

**Teaching funding and student number controls
HEFCE Consultation on changes to be implemented in 2012-13**

Submission from The Royal Academy of Engineering
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Founded in 1976, The Royal Academy of Engineering promotes the engineering and technological welfare of the country. Our fellowship - comprising the UK's most eminent engineers - provides the leadership and expertise for our activities, which focus on the relationships between engineering, technology, and the quality of life. As a national academy, we provide independent and impartial advice to Government; work to secure the next generation of engineers; and provide a voice for Britain's engineering community.

The Government's growth strategy places skills at the centre of the economic recovery and emphasises the need for a rebalanced economy. A rebalanced economy which is environmentally sound requires excellent engineering skills in sufficient numbers. Accredited Bachelors courses in all branches of engineering including computer science, the integrated engineering Masters degree (MEng) and specialist technical MSc courses offered in UK universities set global standards for quality and provide employers with the *professional* skills needed for innovative growth in a global economy. They are strategically important to the UK economy.

We see a risk of insufficient high quality engineering graduates required by Government's growth strategy if provision of accredited engineering degrees and other strategically important courses reduces as an unintended consequence of the proposals set out in the HEFCE consultation document. We also see risks to so-called *squeezed middle* provision of strategically important courses at universities unable to make long term investments in higher cost and capital-intensive courses due to lack of stability in the funding system compounded by changes to capital and research funding.

We restrict our submission to the consultation questions relevant to these themes.

Consultation question 3: Following government changes to funding for higher education, we need to change the way HEFCE provides teaching grant for new-regime students. Do you have any comments on our proposed approach for 2012-13, as outlined in paragraphs 31 to 108?

The Royal Academy of Engineering reports *Engineering Graduates for Industry*¹ and *Educating Engineers for the 21st Century*² show that employers seek engineering graduates trained for modern multi-disciplinary engineering and that excellent engineering education cannot be achieved without sustained investment.

Being a strategically important subject that exhibits aspects of vulnerability, engineering has been sustained by both the level of Price Group B funding provided by HEFCE and the support provided through the SIVS programme. We note with concern that the level of future funding is uncertain for both mechanisms beyond 2012/13. Stability in the funding of strategically important and vulnerable subjects is critical to sustaining provision as universities face pressure on capital funding (72% cuts in HEFCE teaching capital funding, 58% cuts in HEFCE research capital funding, 58% cuts in Research Council capital funding and ongoing pressure on estates funding) and some are threatened financially by the ongoing concentration of research funding. Reductions in capital and research funding mean that universities will need to generate greater annual surpluses to cross-subsidise capital projects, the enhancement of the student experience and the up to date laboratory equipment required for excellent Price Group B teaching. Annual surpluses from Price Group D provision will only be possible at universities able to command and maintain the highest fees. Elsewhere we expect intense competition for Price Group D students to develop between universities and this is likely to drive fees down thereby reducing surpluses and the potential for cross-subsidy.

The limited scope for cross-subsidy means that any future reduction in Price Group B funding for strategically important and vulnerable subjects must be recovered through additional SIVS supplements – the two mechanisms must be seen as inextricably linked for strategically important subjects such as engineering.

The proposed partial liberalisation of student number control through the combination of the AAB+ proposal and the core / margin proposal for lower fee provision are superficially attractive as they suggest market forces driving

- the highest attaining students (and funding) towards the highest quality provision and
- other students towards quality provision at the lowest prices.

However, these are blunt instruments and we see the risk of failure in these market forces:

- (1) Although the Key Information Set (KIS) could be a helpful step, allowing prospective students to see some basic information on what they can expect to receive during their period of study, it comes at a significant administrative cost and still lacks the detail required to make a fully informed choice. Courses lacking value for money can be identified through KIS data on contact hours and modes of study. However, the true value of higher

¹ Engineering graduates for industry, The Royal Academy of Engineering, February 2010

² Educating engineers for the 21st Century, The Royal Academy of Engineering, June 2007

education comes from the longer term returns to the individual. The KIS needs more detailed information on career outcomes to allow prospective students to assess the value of studying strategically important subjects and to allow discrimination between a merely adequate and an exceptional student learning experience. Whether such data can be provided at the required level of detail, quality and integrity whilst remaining at an acceptable cost needs careful consideration.

- (2) Our estimates suggest that, even when a fee of £9000 is charged with no fee waiver, the loss of the Price Group B contribution from HEFCE would mean a net reduction in funding of £246 per Group B student compared with the funding received under the current fee regime. This could become a loss of £1246 for very high cost and vulnerable subjects (Chemical Engineering, Materials, Chemistry, Physics). However, when considering Price Group C and D subjects at the same maximum fee level we would expect increases of 20% and 45% respectively compared with the current fee regime. Universities would receive around £2500 more per Price Group D student than previously.

We see a risk to strategically important subjects here. The potential for cross-subsidy between courses is limited as noted previously. Individual universities will therefore, quite properly, assess their own position in the new market for students and decide whether it is possible to cross-subsidise Price Group B courses using fee earnings from other courses. Those who do not cross-subsidise may find that niche areas of provision and provision that is worthwhile but harder to recruit to becoming economically unviable and vulnerable to closure. Such vulnerability can arise from two sources: poor demand from students and lack of funding support for such higher cost provision. The engineering community is doing a great deal to build on the demand amongst employers for STEM and other strategically important skills by: funding outreach in schools, providing mentoring and work experience, supporting University Technical Colleges, funding CPD support for STEM teachers, providing bursaries and providing wage premia for STEM graduates³. In return we expect HEFCE to intervene in a strategic way to ensure that the supply of graduates can match stimulated demand. This provides grounds for maintenance of a Price Group B contribution from HEFCE as well as maintenance of the SIVS programme.

Additional liberalisation by allowing new providers to compete for the contestable student numbers is not the subject of this consultation. However, it is worth noting that should this take place it will not alleviate the pressure noted for strategically important STEM subjects. The Royal Academy of Engineering's FE STEM Data Project⁴ has identified the paucity of Level 4+ STEM provision in the FE & Skills sector. Therefore the FE & Skills sector does not have the capacity or resources to compete for STEM students in significant numbers. In addition, new for-profit providers will have little or no financial incentive to compete for Price Group B students such as those in STEM.

³ New and very granular analysis of wage returns is available in 'The labour market value of STEM qualifications and occupations', Institute of Education, / Royal Academy of Engineering, July 2011

⁴ FE STEM Data Project – July 2011 Report, The Royal Academy of Engineering, July 2011

Consultation question 4: We have been asked by the Government to remove students achieving AAB+ equivalent from the student number controls. Do you have any comments on our proposed method of implementing this, as outlined in paragraphs 116 to 128? Please identify any possible negative or positive impacts from this proposal.

We are particularly concerned about provision of engineering courses at universities that will have their allocation of student numbers reduced to make room in the system for the core / margin proposals but are:

- less well placed to compete for AAB+ students than the most attractive institutions and
- are unable to provide an average fee level of £7,500.

Such provision is being described by commentators in the media as being in *the squeezed middle* and represents a significant proportion of the completions in strategically important subjects each year.

The integrated engineering Masters degree (MEng) sets a globally-recognised standard, has equivalence to the engineering education of other leading nations through the Washington Accord and is frequently demanded by employers. However, the extended length of this course (four years) makes it less attractive to students concerned about debt. Put another way, fee waivers and other financial inducements will be particularly attractive to students considering longer courses but universities in circumstances of the squeezed middle can ill afford financial inducements for higher cost courses without significant cross-subsidy from Price Group C and D courses. This has the characteristics of market failure as noted earlier.

The loss of squeezed middle provision in strategically important subjects is a concern for reasons beyond straightforward loss of capacity:

- Students in certain locations may be denied access to local or regional provision. This has an impact on widening participation.
- Research informed teaching of a next generation of specialists may be lost in key sub-disciplines if universities undertaking such research are forced to close or reduce their taught provision.
- The additional pressure felt on teaching income may compound pressure on research funding already resulting from the concentration of research funding by the Research Councils.

Consultation question 5: The Government has asked us to consult on a core/margin approach to re-allocating places towards lower fee provision in order to increase choice, competition and fee diversity. Do you have any comments on our proposed method of implementation, as outlined in paragraphs 129 to 139? Please indicate any impacts you can identify, whether positive or negative.

The effects noted earlier for squeezed middle provision apply here.

Consultation question 6: Do you have any comments on the impact(s), positive or negative, that the proposals in this consultation will have on equality and diversity?

Taken as an average, engineering has similar representation of the lowest four socio-economic groups as Higher Education as a whole but the lower half of the socio-economic scale is still under-represented. This could worsen if universities that have been recruiting well from a 'widening participation' cohort are forced to reduce their provision as a result of the proposals set out in the consultation document.

Under-representation will deepen with attendant risk to social mobility if professionally-accredited engineering provision becomes less accessible to less economically advantaged applicants for reasons of:

- Higher contributions expected from students on longer courses noting the greater aversion to debt found in the widening participation cohort.
- Loss of local or regional provision.
- The UK is well behind all other European countries in gender inclusion in engineering. It is a struggle to attract the best students into engineering, including women, and this will be harder still if the student experience suffers from a lack of long term investment driven by uncertainties around Price Group B funding, SIVS, capital funding and research funding.

In addition, the AAB+ proposals do nothing to encourage universities at which competition for admission is most intense to consider the context in which candidates achieved their A Level and other qualifications. The use of contextualised admissions practices are important to raising the proportion of students from disadvantaged backgrounds gaining admissions to the most prestigious universities.