

FEBRUARY 2016



Deepening Partnerships

How Universities Work with the External Organisations

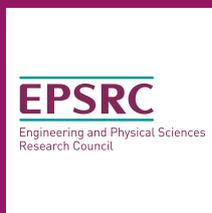


A Summary of
'The Changing State of Knowledge Exchange:
UK Academic Interactions with External Organisations 2005 -2015'

by Hughes, A., Lawson, C., Salter, A., Kitson, M. with Bullock, A. and R. Hughes. London: NCUB

Written By David Docherty

With thanks to:





...engagement is not a 'third mission' but a central element of the existing roles of the university, i.e. teaching and research.

Hughes et al. 2016, pp 49¹



Over the years, the popular images of the academic have been the bumbling Jim Dixon of Lucky Jim, the grasping Howard Kirk of the History Man, the tortured intellectuals of Philip Roth, or the backroom 'boffins' in endless sci-fi films and detective movies. At the core of this is the assumption that universities are isolated ivory towers whose employees are only interested in their own research or advancement.

Despite thousands of anecdotes about academics, solid, large scale, independent evidence about how they actually engaged with external organisations was thin on the ground until 2009, when business researchers at Cambridge produced a report based on 22,000 academic respondents². The largest survey of researchers ever conducted anywhere, it covered the years 2005-2009 and for the first time provided deep insight into how scholars exchanged information, ideas, theories and experience with businesses, the public sector, creative institutions and charities.

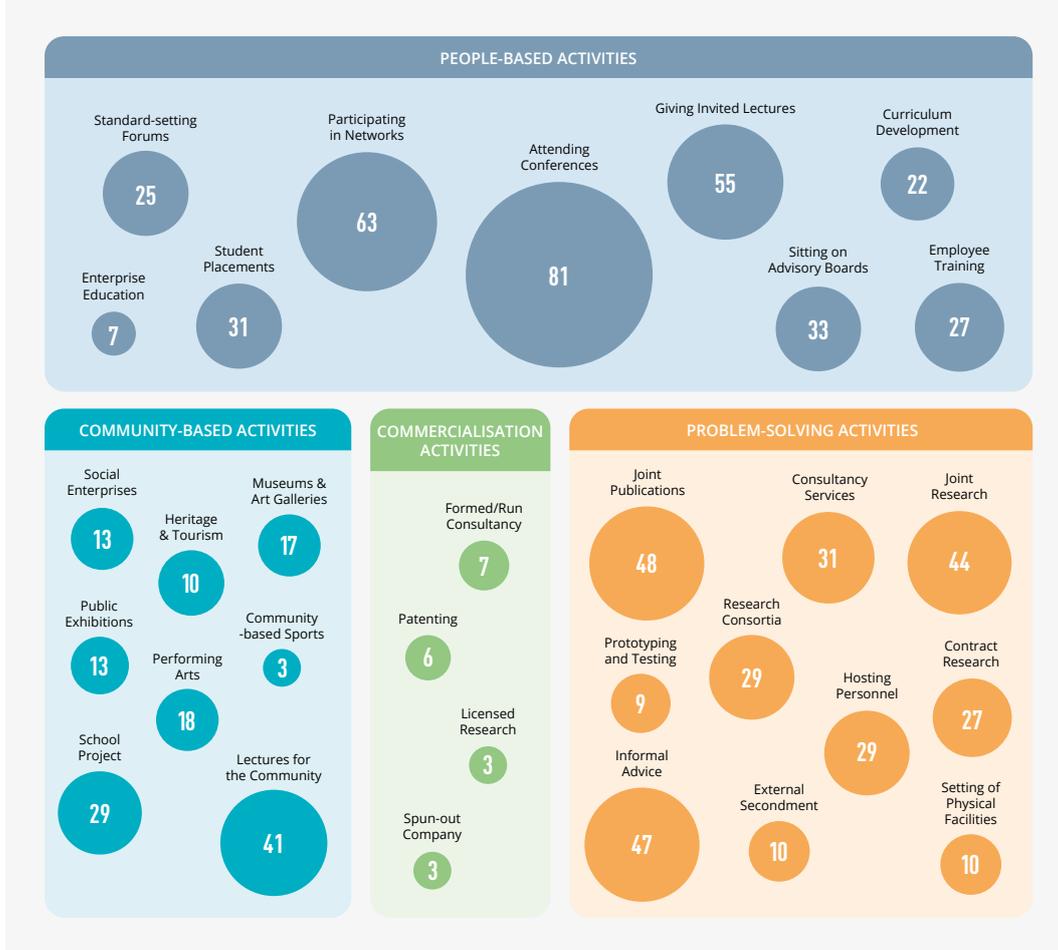
The results of this so-called 'third mission' were both surprising and illuminating: academics in every discipline and of all ages spent a great deal of time and energy engaging with external bodies. These activities covered everything from training, consulting and advice, joint research, commercial activities, to public engagement.

After the deep economic challenges of the great recession, the National Centre for Universities and Business brought together public funders and the original research team plus scholars from Imperial and Bath to reproduce the survey. The results show that despite the collapse in investment in the UK during the financial crisis and the slow recovery of the economy, the desire of academics to build partnerships and continued policy support have been associated with robust and sustainable engagement activity.

¹ Hughes, A., Lawson, C., Salter, A., Kitson, M. with Bullock, A. and Hughes, R.B. (2016) 'The Changing State of Knowledge Exchange: UK Academic Interactions with External Organisations 2005 -2015', NCUB, London.

² Abreu, M., Grinevich, V., Hughes A. and M Kitson (2009) "Knowledge Exchange between Academics and the Business, Public and Third Sectors". Cambridge: UK Innovation Research Centre.

Exhibit 1 Academic external interaction activity and commercialisation in the last three years (% of respondents)



Reproduced from Exhibit 44 in Hughes et al. (2016)

The financial stresses in the economic system were primarily apparent in a lower proportion of patenting (from 7% in 2008/9 to 6% in 2015) and spin-outs (from 4% in 2008/9 to 3% in 2015), but to some extent, this was compensated for by stronger community relationships. And there was strong evidence that academics were deepening their engagements.

The other recessionary impact on academics was on the reduction of consultancies as public and public sector retrenchment bit. In general, the results of both surveys are broadly comparable across time and the research suggests academics have become better at juggling the various ways of working with external partners.

To understand these enduring patterns and future policy implications, it is important to understand the reasons academics partner with external bodies. What motivates them?

Why Academics Do The Things They Do

The majority of academics work with external organisations primarily to further their investigations, help shape their teaching and accomplish the outreach mission of their university. Personal financial gain is their least important consideration.

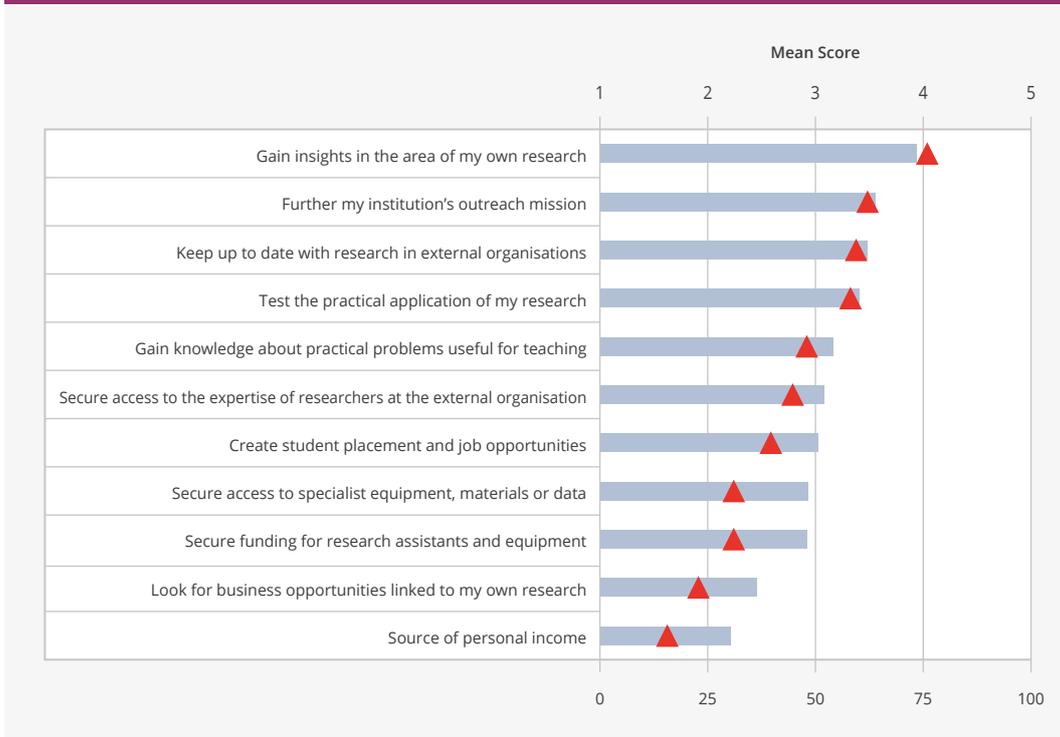


...while academics may engage less, they may be using this time more effectively than they have in the past. The strengthened emphasis on impact in both research and teaching may also have encouraged academic staff to feed their external research into their other work roles.'

Hughes et al. 2016, pp 74



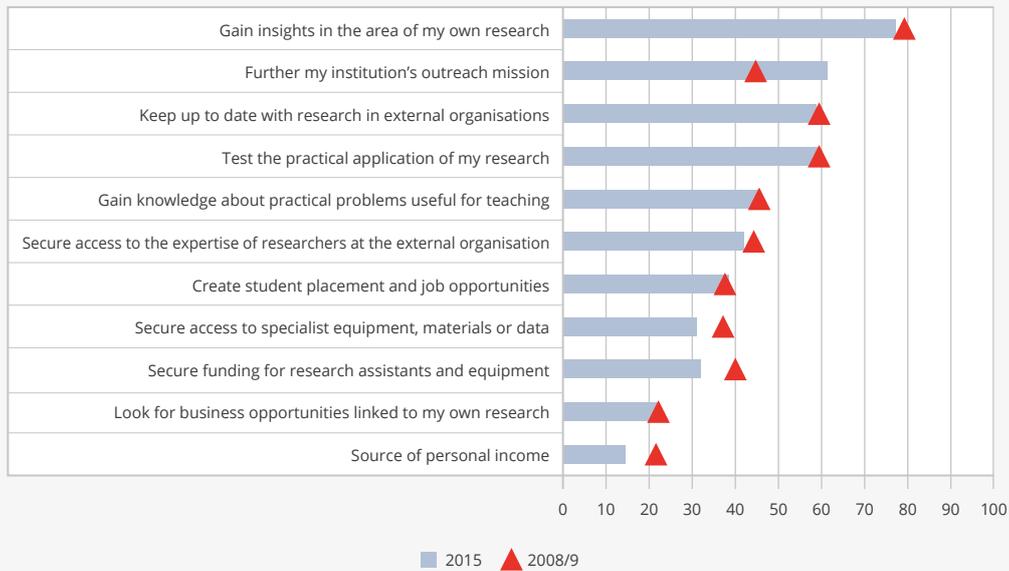
Exhibit 2 Importance of motivations for activities with external organisations (mean score and % of respondents)



Reproduced from Exhibit 36 in Hughes et al. (2016)

It is clearly a good thing that academics are primarily excited by intellectual challenges. But they clearly balance this instinct with a commitment to making a contribution to society and their students. Despite the great recession, this has not fundamentally altered over the two survey periods.

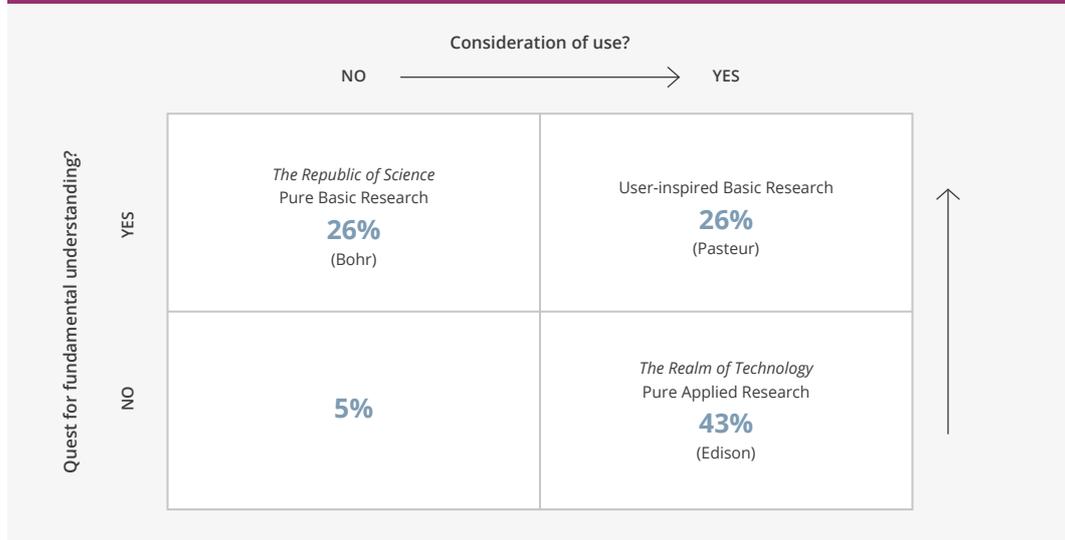
Exhibit 3 Important motivations for activities with external organisations (% of respondents)



Reproduced from Exhibit 59 in Hughes et al. (2016)

This intellectual curiosity is not simply related to basic research. One fifth of the research community use fundamental research to solve societal challenges, 43% apply research to immediate ends (and sometimes immediate income).

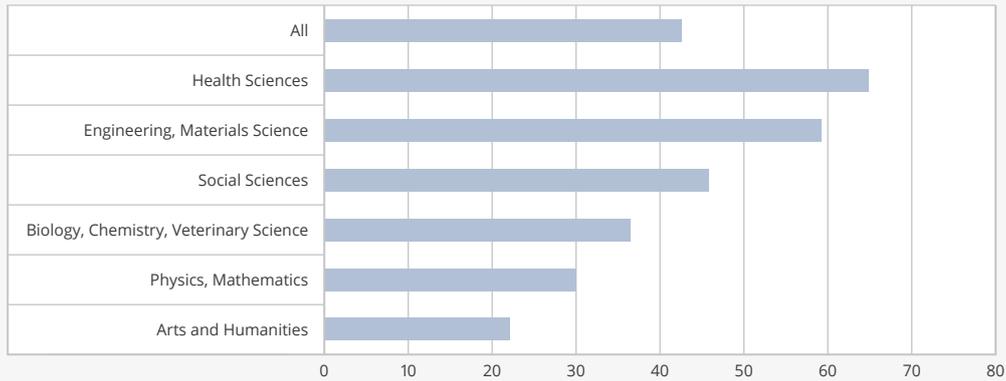
Exhibit 4 Research motivation



Source: Adapted from Stokes (1997) and Dasgupta and David (1994)
 Reproduced from Exhibit 16 in Hughes et al. (2016)

Although researchers in all disciplines are interested in solving problems, it is hardly surprising that life scientists, mathematicians and the arts and humanities tend towards basic research and those in engineering and health tend towards pure applied.

Exhibit 5 Pure applied research (% of respondents)



Reproduced from Exhibit 18 in Hughes et al (2016)

Furthermore, the balance of these different ways of doing research is influenced by the mission of the university.

Exhibit 6 Work activities (% of time)



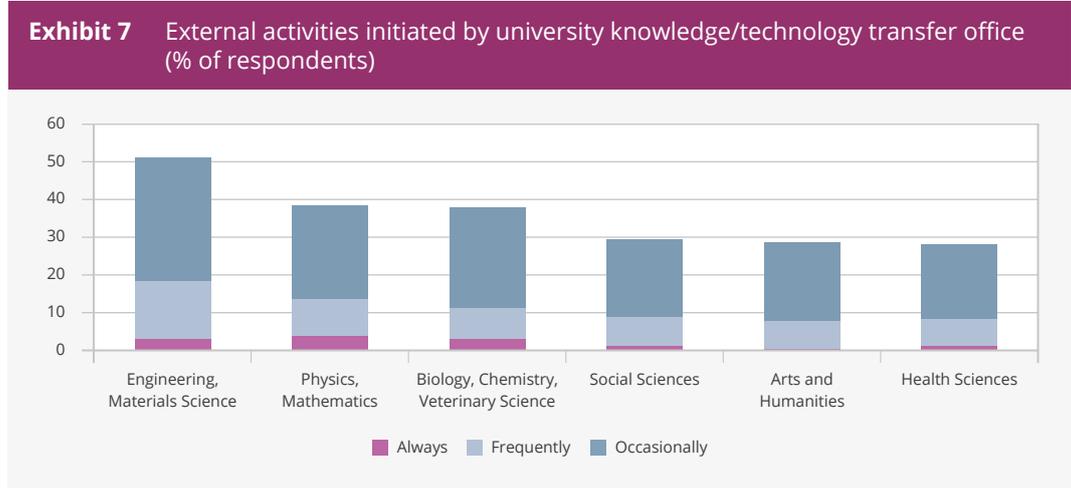
Reproduced from Exhibit 63 in Hughes et al. (2016)

Turning Interest into Partnership

These psychological and motivational profiles illuminate the nature and type of external work that naturally interest researchers. In the past three years, 41% have engaged with charities and voluntary organisations, 35% with the public sector, and 30% with private businesses. Of course, disciplines differ: 50% of engineers work with companies, but only 18% do so with charities; and by contrast almost half of researchers in health (48%) and the arts and humanities (49%) work with the third sector, but a large percentage of social scientists (29%) still work with businesses.

This engagement primarily come about because individuals from external organisations reach out to the academic (83%), the researchers finding partners outside (72%), and mutual action.

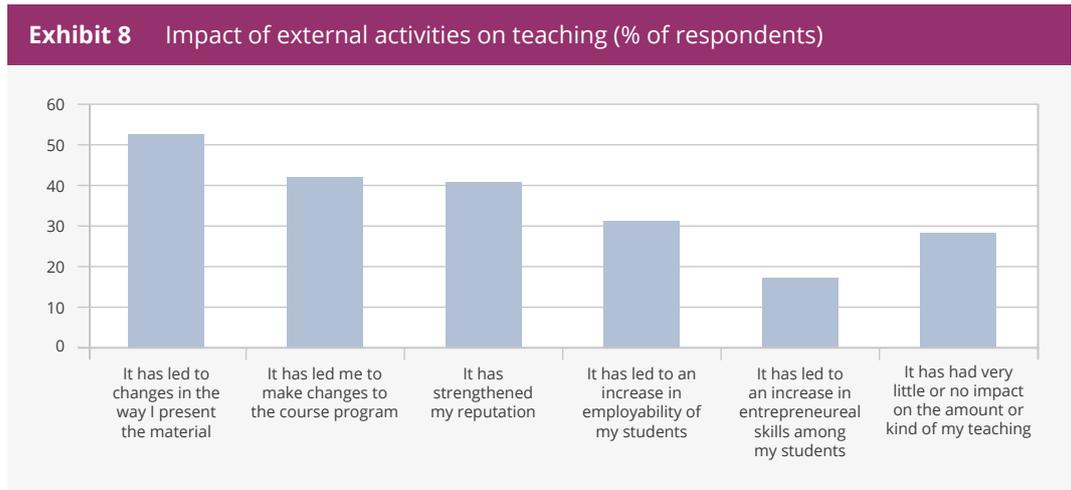
Scientists who tend towards applied technology, consultancy and spin outs will obviously be more likely to use the formal technology and knowledge-transfer routes within the university – normally a technology transfer office (TTO).



Reproduced from Exhibit 32 in Hughes et al. (2016)

Partnering for Growth

Universities help the UK to innovate by pouring out bright, inventive students. It is heartening, therefore, to see that connecting and engaging with external bodies has a positive feedback into teaching and the employability of students.



Reproduced from Exhibit 38 in Hughes et al. (2016)

Most academics agree that higher education has a key role to play in increasing the competitiveness of business in the UK.

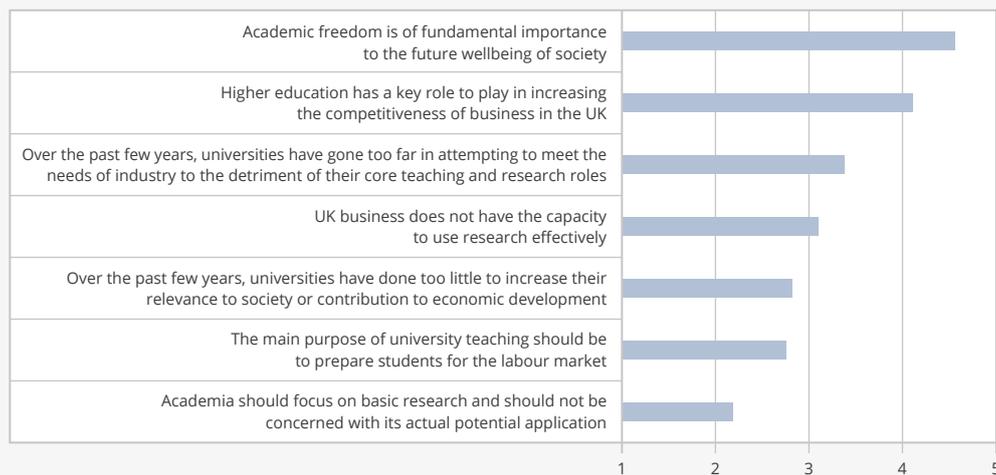


The most important contribution Stanford makes to Silicon Valley is to replenish the intellectual pool every year with new graduate students.

Gordon Moore, founder of Intel



Exhibit 9 Extent to which academics agree to statements about relationships with external organisations (mean score)



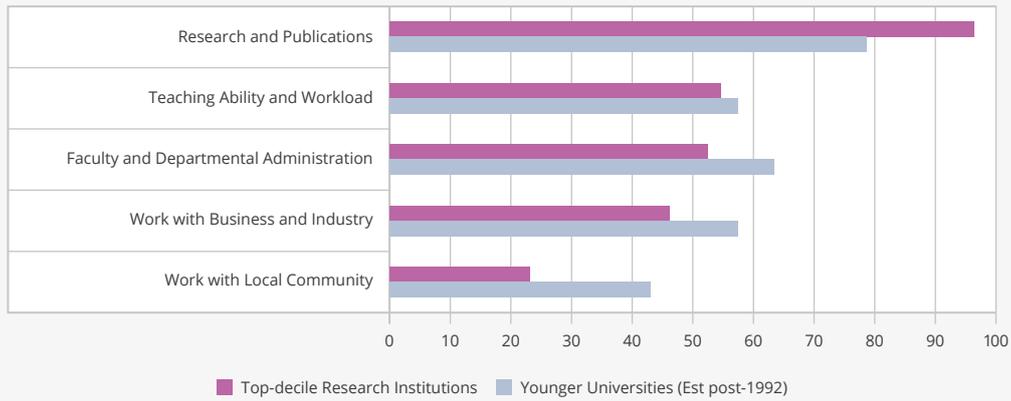
Reproduced from Exhibit 42 in Hughes et al. (2016)

There is a widespread assumption that this view holds good primarily in engineering, but the survey showed that on a scale of 1-5, academics in the arts and humanities score it 3.9. In some ways the disciplines mirror one another. But the simple truth is that both work with the right partners for their disciplines and in doing so grow the value of university research and teaching.

Constraints on Partnerships

Promotion criteria are clearly an issue. Academics still tie their prospects for a better job to research and publications, although other considerations play a part. Furthermore, researchers in younger institutions, perhaps driven by more applied research, are more likely to regard working with industry and local businesses and the community as a driver of advancement.

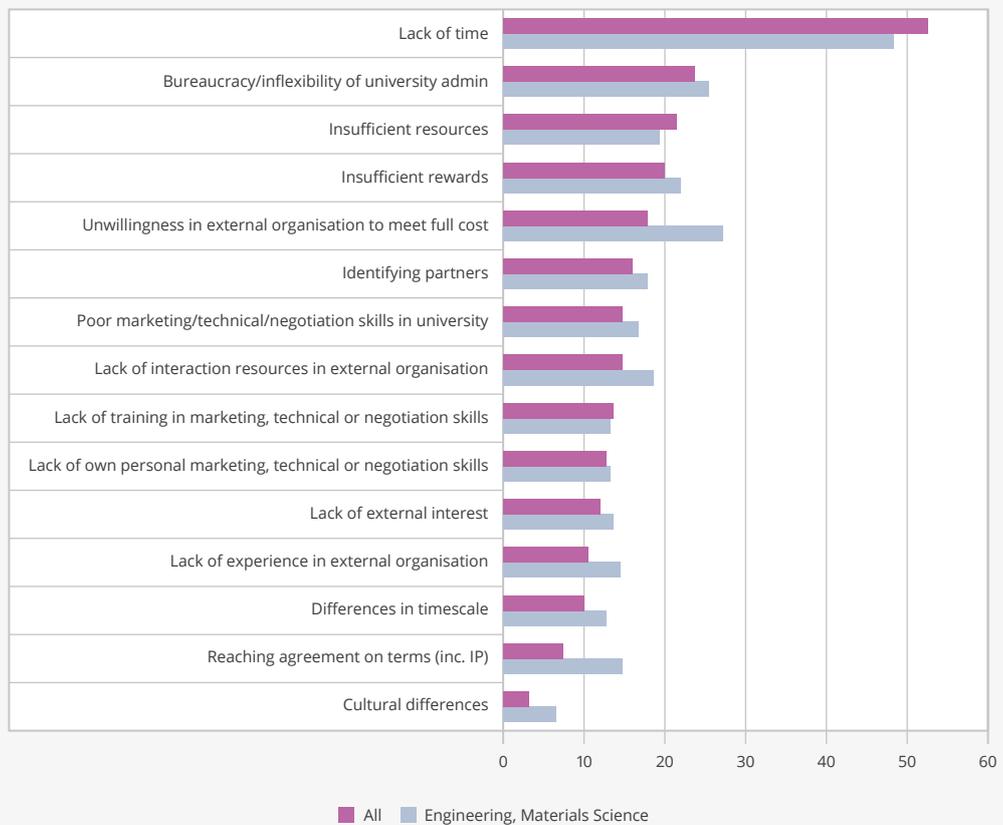
Exhibit 10 Work activities (% of time)



Reproduced from Exhibit 65 in Hughes et al. (2016)

The biggest barriers to external partnership are in general not, as often assumed, culture, intellectual property negotiations, they are lack of time and perceived bureaucracy.

Exhibit 11 Substantial constraints on interactions with external organisations (% of respondents)



Reproduced from Exhibit 40 in Hughes et al. (2016)

Policy Implications

This research strongly suggests that academic engagement with external organisations is rooted in research motivation and practice, and when it is done well it has strong and positive influences on teaching and research. So, what are some of the policy implications?

1. Academics learn to partner over time, and past engagement drives future success. Therefore at the very earliest stages of a young researcher's career they must receive exposure to receive training in and be rewarded for networking with external bodies. This will shape their attitudes and help them to build a portfolio of external connections.
2. Universities research is carried out by individuals with different motivations and with different specialisations across basic /applied spectrum. Academics who are fundamentally interested in basic research and whose work has little gain from external interactions are unlikely to respond to policy instruments designed to increase their engagement with external bodies.
3. Providing more support for researchers who either are already engaging or who wish to engage has a better chance of promoting impact.

