

28 February 2011

The Rt Hon George Osborne Esq MP
Chancellor of the Exchequer
HM Treasury
1 Horseguards Road
London SW1A 2HQ

Agricultural Engineers Association
British Automation and Robot Association
British Paper Machinery Suppliers Association
British Plastics Federation
British Turned Part Manufacturers Association
Confederation of British Metalforming
Gauge and Toolmakers Association
Manufacturing Technologies Association
Polymer Machinery Manufacturers and Distributors
Association
Printing Industry Confederation
Processing and Packaging Machinery Association
UK Industrial Vision Association

Dear Chancellor

Engineering and Machinery Alliance Budget Submission

A) Introduction

Our Budget submission focuses on the need to stimulate manufacturing investment long term to grow the UK economy and strengthen our balance of payments position for two main reasons:

- First, to provide the right conditions for manufacturing to help rebalance the economy sectorally and regionally.
- Second, to raise the productivity of the UK economy overall. Over the last 20-30 years a fundamental truth about economic development has been lost to policy in the excitement about the growth in the number of service jobs. Basically, economic growth is about machines, because whether it's in manufacturing or in services, increasing people's input productivity or resource input productivity requires the intervention of machines to deliver it. The UK therefore should encourage their innovation, design, manufacture and use.

Summary

- In the ten years 1998 to 2007, while UK manufacturing increased productivity by 50%, its contribution to GDP only grew 5% to £158 billion, whereas Germany, France, Spain and the US all increased the size of their manufacturing sectors by up to 37% in constant money.
- A policy encouraging sustained investment in capital intensive manufacturing over the long term will help the UK grow its own manufacturing base by similar proportions.
- Capital investment, R&D tax credits and access to finance and export support services at competitive rates are all crucial.
- The Government has already announced its intention to ensure that the UK's offer on exporting matches up. We look forward to welcoming the package details.
- Our submission therefore looks at the other areas and proposes actions, that:
 - 1) will provide some help on cash flow,
 - 2) provide financing with the grain of increasingly rapid technological development
 - 3) can be aligned with Government budgetary constraints and still coincide with manufacturers' need to plan investment on a rolling strategic basis,
 - 4) begin to tackle some of the technical problems that Basel III apparently creates for banks lending to UK SMEs (when compared to bigger companies),
 - 5) help bolster some certainties for start-ups and high-techs when it comes to markets and maintaining ownership of their company.

Background to the Alliance and the sector

The Engineering and Machinery Alliance (EAMA) is a self-help grouping of 12 trade associations (listed in our masthead) representing circa 1,700 firms in the mechanical engineering sector with sales of some £8 billion. They account for a quarter of the UK's mechanical engineering output, and according to HM Customs' data, sector exports account for about 70% of sector sales.

Typically, our companies supply 'enabling technologies' to other sectors (e.g. automotive, aerospace, medical, power, printing and food industries) in the form of machinery or packages combining services and products. Some of our members make machines that make machines.

In the UK much, but by no means all, of this is carried out in small and medium sized niche or specialist companies (SMEs) -- innovative, entrepreneurial companies pushing the boundaries of factory performance, extending the envelope of the physically feasible to new levels in terms of speed, precision and migration into novel technologies and materials.

Table 1 UK mechanical engineering is a major exporting sector and net contributor to the UK balance of trade (£ billion)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Exports	22.1	24.2	22.7	24.2	23.8	25.8	28.22	28.9	32.3	29.4
Balance	4.3	5.6	3.8	5.3	4.1	3.9	5.6	3.2	3.4	5.1

Source: Monthly Review of External Trade October 2010

Table 2 One of the main characteristics that sets mechanical engineering apart from the other main exporters is the average size of the companies involved.

Sector (2009)	Mechanical engineering	Chemicals	Pharmaceuticals	Motor vehicles	Air and space craft
No. of companies	9,175	2,702	461	707	439
Turnover £bn	31.7	38.7	16.3	28.4	22.1
Average firm sales £m	3.4	14.3	35.4	40.1	50.3

Source: Annual Business Survey 16 November 2010

B) The importance of increasing value added

According to the Office of National Statistics, in the ten years 1998 to 2007, UK manufacturing investment declined 40% while gross value added (GVA) increased by 5.3% and numbers employed in the sector fell by nearly 30%. (Note: We stopped the sequence at 2007 to exclude recession affected data that would make comparisons difficult.)

Table 3 UK manufacturing performance 1998-2007

Year	GVA basic prices £ billions	Average numbers employed (millions)	Net investment £ billions	No of companies
1998	150	4.4	20.4	169,376
2002	144	3.8	13.2	162,212
2004	149	3.4	11.7	154,967
2006	152	3.2	11.4	151,365
2007	158	3.1	12.0	149,101

Annual Business Inquiry June 2009

Using the EU's AMECO ECFIN database we can compare French, German, Spanish and US performance (Table 4) on a similar basis.¹

Thus, over the same 1998 to 2007 period, French, German, Spanish and US manufacturers grew their GVA in 'constant' 2000 euros and dollars by three to seven times the UK rate and in doing so kept their manufacturing employment levels significantly higher than the UK.

Table 4 Manufacturing gross value added comparison constant 2000 € and \$ 1998 to 2007

Country	1998			2007			% change 1998 - 2007		
	Sector billion	Nos employed millions	Per employee '000	Sector billion	Nos employed million	Per employee '000	Sector GVA	Nos employed	GVA per employee
Germany €	395.0	8.1	48.8	502.3	7.5	67.0	27	-7	37
Spain €	98.5	2.8	35.2	115.0	3.1	37.1	17	11	5
France €	188.0	3.6	52.2	218.8	3.2	68.4	16	-11	31
USA \$	1323.5	20.6	64.3	1813.5	17.2	105.4	37	-17	64

Source: AMECO ECFIN revised 29 November 2010

¹ Unfortunately UK employment data on this database is only available up to 2005, hence the need to use data sets from two different sources.

Government initiatives such as the Manufacturing Advisory Service pushing lean manufacturing techniques have vastly improved UK productivity growth and at over 50% (GVA per employee) the UK outperformed increases in France, Germany and Spain (5-37%) but not the USA (64%).

Table 5 UK GVA and investment performance 1998-2007 per employee and per company

Year	GVA per employee £000	Investment per company £000	Investment per employee £000	Ratio £GVA to £investment
1998	34	120.4	4.6	7.35
2007	51	80.5	3.9	13.17
Change %	+50	-33	-15%	+79

Source: workings based on Table 3

Conclusions

- France, Germany, Spain and the USA have all benefitted from an additional 16-37% rise in national manufacturing wealth which has flowed through their economies, creating extra demand for other sectors as well as of course contributing extra tax.
- The UK improvement has been achieved by paring back and cutting employment numbers by approaching a third (30%), whereas Spain actually increased manufacturing employment and France and Germany reduced their proportions (-7/-11%) by a fraction of the UK drop and invested for the future. Even the fall in US manufacturing employment is smaller (-17%).
- Indeed, perhaps the fact that UK companies have been investing less per employee than in the past while our competitors were investing in the latest technology is even more worrying than the poor investment performance per se.

C) Current considerations

Manufacturers investing in new plant and machinery face the following challenging considerations:

- How best to deal with the significantly shorter manufacturing machinery life cycles as important improvements are brought forward every couple of years so that as a rule of thumb the replacement cycle for modern machinery is now down to between five and seven years and continues to shrink.
- Access to finance hasn't become significantly cheaper over the last 12 months and the outlook in this area isn't promising.
- How to manage cash flow, when the increase in business can so easily lead to over-trading or missed business opportunities.
- Equity financing (EF) tends to be very costly from an SME or a start-up's perspective and yet the banking industry and the Government have focused on it as an important route to increase funding availability. (Our feedback is that yes EF is important, but if you have a good idea and a sound business proposition it's not that hard to get investors interested. It's much more difficult to get debt into the business.)
- Loans under the Enterprise Finance Guarantee (EFG) are really loans of last resort, when all other avenues have been used up. (Applicants' expectations would have been better managed had the EFG been branded and marketed to more closely reflect its limited, but very important role.)
- Asset financing, which in the current environment would be considered 1) a good alternative to pricey bank loans or 2) a way to work round shorter machinery life cycles can't play its full part because the terms governing Enhanced Capital Allowances and the Annual Investment Allowance exclude leased equipment.

SME access to finance and banks

We have already seen Barclays Bank withdraw its asset finance offering to businesses with sales of less than £5 million. This is a crucial concern for our sector given the average size of our companies.

The banking industry generally regards SMEs as presenting a higher credit risk than their bigger corporate counterparts. As a result banks are apparently required under Basel III to hold approximately twice the amount of risk weighted assets against an SME loan compared with one for a big company. This appears to be without regard to the type of business the SME is in or the type of clients it services. Basel applies equally to asset finance and to loans.

We believe that UK firms may well be at a disadvantage in flexing these requirements compared to their counterparts in Germany, France and Italy. According to the European Union's *Access to Finance Report* (September 2009), UK banks aren't as closely involved with their clients as banks in

the other three countries (e.g. the Hausbanken system in Germany). Bank loans in those three countries are more prevalent and typically go on fixed investment, which can then be used to pay off the bank. UK firms on the other hand are more likely to spend the money on running the business, including on R&D and on training.

Taxation, capital allowances and investment

Manufacturers working on improving their performance know that improvement usually means having to do something that they have never done before. Often that means investing in new skills, new procedures and new equipment and of course risk.

In the UK, businesses' Corporation Tax liability is assessed before they write down any machinery unless there is a special allowance for the type of investment they make. Other countries treat this depreciation differently.

The UK's capital allowances have varied quite considerably over the last 13 years making investment planning more complex and in essence encouraging a short-term approach, rather than the strategic, rolling investment programme that enables manufacturers to knit together changing technology and workforce skills requirements in a coherent plan.

In an interesting paper *Tax Reform – A manifesto for a balanced economy* EEF shows manufacturers using the 20% capital allowance will take 30 years to fully depreciate their investment against tax on the reducing balance basis that applies in the UK. This 30 year tax depreciation period for manufacturing machinery in the UK compares with radically shorter periods in competitor countries e.g. USA 3-10 years; France 10-20 years, Germany 10-16 years. Note: if the capital allowance is reduced to 12½%, the tax related write down extends out to 53 years.

Conclusions

- Bounded on the one hand by a relatively unfavourable and oft-changing investment tax regime and on the other by banks that require entrepreneurs to put their own homes up as security, SME manufacturers in particular have preferred in part to manage improvement through their ability to change the size and configuration of their workforce, training for specific workshop needs or, where that's not been possible, by taking on foreign workers.
- Meanwhile the challenge to increase the UK's productive capacity grows.
- The typical replacement cycle for modern manufacturing machinery has now shrunk to seven years but the UK tax system is still working as if it were on 30.
- The UK has invested less in high technology manufacturing machinery with knock-on, lower demand for school leavers and graduates with STEM skills to design, maintain and operate such machines.
- As a result, UK factories are underinvested compared with the high value adding automated producers in Europe, USA and Japan.
- Increasingly they face a threat from newly automating countries such as India and China.

D) Policy recommendations

Cash flow

Tax policy

We welcome the commitment to reduce small rate Corporation Tax to 20% from April 2011.

However, manufacturers' cash flow is still being squeezed.

Recommendations

1. It's therefore important to iron out the unnecessary tax wrinkles, for example a technical amendment to accounting standard FRS 5 so that firms servicing Just-in-Time contracts aren't subject to Corporation Tax liability when work in progress and stocks are grossed up and added to 'forward' sales.
2. Re-introduce the flexibility to delay VAT and other tax payment schedules as soon as possible.
3. The important changes for exporters announced in early February may help improve exporter access to deposit guarantees commonly made as a down-payment confirming an order.

SME financing

Government may have some room to help ease Basel III requirements on the banks, through action by the FSA or HM Treasury in the following areas:

1. *SMEs in large company supply chains*: Most large OEMs depend on SMEs in their supply chains. If the OEMs highlighted these suppliers to their banks, the banks would be able to grade them as a lower risk, warranting easier terms and therefore reducing the level of interest that the banks would need to charge.
2. *Premature default*: Strict adherence to the Capital Requirements Directive triggers default “90 days past due”. It can do so for relatively paltry sums. It would be more sensible to place more importance on the sums involved and their significance to the company owed the money.
3. *SME loans*: Banks would be able to lower their rates if the losses associated with default could be reduced, e.g. through some insurance scheme or bond as per ECGD.

Reluctantly, we are coming to the conclusion that UK manufacturing SMEs are unlikely to benefit from the sort of supportive relationship with their banks that similar size firms enjoy in Germany and France or the USA. Action on the above will help ensure a more competitive financial partnership for many manufacturers but ultimately maybe only a dedicated Infrastructure and Industrial Investment Bank will make the necessary difference. It would certainly change perceptions of the UK as a place to run a manufacturing business.

Start-ups and high technology firms

Recommendations

To make their way start-ups and hi-tech firms need consistent frameworks that:

1. Define a recognisable market with consistent tariffs and regulations that don't keep changing
2. Aren't subject to change as Government takes on a different pet-technology only to drop it later in favour of something else
3. Recognise there is immense pressure to deliver everything to shorter timescales and this includes rewarding the finance that's placed in companies to help them grow.

Investment

Investment allowances

The Annual Investment Allowance cap, currently at £100,000 is due to be reduced to £25,000 in April 2012, when according to the Red Book “it is expected that over 95 per cent of businesses will still have all their annual investment covered by this allowance”. That's true, but it's simply because there are far fewer capital intensive businesses in the UK and part of the task of rebalancing the economy must be to grow their role, if manufacturing is to help re-ignite economic growth.

Table 6 Comparing manufacturing and businesses services company investment

	Number of companies	Sector Value Added £ billion	Sector investment £ billion	Investment per company (approx)
Professional, scientific and technical activities	330,412	107	4.5	£14,000
Manufacturing	131,782	150	11.3	£85,000

Source: Annual Business Survey 15 June 2010

Manufacturing investment has to be continuous to improve performance and efficiency.

The intention to reduce the capital allowance rate for items in the general pool from 20% to 18% is another retrograde step for capital intensive firms.

The combination of these steps even puts UK-based manufacturers at a disadvantage compared with service companies in the UK. And yet Government wants manufacturers to help rebalance the economy (and account for a larger proportion of UK GDP).

Recommendations

1. The single largest barrier to investment in new technology is the failure of the tax system to adequately recognise its importance. An Annual Investment Allowance of £100,000 is simply not adequate for any company in advanced manufacturing. The present rate of write down (20% on a reducing balance) on expenditure thereafter is also lower than that available in competitor economies – and does not reflect the relatively short life cycle of much modern high tech equipment. If Government is unable to tackle this issue at the moment due to budgetary pressures, it could still indicate its preference for correcting matters when the finances allow.
2. Otherwise the Government's plans, will, when implemented in 2012, substantially worsen the position of Advanced Manufacturing. At the very least we suggest that, in light of the importance placed on the advanced manufacturing sector in securing growth, urgent consideration be given to either further delaying the implementation or revisiting the substance of the changes.
3. We are, of course, aware of the argument often made against Capital Allowances, namely that good companies will carry out the investment anyway. However to accept this argument would be to miss the point, that the key to securing UK business success is to promote competitiveness. As we have shown, other countries that are embracing the importance of services in their economies are also pushing to raise value added in their manufacturing. Clearly, the current UK tax framework puts UK companies at a disadvantage. It is effectively a barrier caused by Government policy. Ultimately, manufacturing will serve the UK best when it its own long term investment priorities go with the grain of tax policy rather than against it.

Research and Development

The R&D Tax Credit is an absolutely invaluable support for high tech or research-based start-ups, not only helping them through the early years when they are loss making with payments that can be used on company operations but then in later years continuing to encourage innovation.

It is a very important lever and without it, it is difficult to see how such companies would be able to make their way in the UK.

Recommendations

1. We therefore share the views expressed in the Dyson report on the need to:
 - a. Focus R&D tax credits on high tech companies, small businesses and new start-ups
 - b. Increase the rate to 200% when the public finances allow
 - c. Simplify the claims procedure.
2. To grow its manufacturing base, the UK needs to improve its ability to test and commercialise innovation, not only from the larger companies but also for SMEs.
 - a. Make it easier (less expensive) for SMEs to take part in leading innovation-focused organisations such as the Technology Strategy Board (TSB) and the Manufacturing Technologies Centre.
 - b. Extend TSB funded projects to cover the pre-production phase so that a proportion of the customers' costs associated with testing and evaluating prototypes or demonstrators supplied by SMEs can be covered (e.g. agricultural machinery for a low carbon future).
 - c. The total budget for this would be limited (say to £30 million). Projects would be approved in a twice yearly competition.

With best wishes

Yours sincerely



(signed electronically 28 February 2011)

Martin Walder
Chairman

cc Mark Prisk MP – Minister of State, BIS
Catherine Green, Jaya Choria – HMT

Marie-Anne Mackenzie, Brian Greenwood, Sandy Grom – BIS
Member associations