Tempestuous Seasons

'Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is past the ocean is flat again'

08/07/2012

A response to Robert Crawford on Innovation

Dr Robert Crawford, ex-chief executive of Scottish Enterprise (SE) and currently Director of Innovation, Investment and Growth at NESTA had a fascinating piece in yesterday's Sunday Herald in which he attributes Scotland's poor long-term economic performance (asserted not evidenced, but I guess this is a discussion for another day) to a comparatively low rate of innovation. The consequence of not resolving this problem? Scotland will become…ahem…the next Greece.

Appropriately, Dr Crawford explains right up front that innovation is about much more than R&D; other significant factors he identifies include skills development, good management, organisational processes and clever marketing. He deserves credit for raising issues that are usually either overlooked or considered in isolation i.e. a lot of time and money is spent increasing the stock of skills but almost no resource is expended in helping organisations use these skills more effectively (Scotland and the UK are unusual in this regard). And he's undoubtedly correct that a mature, evidence-based discussion about the national innovation system is long overdue.

[An aside…learning from successful productivity enhancing change implemented in large, unionised Scottish firms, the STUC tried to engage the Crawford run SE in a discussion about joint activity to help address at least three – skills, management, organisational processes - of these deficits. Nature of SE response? Patronising, disinterested, aloof].

However, Dr Crawford's argument falls apart when he lists his policy recommendations which are, to put it politely, contradictory. After concluding that '*supply-side offerings aren't working and they are never going to*', he goes onto to plea for an '*avowedly low regulation, low tax economy*'. So is it about supply-side action or not? Is his point that micro interventions such as key sector demand led economic development strategy, R&D grants, business infrastructure, skills support etc are only effective in a low-tax, low-regulation context? If so, he fails to 1) clarify this point and 2) provide any evidence whatsoever to substantiate it.

Seems to me that his argument is based on a number of assumptions which may be commonly held but are nonetheless false:

That Scotland is over-taxed and over-regulated – or at least, that levels of both currently act to constrain innovative activity.

It is so nauseatingly tiresome having to rebut this nonsense yet again but, if we care at all about economic equality, security and stability, then rebut we must.

So, with a deep breath….all the international comparative evidence shows that Scotland is a very lightly regulated economy: the second most deregulated product market (hey banking crisis we love ya!) and the third most deregulated labour market (hey, what's wrong with 20% of the workforce rotating between unemployment and low wage insecure employment?) amongst the 30 nations surveyed by the OECD. Scotland is also in the middle to low cohort of OECD nations in terms of business taxation. If anyone can be bothered reading the detail they'll find it here and here.

Of course George Osborne has tried to make a case for tax cutting and deregulation based on the World Economic Forum's Global Competiveness Report. This report, much of it based on interviews with '100 business executives', is hardly credible but the point to stress is that even the GCR does not support Osborne's case – other nations perform better in terms of overall competitiveness (a wonderfully slippery concept) despite having higher taxation and regulation. Again, if you can summon the energy to read a detailed rebuttal of Osborne's argument you'll find one here.

That low tax, low regulation countries do better at innovation

Show me the evidence please.

There a number of global innovation indexes compiled in the main by the international consulting community and the commentary which accompanies them reflects the prejudices of the sector. Nevertheless, none of the main rankings reflect markedly better performance by low tax, low regulation countries. Indeed, the outstanding performance of high tax and relatively high regulation Sweden is a constant across the surveys.

And while I agree with Mr Crawford that R&D is an imperfect proxy for innovation, there's no denying its relevance. Again (See table 4B here), there's no relationship between the level of tax and regulation and the levels of spending on business R&D.

If Scotland is currently underperforming on innovation it's nothing to do with being over-taxed or over-regulated. Here's some data hoisted from the OECD's innovation indicators:

Variable	2006					
	RD_EXP_BUS_PPP: R&D expenditures performed by the business sector (PPP)	RD_EXP_GOV_PPP: R&D expenditures performed by the government sector (PPP)	EDU_LF_ISCED_34_PERC: Secondary education (as % of labour force)	EDU_LF_ISCED_56_PERC: Tertiary education (as % of labour force)	HTM_PERC_EMP: High and medium high-technology manufacturing (as % of total employment)	KIS_PERC_EMP: Knowledge intensive services (as % of total employment)
Regions						
Denmark	3172.229446	310.92155	47.37143558	37.88814794	6.005542415	43.49804026
Finland	4221.06411	553.3538879	44.97426054	38.56557019	6.810322056	41.10441938
Sweden	8705.922881	522.2844454	54.04216853	32.52058342	6.325242248	47.6661061
Scotland	743.8858559	448.6215289	44.31195123	34.84912388	3.821850841	43.42508901

data extracted on 07 Aug 2012 07:00 UTC (GMT) from OECD.Stat

Note how far Scotland lags Sweden, generally identified as the world's most innovative economy, on all but one indicator. Is Sweden a lower tax/regulation jurisdiction? Hardly.

On the World Bank's Ease of Doing Business Indicators the UK (no separate Scottish data but the business tax situation is not substantially different) sits at number 24 out of the 184 countries surveyed (behind economic powerhouses such as Rwanda and Malawi) while Sweden is a lowly 50th. World Bank analysis concludes that the UK's total tax rate (as a % of profits) is 37.3%. Sweden's is 52.8%.

The situation is similar in regard to regulation: as mentioned above the UK is a very lightly regulated economy. Sweden is the 14th least stringently regulated labour market, sitting just below the OECD average and the 13th least stringently regulated product market. In terms of 'state control of the economy' Sweden ranks 22nd out of OECD nations, the UK 7th.

That the private sector is the primary source of innovation and growing the private sector will necessarily boost investment in innovative activities

This is the crux of the debate but for those genuinely interested in boosting investment in innovation Dr Crawford presents the arguments in a very unhelpful way. For the public role in innovation is crucial and should not be diminished. [note – I'm not saying that Crawford denies that public investment plays a role but both the presentation of his argument and policy recommendations act to seriously undermine the public contribution to the innovation system].

After hearing the brilliant Professor Mariana Mazzucato at the TUC's After Austerity conference in June, I read a couple of her recent publications on innovation: the Demos pamphlet, '*The Entrepreneurial State'* and '*Financing Innovation and Growth: Reforming a Dysfunctional System'* the culmination of a 3 year European Commission funded research programme which she led.

The first describes the role of the state in the innovation process as enabling '*private and public organisations to interact in such a way that new knowledge is produced and diffused throughout the economy to allow structural change and growth'*.

The second document sets out why that role is essential:

"The success of investments in innovation is always highly uncertain, its impact can be difficult to measure and sometimes government support is ineffective or even counterproductive. However, major successful innovations are almost always associated with some degree of government support. Without such support a society will have to forego innovation. Governments have a key role in investing strategically over the long-term in areas where businesses do not, or cannot, invest, such as pre-competitive stages of technology development".

Prof Mazzucato argues intensely that the role of the state must extend far beyond getting the supply side conditions right:

"*…the role of government in the most successful economies has gone way beyond creating the right infrastructure and setting the rules. It is a leading agent in the achieving the type of innovative breakthroughs that allow companies and economies to grow, not just by creating the 'conditions' that enable innovation. Rather the state can proactively create strategy around a new high growth area before the potential is understood by the business community (from the internet to nanotechnology) funding the most uncertain phase of the research that the private sector is too risk averse to engage with, seeking and commissioning further developments and often even overseeing the commercialisation process. In this sense it has played an important entrepreneurial role".*

"The high risk and serendipitous characteristic of the innovation process is one of the main reasons why profit maximising firms will invest less in basic research and more in applied research because of the greater and more immediate returns from the latter".

This is not to say that the Scottish Government and its agencies are getting everything right at the moment. But if a discussion is to take place, and I think it should, then it's best to start with a better understanding of the extent and nature of the state's role. Shrill calls for cutting tax and regulation are a profoundly unhelpful diversion from a proper evidence based consideration of how the public role in the Scottish innovation system.

That the problems of Greece result from low innovation

The idea that without radically improving its rate of innovation Scotland becomes Greece is precisely the type of argument that prevents the kind of mature national economic discussion that Dr Crawford tells us he wants. Innovation is undeniably important to long run growth. The surveys tell us that Germany is much less innovative than the UK but on growth, jobs and a series of other indicators it seems to be performing not at all badly. Switzerland has a very high rate of innovation but a low recent rate of GDP growth. If Greece had kept the drachma and/or managed to collect its taxes then, yes, its rate of innovation would have remained low but it would not be facing the type of crisis it currently confronts.

Beyond tax and regulation Dr Crawford lists a number of other policy recommendations which are so general as to be meaningless (what are we to make of 'a radical review of public service delivery that doesn't have to mean privatisation'?), already widely recognised (attracting highly skilled migrants) or sensible but difficult to implement (using public procurement to foster innovation). Dr Crawford also believes that Scotland 'requires a complete review of the school curriculum to make our children much more savvy about what is going on in technology'. But we've just undergone radical changes to the curriculum and the emphasis on creativity in the curriculum for excellence should benefit innovation in the longer-run. Surely innovation is about much more than technology? Similarly, it's all fine and well thinking about 'how to make available to entrepreneurs the IP owned but not exploited by universities' but if this is to be a sustainable strategy then public investors must be able to capture a fair proportion of the returns for the long-term health of the innovation system.

Maybe much of the above can be dismissed as the type of rhetorical flourishes that too often infect economic arguments in Sunday comment columns. What's more disconcerting is that Dr Crawford fails to address some hugely significant factors behind Scotland's comparatively poor record on innovation. These include:

Finance: investment in innovation (granted not all of it) requires capital as does investment in skills training and capital stock. Scottish businesses invest less in skills and capital stock than most other comparable European nations. Is this also attributable to deficiencies in 'culture and attitude'? Or might Scottish businesses struggle to lay their hands on the type of patient, committed capital necessary to invest in long-term productivity enhancing innovation? It's disappointing that Dr Crawford doesn't even pose the question.

Professor Mazzucato again:

"*Financialisation can also destabilise the economy and undermine economic growth in other ways. Growth relies to a large extent on productivity enhancing innovation which typically requires investments of patient capital and a distribution of incentives that rewards everyone who contributes to the process – including workers and taxpayers. To be effective, these incentives and rewards need to be roughly commensurate with the money, time and energy that they contribute and put at risk".*

"The current financial system often promotes impatient capital, which eschews long connections with investment projects. Practices such as corporate stock buybacks to attain short-term boosts in share prices, premature initial public offerings or trade-sales of start-ups, the use of high leverage to amplify returns at the long-term expense of firms, workers and pension funds and excessive executive pay at the expense of workers, taxpayers and long-term shareholders are all symptoms of this problem".

Prof Mazzucato also provides empirical evidence to show that financial markets do not reward innovation; high growth, innovative firms receive low credit ratings due to their higher risk profile.

The short-termism of UK financial markets is increasingly widely recognised. This is a key barrier to greater investment in innovation. It should not be avoided lest we offend Scotland's still powerful financial lobby.

The 'success' and durability of low road competitive strategies: too many Scottish businesses sustain an acceptable level of profit by pursuing corporate strategies that are anti-innovation: work intensifying approaches to employment practice and weakening investment in skills and training. Often this can be a straightforward business decision but is commonly the result of supply chain pressures exerted by a handful of monopsonistic buyers (e.g. supermarkets).

This problem is *exacerbated* not solved by a low tax, low regulation approach to economic development which practically forces companies to compete on a low road basis.

SME's: Dr Crawford to his credit has a bit of a kick at Scotland's SME community for their poor record on innovation. But the problem is that small firms are just not that important in driving innovation. And as their representatives keep telling us, Scotland is a small business economy. Across the UK, independent SME's only account for about 3.5% of all R&D. Scotland's approach to development which favours SME's though initiatives such as the Small Business Bonus is likely to prove detrimental to innovation growth in the longer-term.

Manufacturing: Dr Crawford argues that '*we do much better in manufacturing but that's a diminishing part of the economy'*. Need it be? Contributing more to productivity and innovation is but one of manufacturing's benefits. Perhaps tax breaks aimed at increasing manufacturing's share of the economy are therefore a much better use of resources than blanket tax cuts which favour extractive finance and under-performing SMEs?

So having criticised Dr Crawford's prescription, what would more effective policy recommendations look like? Well I intend to blog at length in the near future about how Scotland's economic strategy might be revised to boost quality employment, economic security and, yes, innovation. So for the moment, with another hat tip to Prof Mazzucato, I'll stick to the following:

- Establish a public development bank to provide patient, committed capital to innovative, growing Scottish firms
- Introduce a public intervention to support workplace development and organisational change along the lines of Ireland's National Centre for Partnership and Performance (recently subsumed into the Economic and Social Council) or Finnish Workplace Development Programme or similar initiatives in Norway, Sweden and Germany
- End direct transfer's to SME's and funnel money into the above
- At UK level...review R&D tax credits, abandon plans to introduce a patent box and use funds saved to directly commission the technological advance in question
- Abandon plans for Enterprise zones

- Adopt a more proactive interventionist approach to green tech innovation
- Radically overhaul unambitious plans for Green Investment Bank

Finally, worth pointing out that although, yes, innovation is good and necessary for long run sustainable growth, not all innovation has been beneficial for the economy. Credit Default Swaps anyone?

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Excellent piece Stephen. Pithy and well argued. You should be seeking a piece in the Sunday Herald too. Lets have a chat sometime?

Posted by: Richard | 08/07/2012 at 03:31 PM

I ought to comment on the recommendations too....
Public Development Bank - Not a bad idea but depends on the detail. Spanish regions had those....

Don't know enough about the others. Yet.

For all forms of 'social' investment fund the challenge as i see it is to create something that doesn't simply replicate current private sector investment behaviour but in a niche market but at the same time uses the best of those types of investment skills in a fund that still makes investments that generate an - economic - return.

Posted by: Richard | 08/07/2012 at 04:00 PM

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