.

Case study

A company in the transport sector finds that in general the basic skill level in the UK is good but understands the need for improving skills at all levels of the business for long-term success.

The company has no real concerns over skill shortages and does not find it difficult to attract the right skilled workers for their company. However, improving the skill levels of all workers – whether shop-floor or management – and ensuring that everyone has the appropriate level of skills is an ongoing task. Improving skill levels is important for the company to make certain that productivity remains high and quality is maintained.

Valuing the skills that the workforce has – means that implementing short-time working practices during the recession has allowed the company to retain skills and knowledge. The UK needs to make sure that skilled workers remain qualified and productive in order to compete effectively in the global landscape.

Without a decent physical infrastructure, the movement of goods around the UK from company to customer would be difficult. Three-fifths of respondents rate the UK's infrastructure as good, with just under a fifth as bad. The UK has approximately one hundred ports handling the largest volume of sea traffic across Europe⁹.

The ports, including major container ports such as Felixstowe, Southampton and Liverpool, handle approximately 580 million tonnes of freight a year. Ports handle over 95% of UK import and exports, playing a vital role as global trade grows and manufacturing becomes more firmly established in emerging economies. The value of trade through British ports was around £340 billion¹⁰ in 2006. Good road and rail networks ensure that goods are easily transported around the UK, helping supply chains to run smoothly and with minimum disruption.

More work to do

While many of the aspects of the business environment specific to manufacturing – such as skills, physical infrastructure and supply networks – are supportive to the industrial base, two areas were rated particularly negatively – tax and regulation.

Companies were most scathing about the UK tax system, with three-fifths rating it as bad, and only 12% as quite or very good. All sizes of companies and sectors showed a similar picture. A previous EEF survey¹¹ showed that over half of respondents said the tax burden for manufacturers (as a percentage of profits) had increased in the past five years. It also showed that four-fifths had experienced an increase in the complexity of the UK tax system.

In the World Economic Forum's Global Competitiveness Report, tax regulations were named as the third most problematic factor for doing business in the UK by respondents to their survey.

Over the past five years, the corporate tax system has been subject to a plethora of changes – making it neither predictable, nor competitive. While the headline rate of corporate tax has come down,

capital-intensive companies have seen the tax system become less supportive.

As government addresses the state of the public finances, there is good cause for concern about the future of business taxation, and the extent to which companies will be expected to bear some of the burden of increased taxes. Increases in taxes on employment have already been proposed and some fresh thinking on environmental taxes is not out of the question.

On the matter of regulation, a quarter of survey respondents rated the UK as good and over half as bad. Small companies were the most negative, with a balance of -40% for small companies compared with only -2% for large companies. We know that regulation can be time consuming and costly to implement – particularly for smaller companies.

For example, nearly three-quarters of companies have seen an increase in the cost of complying with health and safety regulations in the past three years and 84% have seen the same in the time spent dealing with health and safety regulations¹². The figure for those seeing growth in the time and cost of complying with environmental regulations in the past twelve months was three-fifths in both cases¹³.

Add this to tax compliance and new employment laws, and the burden of regulation has been expanding rapidly in recent years, despite a raft of initiatives to reduce the administrative burden and minimise the regulatory impact on the smallest companies.

Context and experience shape views

The context in which companies rate the UK as a place to do business can affect perceptions. Views of the UK's business environment don't stand still and as conditions improve or deteriorate here – the global landscape is also changing. The UK is only a 'good' or 'bad' location for manufacturing relative to other possibilities.

For example, the data shows that companies which have innovation and research & development facilities in emerging economies, rate intellectual property protection in the UK as better than those

⁹UKTI/DFT

¹⁰British Ports Association

¹¹EEF (Dec 2007) Blurred vision – The need for a clear strategy on business taxation

¹²EEF (Feb 2009) Leading the way – health and safety survey 2008

¹³EEF Climate and environment survey 2009

companies with no research & development in emerging countries; a balance of three-quarters rated IPP as ‘good’ compared with just over half for those companies who only conduct R&D in the UK.

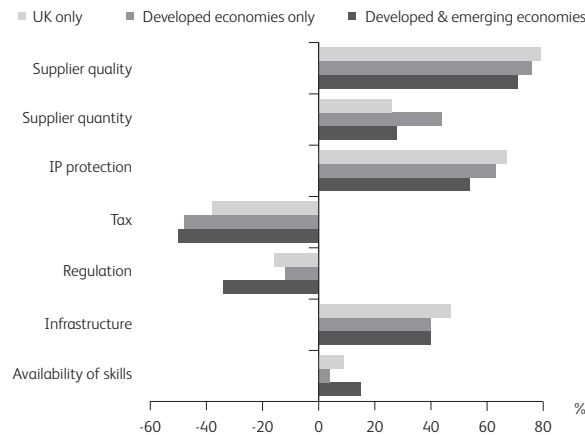
As we can see in chart 14, similar patterns are found when looking at where production is located. For availability of skills, those who have production in developed countries rate the UK, on balance, as worse than those companies who have production in the UK only, or in both developed and emerging economies. We know that in terms of qualifications, the UK is only mid-table (at best) in the OECD league.

Supplier quantity is rated most highly by those companies who have production in developed countries only. The UK may not be able to compete with emerging economies in terms of the number of suppliers available, but within developed countries it is rated well. Infrastructure problems often can slow delivery and turn-around times in emerging economies, and that experience had led companies who produce there to rate the UK higher than those companies who produce in developed countries only.

Chart 14

Experience of other countries shape views on UK

% balance of companies citing UK strengths by production location



Source: EEF/GfK NOP Global Value Chains survey

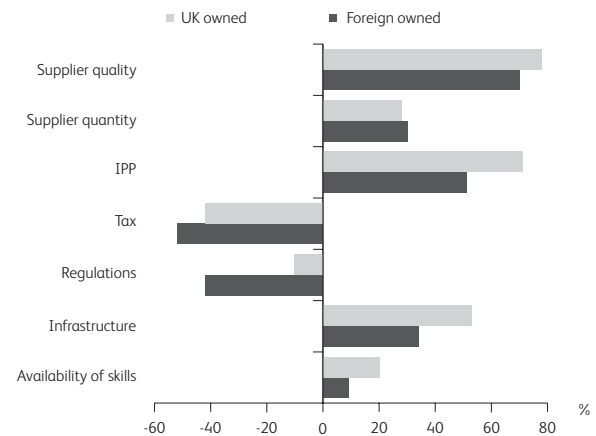
Foreign-owned companies are more positive about the UK as a place to do business than UK-owned companies on six out of the seven areas we investigated. Foreign-owned companies are specifically choosing to do business here in the UK and so presumably this is to be expected.

The UK offers foreign companies a large domestic market in which to sell into, as well as being placed as a gateway to Europe. As discussed previously, the UK is fully involved in all parts of the value chain – processes and activities that require a combination of the appropriate technical skills, supplier network and business environment. Therefore by specifically choosing to do business here, foreign-owned companies have been drawn by what they see as positives which can help their companies benefit and be competitive in the global marketplace.

Chart 15

UK has strengths in global value chains

% balance of companies citing UK strengths by company ownership



Source: EEF/GfK NOP Global Value Chains survey

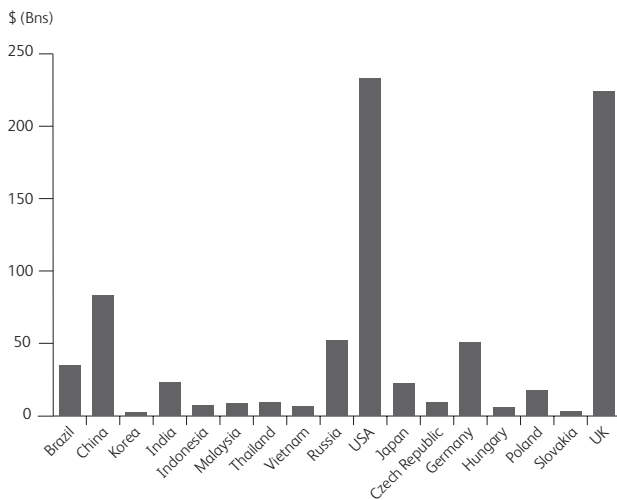
The positive points for the UK as a place to do business clearly attract foreign companies to invest and manufacture here. In our survey, two fifths of companies were foreign-owned. The foreign direct investment statistics speak for themselves; the UK was second behind the US in attracting FDI inflows globally at \$224 billion in 2007 (chart 16), representing over a quarter of all inflows into the EU.

UK Trade and Investment put the number of FDI projects made by international companies in 2008/9 at 1,722, up 11% from the previous year. The weak pound has also encouraged foreign business, making it cheaper to acquire UK assets.

Chart 16

UK attractive to inward investors

FDI inward flows in US\$ (billions) 2007



Source: UNCTAD

Conclusion

In many aspects, the UK business environment will continue to support companies' efforts to increase focus on innovation and high-value good and services. But there is more to do – particularly in creating a predictable and competitive tax system and pushing further on the better regulation agenda. These are among the issues that will affect both UK firms' ability to grow and the UK's attractiveness to large mobile manufacturers.

It is these companies that will help to maintain existing supply chains and boost the development of new ones to support emerging industries and technologies. While the UK has secured its place in global value chains, both a dynamic world economy and continual shifts in the balance of growth mean the policies needed to make the UK a good place for manufacturing will need to be as agile as manufacturers themselves.

About us

EEF is dedicated to the future of manufacturing. Everything we do is designed to help manufacturing businesses evolve, innovate and compete in a fast-changing world. With our unique combination of business services, government representation and industry intelligence, no other organisation is better placed to provide the skills, knowledge and networks they need to thrive.

Around a quarter of the UK's manufacturing businesses are our members and many more use our services to help them work better, compete harder and innovate faster. Because we understand manufacturers so well, policy makers trust our advice and welcome our involvement in their deliberations. We work with them

to create policies that are in the best interests of manufacturing, that encourage a high growth industry and boost its ability to make a positive contribution to the UK's real economy.

Our policy work delivers real business value for our members, giving us a unique insight into the way changing legislation will affect their business. This insight, complemented by intelligence gathered through our ongoing member research and networking programmes, informs our broad portfolio of services; services that unlock business potential by creating highly productive workplaces in which innovation, creativity and competitiveness can thrive.

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To talk about any issues your manufacturing business may be facing please contact Tom Lawton, Head of Manufacturing at BDO LLP, on 0121 352 6200 or 07778 343346 or email tom.lawton@bdo.co.uk

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