

Question 1: Is an increase in the National Training Fund levy as set out in this consultation paper the most appropriate way to meet the recommendations of the Expert Group report regarding enhanced employer funding contributions, or,

The severely constrained funding environment, in addition to the impending demographic bulge, requires increased HE funding from all three sources: exchequer, students and employers. The increase in the National Training Fund levy is an appropriate way to increase the employer contribution, if it is ensured that spending is targeted to ensure optimising outputs that meet employer needs. Rather than going out to employers and requesting piecemeal financial supports for the training/skills agenda it would be much more cohesive for the State to take a single levy which covers a targeted employer contribution to education and training activities.

Utilising and spending down the current surplus in the National Training Fund is also important.

Are there alternative models such as partnerships with education providers or direct employer contributions, of the scale required to deliver the same result in a more effective manner, given the level of increased levy revenue being indicated?

Yes; Science Foundation Ireland has been funding partnerships of scale between Higher Education Institutions and employers. To date, €48.8m has been committed by industry to the SFI Research Centres. More information is provided in response to Question 7. Increasing the funding for world-class research being carried out in Ireland will attract increased industry partnerships and increased industry contributions.

A combination of both approaches will be most likely be optimal to achieve the required scale.

Question 2: What are the implications for the National Training Fund Act in a changed landscape of employer-education engagement?

Science Foundation Ireland supports the ongoing transition of the National Fund to rebalance from a portfolio primarily focussed on training and upskilling of the (reducing numbers of) unemployed to increasingly emphasising employee training and delivering skills for the 21st century and for jobs that have not yet been created. This requires changes to how we teach and learn, and for us to increase the numbers of highly qualified 4th level graduates. The NTF could support these activities which will protect Ireland's economy in the future, by ensuring that we have the human capital required for a modern economy.

Question 3: In what ways can increased National Training Fund levy contributions be linked to (i) identifiable skills needs, (ii) the workforce development agenda and (iii) the local, regional and national roles of institutions?

Science Foundation Ireland notes the important role of employers in securing the longer-term talent pipeline. Recognising the recommendations within the Report on STEM Education (November 2016) any proposal to increase the National Training Fund levy on employers should include addressing these

recommendations, in particular the proposed STEM 2020 Partnership. This partnership is an enterprise-exchequer funded proposal addressing longer term skills supply and should not be dealt with as a separate request to industry. The funding required is estimated to be ~€4M per annum from the State and €4M from industry. In the context of the size of the NTF it does not seem sensible for the funding for STEM 2020 to be excluded. Industry are aware of the need for changes in how STEM subjects are taught and learnt in Ireland. STEM 2020 addresses many of these needs.

It will be important for the Regional Skills Fora to have control of some of the NTF expenditure; this will assist with ensuring suitable regional alignment.

Question 4: How can increased National Training Fund levy contributions be used to support further forms of employer-education engagement, flexible forms of education and training delivery, and, the education and training outcomes required to meet forthcoming skills needs?

As outlined in the response to Q3, the National Training Fund Levy contributions should fund the actions recommended in the Report on STEM Education. The NTF surplus could be applied to these recommendations or if necessary, the NTF levy contributions should be minimally further increased to cover the relatively low cost STEM Education report actions. The support of the recommendations will minimise the proliferation of individual employer-education engagement schemes; this is regularly pointed out as a challenge by industry representative groups.

As an example of programmes that should be scaled-up through increased investment, the SFI Discover Funding Programme is supporting both the growth of Irish Science Capital and STEM-specific Continuing Professional Development for teachers at both primary and second level.

Question 5: Is the manner in which we develop, nurture and deploy talent central to HE and FET and other sectoral strategies?

Yes – the government approved Innovation 2020 strategy requires significant human capital development: “Ireland’s economic renewal and development depends on our capacity to develop human capital, with the right mix of skills and expertise for the evolving labour market.”

The European Commission’s 2017 report “THE ECONOMIC RATIONALE FOR PUBLIC R&I FUNDING AND ITS IMPACT” observes that “EU firms consider uncertainty about the future and availability of staff with the right skills as the main structural barriers to investment, with more than two third of the firms considering them to be obstacle to their investment activities.”

Question 6: Are there skills gaps existing or emerging which require a more coherent response from the HE and FET sectors?

Yes – as set out in the National Skills Strategy and the National Skills Bulletins, there are “ongoing skills shortages for Professionals and Associate Professionals across sectors in areas of ICT, Science, and Engineering. The shortage of ICT talent is potentially significant for a number of sectors where ICT skills are needed (e.g. Software, Data Analytics, Financial Services, Distribution). There are also Professionals skills shortages in specific sectors such as Financial Services, (and) Health.”

Innovation 2020 predicts that “the number of R&D personnel needed in the enterprise sector will increase from 25,000 in 2013 to 40,000 in 2020. Not these R&D personnel will need to be qualified to Ph.D. level, but given the lead time required, there is an urgent need to increase enrolments of research masters and Ph.D. students in the areas most closely linked to enterprise demand, such as ICT, pharmachem, medical devices and business services”. Innovation 2020 clearly outlines the need for Ireland to invest in additional PhD level graduates. The NTF should make a contribution to supporting these additional research training posts via SFI and other research funders.

A coherent response from the HE sector is required so that these R&D personnel have both research expertise, in addition to the transferrable skills which are required by enterprise.

Question 7: How can better partnerships be forged between Education and Enterprise?

The twelve SFI Research Centres have well-established links with industry, demonstrated by significant cash and in-kind contributions. To date, €48.8m has been committed by industry to the SFI Research Centres.

As part of Innovation 2020 Science Foundation Ireland are charged with developing a **new employer-focussed PhD scheme** centred on the SFI Research Centres. This scheme will include industry teaching many of the transferable skills in modules shared between different Higher Education Institutions.

SFI are also scoping an Ireland-UK co-funded **PhD studentship** scheme, that fosters collaboration between Ireland’s Higher Education Institutes (through the SFI Research Centres) and the top-4 universities in the UK, while also growing Ireland’s PhD numbers.

SFI’s Strategic Partnership Programme is specifically aimed at **partnerships of scale with a company**, collection of companies, funding agency, charity, philanthropic organisation or Higher Education Institution. The scheme aims to support standalone initiatives of scale with strong potential for delivering economic and societal impact to Ireland. SFI is currently reviewing a proposal in partnership with industry which is centred on MSc training.

The Report on STEM Education recommends the establishment of a STEM Education Research Centre. A centre where best practice in STEM teaching and learning will be established and implemented. This would benefit from greater input from both education and enterprise. A model of enterprise-exchequer funding, like the already established Science Foundation Ireland research centres model, should be applied here.

Increased investment is needed to expand and implement these highly effective programmes; the NTF could be very effectively deployed to deliver them.