

17 August 2020

Department Secretary
Department of Education, Skills and Employment
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Dear Secretary,

EMCR response to draft legislation to implement the Australian Government's Job-ready Graduates Package

The Early and Mid-Career Researcher Forum of the Australian Academy of Science (**EMCR Forum**) welcomes the opportunity to provide a submission to the Department of Education, Skills and Employment on the Job-ready Graduates Exposure Draft Legislation (**the Exposure Draft**). Given the limited timeframe, our submission remains focused on the following areas:

1. The limited timeframe allowed for public consultation;
2. The realignment of educational investment with national priorities;
3. The impact of reduced funding per student on universities and staff;
4. Discussion of the proposed industry linkages scheme; and
5. Highlighting the direct effect this legislation will have on EMCRs.

Introduction

The Exposure Draft, as tabled on Tuesday the 11th of August 2020, proposes to amend the *Higher Education Support Act 2003 (Cth)* (HESA) to:

- reduce the Commonwealth's overall contribution to teaching graduates in both humanities and social sciences (HASS) and science, technology, engineering, mathematics and medicine (STEMM) areas (based on work by Deloitte recently made public)
- streamline the administration of Commonwealth Supported Places (CSPs) within the educational institution
- re-introduce demand-driven places (limited to regional and remote Indigenous persons)
- allow for the redevelopment of the Industry Linkage Fund and strengthen the alignment of research to national priorities
- improve the eligibility of work-integrated learning (WIL) or work experience in industry (WEI) for commonwealth funding
- request greater oversight from regulatory agencies
- improve educational accessibility by reducing the FEE-HELP penalty from 25% to 20% (for undergraduate courses as postgraduate courses do not attract this penalty)

- improve mobility for regional students by reducing the waiting period for the Fares Allowance

As the representatives of early to mid-career researchers (EMCRs; those with less than 15 years' experience post PhD, excluding career interruptions) in STEM in Australia, the EMCR Forum strongly supports every and all attempts to improve our higher education system whose aim is to assist our citizens become more productive and increase their participation to our democratic institutions.

The EMCR Forum Executive comprises 12 EMCR volunteers from across the STEM disciplines, the States and Territories of Australia, including metropolitan and regional universities. We are the voice of over 5,500 EMCR members that are predominantly employed at universities.

We believe that the role of universities to produce job-ready graduates is crucial to the continuing success of Australia as a wealthy, democratic nation. We are aware - like many in the policy space - of the current status of regional universities and the uneven playing field between regional universities and the so-called sandstone metropolitan universities. We are witnesses and directly impacted by the systemic inequities.

As EMCRs, we are directly affected by many of the proposals in this draft legislative amendment. **We are responsible for the bulk of higher degree teaching and research in Australia.** Many of **our members and colleagues are precariously employed** (casual or fixed-term contracts), and others are **overworked** through the combination of administrative tasks and ambitious research goals with (relative to the OECD average) poor financial and structural support.¹

We welcome any request to interact further with this legislation and are happy to answer further questions if requested by the Department.

1. Timeframe for Public Consultation

The changes proposed by the Exposure Draft are significant. Notably, they include substantial adjustments to government and student contributions across most university subject areas.² The measures would come into effect from 1 January 2021,³ impacting current year twelve students who are already facing uncertainty in their schooling due to the impact of COVID-19.⁴

We are concerned that the framework proposed under the Exposure Draft will perversely incentivise universities to direct students away from national priority areas.⁵ As will be discussed later in this submission, by reducing overall funding for STEM courses (in some cases below the cost of those subjects themselves) universities *may* be incentivised to enrol higher numbers of students in other course areas to subsidise those students. This could create a situation where students in HASS areas are paying not just for their degree, but also in effect paying the costs of those students enrolled in STEM subjects.⁶

Given this, the limited public consultation period (one week) is concerning. In particular, it is not clear that sufficient modelling has been conducted to show that students will obey the attempted "price-signalling" metrics, given that the cost of their degree is deferred under the HECS system.⁷ The limited-time for review by universities, especially given the ongoing impact of COVID-19, raises questions around whether this package will achieve its objectives. Universities, particularly those located in Victoria, are currently facing uncertainty around their ongoing budgets and student numbers and are simultaneously supporting their current students as they adjust to online teaching.⁸ In this context, the limited period for public

comment, by universities, students, future students, teachers and industry experts is of even greater concern, and we recommend that the Department engage in further open and transparent consultation before the Bill is introduced in Parliament.

2. The realignment of educational investment with national priorities

While the proposed Bill strives for “a more nuanced approach”, it is relying on data that does not pass intellectual rigour. There are significant concerns where the realignment of educational investment with “national priorities” is based on incorrect or limited data.

2.1 Concerns with the Deloitte Report

The Deloitte Report⁹ (**the Report**) which underpins the Exposure Draft has been subject to challenge about critical deficiencies in methodology. These deficiencies expose significant risks to the Government if the report is taken at face value. Based on the Exposure Draft, this appears to be what the Department is doing. For example, Figure 1 shows the correlation between cohort scale and cost of a unit. This graph played a key part of the narrative that cost savings can be realised through efficiencies in class sizes. However, given the large cluster of data points between 0 and 200 class size, there are significant uncertainties with the regression line, which appears to be based in part off a small number of data points. A more rigorous statistical analysis may have led to a different conclusion, and the sections of the Deloitte report based on this data analysis may be misleading.

First, considering the flow-on effects this legislation will generate, the Exposure Draft must be led by robust statistical analyses and transparency.

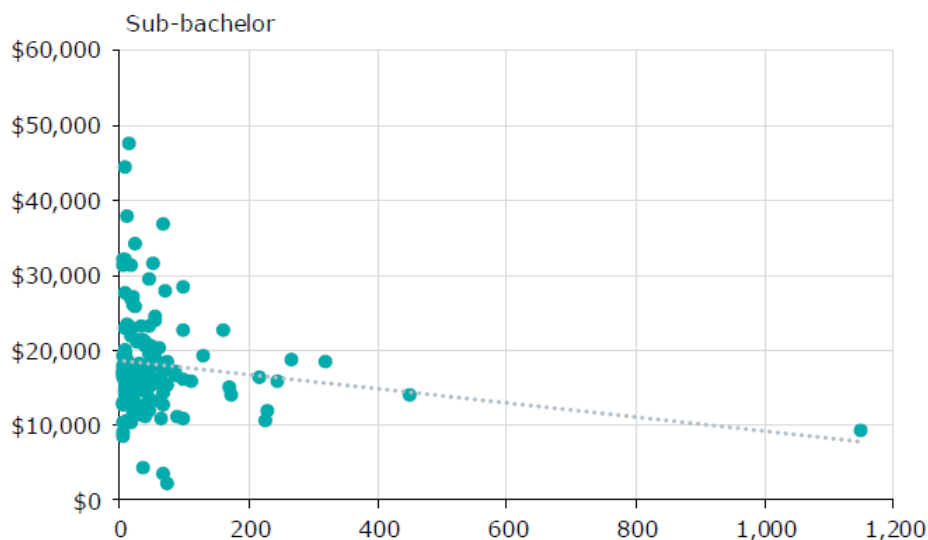
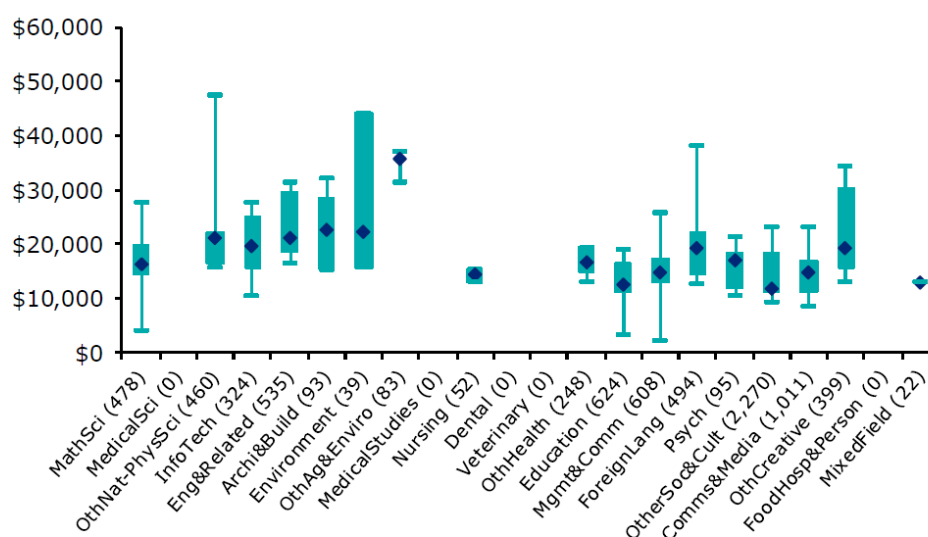


Figure 1: Correlation between scale and units (Deloitte 2019)

Second, a critical issue when attempting to identify true costs is whether we should be expecting universities to be homogeneous. University workers and commentators have stated that it is unlikely that universities are or will ever be homogenous. Indeed, it is that diversity that allows universities to use their attributes to overcome the difficulties presented by COVID.¹⁰ Different universities have different profiles, reflecting the fact that each campus is

located in a different market, has different strengths and weaknesses and is targeting different students and research goals. This holds true for both metropolitan and regional universities. The Deloitte Report captures this discrepancy even though it does not unpack it. The significant spread of the data (and note that the authors of the Report deleted outliers) in Figure 2 shows that even a moderate course such as Other Agriculture and Environmental studies (sample size 83) has a spread of more than \$5,000 per student. Multiple HASS subjects have a spread of more than \$10,000 per student.



Note: 144 cost observations across 20 universities. Outliers excluded. Marker at mean, box width between 25th and 75th percentile, and tails at minimum and maximum.

Figure 2: Average unit costs by field for sub-bachelor (Deloitte 2019)

The Report gives some reasoning on these variations, but it has made no attempt to unpack them, as the authors note, “Large variations in cost may reflect a variety of drivers, including variations in ability to scale, standardisation of delivery, quality, product and investment lifecycles, among others.”

The variation in STEMM unit costs may have a more straightforward explanation: that is a real cost that cannot be ‘averaged out’.

We need to look at how **STEMM careers differ from HASS ones**. In a typical Australian university, HASS teachers (lecturers and above) are hired shortly after their PhD with minimal research experience. As remuneration and promotions are linked to research performance, HASS teaching academics start at a lower remuneration level and progress more slowly.

In contrast, STEMM teaching academics are normally hired after completing several fixed-term post-doctoral contracts (typically between 5 and 10 years of post-doctoral appointments). Even though research-only post-doctoral appointments attract the lowest possible academic salaries (Level A), if in the future they are hired in a teaching and research lectureship, their prior research activity fuels their future research productivity (due to improved research skills and networking). This directly impacts progression, especially in those institutions where progression is weighted heavily on research outcomes.

However, it is not a black and white picture, each institution has different processes and culture for hiring and promotion, and access to talent. When making a costing statement,

therefore, it is imperative we combine robust statistical analysis with high-quality research in unpacking and modelling the results.

Another commentary in print media supports these concerns. For example, notably the Australian Financial Review comments:

‘Deloitte sampled only 32 out of 42 universities and acknowledged in its report that 13 of the 32 "were unable to attribute costs between levels of education for a given faculty or school [...] Where a university has used a cost allocation methodology that captures variation in costs between levels, variation may be higher," Deloitte said. Writing in *The Conversation* on Wednesday, Emeritus Professor Larkins and his colleague, Ian Marshman, said the Deloitte ¹¹ sample was not representative of higher education.¹²

The conclusion is that any report that seeks to provide a single value for any single course across Australia will inevitably apply a simplistic methodology that fails to capture the underlying complexities and variance between universities. Consequently, policy decisions based on the report must lead to significant concerns around whether such decisions will be evidence-driven.

3. Degree costs incentives do not match government advice on job outlooks

As a STEM body, we welcome the acknowledgement from the Minister that STEM jobs will be important in the future. We welcome reform that supports students attaining a high degree of skill through their studies.

However, as *active research* scientists we also know the value that HASS units provide to an individual, whether they are seeking to write a grant proposal that explains the national benefit the research will generate, synthesise complex information, or participate in democratic processes. The changes to government contributions in HASS areas, are of concern.

Using government contributions to “price signal” may make future students wary of increasing university fees generally. Similarly, there is the risk that such price changes may make certain degree combinations unattainable to everyday Australians.

The EMCR Forum believes that every Australian that meets university entry requirements, regardless of background, should be able to select which degree they wish to study without concern for the cost of that degree. The degree funding changes may create a landscape where the better skilled Australians are those who can afford to study at university, rather than those students who are best suited to university study.

Secondly, **undergraduate education is not vocational training. The purpose of a university degree is to instil life-long skills that create an agile Australian who is equipped to respond to the challenges of the twenty first century.** This resilience is entirely absent from the legislation, even though it suggests that Humanities students can decrease their costs by taking an IT course. Universities are not vocational education and training providers. The attributes that universities aim to teach their graduates to require careful thought and scaffolding. Costing disciplines on market can be a speculative activity and we are highly concerned that the Exposure Draft does not take into account the government’s own data and advice. It is worthwhile to note that the Department’s data show high employability for a number of jobs that do require a humanities skillset.¹³

Additionally, there remain significant concerns about whether this type of price-signalling will work given the delayed nature of Higher Education Contribution Scheme (HECS) repayments.

Again, there appears to be limited evidence to support the government's position that students will pick their courses based on cost. Instead, given the delayed nature of HECS, commentators have suggested that it is more likely that students will choose degrees 'based on interests and earning potential'¹⁴. If true, such claims suggest that the Exposure Draft will do little to redirect students to so-called priority areas (except in edge cases) and will instead simply cut STEMM funding per student as will be discussed below.

Therefore, **we conclude that this draft legislation tries to create perverse price incentives, and it does so against the market advice.**

Finally, we feel obliged to reiterate, as the Australian Academy of Sciences noted elsewhere,¹⁵ the Exposure Draft in its present form *decreases* the overall funding for STEMM per student by 16%. Whilst it may be the legislation's aim to increase efficiencies (e.g. as informed by the Deloitte report), it is unlikely that the cost for STEMM will decrease simply because the legislation signals it. What is far more likely to happen is that the quality of education offered by universities will decrease (commensurate to funding) and that simultaneously the workload of EMCRs will increase. As noted above, this increase will occur at a time when EMCRs are already facing a higher work burden due to the ongoing impact of COVID-19¹⁶. This outcome will not only impact EMCRs personally but will also influence their research output and quality of teaching. In turn, these funding changes may reduce the quality of future Australian STEMM graduates and will affect Australia's ability to recover from the ongoing pandemic.

4. Industry linkages

We welcome the Industry Linkages in the announcement, even if the details are not clear from current releases. It is crucial that supporters of this type of research funding communicate clearly to Australian researchers about what exactly they are offering and do so without opaque secondary promises such as the Industry Linkage Fund.

It is crucial to note that this policy should be developed in collaboration with the Department of Industry, Science, Energy and Resources and form a separate legislative instrument that is flexible and can respond to market demands. We note that Australia's economy is poorly diversified¹⁷ and was facing a possible downturn even before the impact of COVID-19.¹⁸

Therefore, industry linkages are welcomed, but this must be part of a broader, better thought out, measures that includes support for start-ups, high tech art and industries.¹⁹

5. Reform is needed but so is careful thought

Overall, the EMCR community is starving for university reform and the attempt to balance research productivity with educational outcomes. We have made a Productivity Commission submission on the current's system impact on EMCRs mental health²⁰, and we have recently released a report outlining the effects COVID has on the research and teaching output of the STEMM workforce as well as their wellbeing.²¹

The risk for a brain drain of the future research leaders is real²². The country faces the loss of scientists to the overseas countries as well as the exit of otherwise successful scientists into other careers that have no connection to research or STEMM (partly due to the lack of support for innovation startups).

The mental health, economic fallout, and employability outcomes the previous system has created, COVID has exasperated. This Exposure Draft, however, if not redrafted, will almost

certainly deliver a death blow to EMCRs, i.e. those who perform the bulk of research and teaching at universities, government institutions, and industry. The cuts (current and expected) to university budgets due to COVID-19 and the loss of overseas students combined with a decrease in overall funding per student will lead to a reduction in Australia's research and education productivity.

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