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The high tech manufacturing sector in Scotland

This Seminar, held in the new Informatics Forum Centre at Edinburgh University, was one of a series on key sectors of the Scottish economy designed to respond to the suggestion of the Secretary of State for Scotland, Jim Murphy, that the Institute might usefully provide Ministers with material for reflection on economic issues. Ian Ritchie, a Trustee of the Institute and “serial entrepreneur” was Chairman. Calum Paterson of Scottish Equity Partners and Jim McColl of Clyde Blowers were the speakers.

Jim Murphy himself attended, together with civil servants both from his office and from the Scottish Government, and the participants covered a wide range of firms, capital providers and facilitators as well as the University sector.

The Question

The question addressed was “How could the Scottish economy capitalise on any competitive advantage in engineering and technology?” Past Secretaries of State had been confident that the conjunction, in Scotland, of managerial capital, financial capital and intellectual capital would ensure that advantage. The Seminar speakers (each a leader in the managerial and venture capital fields) provoked a lively re-appraisal of that confidence, not least as regards the intellectual capital role of Higher Education.

An Investors View

Calum Paterson, speaking as a major investor in the sector, described its Scottish context as one in which following the decline of traditional manufacturing the diversification into lighter industries such as electronics had produced less lasting impact than had been hoped or supposed. But this had not altered the fundamental that the Scottish sector had to operate in “the very great space between dynamic enterprises delivering high added value from high skills and static enterprises relying on low skills and low value.

Against that background he posed three questions:

1. What had we now learned about the nature of the creation process in the technology sector?
2. What should we make of the ambivalent cultural attitudes to its creators?
3. What guidance could most usefully be offered to Government in its policy making?

So far as sector creation went we should learn, from the Silicon Glen experience, to look to indigenous companies rather than to foreign investment to delivery ‘value added’. We could also learn from the current economic situation that we should not so readily accept that we had ‘moved’ from manufacturing to a service economy. Weakness in new business formation and innovation was a fact but he asked, was it the true issue?

That issue was, not so much manufacture as our ability to market products and our relevant point of reference should be Japan - a producer economy but not an inventive one. Our R & D spend might be well below average so let us instead try to be skilled imitators (like the Japanese) and think more of how to engage with consumers.

[Jim McColl in his own presentation emphasised that the products both of Clyde Blowers and acquisition Weir Pumps were long established and familiar ones]

On the cultural ambivalence towards the entrepreneur in Scotland, Paterson identified the root of the problem in the notion that 'capitalism' had somehow been an 'invention' of bankers or economists whereas in truth it was a natural system whose whole claim on our attention was that it worked. Adam Smith had observed how a system worked: he had not invented or imposed a system. Paterson equally contested the common notion that entrepreneurial activity was somehow at odds with societal activity. On the contrary it was an essential contributor to social activity through the employment it created and the other benefits it brought. Nor were entrepreneurs to be equated with 'big' business - they did not naturally flow out of large organisations but belonged to the world of small business.

The current crisis was one for some capitalists but it was in no sense a crisis of capitalism.

Identifying a helpful role for Government in fostering an entrepreneurial economy was an elusive task. Silicon Glen had not delivered the desirable outcomes of high skill and high value added enterprises. There was a temptation for Governments to select industries for assistance but selection, Paterson argued, entailed "an imperfect view of the whole". And showing a preference for one type of operation created the moral hazard of discouraging innovation in those who were not preferred.

There was also a natural temptation to protect employment - but the proper approach should be to leave entrepreneurs free to deliver that by product. Redistribution should be sought through public benefit not through imposing deterrent taxes on entrepreneurs' profit.

Paterson saw the most practical role of Government as being the creation of an 'infrastructure' which could serve to attract economic activity (and not merely in physical forms such as transportation but in more general ways such as living conditions). It could also help in 'micro economic' interventions such as the provision of education and training.

[Others in subsequent discussion urged Government to be a 'broker' rather than 'agent' exercising its influence indirectly rather than directly]

A Manufacturer's View

Jim McColl spoke from experience in Clyde Blowers (CB) which had built an international group in an old established subsector and had now acquired Weir Pumps (another established company).

He emphasised that the success of Clyde Blowers was not based on novelty. Pumps were a very old established product indeed, and what he had done was to “dust them down” when the original owners had sought to leave manufacture for spares and service only. The ‘dusting down’ had meant breaking with the traditional approach of ‘build it in Glasgow and ship it from there’ – so CB had moved production lines to India.

It had also meant looking closely at what consumers demanded and how the desired products could be made cost effective. The product was as right for CB as it had (once) been for Weir but CB believed they could renew the development of the product (“D” not “R & D” was how he put it) and reshape the product range.

Such a strategy had however required engagement with employees as much as with customers, and CB had been active in that regard. They had, for example, increased rates of pay which had become too low, and had won the cooperation of employees in the transfer of production to India. That move had not resulted in a lessening of demand for what was still manufactured in Glasgow.

[McColl added in later discussion that a concentration on higher value products could as well increase Turn Over as reduce it]

McColl was critical of both the role which the Banking system now played as the source of capital and of the contribution which the University Sector made as a source of intellectual capital. The trouble with the Banks was twofold. The UK sector’s over reliance on Banks meant that problems at a time when competition between Banks was reduced and Bank margins had to be (greatly) increased. The UK problem went beyond traditional Bank borrowing. The ‘bonding’ market for example (critical to exports) was notably defective. He contrasted the position in the UK unfavourably with the current position in Germany when the Central Government - by guaranteeing some lending to mid cap companies - had taken pressure off the Banks as providers.

As for the Universities, McColl thought their concentration on research was stifling any interest they might have had in working with industry or working in industry. Indeed, as regards the education of their own technologists, CB had taken the initiative themselves by ‘customising’ University Masters Courses to their own needs.

[The criticism of the research culture was redoubled by Jeremy Peat in his summary below].

We had to recognise that the old easy interface between Academia and Industry had gone with the ending of critical mass in our industrial sector (in which, as someone pointed out, a theorist like Kelvin could take a simultaneous interest in boiler design).

Discussion

There was a vigorous open discussion on the following theses:-

The size of the Sector

One participant said that neither the relative size of our manufacturing sector or of the engineering component within it was well understood – the Scottish Government had been surprised to discover (their own) statistical evidence.

Start up Rate

Paterson distinguished between the start up rate in general (low) and the start up rate for high value added companies (this might compare more favourably with competitor countries). How would the U.S. look for example if one stripped out Silicon Valley?

Are there financing gaps?

Paterson said that there was no reason to expect a natural progression from start up finance to any successive financing stage. Moreover, Business Angels at the start up still might not be as free to concentrate on working with the companies as they out, since they had to watch their own financial position e.g. on dilution of interest.

Comment was made on withdrawals from the Venture Capital scene overall e.g. the migration of its players to the Buy Out market and the withdrawal of the 3 i branches in Scotland. McColl thought that the large investment institutions (absentees from the market) should be directed to put some small percentage of their funds into the Sector.

Public Sector Procurement

The Chairman asked whether public bodies such as the NHS should not be pressurised into supporting local providers. Was it sensible that Scottish healthcare equipment producers had to go to the U.S. to find their purchasers? Others conversely were concerned that any home market privileges might divert Scottish companies from building global markets.

Higher Education

Some participants thought the contribution from Academia was 'improving', although it in its turn depended on the existence of appropriate manufacturing 'clusters'.

The High Value/Low Skills Divide

Several participants noted that India was now becoming competitive on 'brains' as well as 'costs'.

What emerges from all this?

After the open discussion the Institute's Director, Jeremy Peat, gave this summation of ongoing issues.

1. If one looked back at past outcomes one had to be struck by the notable absence of creation of any new Scottish based business of substantial scale over the last fifteen years. If one looked forward to future policy it was clear that any creative impulse would derive from the high added value contribution – and that, as the developments in India indicated – would be a more competitive task than before.
2. Looking to management the Clyde Blowers example showed how much a thoughtful approach and a communicative management style could still achieve.
3. At the 'cultural' level, conversely, the problem might be deeper than it appeared since in Scotland (uniquely?) there was as much ambivalence about entrepreneurial failure as there was about entrepreneurial success. Hence the acceptance of risk would be a highly significant issue – and this at a time when recent events in the financial sector were casting a long shadow. [The 'Risk' issue was taken up in informal discussion afterwards]
4. The problem with modern Academia might be deeper than supposed if (as he would argue) the influence of the Research Assessment on Higher Education funding skewed University activity towards inward peer group publication and away from external engagement. Clyde Blowers initiative in 'customising' a Master Course looked to be a helpful contrast here.
5. Improvement of the "infrastructure" had been urged on Government by several participants. But in this area Government would need guidance on specifics, and infrastructure improvement could only come over a relatively long time.

***Robert Bertram, DHI Trustee
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