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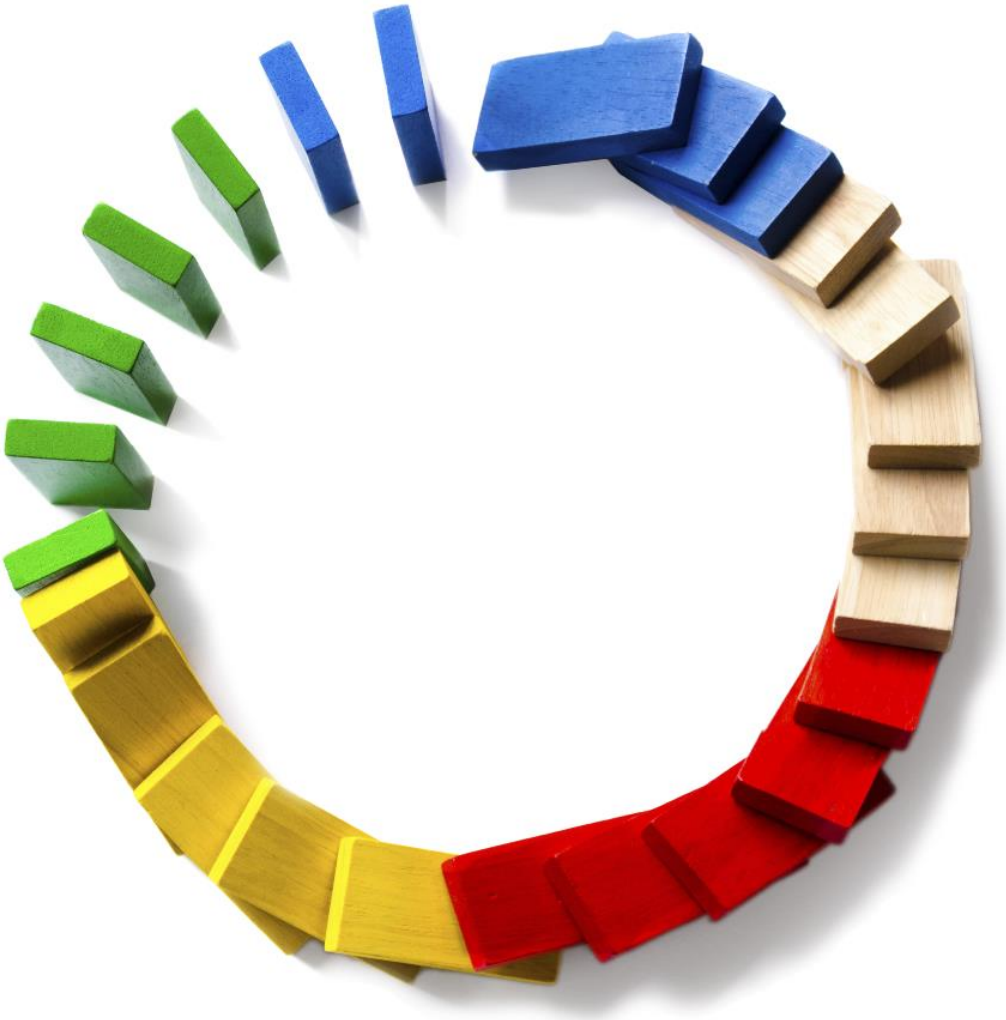

Transparency in Higher Education Expenditure

Prepared for the Australian Government Department of Education, Skills and Employment

June 2022

Deloitte Access Economics

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Glossary

Acronym or initialism	Full name
ABC	Activity Based Costing
ATN	Australian Technology Network of Universities
ASCED	Australian Standard Classification of Education
CAGR	Compound Annual Growth Rate
CGS	Commonwealth Grant Scheme
CSP	Commonwealth Supported Place
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
EFTSL	Equivalent Full Time Student Load
FOE	Field of Education
FTE	Full-Time Equivalent
Go8	Group of Eight
HELP	Higher Education Loan Program
HDR	Higher Degree Research
IRU	Innovative Research Universities Australia
IRV	Insurance Replacement Value
MSI	Margin for Sustainability and Investment
MYEFO	Mid-Year Economic and Fiscal Outlook
RUN	Regional Universities Network
SCA	Student Contribution Amount
TCW	Transparent Costing Worksheet
TRAC	Transparent Approach to Costing
UA	Universities Australia
VET	Vocational Education and Training

Field of education abbreviations

Abbreviation	Full name
MathSci	Mathematical Sciences
MedicalSci	Medical Science
OthNat-PhysSci	Other Natural and Physical Sciences
InfoTech	Information Technology
Eng&Related	Engineering and Related Technologies
Archi&Build	Architecture and Building
Environment	Environmental Studies
OthAg&Enviro	Other Agriculture, Environmental and Related Studies
MedicalStudies	Medical Studies
Nursing	Nursing
Dental	Dental Studies
Veterinary	Veterinary Studies
OthHealth	Other Health
Education	Education
Mgmt&Comm	Management and Commerce
ForeignLang	Foreign Languages and Translating
Psych	Psychology
OtherSoc&Cult	Other Society and Culture
Comms&Media	Communiation and Media Studies
OthCreative	Other Creative Arts
FoodHosp&Person	Food, Hospitality and Personal Services
MixedField	Mixed Field Programmes

Executive summary

Universities are complex institutions operating in a variety of environments with a range of missions. The *Higher Education Support Act 2003* creates the legislative framework for Australian Government support for higher education in order to support the "distinctive purpose of universities, which are:

(i) the education of persons, enabling them to take a leadership role in the intellectual, cultural, economic and social development of their communities; and
(ii) the creation and advancement of knowledge; and
(iii) the application of knowledge and discoveries to the betterment of communities in Australia and internationally; and
(iv) the engagement with industry and the local community to enable graduates to thrive in the workforce." [1]

The Australian Government supports teaching and scholarship activities at universities through the provision of funding. There is a collective interest in transparency regarding the use of these funds and the allocation of resources across the various activities that universities engage in. The way in which this funding is provided, in terms of the specific teaching and research activities it is intended to support, significantly influences the behaviour of universities. Understanding the extent to which funding is used to support teaching and scholarship across fields of education enables effective decision-making both within universities, and across the students, organisations and the governments which fund them.

For the Australian Government, the funding of teaching and scholarship via the Commonwealth Grant Scheme (CGS) is provided on the basis of funding clusters and student contribution bands. The CGS is designed to allocate aggregate base funding to universities in a way that appropriately reflects their respective mix of disciplines.

This model, notionally intended to capture relative average costs across disciplines, has been periodically informed by research into the costs of teaching and scholarship at universities. Analysis of the costs of teaching and scholarship at universities was previously undertaken by Deloitte Access Economics in 2011 and 2016 (both of which concerned activity in the prior calendar year).

Seeking to build on these previous exercises and develop an annually updated evidence base on the costs of teaching and scholarship at Australian universities, the Australian Department of Education, Skills and Employment (the Department) established the Transparency in Higher Education Expenditure exercise, commissioning Deloitte Access Economics to undertake this collection in 2018, 2019 and 2020. The 2020 data collection exercise was postponed following the outbreak of COVID-19. This report presents the results derived from the 2022 study, relating to university activity in the 2019 and 2020 calendar years. The university sample for the remainder of the report will be referred to as the 2022 sample of 37 universities, which are included in the 2022 study.

This report updates the analysis contained in the 2019 study. While this report should be seen as a stand-alone document, much of the content is consistent with that provided in the 2019 report and direct comparisons are provided where appropriate.

[1] Higher Education Support Act 2003, s2(1)(b).

Approach to the data collection

Building on the 2016 data collection,[2] the approach to the Transparency in Higher Education Expenditure exercise was guided by two key objectives, namely:

- Accurately measuring the costs of teaching and scholarship[3] by field and level of education.
- Supporting the continued transition to a more comprehensive, systematic and streamlined data collection process over time.

To support the achievement of these objectives, the collection process, data template (or Transparent Costing Worksheet (TCW)) and an associated set of comprehensive Guidelines were developed in close collaboration with the university sector and the Department. This included endorsement of the TCW and Guidelines by a Universities Australia (UA) Reference Group (consisting of university representatives, representatives from UA, the Department and Deloitte Access Economics) and a whole-of-sector one-day forum organised by UA to introduce and discuss the exercise with universities.

The approach sought to establish a dataset which, to the greatest extent possible, was:

- Reliable – such that a suitable level of assurance can be established regarding the underlying data.
- Comparable – across universities, given differences in university context, and over time.
- Attributable – ensuring costs are captured only to the extent that they are incurred as a result of a defined and in-scope activity.
- Actual – in that the economic rather than the accounting measure of cost[4] is of primary interest.

Based on these principles and in-depth consultation with the sector, a number of refinements were made to the TCW as part of the 2022 exercise to address feedback from universities and the UA Reference Group while keeping the core structure of both unchanged. These included:

- Including an additional optional COVID-19 measures adjustment item in the TCW to allow for additional analysis of the impact of COVID-19 on teaching and scholarship costs. While all actual costs for 2020 were to continue to be included in the main tab of the worksheet, universities could choose to populate this optional tab to address the specific components of costs (or revenue) specifically attributable to COVID-19.
- Providing opportunities to qualitatively describe the impact of COVID-19 on teaching and scholarship costs in the supporting statement and through the one-on-one consultations which occur with each university.
- Including undergraduate certificates as in scope for the 2022 data collection exercise. They are captured as part of the sub-bachelor level of education.
- Making a number of minor changes to improve the usability of the TCW, such as providing greater clarity in the labelling of in-kind costs.

Following these changes, the 2019 and 2020 TCW was provided to all 37 universities participating in the 2022 exercise on 5 August 2021 and 17 December 2021, respectively. Universities were requested to complete the exercise by 18 February 2022. Following submission of the template, the data was moderated and synthesised by the Deloitte Access Economics team, with follow-up discussions initiated where outliers or other uncertainties were identified.

[2] Unlike the 2016 study, this report does not seek to provide estimates of the reasonable costs of teaching and scholarship by field of education or to use a regression framework to identify the size of particular cost drivers. Importantly, this means that the cost estimates reflect the actual costs of teaching and scholarship for the universities concerned. This report does not explicitly analyse notions of efficiency or quality.
[3] For simplicity, the 'cost of teaching and scholarship' is often referred to as the 'cost of teaching' throughout this report.
[4] Economic costs include both accounting costs but also the opportunity cost involved in using a given resource for a particular activity.

All 37 universities participating in the 2022 data collection returned a full dataset. The inclusion of an additional five universities ensures the full population of Table A public universities participated in the 2022 exercise.[5] As such, the 2022 study now includes full coverage of the following university characteristics:

- Dual sector universities
- Regional and Regional Universities Network affiliated universities
- Smaller universities (fewer than 15,000 domestic enrolments)
- Universities from all Australian states and territories.

During the data collection window, Deloitte Access Economics consulted with participating universities to discuss the costing approaches taken, and to ensure that the TCW was completed appropriately and as consistently as possible across institutions. Universities were also able to provide a Supporting Statement alongside the collection template, outlining the methodology applied, any unique contextual considerations and relevant concerns. This process of consultation, as with prior years, reflected both the complexity and diversity of costing approaches and organisational practices across the sector and helped ensure the collection of a high quality dataset. Notably, it was clear that a number of universities had made further investments to improve the quality of data and cost allocation methodologies relative to those used in previous years.

Key findings from this process were that:

- Universities varied in the sophistication of their cost data collection and reporting abilities. A total of 23 out of 37 universities participating in the 2022 data collection utilised activity-based costing (ABC) models and software platforms, or have developed their own cost allocation models which are able to report costs at a unit of study level. Others relied on more aggregated financial information, which is then allocated to more granular activities and functions. Despite these differences, similar assumptions and drivers tended to be applied in allocating costs across fields of education.
- There continues to be challenges for many universities in separating the costs of teaching and scholarship from research activities. This is because resources are often shared between different activities and collecting data on how those resources are shared poses practical difficulties. This is particularly the case for staff time, although the use of regular staff time surveys can help provide a more accurate measure.
- The reporting of data based on fields of education has not traditionally been commonplace for universities and does not reflect universities' underlying operating structures, which are organised around faculties and schools. While universities have relatively refined data on, for example, teaching costs at the faculty or school level, mapping this to individual fields of education often requires several additional methodological steps.
- The separation of costs between different levels of study within an FOE was challenging for a number of universities, particularly those whose cost allocation models do not report costs at the unit of study level. In these cases, costs were allocated across levels proportionally using EFTSL numbers, such that each level had the same average unit cost.
- In instances of low EFTSL delivery within an FOE, results can be highly sensitive to minor changes in costing methodology. For this reason, field and level cost observations with a student load of less than five EFTSL were omitted from the reporting.[6] This was most commonly observed at the sub-bachelor level.

[5] The University of Notre Dame only became a Table A university in 2021 and is therefore not included in Table A universities for 2019 and 2020.
[6] Outliers were removed where EFTSL counts were less than 5, costs per EFTSL were greater than $100,000 and an EFTSL count was less than 10, when costs per EFTSL were greater than $300,000, or in instances where participating universities explicitly indicated that costs for a field-level combination should not be relied upon.

The data collection and statistical methods applied in this study were specifically designed to mitigate these limitations wherever possible – noting that in most cases these were limitations that had been encountered in a similar form in previous years. The provision of detailed Guidelines alongside consultation with universities and a subsequent data validation process are used to ensure that, to the greatest extent possible, the results were comparable over time and reliable.

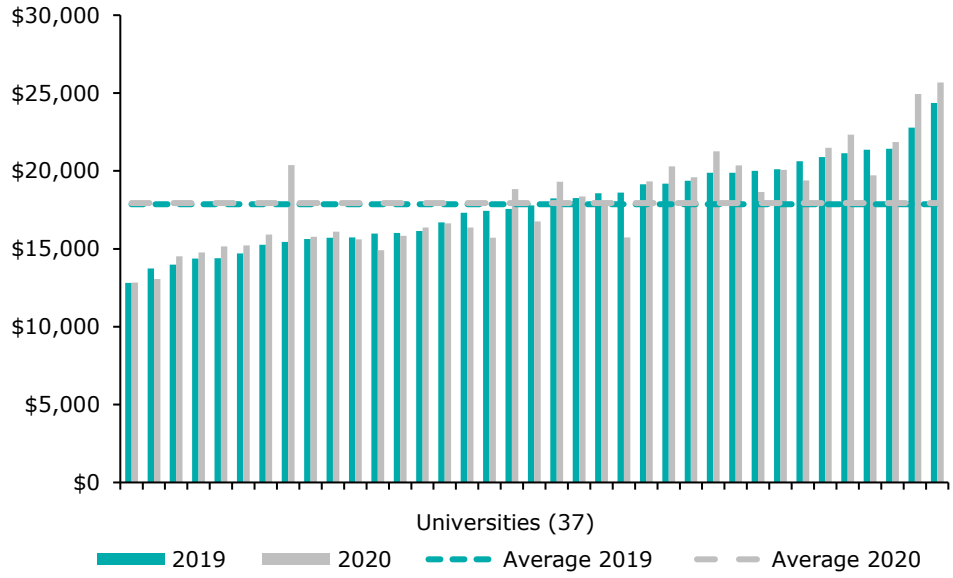
The results of this study seek to capture the actual costs of teaching and scholarship for Australian public universities in the 2019 and 2020 calendar years. They do not seek to capture the costs of teaching and scholarship required to meet specific quality benchmarks or to assess the relative efficiency of universities in delivering teaching and scholarship. These are nonetheless important policy questions – which were raised by a number of universities throughout consultations with the sector – that could be explored in future work based on the data presented here.

The cost of teaching and scholarship in higher education

Across all FOEs, the average cost of bachelor teaching per EFTSL for the 37 universities sampled as part of this study was $17,900 in 2019. Chart i below shows the distribution of the estimated average cost per EFTSL, which ranged from $12,800 (28% below average) to $24,400 (36% above average). The variation in average costs reflects a range of contextual factors (such as differences arising from geography, scale, student mix, subject focus, and research intensity),[7] as well as differences in strategic focus across institutions.

The average unit cost of bachelor teaching per EFTSL grew 0.4% in 2020. There was a slightly wider range of average unit costs across the sector in 2020, from $12,800 (28% below average) to $25,700 (43% above average). This may reflect the impact of different university responses to COVID-19 and the subsequent impacts on the cost of teaching and scholarship.

Chart i: Average bachelor unit costs per EFTSL by university

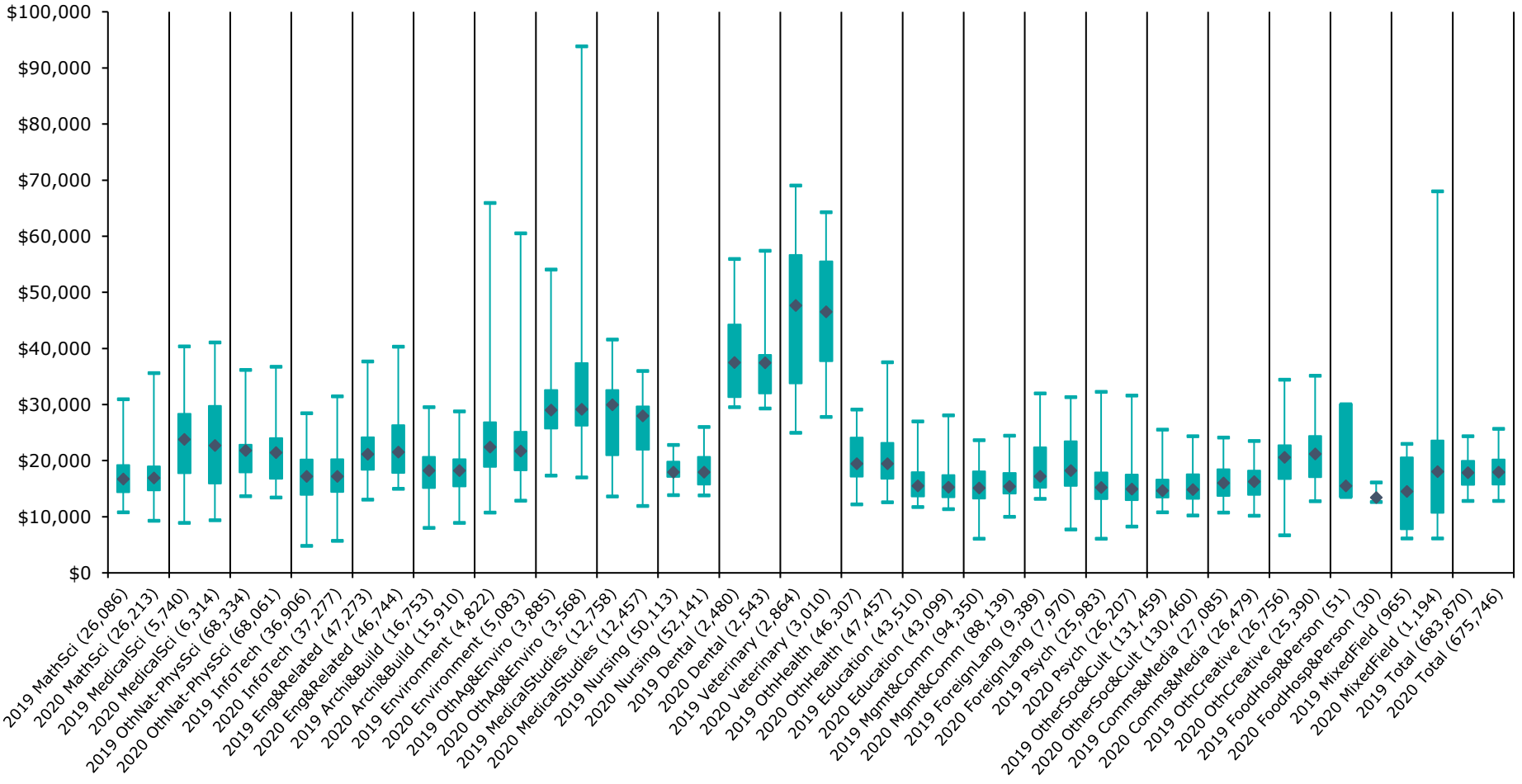


By FOE, average costs at the bachelor level ranged from $14,500 per EFTSL in Mixed Field Programmes to $47,600 in Veterinary Studies in 2019. In 2020, average costs at the bachelor level ranged from $13,400 per EFTSL in Food, Hospitality and Personal Services to $46,500 in Veterinary Studies. Two other health science fields – Dental Studies and Medical Studies– along with Other Agriculture and Environmental Studies are the next most costly, on average, at the bachelor level in both 2019 and 2020. Eleven fields in 2019 and eight fields in 2020 exhibit average costs per

[7] Greater research intensity or focus within a field or institution may simultaneously drive higher costs in teaching, due to more senior professional staff with both teaching and research roles.

EFTSL at the bachelor level between $14,000 and $18,000 while a further six exhibit average costs between $19,000 and $27,000 in both 2019 and 2020.

Chart ii: Distribution of unit costs by field for bachelor studies

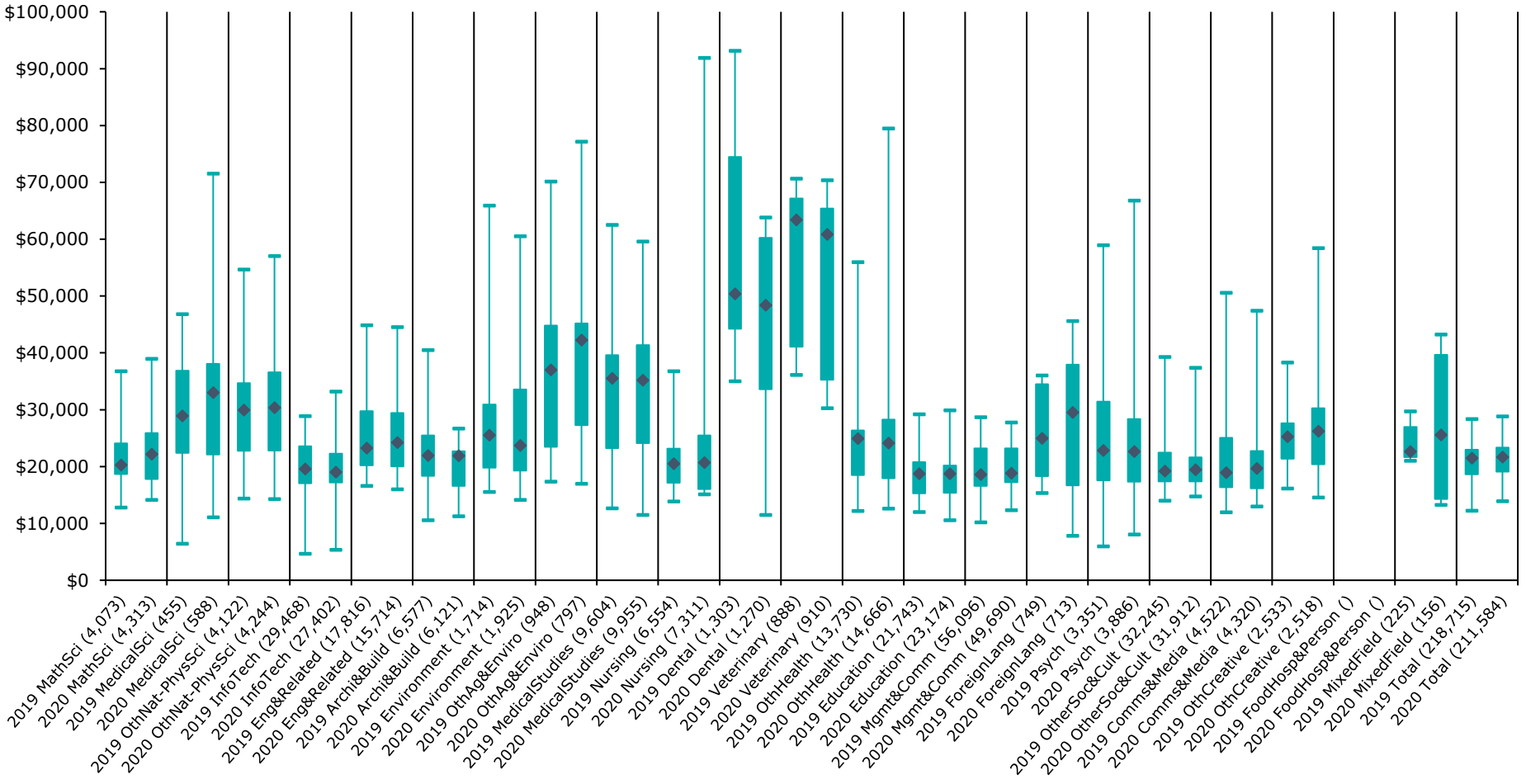


Note: 1,289 cost observations across 37 universities. Outliers excluded. Marker at mean, box width between 25th and 75th percentile, and tails at minimum and maximum.

Overall, there was a 1.0% increase in total cost per EFTSL for postgraduate level education programs between 2019 and 2020. Similar results by FOE are observed regarding costs per EFTSL at the postgraduate level (Chart iii) in 2019 and 2020. Veterinary Studies, Dental Studies and Other Agricultural and Environmental studies exhibit the highest average cost per EFTSL at the postgraduate level while Society and Culture – Other, Communications and Media, Education, and Management and Commerce recorded the lowest average cost per EFTSL in both 2019 and 2020.

On average, the cost of postgraduate studies was 20% higher in 2019 and 2020 compared to bachelor studies. This may reflect differences in the way these qualifications are taught including potentially smaller class sizes, more senior teaching staff and different forms of instruction, among other reasons, such as the mix of fields taught. Variation in costs (difference between maximum and minimum costs) within fields also tends to be greater at the postgraduate level than for bachelor level studies, with the greatest variation observed in Nursing, Other Health and Medical Sciences, all in 2020.

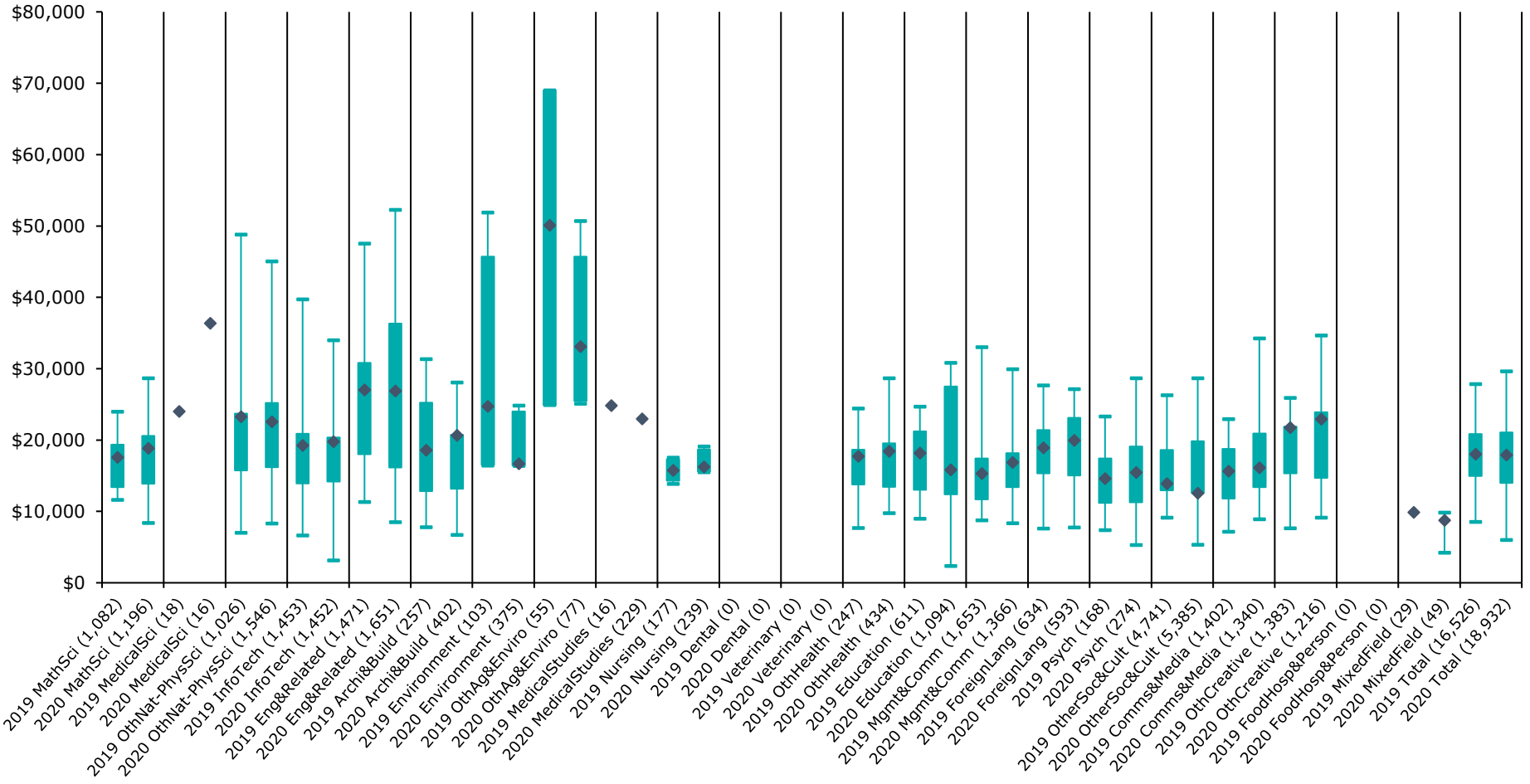
Chart iii: Distribution of unit costs by field for postgraduate studies



Note: 1,063 cost observations across 37 universities. Outliers excluded. Marker at mean, box width between 25th and 75th percentile, and tails at minimum and maximum.

In contrast to the postgraduate level, studies at the sub-bachelor level tended to exhibit on average similar costs per EFTSL compared to bachelor level studies. The average cost per EFTSL for sub-bachelor studies was 0.8% higher than bachelor level study in 2019 and 0.13% lower in 2020. At the sub-bachelor level there is a comparable variation to bachelor level within fields of education but tends to be less variation in average costs per EFTSL across fields (Chart iv).

Chart iv: Distribution of unit costs by field for sub-bachelor studies



Note: 495 cost observations across 34 universities. Outliers excluded. Marker at mean, box width between 25th and 75th percentile, and tails at minimum and maximum

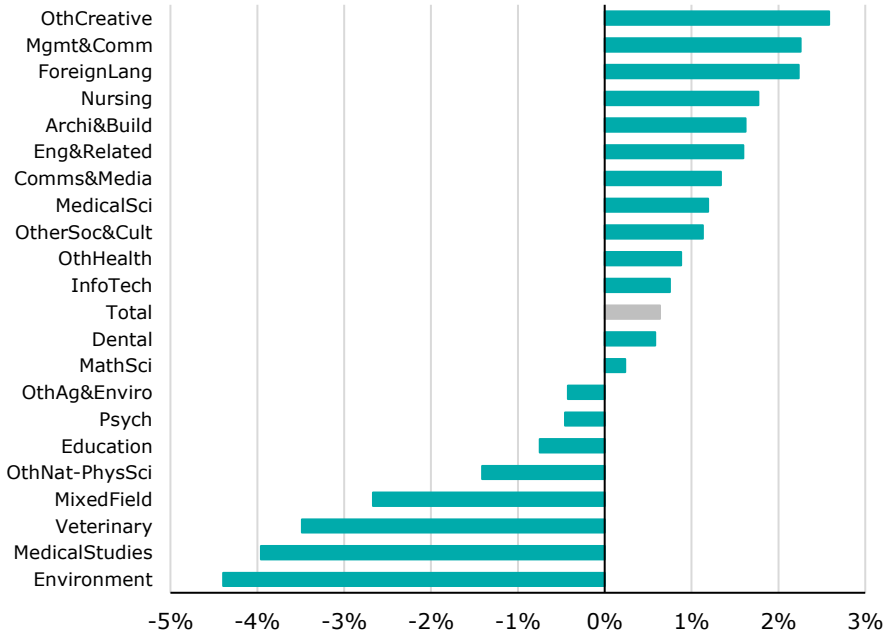
How these findings compare to previous studies

In comparing the results of this research over time, it is important to recognise – and account for – the fact that the sample of participating universities has changed (expanded) over time. To this end, several reporting approaches are adopted, including the use of a common sample. Examining the results of the common sample of universities in the 2018 and 2020 studies provides an indication of how the cost of teaching changed over this period, on average and across fields.

While a handful of refinements were made to the cost collection methodology in the 2022 study, the most significant of these involved the inclusion of a COVID-19 measures adjustment tab which was incorporated 'below the line' and thus did not affect the comparability of results 'above the line'.[8] Nevertheless, comparability can be influenced by factors such as one-off costs, changes to university structures (within a given university) and ongoing policy and strategic changes in the sector. As such, even comparisons of the common sample need to be interpreted carefully.

These points noted, analysis of changes in bachelor level costs among the common sample reveals that all 22 fields experienced absolute average annual growth less than 5% and 14 experienced absolute average annual cost changes of less than 2% (Chart v). The total cost per EFTSL increased by 0.6% per year between 2018 and 2020, compared to headline Consumer Price Index (CPI) inflation of 1.2% per year across the same period. Overall, the largest unit cost changes in percentage terms were mostly in fields that were delivered at a relatively small scale and by only a few universities (such as Food, Hospitality and Personal Services (31.3% annual decrease, excluded from chart below)).

Chart v: Comparing average cost growth from 2018 to 2020 for bachelor studies (2018 common sample (32 universities))



Note: chart excludes growth in costs for Food, Hospitality and Personal Services (-31% CAGR).

[8] 'Above the line' costs are those provided in the TCW that reconcile to statutory accounts. A number of additional cost items are able to be reported by universities, but these are optional. These additional cost items are referred to as 'below the line costs' and include in-kind and third party/partnership costs among others. A full description of these can be found in Appendix B.

The figures in Table i show the average cost per EFTSL for 2010, 2015, and 2017 to 2020. The cost data is shown for the full sample in each year as well as for the common sample of universities (where available).

The average cost per EFTSL for bachelor study rose from $17,300 in 2017 to $17,700 in 2020 for the 25 universities that provided data in both years, an average annual increase of 0.8% as shown in Table ii. Average unit costs for the full sample of 37 universities was slightly higher in 2020 at $17,900 but broadly similar (given that the full sample includes the universities in the common sample).

The average cost per EFTSL for postgraduate study decreased from $22,200 in 2017 to $22,000 in 2020 for the 25 universities that provided data in both years, a decrease of 0.4% per annum. Only 9 of the 25 universities included in the common sample reported lower postgraduate costs per EFTSL in 2020 compared to 2017. For these universities, the average fall in postgraduate costs per EFTSL was 16% between 2017 and 2020. For those universities that saw postgraduate costs per EFTSL increase, the average increase was 9%.

Table ii sets out the growth in costs over time for different time periods. The annual growth in costs for bachelor level study has been declining since 2015 (among the common sample of 17 universities). Annual growth in bachelor costs per EFTSL have slowed from 3.3% in 2018 to 1.2% in 2019 and -0.7% in 2020.

Overall costs have increased at an annual rate of 1.8% since 2015 (for the common sample) compared to headline Consumer Price Index (CPI) inflation of 1.5% per annum over the same period. Given the change in sample in each year, the common sample is likely to provide a more reliable basis for estimating changes in costs over a longer time period.

Table i: Average unit cost per EFTSL

	Year	2010 sample (8 universities)	2015 sample (17 universities)	2017 sample (25 universities)	2018 sample (32 universities)	Full sample (37 universities)
Bachelor	2010	$15,100	-	-	-	-
	2015	-	$16,200	-	-	-
	2017	-	$16,900	$17,300	-	-
	2018	-	$17,500	$17,700	$17,600	-
	2019	-	$17,700	$17,900	$17,800	$17,900
	2020	-	$17,600	$17,700	$17,800	$17,900
Postgraduate	2010	$17,400	-	-	-	-
	2015	-	$20,500	-	-	-
	2017	-	$21,800	$22,200	-	-
	2018	-	$21,900	$22,000	$21,500	-
	2019	-	$21,900	$22,000	$21,700	$21,500
	2020	-	$21,900	$22,000	$21,900	$21,700
Total*	2010	$15,500	-	-	-	-
	2015	-	$17,000	-	-	-
	2017	-	$18,100	$18,400	-	-
	2018	-	$18,600	$18,700	$18,500	-
	2019	-	$18,800	$18,900	$18,800	$18,700
	2020	-	$18,600	$18,700	$18,800	$18,800

Table ii: Growth over time in average unit cost per EFTSL

		Bachelor		Postgraduate		Total	
		% growth	CAGR	% growth	CAGR	% growth	CAGR
2015 - 2020	Common sample (17 universities)	8.5%	1.7%	6.6%	1.3%	9.2%	1.8%
2017 - 2020	Common sample (25 universities)	2.3%	0.8%	-1.1%	-0.4%	1.8%	0.6%
2018 – 2020	Common sample (32 universities)	1.3%	0.6%	2.1%	1.1%	1.7%	0.8%
2019 - 2020	Full sample (37 universities)	0.4%	-	1.0%	-	0.5%	-

Note: CAGR indicates Compound Annual Growth Rate. * Includes costs related to sub-bachelor study. Total growth exceeds growth in bachelor and postgraduate costs in some cases due to both the inclusion of costs for sub-bachelor level study and also compositional shifts which have resulted in a greater share of total EFTSL comprising postgraduate coursework students (who have a higher average cost per EFTSL).

The impact of COVID-19

The COVID-19 pandemic had a significant impact on the financial performance of many Australian universities in 2020. Based on the information garnered through this exercise, Deloitte Access Economics understands that the impacts of COVID-19 on university expenditure can be grouped into three broad categories:

- **Financial incentives and support for students** including scholarships, bursaries and stipends, hardship payments and tuition fee discounts
- **Management of staff costs** including redundancy costs, deferral of salary increases, leave and balance sheet provisions, temporary salary cuts and temporary payroll tax exemptions
- **Management of non-staff costs** including higher IT investment and COVID-related cleaning and consumables; lower spending on travel, conferences and events; and deferred spending on maintenance and capital projects.

As reported above, overall teaching unit costs grew 0.5% in 2020 across all 37 universities. This is below the average annual growth rate of 1.8% from 2015 to 2020 among the 17 universities in the 2015 common sample, but is higher than the 0.2% increase in overall university expenditure per EFTSL. This suggests that, in 2020, universities cut non-teaching costs proportionally more than teaching costs.

Expenditure was affected differently across the sector based on individual university responses to COVID-19. On average, staff costs per EFTSL rose 5.1% in 2020 across all 37 universities amid the effect of redundancy programs. Non-staff costs fell 6.2% over the same period as COVID-19 restrictions reduced campus utilisation, delayed capital and maintenance expenditure at several universities, and led to sharp falls in expenditure on travel.

University responses to COVID-19 are likely to also affect the cost of teaching in 2021, 2022 and beyond. Redundancy programs may mean that staff costs grow more slowly, but non-staff costs may recover following the end of lockdowns. It is also possible that teaching costs may return closer to long term growth trends if the number of international students at Australian university campuses returns to pre-COVID levels.

Costs and funding

The cost of delivering teaching and scholarship for bachelor studies was 89% of the average base funding[9] across all 37 universities in 2019 and 88% in 2020 (Chart vi). A number of fields had an average cost greater than average funding. These include Veterinary Studies, Food, Hospitality and Personal Services, Mixed Field Programmes, Creative Arts – Other, Dental Studies and Management and Commerce. Fields such as Food, Hospitality and Personal Services, Mixed Field

[9] Commonwealth Supported Place (CSP) funding - the sum of CGS and student contributions

Programmes, Veterinary Studies and Dental Studies were delivered at a relatively small scale and by only a few universities. While larger fields such as Management and Commerce and Creative Arts – Other had average costs greater than average funding. Management and Commerce had the equal lowest amount of base funding per EFTSL of the 22 FOEs examined, while Creative Arts – Other had a base funding level that is below the mean across all 22 FOEs.

Chart vi: Average unit costs as a proportion of base funding for bachelor, 37 universities (2019 and 2020)

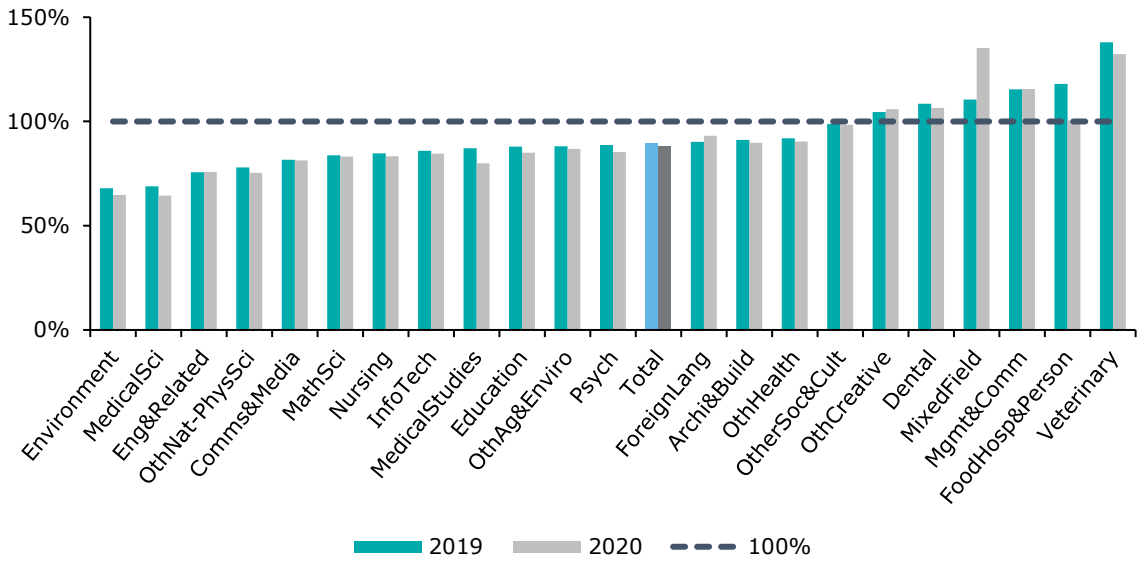


Table iii compares the cost of teaching and scholarship relative to base funding over time. For the 2015 common sample of 17 universities this ratio has increased from 85% in 2015 to 88% in 2020. This shift is consistent with cost per EFTSL growing more quickly than base funding per EFTSL over this period. That said, teaching costs relative to base funding have fallen marginally for the 2017 common sample of 25 universities (89% in 2017 to 88% in 2020) and the full sample of universities (89% in 2019 to 88% in 2020). Overall, teaching costs have remained relatively stable as a share of base funding over recent years.

Table iii: Teaching costs relative to base funding for bachelor studies

Year	2015 sample (17 universities)	2017 sample (25 universities)	2018 sample (32 universities)	Full sample (37 universities)
2015	85%	-	-	-
2017	87%	89%	-	-
2018	89%	90%	89%	-
2019	88%	89%	89%	89%
2020	88%	88%	89%	88%

Note: Figures can be interpreted as the average unit cost per EFTSL as a proportion of average Commonwealth Supported Place (CSP) funding which includes the Commonwealth contribution amounts and Student Contribution amounts.

Importantly, the ratio of teaching costs relative to CSP funding has been calculated based on the maximum CSP funding rates that can be received by a university. That is, the ratios presented in this report do not account for instances where enrolments at a particular university exceed the CGS funding cap.

Concluding remarks

The 2022 study marks the third and fourth years of the current Transparency in Higher Education Expenditure project. The results presented in this report build on previous studies and, to the greatest extent possible, provide a comparable data set on the costs of teaching and scholarship which for the first time encompasses all Table A Australian public universities in 2019 and 2020.[10]

The outbreak of COVID-19 saw many universities offer financial support to students, as well as introduce measures to reduce staff and non-staff costs. The results for 2020, particularly for a given FOE and level of study, should be interpreted with care.

Despite this, the relative consistency of results across the three most recent studies, which have adopted a fundamentally consistent TCW and Data Collection Guidelines, provide policymakers with a greater level of confidence in the reliability of the findings and their comparability over time. This consistency has also been welcomed by the sector to the extent that it has allowed them to develop reporting systems that align with the cost collection template.

Noting the importance of maintaining consistency over time, there remains scope to continue to refine the exercise both in striving not only to more accurately capture the economic costs of teaching and scholarship, but also to cater for new developments and trends in the sector. The benefits of the refinements seen since the commencement of the project in 2017, together with the sector's appetite to continue to explore improvements, suggests this should continue to be a point of consideration in future collection exercises (generally and in specific areas like capital costs). Similarly, understanding the true economic cost of research remains a topic of interest to the sector.

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[10] The University of Notre Dame was added as a Table A university in 2021 and therefore was not a Table A university in 2019 or 2020.

1 Background

In order to support the extensive public and private benefits that universities generate, the Australian Government provides significant financial support and funding to the sector and users. This support is provided through a variety of forms ranging from specific grants for research or infrastructure through to Commonwealth Grant Scheme (CGS) funding for Commonwealth supported students. Universities also receive revenue from a range of private sources.

Universities use this revenue to support a range of activities and outcomes, broadly including teaching and scholarship, research and community engagement. The relative importance of these activities in terms of resource allocation may differ according to the specific strategy of each institution.

Given the range of outcomes and funding sources received by universities, understanding the level of expenditure on teaching and scholarship, and how this varies by discipline, is important to the ongoing monitoring and, as appropriate, refinement of policy settings. Such information can also be instructive to the sector's other stakeholders.

In this context, Deloitte Access Economics has been engaged by the Australian Government Department of Education, Skills and Employment (the Department) to collect and analyse data on the cost of delivering higher education – the costs of teaching and scholarship – at Australia's public universities.

The 2022 exercise collects data on teaching and scholarship costs of all public universities for the 2019 and 2020 calendar years. This exercise extends on previous studies in 2019 and 2018 where Deloitte Access Economics collected teaching and scholarship cost data from universities related to activity in the 2018 and 2017 calendar years. Similar studies were also conducted in 2016 and 2011. Each year, the coverage of the university sector has expanded, with the 2022 collection including all public universities in Australia.[11] With each data collection, areas of improvement and refinement have been incorporated into the exercise to improve the quality and consistency of data collected while also seeking to minimise the administrative burden on universities.

This chapter:

- Provides more context on the objectives of the Transparency in Higher Education expenditure project (Section 1.1)
- Describes the changes in methodology from the 2019 study, including the process and decision-making behind each change (Section 1.2)
- Summarises the process and planning for sampling universities in 2022 (Section 1.3)
- Explores recent trends in the delivery of higher education (Section 1.4)
- Outlines the remaining report structure (Section 1.5).

1.1 Purpose and objectives

The overarching objective of this exercise is to build and develop the evidence-base on the cost of providing teaching and scholarship in higher education to better inform student decision-making and future decisions regarding the policy architecture for higher education. In order to achieve this overarching outcome, the Department has set a number of key objectives for this exercise:

1. Accurately measure the costs of teaching and scholarship[12] by field and level of education
2. Support the continued transition to a more comprehensive, systematic, and streamlined data collection process

[11] The University of Notre Dame was added as a Table A university in 2021 and therefore was not a Table A university in 2019 or 2020.
[12] For simplicity, references to teaching and scholarship costs, and teaching costs are treated synonymously in this report.

3. Provide universities with additional data to benchmark their costs against others in the sector.

Maintaining consistency is essential to support the comparability of costs over time, enabling a richer measurement and understanding of the year-to-year variability in institutions' activities and costs. The imperative to retain consistency is pursued in the context of the learnings and refinements that conducting the exercise year after year generates. The practical challenges associated with implementing identified improvements while preserving comparability is an important trade off in this exercise, which is discussed in further detail in section 1.2 below.

More broadly, a number of principles have informed the process and methodology underpinning the cost collection. The final approach sought to establish a dataset which, to the greatest extent possible, was:

1. Reliable – such that a suitable level of assurance can be established regarding the underlying data
2. Comparable – across universities, given differences in university context, and over time
3. Attributable – ensuring costs are captured only to the extent that they are incurred as a result of a defined and in-scope activity
4. Actual – in that the economic rather than the accounting measure of cost[13] is of primary interest to the exercise.

1.2 Changes to the exercise in 2022

A number of changes to the process and template for collecting data from universities have been implemented for the 2022 collection. The key changes, and their basis, are described in Table 1.1 below.

Australia's higher education sector was affected by the closure of the international border to all non-citizens and non-residents from 20 March 2020 to 21 February 2022, extended periods of lockdown and other restrictions introduced to limit the spread of COVID-19. This analysis seeks to understand the impact of COVID-19 and university responses to COVID-19 on the cost of teaching and scholarship in 2020.

Incremental changes have also been made to the Transparent Costing Worksheet, Guidelines and the process for collecting data. These changes have sought to strike a balance between incorporating feedback from the sector to streamline and clarify the process, while maintaining year-on-year consistency. These changes were developed in collaboration with the sector (see Box 1.1 below on university engagement) and with the overarching aim of strengthening adherence to the four principles outlined immediately above.

Consultation and feedback from a number of universities indicated that the consistency of the template structure greatly eased the workload and improved usability. The main data collection template is provided in Appendix A and the accompanying data collection Guidelines are provided in Appendix B of this report.

[13] Economic costs include both accounting costs but also the opportunity cost involved in using a given resource for a particular activity.

Table 1.1: Key changes to the template for 2022

Including an optional COVID-19 measures adjustment	To allow for additional analysis of the impact of COVID-19 on teaching and scholarship costs, Deloitte has included an optional tab in the Transparent Costing Worksheet to capture the financial impact of university responses to COVID-19. While all actual costs for 2020 were to continue to be included in the main tab of the worksheet, universities could choose to populate this optional tab to address the specific components of costs (or revenue) attributable to COVID-19. The measures in the COVID-19 tab are split into three categories. These categories include financial incentives and support, staff costs and non-staff costs. Within each of these three categories are specific line items designed to identify the different potential areas where COVID-19 has impacted university operations.
Providing opportunities to qualitatively describe the impact of COVID-19	In addition to the inclusion of an optional COVID-19 measures tab, Universities had the option to qualitatively describe how COVID-19 may have affected teaching and scholarship costs in the Supporting Statements. Universities also had the opportunity to detail the impact of COVID-19 on teaching and scholarship costs during one-on-one consultations with Deloitte.
Inclusion of undergraduate certificates as in scope for the 2022 data collection exercise	Students enrolled in Undergraduate Certificate programs are included as in-scope EFTSL in 2020. Students enrolled in Undergraduate Certificates are captured as part of the sub-bachelor level of education.
Improving usability of the template	This included providing greater clarity in labelling of optional in-kind costs.

Box 1.1: University sector engagement

The development of the TCW and associated data collection Guidelines for this exercise involved significant engagement and collaboration with the sector, including key university stakeholders and the peak body Universities Australia (UA), as well as the Department.

Alongside ongoing communications, this sector engagement included a UA Reference Group (consisting of university representatives, representatives from UA, the Department, and Deloitte Access Economics), a Technical Working Group, and a forum to introduce new universities to this exercise. The Technical Working Group provided an avenue for discussing and resolving issues associated with the definition, specification and measurement of certain activities and costs; while the Reference Group served as the ultimate forum for strategic decision making.

All universities were issued with a detailed set of data collection Guidelines to ensure that the Transparent Costing Worksheet was filled out consistently. Consultations were also held with all universities to ensure a common approach was undertaken to capturing the costs of teaching and scholarship across the sector.

1.3 University sample

The 2022 study now includes all 37 Table A universities. Table 1.2 outlines university participation over time.

Table 1.2: Participation by universities

2016 ***Fourth year of participation in this study***	**2018** ***Third year of participation in this study***	**2019** ***Second year of participation in this study***	**2022** ***New to this study***
1. Australian Catholic University	18. Charles Darwin University	26. Central Queensland University	33. La Trobe University
2. Charles Sturt University	19. Curtin University	27. Edith Cowan University	34. Macquarie University
3. Deakin University	20. Federation University Australia	28. Murdoch University	35. The University of New South Wales
4. Griffith University	21. Flinders University	29. RMIT University	36. University of Technology Sydney
5. James Cook University	22. University of Canberra	30. Swinburne University of Technology	37. Western Sydney University
6. Monash University	23. University of South Australia	31. The Australian National University	
7. Queensland University of Technology	24. University of Tasmania	32. The University of Adelaide	
8. Southern Cross University	25. The University of Western Australia		
9. The University of Melbourne			
10. The University of New England			
11. The University of Newcastle			
12. The University of Queensland			
13. The University of Wollongong			
14. University of Southern Queensland			
15. University of Sydney			
16. University of the Sunshine Coast			
17. Victoria University			

Note: The University of Notre Dame is not included as it was made a Table A university in 2021.

1.4 Trends in higher education delivery

COVID-19 had a notable impact on Australia's higher education sector, which is highly reliant on international students for its revenue. Total revenue from continuing operations fell 5.1% in 2020. As such, universities adopted a variety of cost-saving measures in 2020 to mitigate the impact of the loss of international students, economic uncertainty, and COVID-19 lockdowns. The impact of COVID-19 on university expenditure can be grouped into three broad categories:

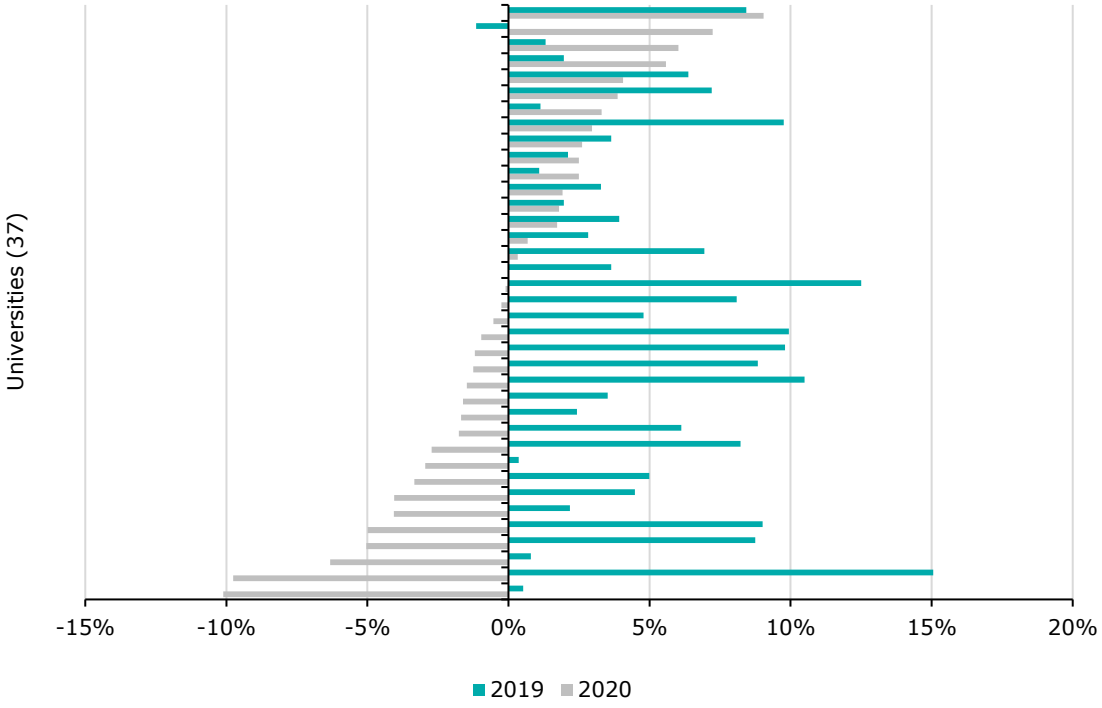
- Financial incentives and support for students including scholarships, bursaries and stipends, hardship payments and tuition fee discounts
- Management of staff costs including redundancy costs, deferral of salary increases, leave and balance sheet provisions, temporary salary cuts and temporary payroll tax exemptions, and,
- Management of non-staff costs including higher IT investment and COVID-related cleaning and consumables; lower spending on travel, conferences, and events; and deferred spending on maintenance and capital projects.

A total of 21 out of 37 universities experienced a decline in total higher education expenditure in 2020, in comparison to 1 out of 32 universities in 2019. This was primarily due to measures introduced in response to COVID-19, with average expenditure on teaching, scholarship, and all other university activities increasing by 0.2% in 2020 across all universities. Cost per EFTSL increased by 0.2% as the fall in total EFTSL in 2020 (0.9%) was larger than the decline in expenditure (0.7%).

The largest decrease in expenditure over this period was -10.1% and the largest increase in total higher education expenditure was 9.0% (see Chart 1.1). The universities that saw relatively large increases in total higher education expenses in 2020 experienced elevated growth in employee related expenses and on-costs. The five universities that experienced the fastest growth saw total higher education expenses increase by 7% on average in 2020 compared to a 12% increase in

employee related expenses and on-costs. This is possibly related to the institution's response to the COVID-19 pandemic via redundancy programs. The impact of COVID-19, and measures introduced in response to COVID-19, is discussed in further detail in Section 3 of this report.

Chart 1.1: Percentage change in total higher education expenses (teaching, scholarship, and all other activities) by university



Source: Cth Department of Education data.

Notwithstanding the impacts of COVID-19, demand for Australian higher education has been steadily increasing over recent years with total EFTSL increasing year on year, until 2020 where total EFTSL declined. Chart 1.2 describes the growth in student enrolments across the sector by broad (2-digit) fields of education.

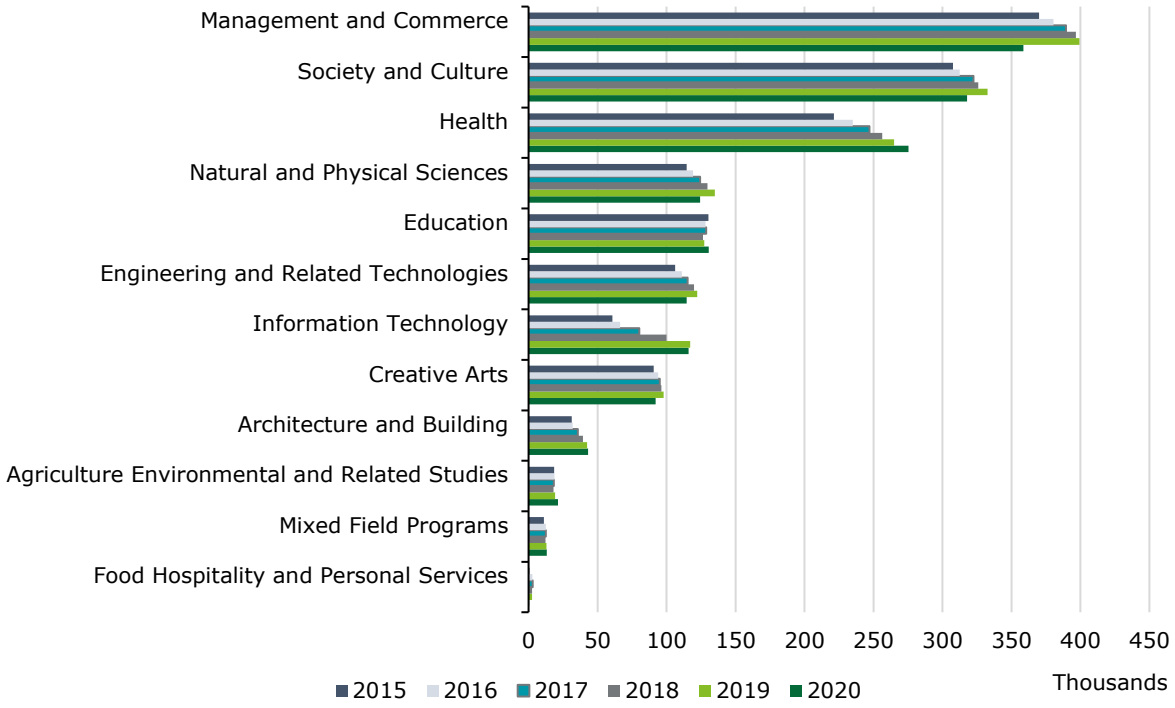
Fields of education such as Food, Hospitality, and Personal Services; Information Technology; and Architecture and Building exhibited the strongest growth between 2015 and 2019, growing by 297%, 93%, and 36% respectively. Education was the only field to decline over this period, falling by 2%.

While the impacts of COVID-19 were spread across the higher education sector, the largest fall in enrolments in 2020 was in Food, Hospitality, and Personal Services (87%) and Management and Commerce (10%). The large decline in Food Hospitality and Personal Services largely reflects the small number of EFTSL that study at Australian universities.

Other fields of education that contracted significantly over this period include Natural and Physical Sciences (-8%), Creative Arts (-6%), and Engineering and Related Technologies (-6%). Enrolments in Agriculture, Environmental and Related Studies exhibited the strongest growth in 2020, increasing by 11%. Other fields that also grew over this period include Health (4%), Mixed Field Programs (2%), and Architecture and Building (1%). Generally, COVID-19 reduced the rate of growth in student enrolments, even for those fields of education that experienced moderate positive growth in 2020.

Overall EFTSL[14] fell by 0.9% in 2020, reflecting a 7.8% decrease in overseas EFTSL[15] (from 394,800 in 2019 to 364,200 in 2020, or a fall of 30,600) and a 2.6% increase in domestic EFTSL (from 748,600 in 2019 to 768,400 in 2020, or a rise of 19,800). A subset of total EFTSL is in-scope for this study. This subset excludes some enabling and non-award programs, higher degrees by research, as well as students enrolled at overseas campuses of Australian universities. In-scope teaching and scholarship EFTSL fell by 1.4% in 2020, reflecting a 10.4% decrease in overseas EFTSL studying at an Australian campus (from 261,600 in 2019 to 234,500 in 2020, a fall of 27,100) and a 2.2% increase in domestic ESTSL studying at an Australian campus (from 657,400 in 2019 to 671,700 in 2020, a rise of 14,400).

Chart 1.2: Student enrolments over time by FOE (count)



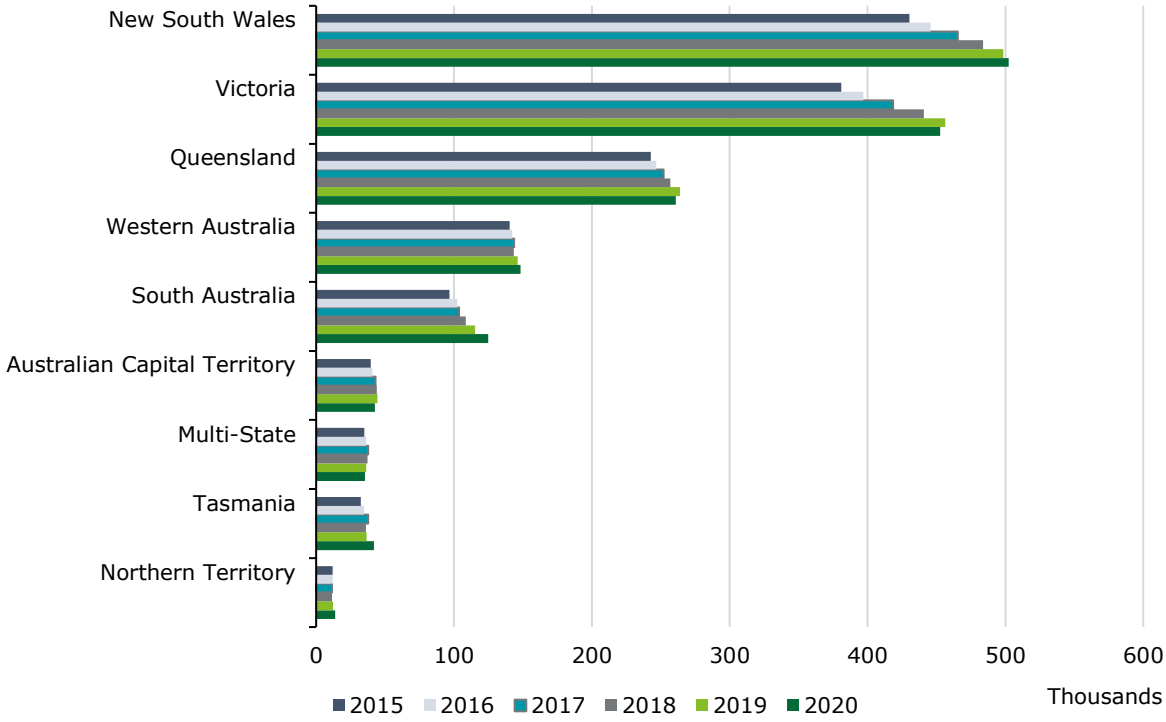
Source: Cth Department of Education data. Note: Total enrolments including domestic and international students, and all levels of education.

Enrolments in each state and territory have experienced positive growth from 2015 to 2019, with the largest gains in the ACT (20%), South Australia (19%) and Victoria (13%). Over this period, the slowest growth in enrolments was in New South Wales (3%), Queensland (4%) and Tasmania (4%).

In 2020, Tasmania, South Australia and the Northern Territory experienced higher-than-average annual growth in enrolments, while all other jurisdictions experienced a lower-than-average growth in enrolments. The ACT, Victoria, and Queensland were the only states and territories to have experienced a contraction in enrolments in 2020, with enrolments declining by 4%, 1%, and 1% respectively (Chart 1.3).

[14] EFTSL including students enrolled at Australian universities but studying at an overseas campus and students enrolled in higher degree by research programs and enabling and non-award programs
[15] Overseas EFTSL refers to overseas students enrolled at an Australian university and studying at either an Australian or overseas campus.

Chart 1.3: Student enrolments over time by state (count)



Source: Cth Department of Education data. Note: Total enrolments including domestic and international students, and all levels of education

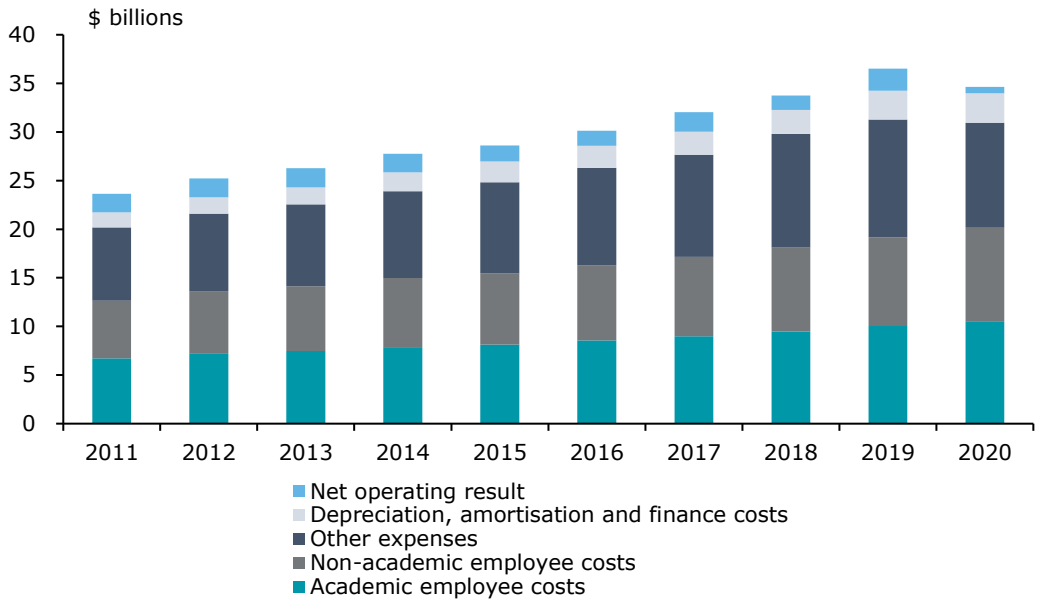
Sector-wide changes in aggregate financial measures (i.e., revenue and expenses) provide a useful point of reference on the growth in costs for the university sector in recent years.

Total university expenses increased at a compound annual growth rate (CAGR) of 5.1% from 2011 to 2020 (Chart 1.4). The largest growth in expenses over this period related to depreciation, amortisation, and finance costs (7.8%). There was also growth over the same period in non-academic employee costs (5.5%), academic employee costs (5.1%), and other expenses (4.1%).

The net operating result fell 70.7% in 2020 from 2019, having grown at a CAGR of 2.0% from 2011 to 2019 (Chart 1.5). Total expenses fell 0.7% in 2020, led by a 10.7% decrease in other expenses which outweighed gains in academic employee costs (5.2%), non-academic employee costs (5.1%) and depreciation, amortisation and finance costs (1.9%). The fall in other expenses was largely due to falls in non-staff costs such as travel, conferences and events, though there was also a decline in repairs and maintenance expenditure.

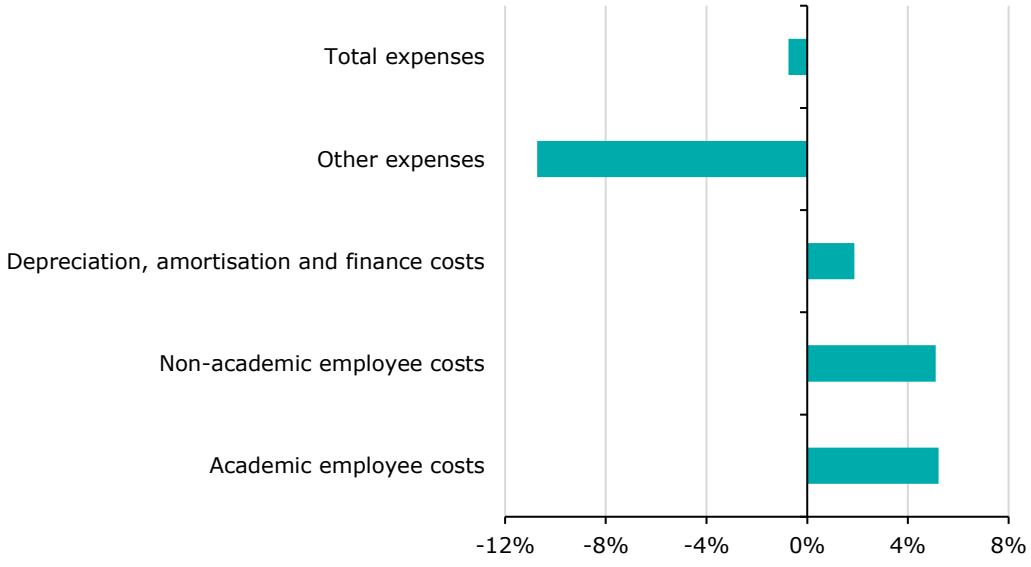
Labour costs increased slightly, representing 59% of total expenses (31% academic, 28% non-academic) in 2020. Historically, labour costs have represented 57% of total expenses (30% academic, 27% non-academic), a ratio that has been almost constant for the past 8 years.

Chart 1.4: Total expenses and net operating result for Australian public universities (2011 to 2020)



Source: Cth DET data

Chart 1.5 Percentage change in university expenses between 2019 and 2020



Source: Cth DET data

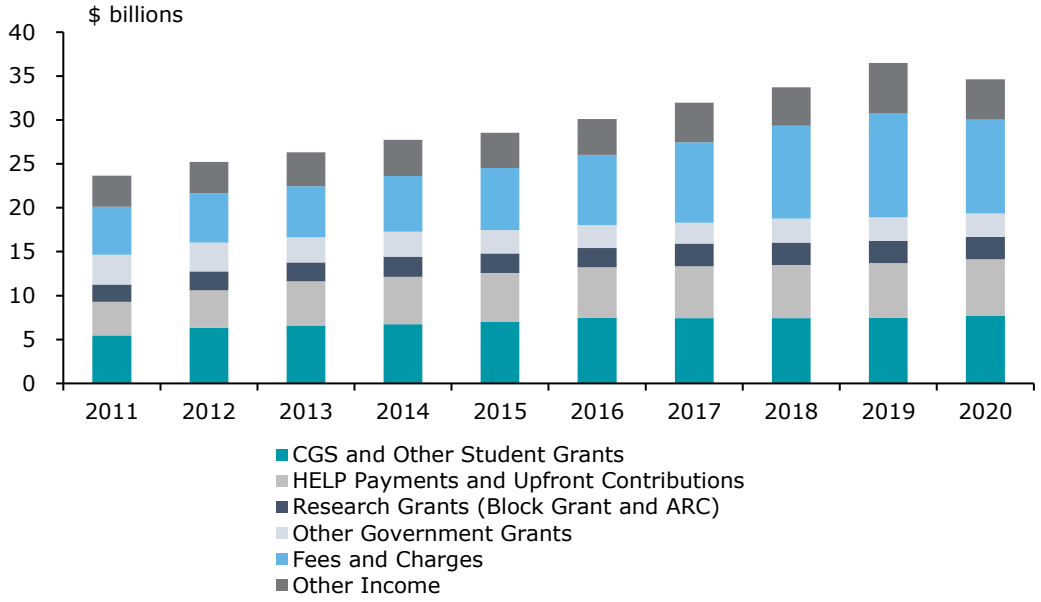
Total revenue from continuing operations grew at a CAGR of 5.6% from 2011 and 2019, with the strongest growth in fees and charges[16] (10.1%), Higher Education Loan Program (HELP) payments

[16] Fees and charges are paid by international and domestic students enrolled in courses which are not Commonwealth supported (i.e. not subsidised by the Australian Government) and for which tuition fees are payable (i.e. those not paid via HELP loans).

and upfront contributions[17] (6.3%) and other income (6.3%). There were gains in CGS and other student grants, research grants. The only decline was seen in other government grants, which fell by a CAGR of 2.9% from 2011 to 2019. Total revenue fell 5.1% in 2020, driven by a 9.5% decline in revenue from fees and charges and a 20.7% decline in revenue from other income.

Fees and charges have increased from 23% of total revenue in 2011 to 31% in 2020. CGS and other student grants and other government grants have both fallen as a share of total revenue from 2011 to 2020, while other revenue categories have remained relatively constant as shares of total revenue.

Chart 1.6: Total revenue for Australian public universities (2011 to 2020)

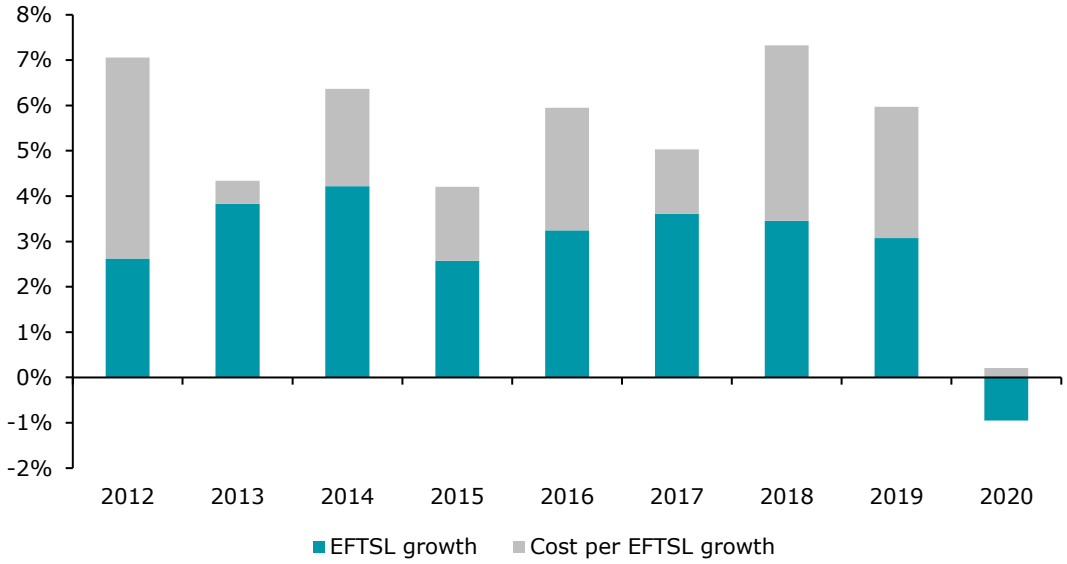


Source: Cth DET data

Growth in total costs can be decomposed between growth in total EFTSL (i.e. increases in student volumes) and growth in unit costs (i.e. increases in average cost per EFTSL). Chart 1.7 shows this decomposition and the high variance of unit cost growth year-on-year. From 2012 to 2019, EFTSL growth has been the more significant driver of cost growth relative to increases in cost per EFTSL. Total EFTSL fell 0.9% in 2020 compared to a 0.2% rise in unit costs.

[17] The HELP refers to a number of Commonwealth loan policies to support student contributions, as well as fees and other selected expenses related to study.

Chart 1.7: Cost growth decomposed by growth in EFTSL and growth in unit costs (2012 to 2020)



Source: Cth DET data. Note: Total EFTSL including domestic and international, and all levels of education

These trends highlight the association between student enrolments and growth in costs in the sector as a whole and provide useful background for assessing changes in the costs of teaching and scholarship over time, which are examined in the following chapter.

1.5 Report structure

The remainder of the report is organised as follows:

- Chapter 2 – Reports the core quantitative analysis and key results, in terms of the costs of teaching and scholarship, including the distribution and variation across fields, levels and university contexts. This chapter also includes a comparison of costs between this study and the previous 2016, 2018 and 2019 studies, and analysis of 'below the line' costs.
- Chapter 3 – Analyses the costs of teaching and scholarship in 2020 in the context of the COVID-19 pandemic. This consists of a comparison of change in costs of teaching and scholarship across fields, levels, and university contexts (university characteristics and geographies).
- Chapter 4 – Presents a discussion of the key considerations and limitations of this exercise, particularly in interpreting the results, as well as reflections from participating universities. The chapter also sets out a range of considerations in relation to the way capital costs are incorporated in the exercise.

Appendix A contains a screenshot of the costing template used for universities to submit their data and Appendix B contains the data collection Guidelines provided to universities. Appendix C includes additional charts for the 2017 common sample of universities. Appendix D includes additional charts for the 2015 common sample of universities.

2 Cost of teaching and scholarship

This chapter sets out the results of the data collection on the cost of delivery of teaching and scholarship at Australian universities. It provides analysis of the distribution and variability of costs – at the university, field, and level of education level. Specific cost line items are analysed, and some exploration of systematic cost variations amongst key contextual factors or drivers is undertaken. The scope of this report does not extend to providing estimates of the reasonable costs of teaching and scholarship by FOE, or to identifying the size of particular cost drivers but instead focuses on the actual costs incurred by universities in the 2019 and 2020 calendar year. The findings of the 2016 report, which did undertake such analysis, is summarised in Box 2.3 below.

A very small selection of field-level observations were excluded from the results included in this report as they were identified as outliers. The process for identifying outliers is summarised in Section 2.2.

While the results of this 2022 study are comparable to those from the 2019 study and indeed are collected using a consistent cost collection template, the sample is slightly different to the 2019 study. Hence results are presented with both a common sample of 32 universities across the two studies and the full sample of 37 universities involved in the 2022 study. Importantly, the results in sections 2.1 to 2.4 focus on above the line items which are also available from the 2011 and 2016 studies. Results including below the line items are discussed in section 2.5 as these items have only been included since 2018.

The remainder of this chapter is structured as follows:

- Section 2.1 describes the distribution of costs within a university, including the total cost per EFTSL.
- Section 2.2 presents the distribution of total cost per EFTSL by field and level of education.
- Section 2.3 contrasts average costs with base funding levels.
- Section 2.4 compares the results of the previous section to those in the 2019 and 2018 study, noting some caveats on comparability.
- Section 2.5 examines the addition of below the line costs, which were introduced in this study to more fully capture the true economic costs of teaching and scholarship.
- Section 2.6 provides consideration of some of the contextual factors that may influence cost, informed by the 2016 study of cost drivers as well as consultation with the sector as part of this study.

2.1 Distribution of types of costs

Total costs attributable to teaching

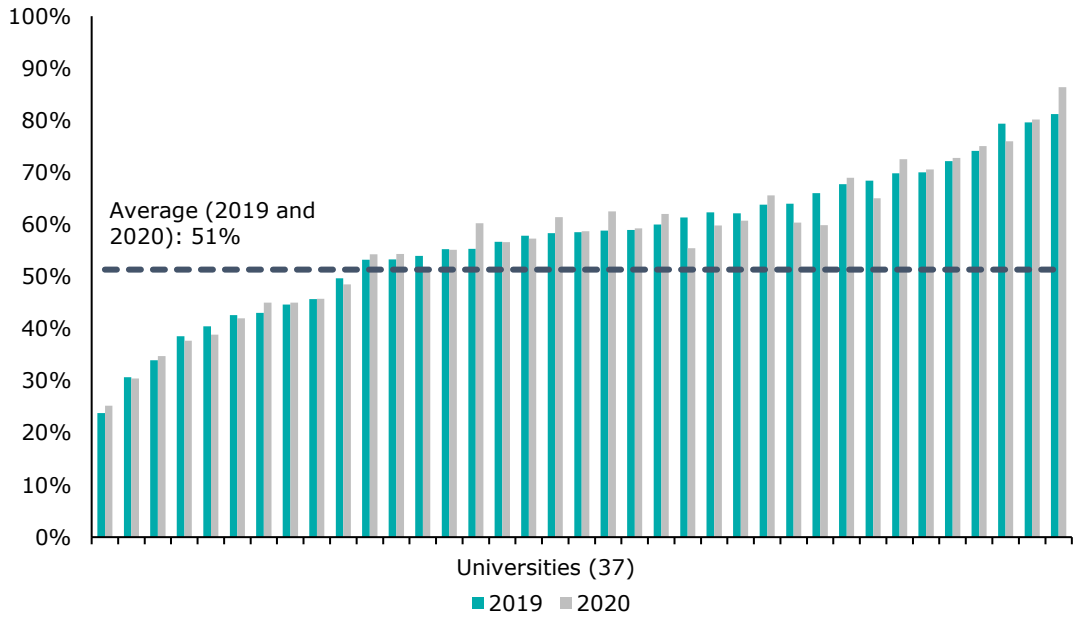
Australian public universities generate a range of outputs, including not only teaching and scholarship, but research, commercial activities, and community outreach. Understanding the relative share of expenditure on teaching and scholarship in comparison to other activities is useful in understanding the extent to which these activities consume university resources as well as the degree of variation across the sector.

As shown in Chart 2.1 below, on average, 51% of all university costs for the sector in 2019 were attributable to teaching and scholarship activities, as opposed to other university functions. There remains considerable variation in the share of teaching costs across universities. While 22 of the 37 universities had between 50-70% of total costs attributable to teaching, this figure ranged from 24-81% of total costs for the full sample of 37 universities. This reflects the significant variation in the share of resources dedicated to teaching and scholarship relative to other activities across

universities. In 2019 there was a correlation of -0.30 (-0.32 in 2020) between the size of a university (as measured by the number of EFTSL) and the share of costs attributable to teaching and scholarship. This implies that larger universities tend to have lower shares of costs attributable to teaching and scholarship, potentially reflecting economies of scale.

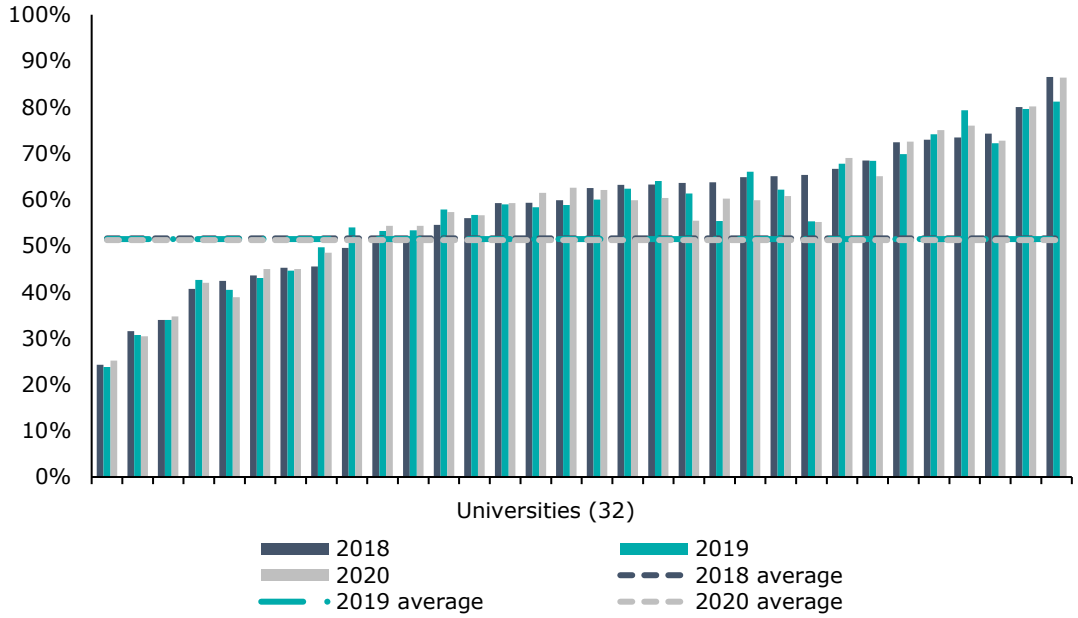
The proportion of total costs attributable to teaching in 2020 was unchanged from 2019, at 51%. A total of 21 out of 37 universities experienced an increase in teaching costs as a proportion of total costs in 2020. In comparison to 2019, there was slightly larger variation in the share of resources dedicated to teaching and scholarship across the sector. While 20 of the 37 universities had between 50-70% of total costs attributable to teaching (similar to 2019), this figure ranged from 25-86% of total costs in 2020.

Chart 2.1: Proportion of total costs attributable to teaching and scholarship (2019 and 2020)



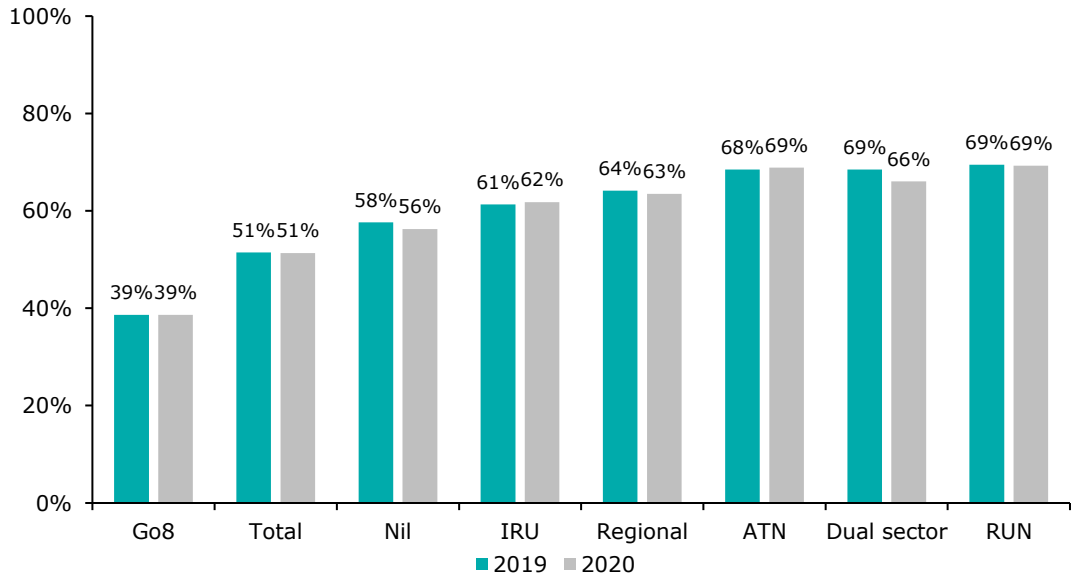
When comparing a common sample of 32 universities who provided data for the 2018, 2019, and 2020 calendar years, the proportion of total costs attributable to teaching was similar on average (52% in 2018 falling to 51% in both 2019 and 2020). The proportion of total costs attributable to teaching increased year-on-year for 17 out of 32 universities in 2020 (Chart 2.2). The largest year-on-year increase was 5.2 percentage points, while the largest decrease was 6.2 percentage points.

Chart 2.2: Proportion of total costs attributable to teaching and scholarship (2018 to 2020), 2018 common sample (32 universities)



The average proportions of teaching cost by university affiliation, outlined in Chart 2.3, shows a lower average share of total expenses attributed to teaching for Group of Eight universities (39% in 2019 and 2020 compared to a sector-wide average of 51%). This is likely to reflect their relative research-intensity and hence allocation of a greater share of expenses to research activities. In comparison, the proportion of total costs attributable to teaching activity is higher than average for the Region Universities Network and Dual Sector Universities.

Chart 2.3: Proportion of costs attributable to teaching by university affiliation (2019 and 2020)



Note: Categories are not mutually exclusive. That is, a given university can appear in more than one category.

Teaching costs attributable to staff

As a service industry, typically delivered face-to-face by highly skilled professionals, universities are highly labour intensive, and hence labour costs are likely to represent a significant component of total teaching costs.

On average, 59% of teaching costs were attributable to staff in 2019,[18] with 33 of 37 universities having staff teaching costs between 50-70% of all teaching costs. The proportion of teaching costs attributable to staff rose to an average of 62% across the sector in 2020, with 36 of 37 universities having staff costs between 50-70%.

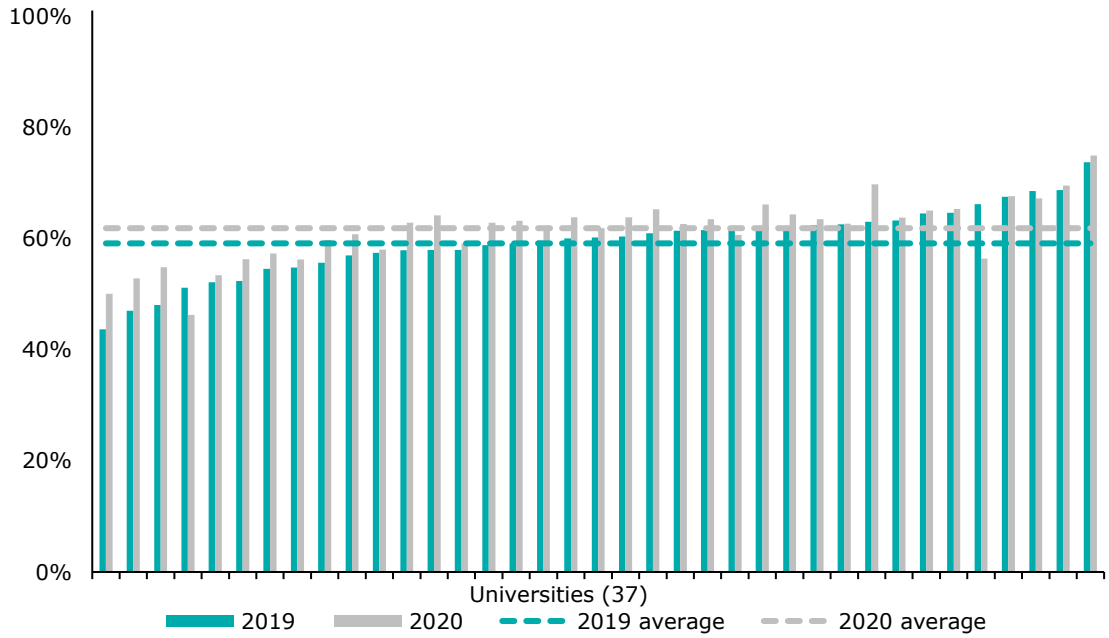
These proportions ranged from 44-74% of total teaching costs in 2019 and 50-75% in 2020, which may represent variations in:

- Scale, where size allows for fewer staff per enrolment
- Teaching and classroom practices, where some universities will adopt more intensive student-staff ratios
- Discipline focus, where some disciplines require smaller class sizes or more intensive teaching
- Differences in staff per student ratios across different levels of education
- Differences in mode of delivery, with different modes of delivery potentially utilising a different mix of labour and capital inputs.

The relative importance of labour costs highlights the impact that variations in the measurement and attribution of labour costs can have on the results of this exercise. These considerations are discussed in more detail in Section 4.2.

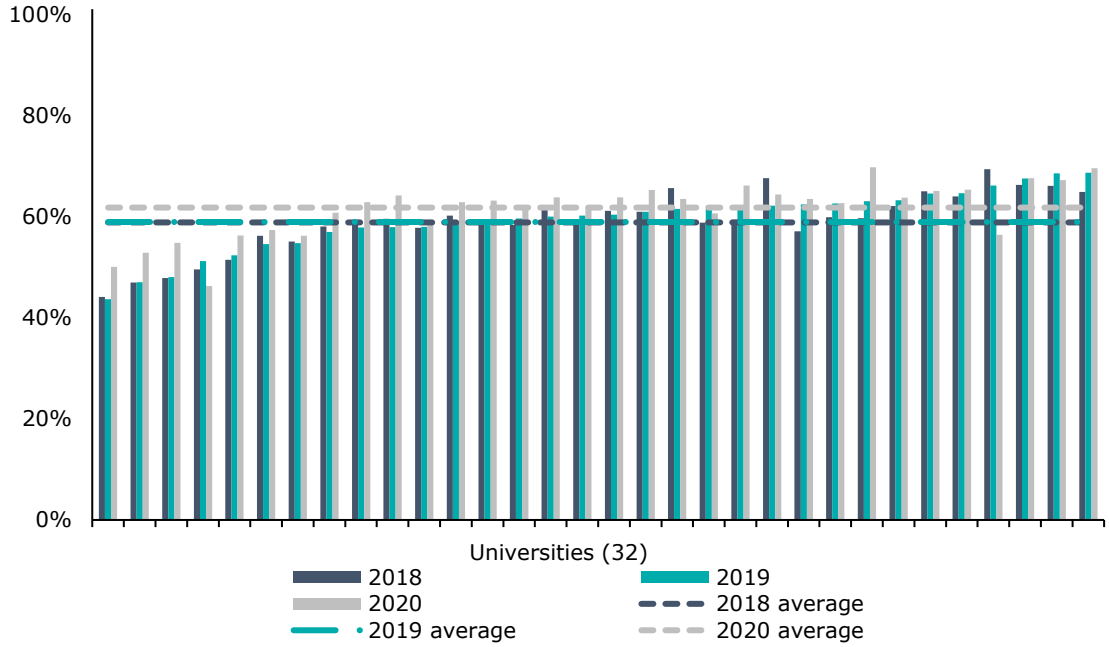
Staff costs as a proportion of total costs increased for 33 out of 37 universities in 2020. This may be due to university responses to COVID-19 such as staff re-structures, staff redundancy programs as well as lower spending on non-staff costs (e.g. travel). Four universities saw staff costs decrease as a proportion of total costs in 2020, with this decrease ranging from 1-10 percentage points.

Chart 2.4: Proportion of teaching costs attributable to staff (versus non-staff) (2019 and 2020)



[18] It should be noted that the true share of teaching costs attributable to higher education staff may be marginally higher as universities had the option to attribute teaching costs to third party providers under 'non-staff expenses'. Thus staff expenses (as described in this report) are likely to be understated.

Chart 2.5: Proportion of teaching costs attributable to staff (versus non-staff) (2018 to 2020), 2018 common sample (32 universities)

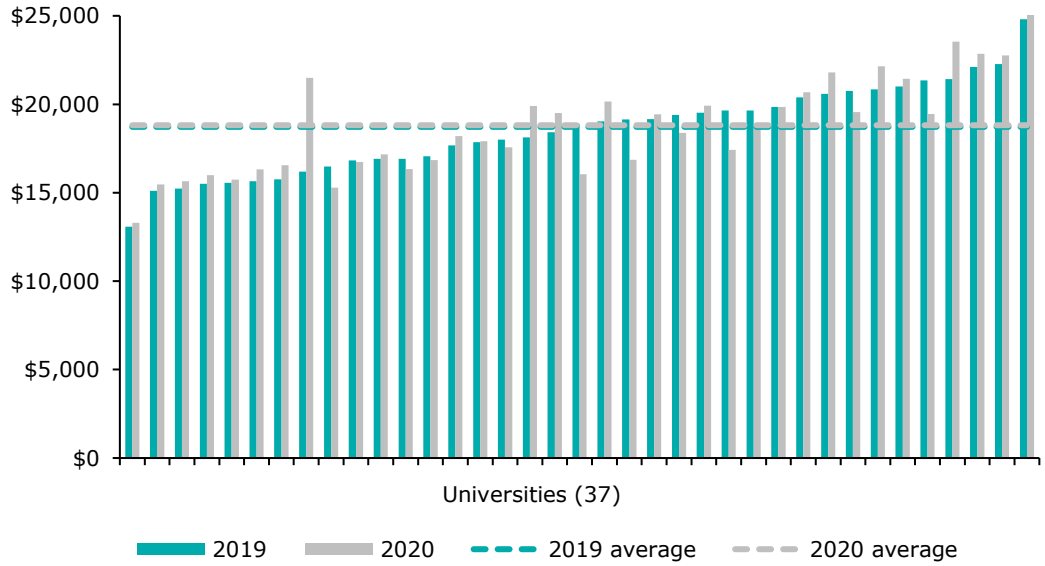


Average unit teaching costs

The key outputs of this exercise relate to unit teaching costs, namely average costs per EFTSL, and the variation in these unit costs by field and level of education.

The average unit teaching cost across all levels of study and universities is $18,700 in 2019. Chart 2.6 shows that the average unit cost (including all observations) at each institution can vary, ranging from $13,100 (30% below average) to $24,800 (32% above average) in 2019. This variation represents, in part, the varied focus and context of universities across the sector. The following sections examine the degree of variation in unit costs across qualification levels and fields of education.

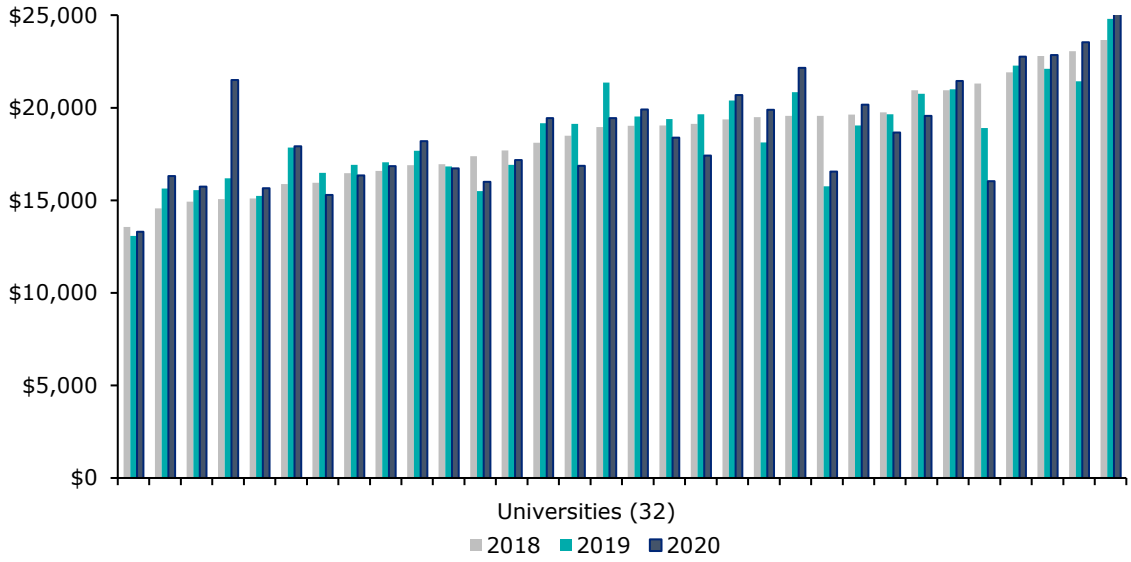
Chart 2.6: Average unit costs by university (all fields and levels) (2019 and 2020)



Note: This includes all data observations.

The average unit cost (including all observations) grew 0.5% in 2020 to $18,800. There was a slightly wider range of average unit costs across the sector in 2020, from $13,300 (29% below average) to $25,800 (37% above average). This may reflect the impact of different university responses to COVID-19 and the subsequent effects on the cost of teaching and scholarship. The largest increase in average unit costs in 2020 was $5,300 and the largest decrease over the same period was $2,900.

Chart 2.7: Average unit costs by university (all fields and all levels) (2018 to 2020), 2018 common sample (32 universities)



Note: This includes all data observations.

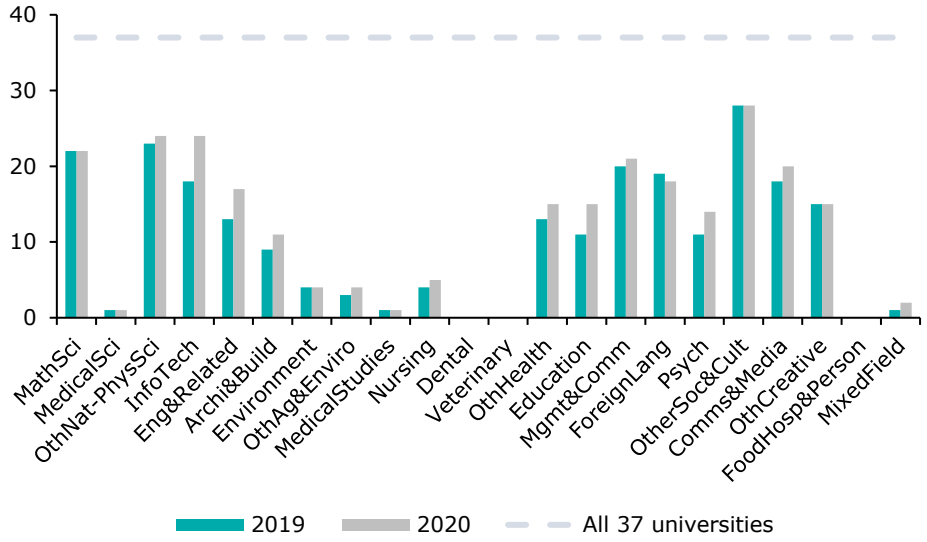
2.2 Costs by field and level of education

This section presents the costs of teaching and scholarship by field and level of education. Before discussing the results in detail, the first part of this section describes the sample size of each field and level of education and discusses the approach taken to addressing outliers.

Sample size for each field and level of education

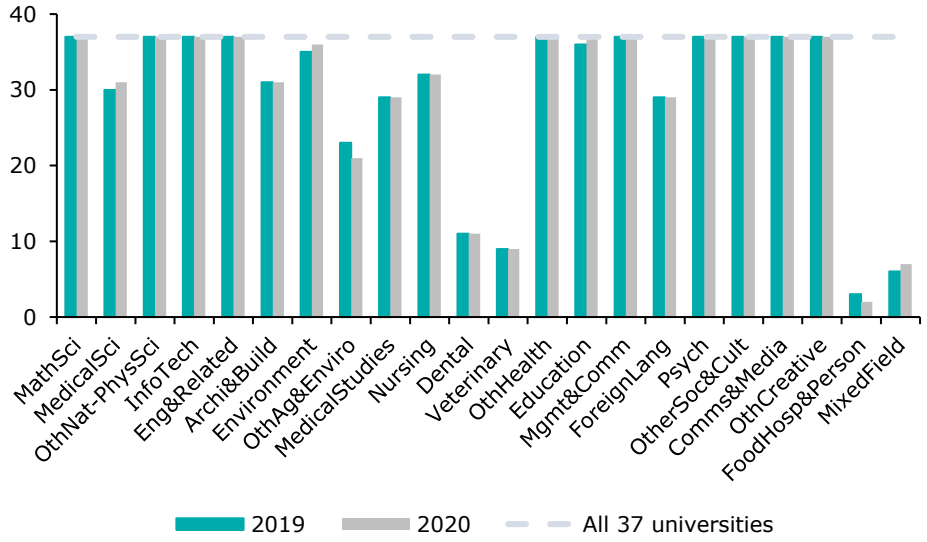
While universities offer a wide selection of disciplines and qualification types, some field and level combinations are significantly more common (e.g. Information and Technology bachelor degrees are delivered at all 37 universities in the sample), while others are much less prominent, typically due to their specialist nature (e.g. Veterinary Studies is offered at 9 of the 37 universities). Chart 2.8, Chart 2.9 and Chart 2.10 provides the sample size counts for each field-level combination in 2019 and 2020.

Chart 2.8: Sample of cost observations by field of education, sub-bachelor



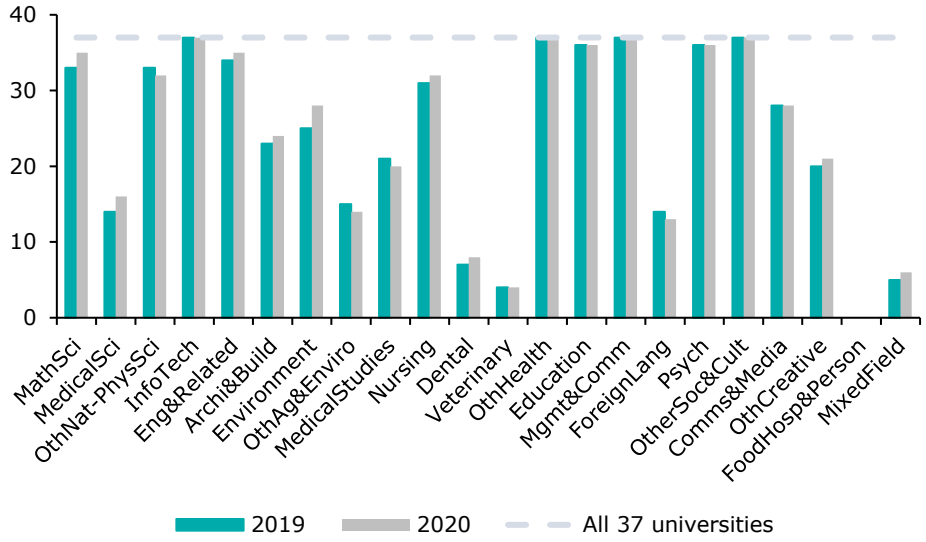
Note: Maximum total count is 37. Excluding outliers. See Box 2.1 for approach to excluding outliers.

Chart 2.9: Sample of cost observations by field of education, bachelor



Note: Maximum total count is 37. Excluding outliers. See Box 2.1 for approach to excluding outliers.

Chart 2.10: Sample of cost observations by field of education, postgraduate



Note: Maximum total count is 37. Excluding outliers. See Box 2.1 for approach to excluding outliers.

In instances where a greater number of universities offer a specific field and level combination, there is greater confidence and robustness in the measurement of average costs. For disciplines with fewer respondents, while there is sufficient confidence in the individual data provided by each institution, there is greater uncertainty as to whether the results are reflective of the sector as a whole, or instead reflect university-specific factors.

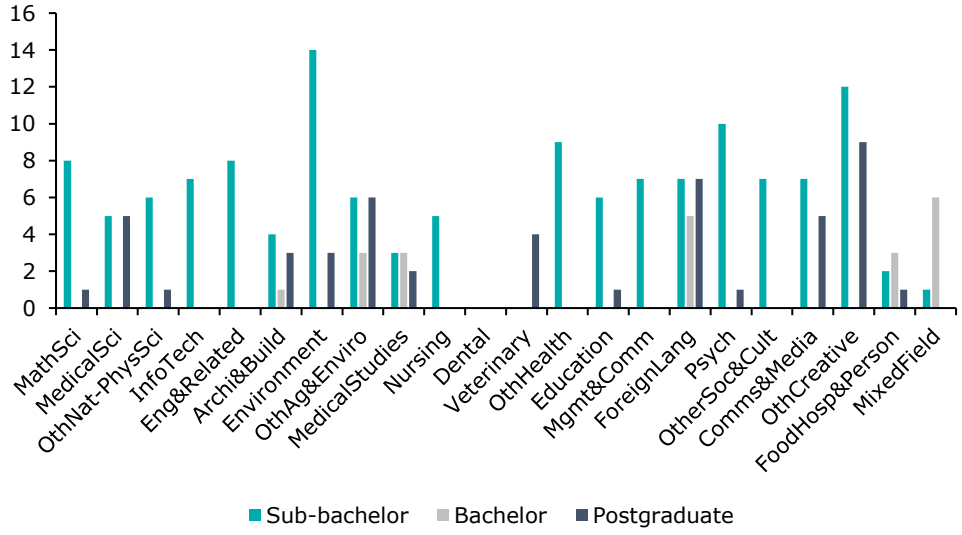
To this point, the number of observations for sub-bachelor programs is systematically lower than bachelor and postgraduate, which is likely an accurate reflection of delivery in the sector, given the fewer number of programs offered and lower enrolment numbers in total. Similarly, there are fewer observations for Food, Hospitality and Personal Services and Mixed Field Programmes, as these fields are typically a greater focus for vocational education providers.

The analysis in this report excludes a number of university results for field-level combinations that were deemed to be outliers to the extent that they are unlikely to reflect the true cost of delivery. The approach to identifying outliers is set out in Box 2.1 below, while Box 2.2 discusses how to interpret the 'Box and Whisker' plots used in subsequent sections of this chapter. The count of cost observations deemed to be outliers within each field-level combination in 2019 and 2020 are presented in Chart 2.11 and Chart 2.12.

Chart 2.11: Count of outlier cost observations removed by field and level of education combination (2019)

Note: See Box 2.1 for approach to excluding outliers.

Chart 2.12: Count of outlier cost observations removed by field and level of education combination (2020)



Note: See Box 2.1 for approach to excluding outliers.

Box 2.1: Data moderation process and exclusion of outliers

A moderation exercise was undertaken for each university upon receipt of the data. The goal of this exercise was to identify:

- Any data entries that indicated an error had been made
- Any outliers (by levels and year-on-year growth) across FOEs or universities that should be further investigated
- Broad indicators of the results (such as relativities across FOEs, and spreads within FOEs) that may guide the analysis of the data.

The data was assessed for errors using standard data validation techniques. This included identifying any instances of negative costs or cost shares implied by the data or cost shares exceeding 100%. Where such issues were identified, universities were followed up to resolve the issue. The information provided in the qualitative submissions was also reviewed and used to inform the moderation process.

Ultimately, following conversations and validation with participants, some cost observations remained outliers. In most cases, these were due to field and level observations with very low EFTSL counts resulting in both instances of relatively high and low cost per EFTSL.

Overall, average costs for all fields of education remained materially unchanged as a result of excluding outliers since excluded observations (both high and low) tended to be those with very small EFTSL. However, for field-level combinations where only a small number of university observations are available, the inclusion of outliers can result in a relatively large (and likely unrealistic) spread of costs per EFTSL and can result in averages that may not reflect the typical cost of delivery. The impact of excluded outliers on average costs by FOE is insignificant for most courses at the bachelor level but is a significant issue for courses at the sub-bachelor level where sector EFTSL by field is especially low.

To account for these effects, the average and distribution of results by FOE are presented after excluding outliers. This approach was consistent with the approach taken in the 2018 exercise. The following criteria were used to identify outliers, namely observations with:

- EFTSL counts of less than five
- Costs per EFTSL of greater than $100,000 and an EFTSL count of less than 10
- Costs per EFTSL greater than $300,000 (no observations this year were over this threshold)
- Instances where participating universities have noted that costs for a field level combination are not representative and do not capture true costs for that field and level combination.

Observations that fell into any of the above categories were excluded in calculating the average and distribution of costs by FOE and level.

Box 2.2: Interpreting 'box and whisker' plots

Box and whisker plots are commonly used in statistical analysis to show both central points (i.e. medians or means) and the distribution, dispersion or variance of values. They usefully provide further detail on the range of values for groups of data and provide the reader with a sense of confidence or certainty regarding the representativeness of a central point.

For the purposes of this report:

- The central markers are measured at the mean of the distribution.
- The box includes half of all observations - namely those that lie within the 25th to 75th percentile of the distribution.
- The whiskers cover the remaining half of all observations, from the minimum point to the 25th percentile (the lower edge of the box), and from the 75th percentile (the upper edge of the box) to the maximum value.

Field variation across sub-bachelor study

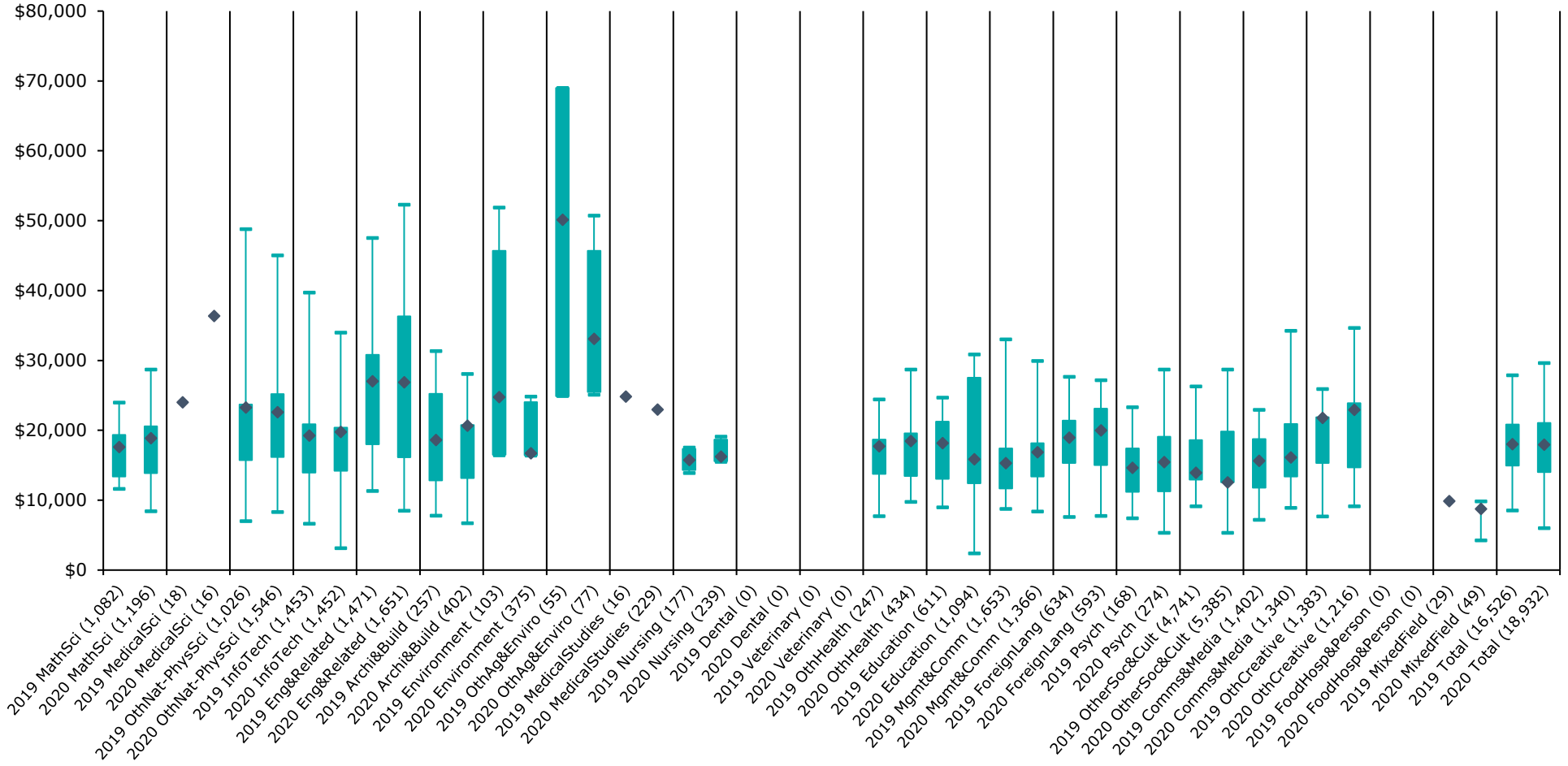
Due to differences in pedagogy, practical requirements, and contextual settings, different disciplines will likely have varying costs of delivery.

Chart 2.13 presents the distribution of unit costs by FOE for sub-bachelor programs in the 2019 and 2020 calendar years. Compared to estimates for bachelor and postgraduate, these costs have a relatively wide distribution of values. This is likely driven by the small sample sizes in many fields of education at this level, with many universities noting that it was often difficult to disentangle costs for sub-bachelor students within an FOE from costs for bachelor level students.

Notably, there are a number of very high-cost observations (over $45,000) in fields such as Other Natural and Physical Sciences, Engineering and Related Technologies, Environmental Science and Other Agricultural, Environmental and Related Studies in both the 2019 and 2020 calendar years. Nonetheless average costs in 2019 and 2020 ranged between $14,000 and $21,000 per EFTSL for most fields except Other Agricultural, Environmental and Related Studies, which had relatively few total EFTSL (55 EFTSL in 2019 and 77 EFTSL in 2020).

There was a 0.8% decrease in total cost per EFTSL for sub-bachelor education programs in 2020. The largest annual increase in cost per EFTSL was in Medical Science, where the cost of delivering sub-bachelor programs increased by 51% over this period. However, there were relatively few total EFTSL in this field (less than 18 EFTSL in 2019 compared to 16 EFTSL in 2020). Architecture and Building (11%) and Management and Commerce (10%) also saw relatively large increases. The largest decrease in cost per EFTSL in the delivery of sub-bachelor programs was in Other Agricultural, Environmental and Related Studies (34%), followed by Environmental Sciences (33%) – which experienced a three-fold increase in student load in 2020.

Chart 2.13: Average unit costs by field for sub-bachelor (2019 and 2020)



Note: 495 cost observations across 34 universities. Outliers excluded. Marker at mean, box width between 25th and 75th percentile, and tails at minimum and maximum.

Field variation across bachelor study

Chart 2.14 shows the average unit costs by field for bachelor studies. The health science fields (Veterinary Studies and Dental Studies, and Medical Studies) comprise three of the four most costly fields in both 2019 and 2020, on average. Qualifications in these fields are known to involve intensive teaching delivery, higher capital and material costs, and placement costs.

Other Agriculture and Environmental Studies was the fourth highest unit cost field, which is likely a reflection of higher capital costs, as well as potentially greater delivery costs in regional areas. Overall, Chart 2.14 suggests three broad groupings of costs in 2019 and 2020:

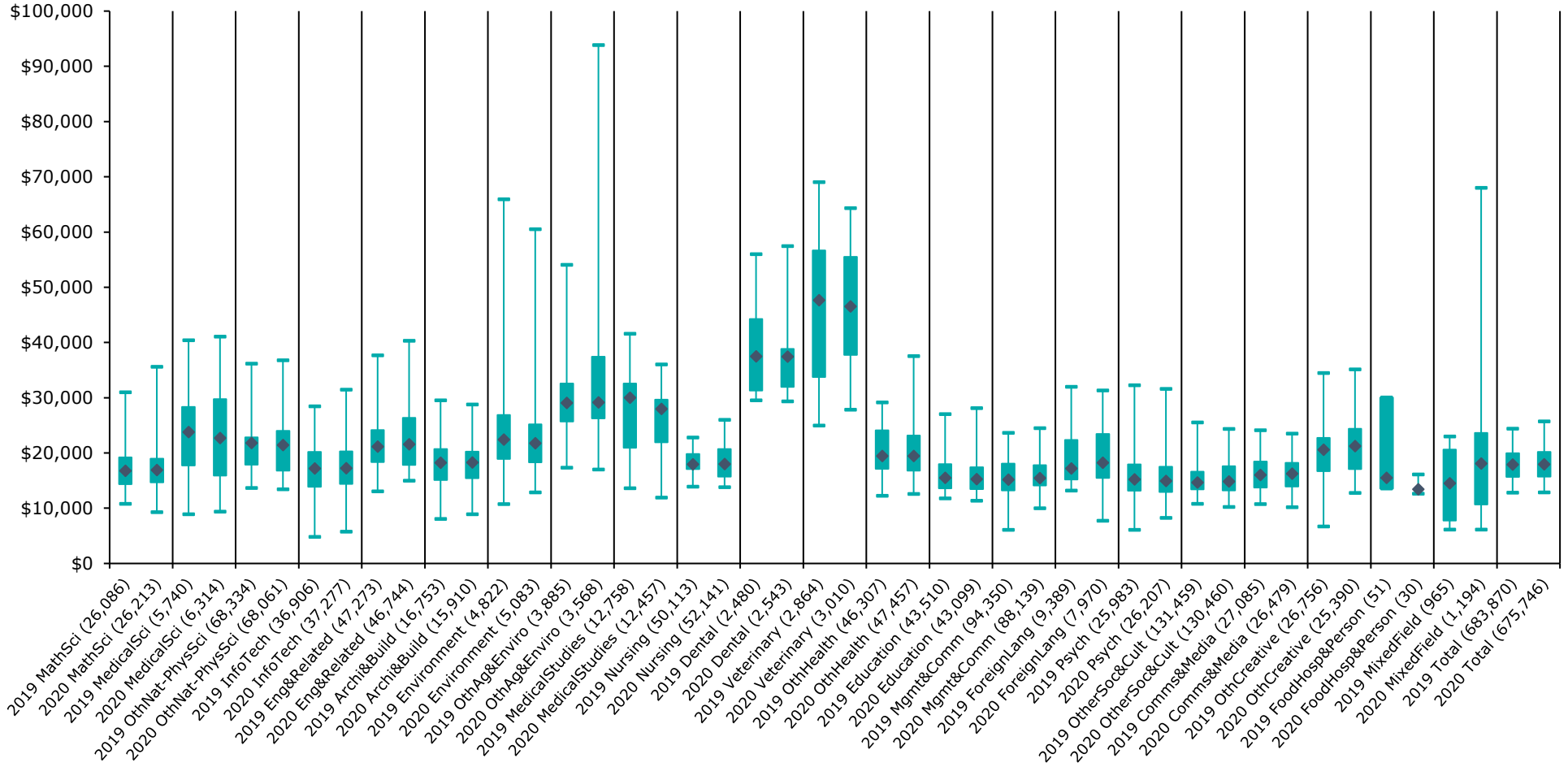
- Lower cost fields (11 fields in 2019 and 8 fields in 2020) from $14,000 to $18,000, which appear to be more traditional 'classroom-based' fields
- Mid-range cost fields (7 fields in 2019 and 10 fields in 2020) from $19,000 to $27,000, which appear to include fields of education that may require greater material, practicum or applied components
- Higher cost fields (4 fields in 2019 and 2020) from $28,000 to $51,000.

Chart 2.14 presents the full distribution of unit costs by FOE for bachelor degrees. With the main exceptions of Environmental Science and Other Agriculture and Environmental Studies where cost variation was relatively large, the distribution of the 'whiskers' are generally narrower than for sub-bachelor programs, which suggest greater similarity in the costs of delivery across institutions.

A number of fields such as Architecture and Building, Management and Commerce, and Communication and Media, among others, have very narrow estimates, which may also reflect a more standard approach to the delivery of teaching for qualifications in these fields. Higher cost fields typically also have greater dispersion in costs, for example Dental Studies and Veterinary Studies.

Overall, there was a 0.4% increase in total cost per EFTSL for bachelor level education programs in 2020. The cost of delivery of bachelor programs increased in 13 out of 22 fields over this period. The largest increases were in Mixed Field Programmes (24.5%), Foreign Languages and Translating (6.2%) and Other Creative Arts (3.1%). The largest decreases were in Food, Hospitality, and Personal Services (-13.4%), Medical Studies (-6.7%) and Medical Science (-4.6%). It is likely that the introduction of COVID-19 lockdowns and other restrictions disrupted some costs in these fields related to placements or practical in-person training. In the case of Food, Hospitality and Personal Services a reduction in enrolments may have also reduced economies of scale.

Chart 2.14: Distribution of unit costs by field for bachelor (2019 and 2020)

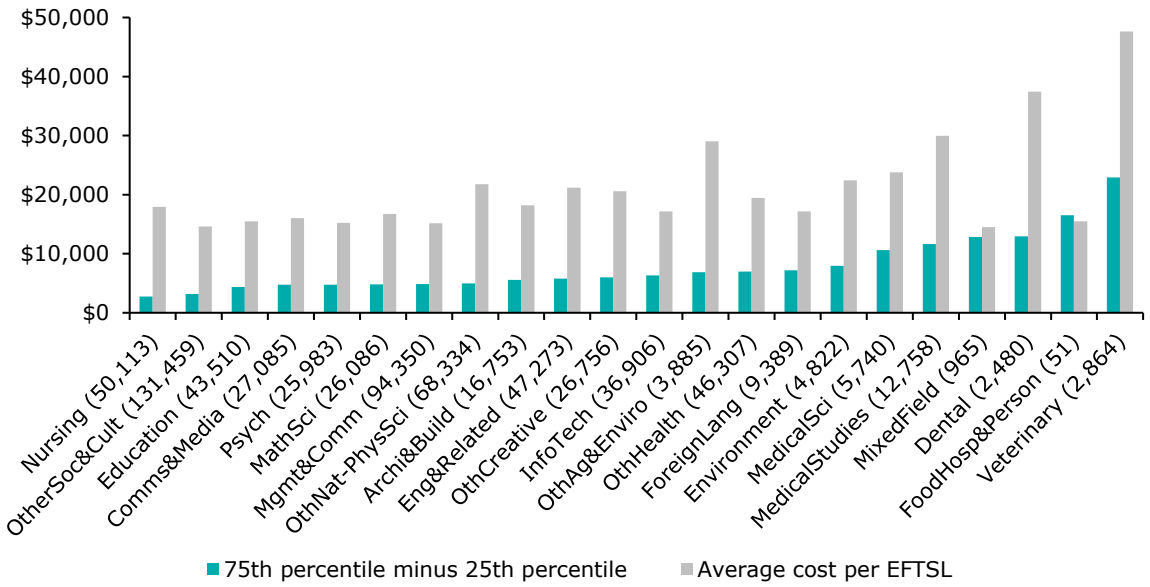


Note: 1,289 cost observations across 37 universities. Outliers excluded. Marker at mean, box width between 25th and 75th percentile, and tails at minimum and maximum.

Within each FOE, there are varying levels of deviation or spread of costs across institutions. Chart 2.15 and Chart 2.16 show the difference in average unit costs between the 25th and 75th percentiles (a standard measure of deviation or dispersion) in the 2019 and 2020 calendar years respectively. On average, this range was approximately $7,000 in 2019 and 2020, excluding Mixed Field Programmes and Food and Hospitality, which have very low EFTSL.

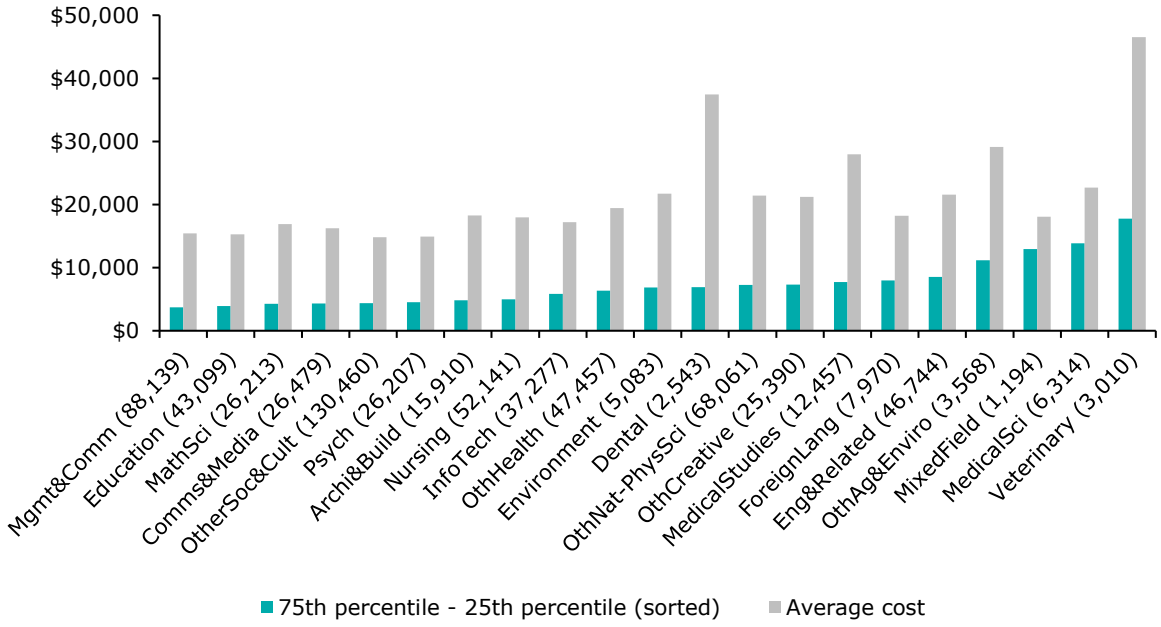
Notably, this variation is greatest among higher cost fields. For example, Veterinary Studies has a cost spread of around $22,900 compared to around $2,700 for Nursing in 2019. Large variations in cost may reflect a variety of drivers, including variations in ability to scale, standardisation of delivery, quality, product and investment lifecycles and the efficiency with which universities deliver teaching and scholarship, among others.

Chart 2.15: Average unit cost and dispersion by field for bachelor (2019)



Note: 644 cost observations across 37 universities.

Chart 2.16: Average unit cost and dispersion by field for bachelor (2020)



Note: 645 cost observations across 37 universities.

Field variation across postgraduate study

Chart 2.17 presents the distribution of unit costs by FOE for postgraduate coursework degrees (excluding higher degree research students). As for bachelor degrees, the distribution of costs are relatively narrow compared to sub-bachelor. Again, higher cost disciplines tend to have wider distributions compared to lower cost fields.

The full range of estimated costs are significantly wider than the estimates for bachelor degrees. There appear to be a number of university observations with relatively high average costs (compared to their peer institutions), and in many instances the maximum value (the top whisker) is substantially larger than the 75th percentile (the upper box).

For example, in 2019, for Environmental Studies, approximately 44% of universities have costs between $22,000 and $32,000, and 76% have costs between $15,000 and $32,000 (a range of $17,000). The highest cost university has a unit cost of $65,900, which is more than double the average cost per EFTSL in this field.

Consultations with universities and their accompanying statements provide some rationale for higher unit costs, and include:

- The introduction of a new school or course program to the university, where the costs of delivery are expected to moderate in future years due to reduced upfront costs and increasing scale
- Higher costs associated with advanced facilities and equipment
- Low enrolments and/or class sizes.

Similarly, the rationale for lower than average unit costs include:

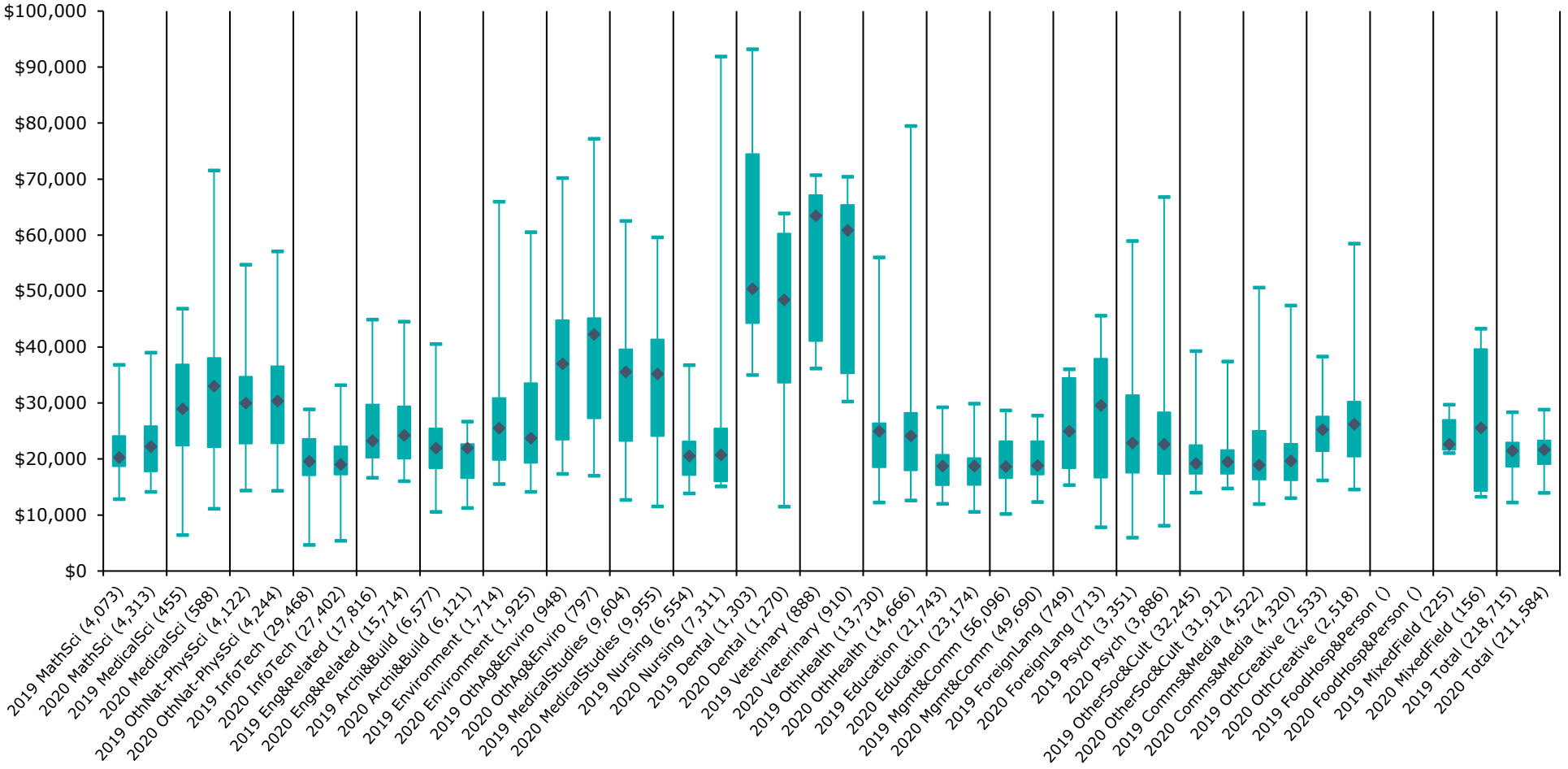
- Larger share of delivery online, reducing the amount of staff hours
- Courses with relatively inexpensive teaching formats
- Large enrolments and/or class sizes.

These reasons for differences in costs were notably not confined to postgraduate level study and were also raised in the context of bachelor and sub-bachelor level programs.

Overall, there was a 1.0% increase in total cost per EFTSL for postgraduate level education programs between 2019 and 2020.

The cost of delivery of postgraduate programs declined in 8 out of 22 fields over this period, notably in fields such as Health, Information and Technology, and Architecture and Building. The largest annual increase in cost per EFTSL was observed in Foreign Languages and Translating, where the cost of delivering postgraduate programs increased by 18.4%. The student load in this field decreased 4.9% in 2020. The largest decline in cost per EFTSL was observed in Environmental Studies at 7.1%. The student load in this field increased 12.4% in 2020.

Chart 2.17: Average unit costs by field for postgraduate (2019 and 2020)



Note: 1,063 cost observations across 37 universities. Outliers excluded. Marker at mean, box width between 25th and 75th percentile, and tails at minimum and maximum.

Variation between levels

Consultations with universities suggested some systematic variation in costs by levels of education. The cost of postgraduate studies was on average 20% higher in 2019 and 21% higher in 2020 compared to bachelor studies. This equates to $3,600 in 2019 and $3,700 in 2020. This may reflect more specialised and intensive qualifications, smaller class sizes, more senior teaching staff, among other reasons.

On the other hand, the average cost per EFTSL for sub-bachelor studies was 0.8% higher than bachelor level study in 2019 and 0.1% lower in 2020. Some of this difference may be driven by differences in enrolments by FOE between bachelor and sub-bachelor level study.

Notably, 9 of 37 universities indicated they were unable to systematically attribute costs between levels of education for a given faculty or school. In other words, these universities had generally equivalent costs for each of the three levels in a given faculty or school unless specific expenditure items were clearly attributable to study at a given level and incorporated in the results. In many of these cases, universities simply used EFTSL to separate costs within faculties or schools and across levels, such that costs per EFTSL were equivalent for all levels of study. Thus, any difference within a FOE was driven solely by the different mix of faculties or schools within an FOE.

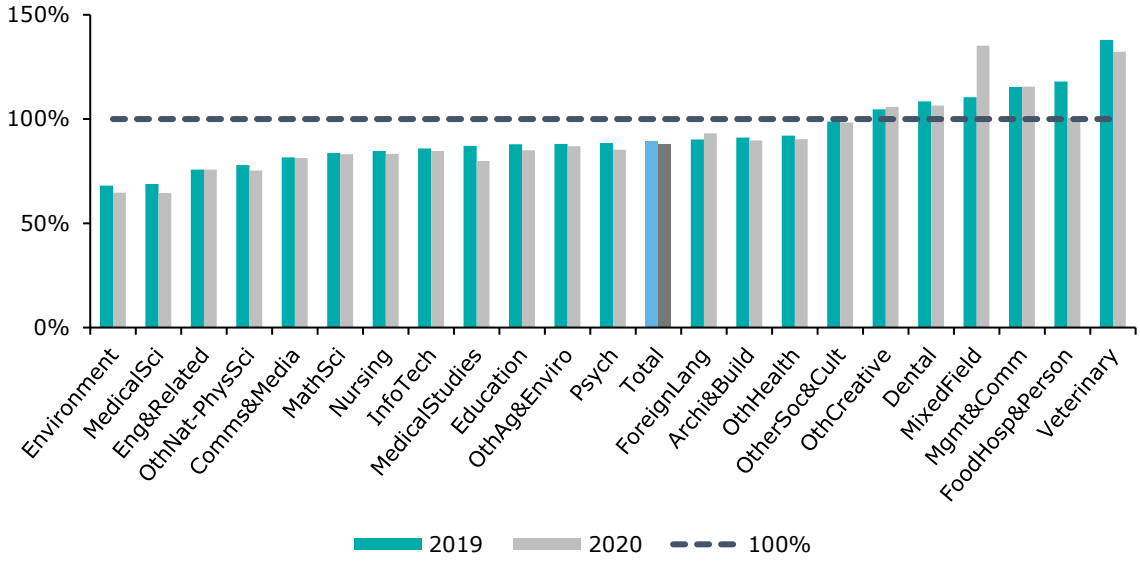
These limitations were raised in consultations and accompanying statements by universities and should be considered when comparing unit cost calculations between levels for a given field. Where a university has assumed a constant unit cost, this will lead to convergence in costs between levels, but in other instances, where a university has used a cost allocation methodology that captures variation in costs between levels, variations may be higher.

2.3 Comparing costs to base funding levels

As a broad measure of funding adequacy at the field level, previous studies have examined the relativities between average unit costs and average base funding according to CGS classifications. Importantly, caution should be taken in drawing inferences regarding the sufficiency of CGS funding from these results. While not specifically stated in the *Higher Education Support Act 2003*, there is a general view that CGS funding is intended to cover some level of base research activity (which was excluded from the definition of teaching and scholarship costs used in this study), and the cost of such research may vary as a proportion of teaching costs.

On average, the cost of delivering teaching and scholarship for bachelor studies was 89% of the average base funding across all 37 institutions in 2019 and 88% in 2020 (Chart 2.18). A number of fields had an average cost greater than average funding. These include Veterinary Studies, Food, Hospitality and Personal Services, Mixed Field Programmes, Creative Arts – Other, Dental Studies and Management and Commerce.

Chart 2.18: Average unit costs as a proportion of base funding for bachelor (2019 and 2020) (37 universities)



Fields such as Food, Hospitality and Personal Services, Mixed Field Programmes, Veterinary Studies and Dental Studies were delivered at a relatively small scale and by only a few universities. While larger fields such as Management and Commerce and Creative Arts – Other had average costs greater than average funding. Management and Commerce had the equal lowest amount of base funding per EFTSL of the 22 FOEs examined, while Creative Arts – Other had a base funding level that is below the mean across all 22 FOEs.

Importantly, the ratio of teaching costs relative to CSP funding has been calculated based on the maximum CSP funding rates that can be received by a university. That is, the ratios presented in this report do not account for instances where enrolments at a particular university in a particular field exceed the number of CGS places.

2018 common sample (32 universities)

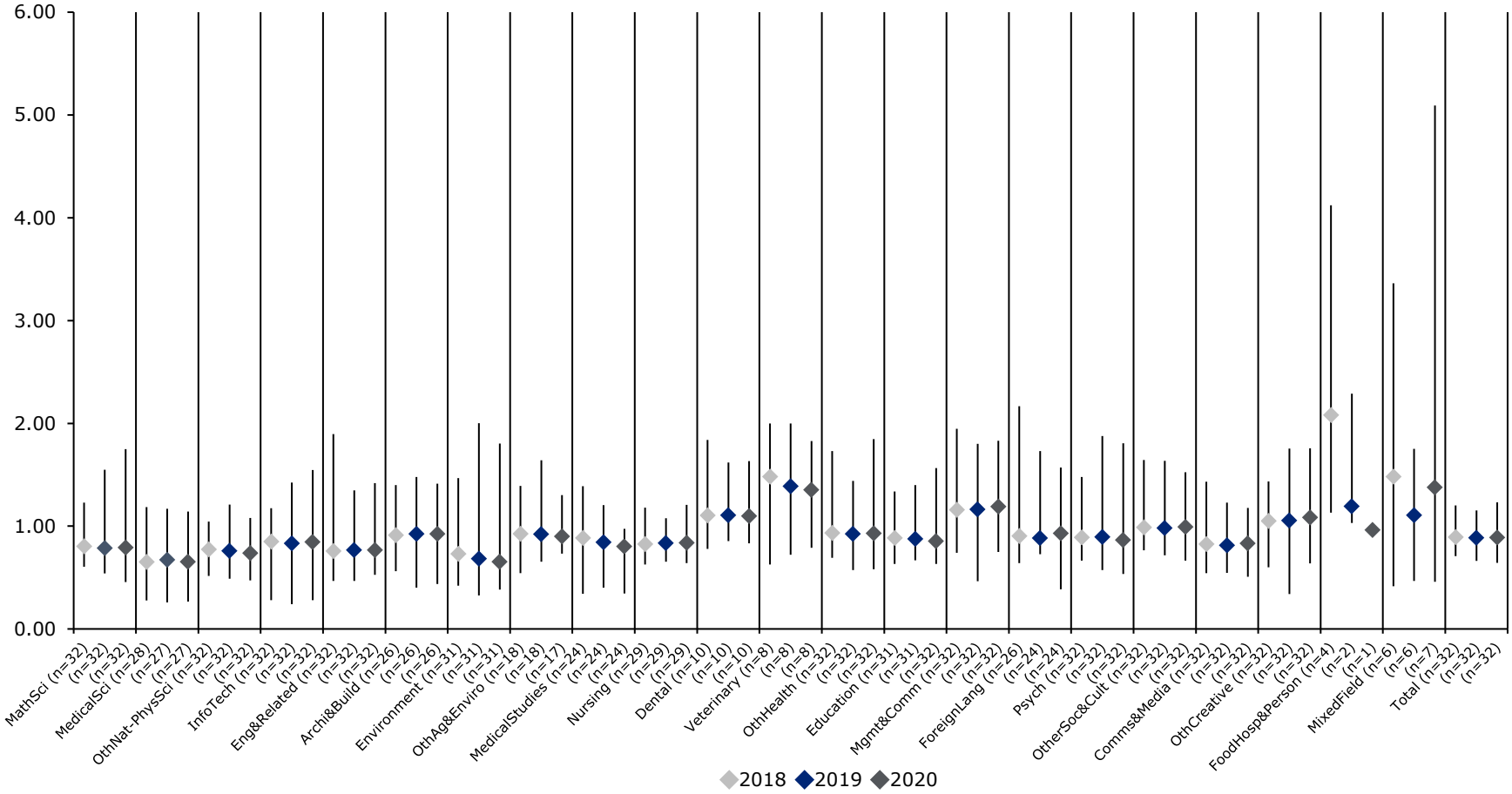
Among universities that provided data for both 2018 and 2020 (i.e. comparing a common sample), the average proportion of bachelor teaching costs relative to base funding was 89% in 2020. It has remained unchanged since 2018 (Chart 2.19).

Among the 22 fields, thirteen experienced decreasing cost-to-funding ratios from 2018 to 2020, seven remained relatively stable (within one percentage point higher or lower), and nine experienced an increase in cost-to-funding ratios. Five fields experienced movements greater than 5 percentage points:[19]

- Food, Hospitality and Personal Services decreased from 208% to 96%
- Veterinary Studies decreased from 148% to 135%
- Mixed Field Programmes decreased from 148% to 138%
- Medical Studies decreased from 88% to 80%
- Environmental Studies decreased from 73% to 65%.

[19] Noting that these figures vary to the full sample discussed earlier.

Chart 2.19: Distribution of average unit costs to base funding ratio for bachelor studies, 2018 common sample (32 universities).



2017 common sample (25 universities)

Among universities that provided data for both 2017 and 2018 to 2020 (i.e. comparing a common sample), the average proportion of bachelor teaching costs relative to base funding was 88% in 2020, compared to 89% in 2017.

Among the 22 fields, fifteen experienced decreasing cost-to-funding ratios from 2017 to 2020, while seven increased. Four were relatively stable (within one percentage point higher or lower), while two fields experienced movements greater than 5 percentage points.[20]

- Mixed Field Programmes increased from 75% to 125%
- Food, Hospitality and Personal Services decreased from 185% to 96%.

A comparison of average unit costs to base funding ratio for all 22 fields in 2017, 2018, 2019 and 2020 is included in Appendix C.

2015 common sample (17 universities)

Among universities that provided data for 2015, 2017 and 2018 to 2020 (i.e. comparing a common sample), the average proportion of bachelor teaching costs relative to base funding was 85% in 2015 and 88% in 2020.

For the common sample, among the 19 fields that are directly comparable, eleven experienced decreasing cost-to-funding ratios from 2015 to 2020 and eight increased.

A comparison of average unit costs to base funding ratio for all 19 fields in 2015, 2017, 2018, 2019, and 2020 is included in Appendix D.

2.4 Comparing changes in cost over time

2018 common sample (32 universities)

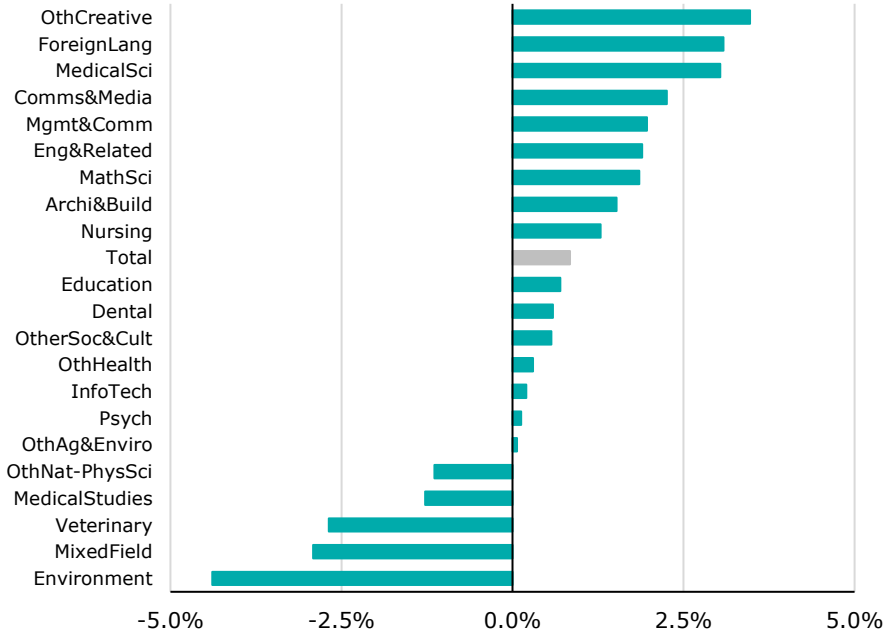
The average cost across all fields and levels of education in 2020 was $18,800 which is 1.7% or around $300 higher than the average cost in 2018 (among the 32 universities that provided data for all years between 2018 and 2020).

In the case of bachelor degree students, the average cost per EFTSL rose from $17,600 to $17,800, a 1.3% increase for the common sample. All 22 fields experienced average annual growth of less than 3%. Overall, the largest unit cost changes in percentage terms were mostly in fields that were delivered at a relatively small scale and by only a few universities such as Food, Hospitality and Personal Services (31% annual decrease).

Across all levels of education, the largest CAGRs were in Creative Arts Other (+3.5%) and Environmental Studies (-4.4%). There was a significant decline in bachelor EFTSL in the Creative Arts Other field of education, while the decline in costs for Environmental Studies was due to a small group of universities experiencing large declines in cost per EFSTL.

[20] Noting that these figures vary to the full sample discussed earlier.

Chart 2.20: Comparing average costs between 2018 and 2020 for all levels of study (2018 common sample (32 universities)), CAGR



Note: chart excludes growth in costs for Food, Hospitality and Personal Services (-31% CAGR).

Chart 2.21, Chart 2.22 and Chart 2.23 describe the changes in averages and distribution of average unit costs across each field and level of education, among universities that provided data for all years between 2018 and 2020 (i.e. common to all studies). In general, the mean and ranges of dispersion at a FOE level are relatively similar across years while overall bachelor level degrees tend to have less variability compared to other levels of study.

Chart 2.21: Comparing costs between 2018 and 2020 for sub-bachelor (2018 common sample (32 universities))

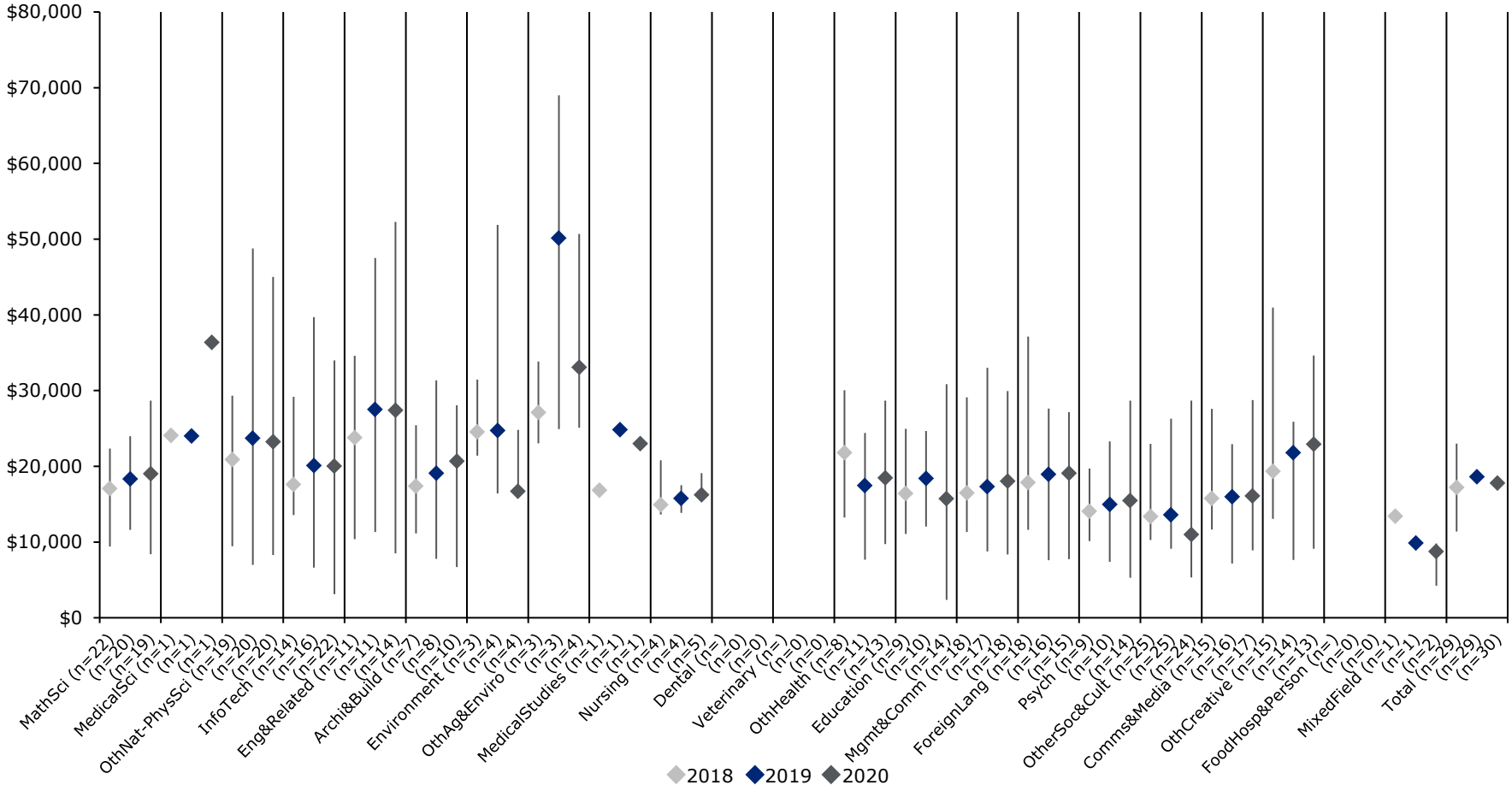


Chart 2.22: Comparing costs between 2018 and 2020 for bachelor (2018 common sample (32 universities))

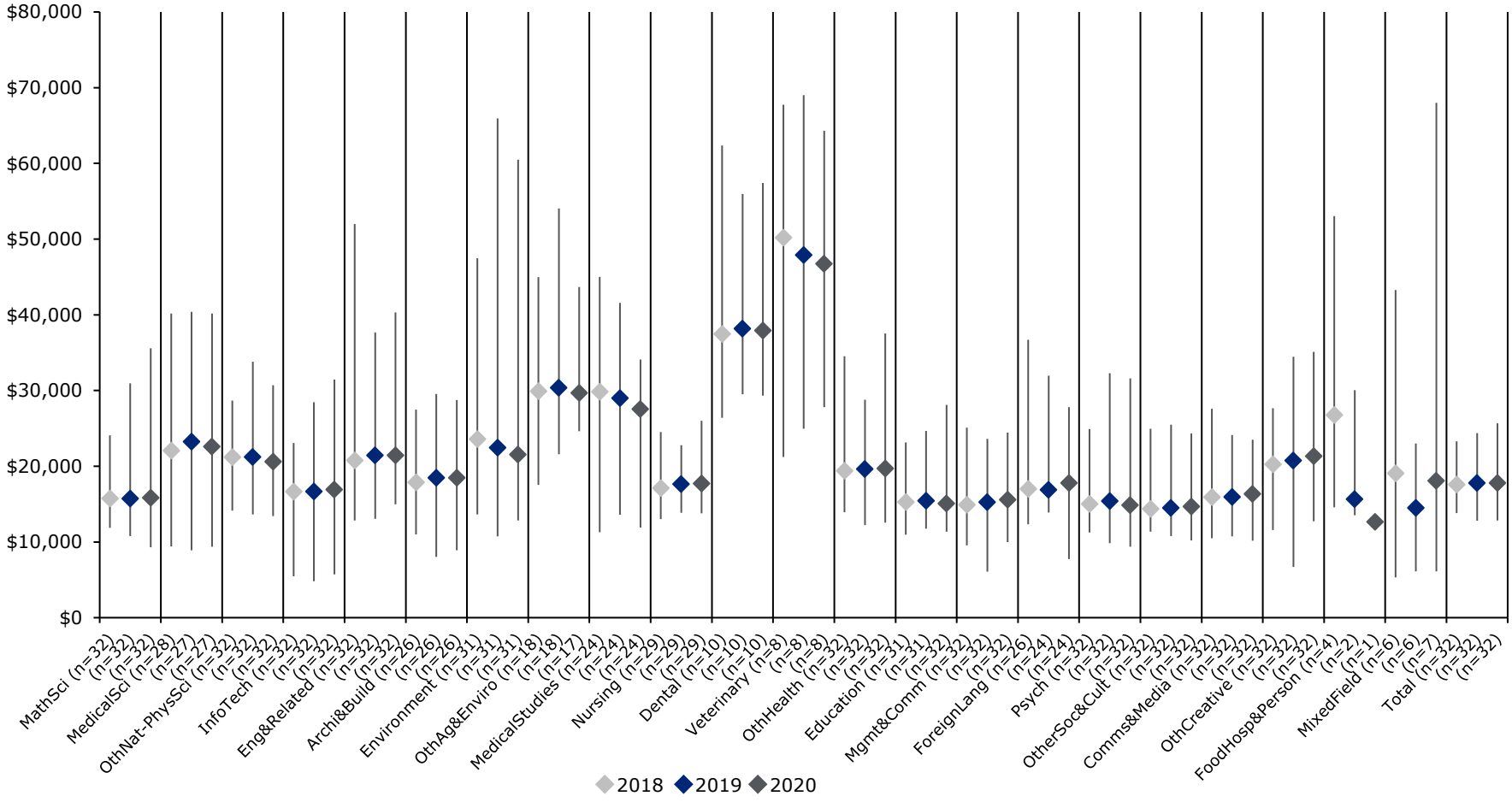
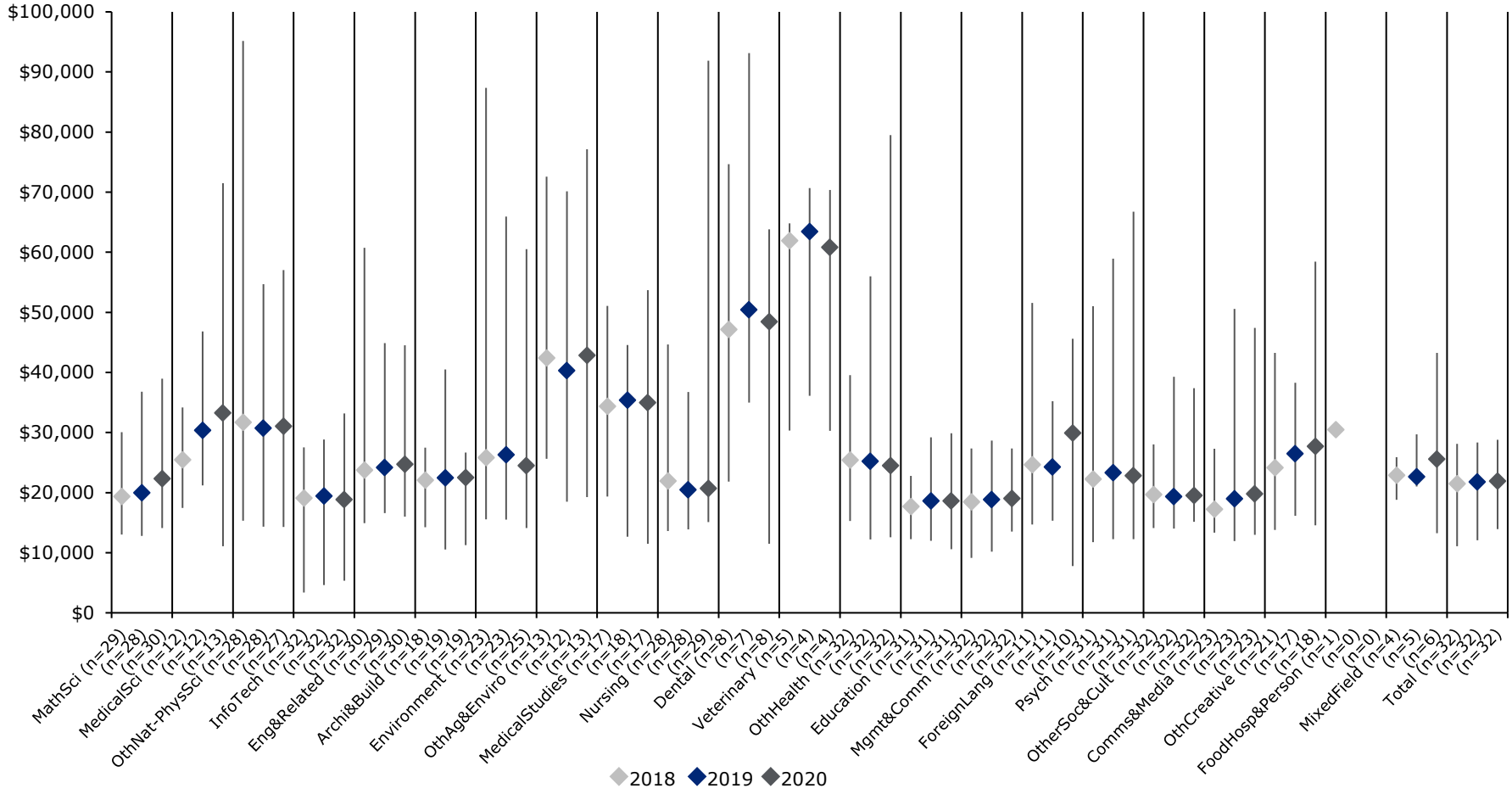


Chart 2.23: Comparing costs between 2018 and 2020 for postgraduate (2018 common sample (32 universities))



2017 common sample (25 universities)

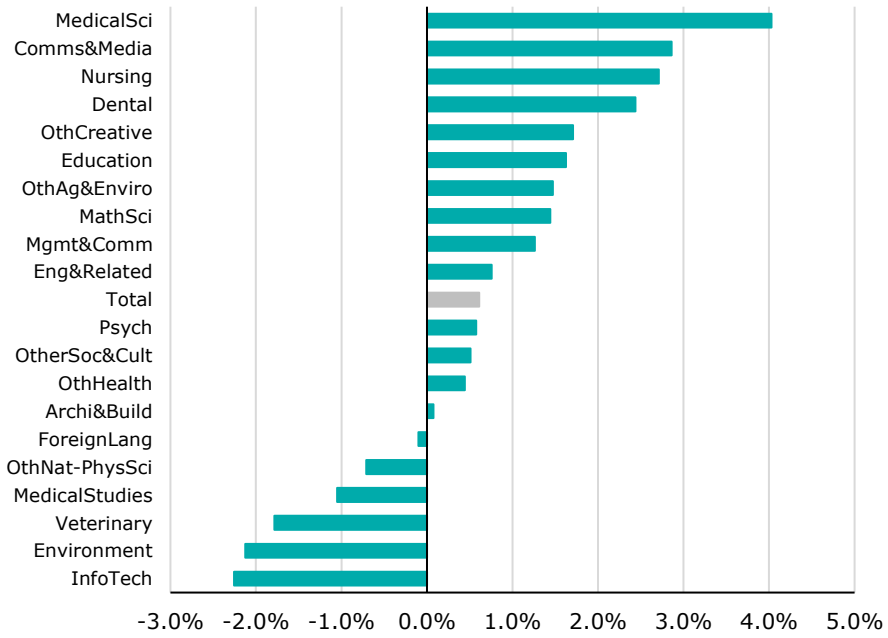
The average cost across all fields and levels of education in 2020 was $18,700, which is 1.8% or around $300 higher than the average cost in 2017 (among the 25 universities that provided data for all years between 2017 and 2020).

In the case of bachelor degree students, the average cost per EFTSL rose from $17,300 in 2017 to $17,700 in 2020, a CAGR of 0.8% for the common sample.

Across all levels of education, a total of 14 out of 22 FOEs saw average annual cost growth of between -2% and 2%. The largest unit cost changes in percentage terms were mostly in fields that were delivered at a relatively small scale and by only a few universities (including Mixed Field Programmes (15.3% annual decrease) and Food, Hospitality and Personal Services (16.9% annual decrease)).

The largest increase in average annual costs per EFTSL were in Medical Sciences (4.0%) and Communication and Media Studies (2.9%). The largest decrease in average annual costs, outside of Food, Hospitality and Personal Services and Mixed Field Programmes was seen in Information and Technology (-2.3%). Overall, 13 of 25 universities saw costs increase from 2017 to 2020.

Chart 2.24: Comparing average costs between 2017 and 2020 for all levels of study (2017 common sample (25 universities)), CAGR



Note: chart excludes growth in costs for Food, Hospitality and Personal Services (-17% CAGR) and Mixed Field Programmes (-15% CAGR).

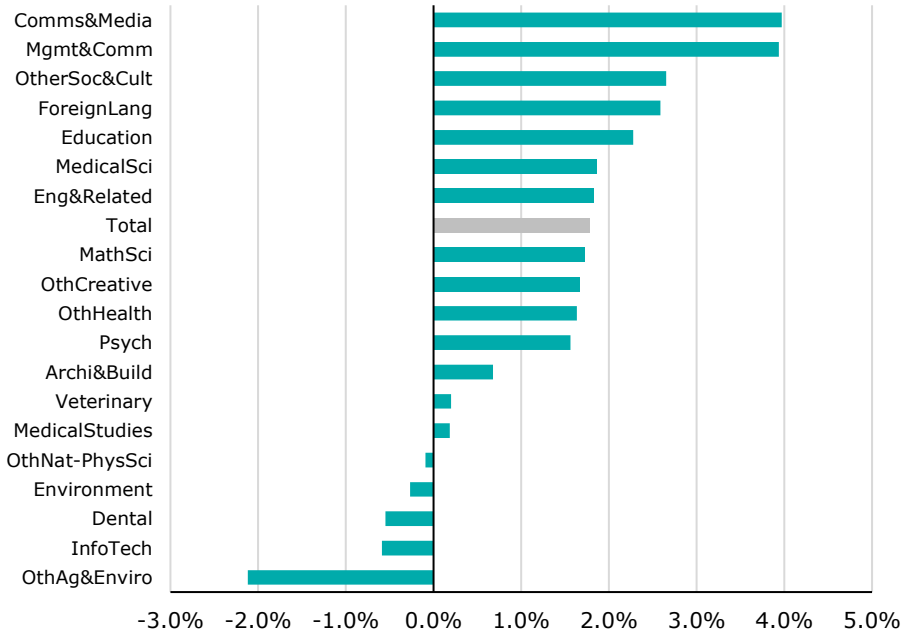
A comparison of the distribution of unit costs from 2017 to 2020 for sub-bachelor, bachelor and postgraduate studies (across all 25 comparable fields) is included in Appendix C.

2015 common sample (17 universities)

For the common sample of 17 universities who have participated since 2015, the average cost across all fields and levels of education in 2020 was $18,600, which is around $1,600 higher than the average cost of $17,000 in 2015 (among the 17 universities that provided data for 2015, 2017, 2018, 2019 and 2020). This represents a CAGR of 1.8% from 2015 to 2020.

In the case of bachelor degree students, the average cost per EFTSL rose from $16,200 in 2015 to $17,600 in 2020, an annual growth rate of 1.7% for the common sample. Of the 19 fields that are directly comparable[21], ten experienced cost growth of more than 1.0% per annum while six saw costs decline.

Chart 2.25: Comparing average costs between 2015 and 2020 for all levels of study (2015 common sample (17 universities)), CAGR



Note: Nursing is included in Other – Health.

A comparison of the distribution of unit costs in 2015, 2017, 2018, 2019 and 2020 for sub-bachelor, bachelor and postgraduate studies (across all 19 comparable fields) is included in Appendix D.

Summary tables

The figures in Table 2.1 show that the average cost per EFTSL for 2010, 2015, and 2017 to 2020. The cost data is shown for the full sample in each year as well as for the common sample of universities (where available).

The average cost per EFTSL for bachelor study rose from $17,300 in 2017 to $17,700 in 2020 for the 25 universities that provided data in both years, an average annual increase of 0.8% as shown in Table 2.2. Average unit costs for the full sample of 37 universities was slightly higher at $17,900 in 2020 but broadly similar (given that the full sample includes the universities in the common sample).

The average cost per EFTSL for postgraduate study decreased from $22,200 in 2017 to $21,900 in 2020 for the 24 universities that provided data in both years, an average annual decrease of 0.4%. This fall was concentrated in the nine (out of the 25 universities included in the common sample)

[21] Nursing was included in Other – Health for the 2016 study

that reported lower postgraduate costs per EFTSL in 2020 compared to 2017. For these universities the average fall in postgraduate costs per EFTSL was 16% between 2017 and 2020, compared to a 9% increase among the other 15 universities.

Table 2.1: Average unit cost per EFTSL

	Year	2010 sample (8 universities)	2015 sample (17 universities)	2017 sample (25 universities)	2018 sample (32 universities)	Full sample (37 universities)
Bachelor	2010	$15,100	-	-	-	-
	2015	-	$16,200	-	-	-
	2017	-	$16,900	$17,300	-	-
	2018	-	$17,500	$17,700	$17,600	-
	2019	-	$17,700	$17,900	$17,800	$17,900
	2020	-	$17,600	$17,700	$17,800	$17,900
Postgraduate	2010	$17,400	-	-	-	-
	2015	-	$20,500	-	-	-
	2017	-	$21,800	$22,200	-	-
	2018	-	$21,900	$22,000	$21,500	-
	2019	-	$21,900	$22,000	$21,700	$21,500
	2020	-	$21,900	$22,000	$21,900	$21,700
Total*	2010	$15,500	-	-	-	-
	2015	-	$17,000	-	-	-
	2017	-	$18,100	$18,400	-	-
	2018	-	$18,600	$18,700	$18,500	-
	2019	-	$18,800	$18,900	$18,800	$18,700
	2020	-	$18,600	$18,700	$18,800	$18,800

Table 2.2: Growth over time in average unit cost per EFTSL

		Bachelor		Postgraduate		Total	
		% growth	CAGR	% growth	CAGR	% growth	CAGR
2015 - 2020	Common sample (17 universities)	8.5%	1.7%	6.6%	1.3%	9.2%	1.8%
2017 - 2020	Common sample (25 universities)	2.3%	0.8%	-1.1%	-0.4%	1.8%	0.6%
2018 – 2020	Common sample (32 universities)	1.3%	0.6%	2.1%	1.1%	1.7%	0.8%
2019 - 2020	Full sample (37 universities)	0.4%	-	1.0%	-	0.5%	-

Note: CAGR indicates Compound Annual Growth Rate. * Includes costs related to sub-bachelor study. Total growth exceeds growth in bachelor and postgraduate costs in some cases due to both the inclusion of costs for sub-bachelor level study and also compositional shifts which have resulted in a greater share of total EFTSL comprising postgraduate coursework students (who have a higher average cost per EFTSL).

Table 2.3 benchmarks the changes in teaching costs per EFTSL to changes in expenditure by the sector over time across the various common samples, all universities sampled in a given year, and changes in total costs (including non-teaching costs) for all public universities.

Over the period from 2015 to 2020, teaching cost per EFTSL grew by 1.8% for the common sample, which was slightly lower than the increase in continuing expenditure (including research and community engagement) per EFTSL of 2.3% for the common sample and for the whole sector.

Growth in teaching costs for the common sample has exceeded growth in base funding levels per EFTSL over the last five years, with base funding per EFTSL growing by an annual rate of 1.6%.

Importantly, while the growth in costs per EFTSL for the common sample provides a valid comparison over time for a common sample of universities, it is not strictly a measure of cost per EFTSL for the sector over time. It is possible that growth in cost per EFTSL may differ for

universities not in the common sample. Changes in continuing expenditure per EFTSL have not differed markedly for the sector as a whole relative to the 2015 common sample from 2015 to 2020, while the sector saw stronger growth in continuing expenditure per EFTSL relative to the 2017 common sample from 2017 to 2020 and the 2018 common sample from 2018 to 2020.

Table 2.4 benchmarks the growth in reported teaching and scholarship costs against all university costs (including research). Growth in total teaching and scholarship costs is slightly below growth in overall university costs (teaching, scholarship and research) between 2015 to 2020 and 2017 to 2020, and above growth in overall university costs from 2018 to 2020 (for the respective common samples). This is partly due to a larger fall in overall university non-staff costs relative to teaching and scholarship related non-staff costs from 2017 onwards.

Teaching and scholarship related staff costs grew at a faster rate compared to teaching related non-staff costs from 2015 to 2020, 2017 to 2020 and 2018 to 2020 (for the respective common samples). This partly reflects the decrease in non-staff costs in 2020 (-6.2%) relative to the increase in staff costs (5.1%) amid the impact of COVID-19.

Table 2.3: Change in costs, CAGRs

	2015 to 2020			2017 to 2020			2018 to 2020		
	2015 common sample (17 universities)	Full sample in each year (17 universities in 2015 37 universities in 2020)	All universities (37 universities)	2017 common sample (25 universities)	Full sample in each year (25 universities in 2017 37 in 2020)	All universities (37 universities)	2018 common sample (25 universities)	Full sample in each year (32 universities in 2017 37 in 2020)	All universities (37 universities)
Teaching cost per EFTSL - all levels	1.8%	2.0%	-	0.6%	0.8%	-	0.8%	0.8%	-
Teaching cost per EFTSL - bachelor	1.7%	3.5%	-	0.8%	1.2%	-	0.6%	0.6%	-
Teaching cost per EFTSL - postgraduate	1.3%	1.8%	-	-0.4%	-0.8%	-	1.1%	1.1%	-
Total EFTSL	2.4%	-	2.4%	2.8%	-	2.5%	4.2%	-	1.9%
Continuing expenditure per EFTSL	2.3%	1.9%	2.3%	0.7%	0.9%	1.7%	0.1%	0.1%	0.7%
University labour expenditure per EFTSL	3.2%	2.7%	3.0%	2.2%	2.0%	3.0%	3.0%	2.8%	3.5%
Base funding (CGS+Student Contribution Amount (SCA) per EFTSL)	1.6%	1.5%	-	1.5%	1.4%	-	1.6%	1.4%	-

Source: Deloitte Access Economics and Department of Education, Skills and Employment.

Table 2.4: Change in costs by line item, CAGRs

	2015 to 2020		2017 to 2020		2018 to 2020	
	Teaching and scholarship costs	**All costs (teaching, scholarship, research)**	**Teaching and scholarship costs**	**All costs (teaching, scholarship, research)**	**Teaching and scholarship costs**	**All costs (teaching, scholarship, research)**
Staff costs	3.7%	3.2%	1.9%	2.2%	3.3%	3.0%
Academic staff	3.5%	-	0.2%	-	3.6%	-
Casual academic staff	4.4%	-	4.5%	-	0.1%	-
Non-academic staff	3.7%	-	2.8%	-	3.7%	-
Non-staff costs	-0.8%	1.1%	-1.2%	-1.3%	-2.8%	-3.7%
Depreciation, amortisation, repairs, maintenance, borrowing, bad debts	2.5%	-	3.2%	-	4.3%	-
All other	-2.1%	-	-2.8%	-	-5.2%	-
Total costs	1.8%	2.3%	0.6%	0.7%	0.8%	0.1%

Source: Deloitte Access Economics and Department of Education, Skills and Employment.

2.5 Examining costs 'below the line'

As part of the consultation process undertaken at the outset of the 2018 study, two areas were identified where the true cost of teaching and scholarship may not be captured by standard financial or statutory reporting, and which were not captured in previous data collections.

To recognise these potentially material costs, two additional line items have been included in the costing template since 2018, namely 'in-kind' costs, and 'additional partnership' costs. These items were included 'below the line', to reflect that they would not be expected to reconcile to statutory reporting.

As part of the consultations informing the previous 2019 study (collecting data from 2018), an additional below the line item allowing universities to include an optional depreciation adjustment was included. This adjustment was intended to account for the potential that capital costs may be underestimated as a result of the way depreciation is calculated at certain universities. Further details on the purpose of this adjustment is set out in Section 4.3.

Notably, the baseline analysis in this report does not include any of these below the line costs items to ensure consistency with the previous exercises. They are not included in the comparison to base funding levels in Section 2.3.

Overall, below the line items had a relatively small impact on total teaching and scholarship costs. On average costs were 1.7% higher in 2019 and 2020 as a result of including these items (Table 2.5). It should be noted that some universities indicated difficulty in accurately identifying and measuring in-kind costs to a level of confidence where they could be reliably included in the template. For those universities who did report below the line items, their costs were 7.0% higher in 2019 and 7.3% higher in 2020.

Table 2.5: Total average impact of 'below the line' costs on teaching and scholarship costs (2019 and 2020)

	Impact on cost per EFTSL	***% impact on total teaching and scholarship costs***	***Impact on cost per EFTSL***	***% impact on total teaching and scholarship costs***	***Number of universities reporting below the line costs***
	All universities		*Universities who reported below the line costs*		
In-kind costs					
2019	$97	0.5%	$745	3.5%	3
2020	$99	0.5%	$747	3.9%	3
Third-party and partnership costs					
2019	$125	0.7%	$735	3.5%	6
2020	$99	0.5%	$813	4.3%	5
Optional depreciation adjustment					
2019	$105	0.6%	$644	3.1%	6
2020	$116	0.6%	$699	3.7%	6
Total below the line costs					
2019	$327	1.7%	$1,468	7.0%	12
2020	$314	1.7%	$1,396	7.3%	11

Note: There are unique but overlapping groups of universities who report below the line costs for each item. The total below the line costs for universities who report below the line costs for any of the individual items is therefore not the sum of the items above as some universities may only report one below the line item.

In-kind costs

In-kind costs reflect non-monetary exchange of goods and services in return for teaching and scholarship services, which if not for the existing 'quid pro quo' nature, a university would face a financial cost. These arrangements may, for example, involve the shared use of another institution's staff or resources for the purposes of teaching and scholarship, in exchange for the use of university buildings or facilities.

Three universities reported in-kind costs across 4 fields of education in both 2019 and 2020 (Table 2.6 and Table 2.7), resulting in an average increase of $97 (0.5%) in cost per EFTSL across the sector for 2019 and $99 (0.5%) in 2020. For the three reporting universities, the per EFTSL impact was much larger at $745 (or 3.5%) in 2019 and $747 (or 3.9%) in 2020. Of those that did not report in-kind costs there were a range of reasons with most noting that they did not believe they had significant in-kind costs and a small number noting that they would be difficult to quantify.

For those universities who reported in-kind costs, the impact on cost per EFTSL is completely concentrated in health-related fields of education. In particular, the Medical Studies field has in-kind costs that were equivalent to a $3,729 (or 11.5%) increase in cost per EFTSL in 2019 and $3,763 (or 12.1%) in 2020.

Table 2.6: Impact of in-kind costs on total teaching and scholarship costs (2019)

FOE	*Impact on total cost*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*
		All universities		*Universities who reported in-kind costs*	
MathSci	-	-	-	-	-
MedicalSci	-	-	-	-	-
OthNat-PhysSci	-	-	-	-	-
InfoTech	-	-	-	-	-
Eng&Related	-	-	-	-	-
Archi&Build	-	-	-	-	-
Environment	-	-	-	-	-
OthAg&Enviro	-	-	-	-	-
MedicalStudies	$83,479,726	$3,729	11.5%	$16,005	50.9%
Nursing	$2,379,018	$42	0.2%	$657	3.7%
Dental	$2,216,220	$585	1.4%	$4,097	8.4%
Veterinary	-	-	-	-	-
OthHealth	$1,164,095	$19	0.1%	$1,233	5.3%
Education	-	-	-	-	-
Mgmt&Comm	-	-	-	-	-
ForeignLang	-	-	-	-	-
Psych	-	-	-	-	-
OtherSoc&Cult	-	-	-	-	-
Comms&Media	-	-	-	-	-
OthCreative	-	-	-	-	-
FoodHosp&Person	-	-	-	-	-
MixedField	-	-	-	-	-
Total	**$89,239,059**	**$97**	**0.5%**	**$745**	**3.5%**

Table 2.7: Impact of in-kind costs on total teaching and scholarship costs (2020)

FOE	*Impact on total cost*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*
		All universities		*Universities who reported in-kind costs*	
MathSci	-	-	-	-	-
MedicalSci	-	-	-	-	-
OthNat-PhysSci	-	-	-	-	-
InfoTech	-	-	-	-	-
Eng&Related	-	-	-	-	-
Archi&Build	-	-	-	-	-
Environment	-	-	-	-	-
OthAg&Enviro	-	-	-	-	-
MedicalStudies	$85,267,105	$3,763	12.1%	$15,866	53.2%
Nursing	$1,397,338	$23	0.1%	$366	1.9%
Dental	$1,760,472	$462	1.1%	$3,237	6.8%
Veterinary	-	-	-	-	-
OthHealth	$1,037,020	$17	0.1%	$1,055	4.8%
Education	-	-	-	-	-
Mgmt&Comm	-	-	-	-	-
ForeignLang	-	-	-	-	-
Psych	-	-	-	-	-
OtherSoc&Cult	-	-	-	-	-
Comms&Media	-	-	-	-	-
OthCreative	-	-	-	-	-
FoodHosp&Person	-	-	-	-	-
MixedField	-	-	-	-	-
Total	**$89,461,935**	**$99**	**0.5%**	**$747**	**3.9%**

Additional partnership costs

In some instances, universities may arrange for a third-party organisation to deliver teaching for EFTSL that is attributable to a university. Costs incurred directly as a result of third-party delivery arrangements (such as administrative costs) have previously, and continue to be, included appropriately 'above the line'. However, some universities identified particular arrangements, whereby the full cost of teaching related to EFTSL attributable to the home institution would not be captured in statutory reporting, or the existing template.

An example provided by some universities was in instances where the third-party collects some or all student fees. In these cases, costs incurred in teaching these students would not be fully reflected in continuing expenses for the home institution for the relevant EFTSL. Including these costs is important for ensuring comparability across institutions is not affected by specific revenue sharing arrangements with partner organisations. To address this issue, universities were asked to estimate teaching costs for their partners based on the revenue collected by those partners in cases where this revenue is not incorporated as an expense by the home university.

In line with this definition, reported additional partnership costs in 2019 resulted in an on average $125 (or 0.7%) increase in cost per EFTSL. The largest impacts were on Food, Hospitality and Personal Services ($2,859 increase per EFTSL or 17.1%) and Dental Studies ($2,319 or 5.5%). Third-party and partnership costs were recorded by six universities below the line in 2019.

In 2020, reported additional partnership costs resulted in an on average $99 (or 0.5%) increase in cost per EFTSL. This represents a small decline from 2019, largely reflecting the fall in overall third-party partnership recorded below the line from $115 million in 2019 to $90 million in 2020. The largest impacts were also in Food, Hospitality and Personal Services ($2,621 increase per EFTSL or 17.1%) and Dental Studies ($2,358 or 5.7%). Third-party and partnership costs were recorded by five universities below the line in 2020.

Table 2.8: Impact of additional partnership costs on total teaching and scholarship costs (2019)

FOE	*Impact on total cost*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*
		All universities		*Universities who reported partnership costs*	
MathSci	$2,519,342	$80	0.5%	$585	2.2%
MedicalSci	-	-	-	-	-
OthNat-PhysSci	$2,337,045	$32	0.1%	$454	1.6%
InfoTech	$22,544,234	$332	1.8%	$3,396	21.0%
Eng&Related	$4,404,063	$66	0.3%	$293	0.9%
Archi&Build	$891,357	$38	0.2%	$643	3.7%
Environment	-	-	-	-	-
OthAg&Enviro	-	-	-	-	-
MedicalStudies	$7,251	$0	0.0%	$6	0.0%
Nursing	$430,161	$8	0.0%	$194	1.1%
Dental	$8,784,083	$2,319	5.5%	$16,970	34.7%
Veterinary	-	-	-	-	-
OthHealth	$1,585,769	$26	0.1%	$358	1.5%
Education	$3,212,268	$49	0.3%	$836	5.1%
Mgmt&Comm	$57,377,316	$377	2.3%	$3,032	19.3%
ForeignLang	$82,229	$8	0.0%	$866	5.6%
Psych	$81,276	$3	0.0%	$86	0.5%
OtherSoc&Cult	$8,420,646	$50	0.3%	$337	1.9%
Comms&Media	$1,467,391	$44	0.3%	$402	2.4%
OthCreative	$707,311	$23	0.1%	$539	2.6%
FoodHosp&Person	$170,478	$2,859	17.1%	$4,262	27.5%
MixedField	-	-	-	-	-
Total	**$115,022,220**	**$125**	**0.7%**	**$735**	**3.5%**

Table 2.9: Impact of additional partnership costs on total teaching and scholarship costs (2020)

FOE	*Impact on total cost*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*
		All universities		*Universities who reported partnership costs*	
MathSci	$310,959	$10	0.1%	$216	1.3%
MedicalSci	-	-	-	-	-
OthNat-PhysSci	$57,716	$1	0.0%	$27	0.1%
InfoTech	$19,127,262	$289	1.6%	$3,088	18.8%
Eng&Related	$1,819,033	$28	0.1%	$299	1.3%
Archi&Build	$1,084,762	$48	0.3%	$786	4.4%
Environment	-	-	-	-	-
OthAg&Enviro	-	-	-	-	-
MedicalStudies	$15,297	$1	0.0%	$12	0.0%
Nursing	$630,962	$11	0.1%	$281	1.5%
Dental	$8,991,202	$2,358	5.7%	$17,258	36.3%
Veterinary	-	-	-	-	-
OthHealth	$2,210,835	$35	0.2%	$442	2.0%
Education	$2,895,378	$43	0.3%	$688	4.2%
Mgmt&Comm	$43,385,612	$312	1.9%	$2,563	16.0%
ForeignLang	$70,140	$8	0.0%	$698	4.4%
Psych	$199,334	$7	0.0%	$185	1.1%
OtherSoc&Cult	$6,390,807	$38	0.2%	$338	2.2%
Comms&Media	$1,595,759	$50	0.3%	$448	2.6%
OthCreative	$1,049,928	$36	0.2%	$783	3.9%
FoodHosp&Person	$106,136	$2,621	17.1%	$3,860	30.8%
MixedField	-	-	-	-	-
Total	**$89,941,125**	**$99**	**0.5%**	**$813**	**4.3%**

Optional depreciation adjustment

Since the 2019 exercise, universities were permitted to include an optional depreciation adjustment to account for the use of fully depreciated assets or differences between book value and the fair value of their existing assets. An optional depreciation adjustment was included by twelve universities in 2019 and eleven in 2020.

As shown in Table 2.10 and Table 2.11 below it added 0.6% to average cost per EFTSL for the sector in 2019 and 2020 (both universities including and not including it). For those universities that reported the optional depreciation adjustment the impact on teaching and scholarship costs per EFTSL was 3.1% in 2019 and 3.7% in 2020.

When looking at the cost per EFTSL, the impact was spread relatively evenly across FOEs for both 2019 and 2020, consistent with capital costs being important for all FOEs.

Table 2.10: Impact of the optional depreciation adjustment on total teaching and scholarship costs (2019)

FOE	*Impact on total cost*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*
	All universities			*Universities who reported depreciation adjustment costs*	
MathSci	$3,232,340	$103	0.6%	$609	2.2%
MedicalSci	$1,330,319	$214	0.9%	$1,183	4.8%
OthNat-PhysSci	$14,735,354	$200	0.9%	$1,097	3.9%
InfoTech	$3,463,742	$51	0.3%	$481	3.0%
Eng&Related	$8,778,829	$132	0.6%	$862	2.5%
Archi&Build	$3,579,877	$152	0.8%	$876	5.0%
Environment	$813,849	$122	0.5%	$902	3.6%
OthAg&Enviro	$649,844	$132	0.4%	$1,550	4.7%
MedicalStudies	$7,145,718	$319	1.0%	$1,073	3.4%
Nursing	$2,326,627	$41	0.2%	$418	2.4%
Dental	$1,473,288	$389	0.9%	$892	1.8%
Veterinary	$1,710,854	$454	0.9%	$1,322	2.5%
OthHealth	$11,908,208	$197	1.0%	$1,039	4.5%
Education	$5,324,860	$81	0.5%	$586	3.6%
Mgmt&Comm	$9,597,700	$63	0.4%	$379	2.4%
ForeignLang	$951,680	$88	0.5%	$476	3.1%
Psych	$2,911,461	$99	0.6%	$623	3.6%
OtherSoc&Cult	$9,448,495	$56	0.4%	$334	1.8%
Comms&Media	$2,599,240	$79	0.5%	$473	2.8%
OthCreative	$4,682,350	$152	0.7%	$790	3.9%
FoodHosp&Person	$7,350	$123	0.7%	$1,336	8.6%
MixedField	$61,909	$50	0.3%	$1,415	8.0%
Total	**$96,733,895**	**$105**	**0.6%**	**$644**	**3.1%**

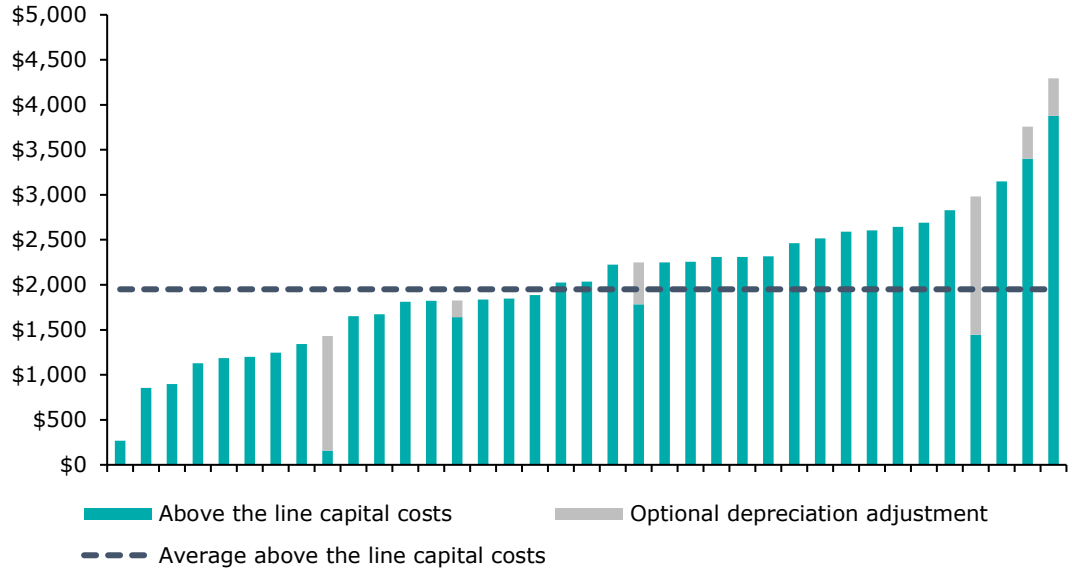
Table 2.11: Impact of the optional depreciation adjustment on total teaching and scholarship costs (2020)

FOE	*Impact on total cost*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*	*Impact on cost per EFTSL*	*% impact on total teaching and scholarship costs per EFTSL*
	All universities			*Universities who reported depreciation adjustment costs*	
MathSci	$3,750,873	$118	0.7%	$659	4.1%
MedicalSci	$1,297,919	$187	0.8%	$1,124	4.7%
OthNat-PhysSci	$16,108,753	$218	1.0%	$1,218	5.3%
InfoTech	$3,690,055	$56	0.3%	$486	3.0%
Eng&Related	$11,355,099	$177	0.8%	$1,145	4.9%
Archi&Build	$4,040,348	$180	0.9%	$1,000	5.6%
Environment	$874,986	$118	0.5%	$959	4.1%
OthAg&Enviro	$758,112	$170	0.5%	$1,649	4.4%
MedicalStudies	$7,562,284	$334	1.1%	$1,117	3.7%
Nursing	$2,373,233	$40	0.2%	$430	2.3%
Dental	$1,904,563	$499	1.2%	$1,157	2.4%
Veterinary	$1,367,561	$348	0.7%	$1,065	2.2%
OthHealth	$12,450,655	$199	1.0%	$1,038	4.7%
Education	$5,777,419	$86	0.5%	$614	3.7%
Mgmt&Comm	$10,208,564	$73	0.4%	$426	2.7%
ForeignLang	$1,077,737	$116	0.6%	$589	3.7%
Psych	$3,187,952	$105	0.7%	$652	4.0%
OtherSoc&Cult	$10,203,359	$61	0.4%	$358	2.3%
Comms&Media	$2,555,666	$79	0.5%	$468	2.8%
OthCreative	$4,368,319	$150	0.7%	$756	3.8%
FoodHosp&Person	-	-	-	-	-
MixedField	$84,840	$60	0.3%	$2,002	8.6%
Total	**$104,998,294**	**$116**	**0.6%**	**$699**	**3.7%**

Only two of the six universities that reported an optional depreciation adjustment had 'above the line' capital costs per EFTSL that were higher than the average seen across all 37 institutions in 2019 and 2020 (see Chart 2.26 and Chart 2.27).

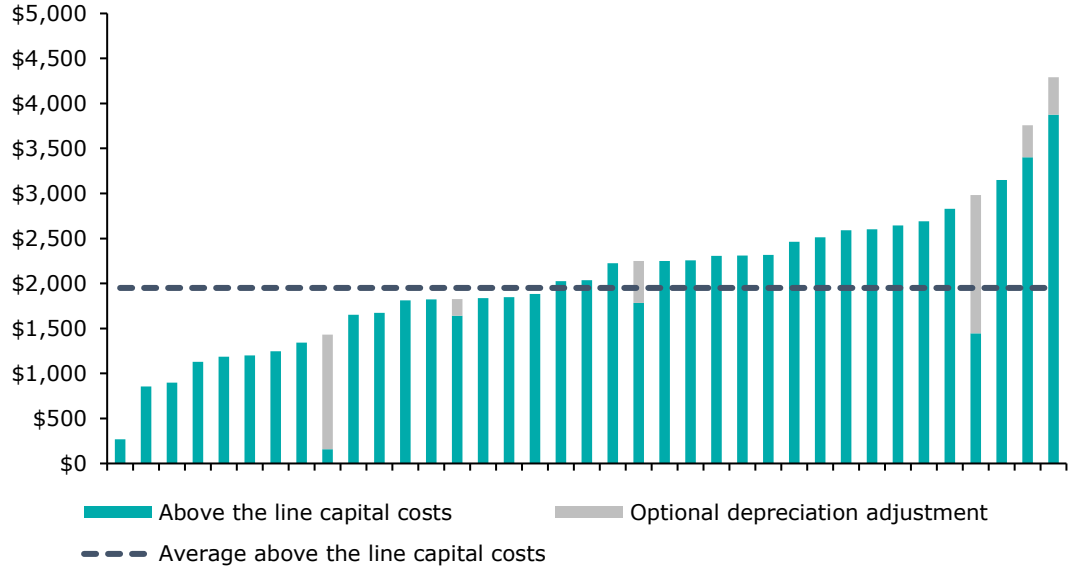
For the six universities that included an optional depreciation adjustment, unit costs increased by $644 per EFTSL in 2019 and $699 in 2020, although on average institutions with optional depreciation costs did not necessarily have lower average above the line capital costs (see Chart 2.28).

Chart 2.26: Variation in capital costs per EFTSL reported 'above the line' and the optional depreciation adjustment by university (all levels) (2019)



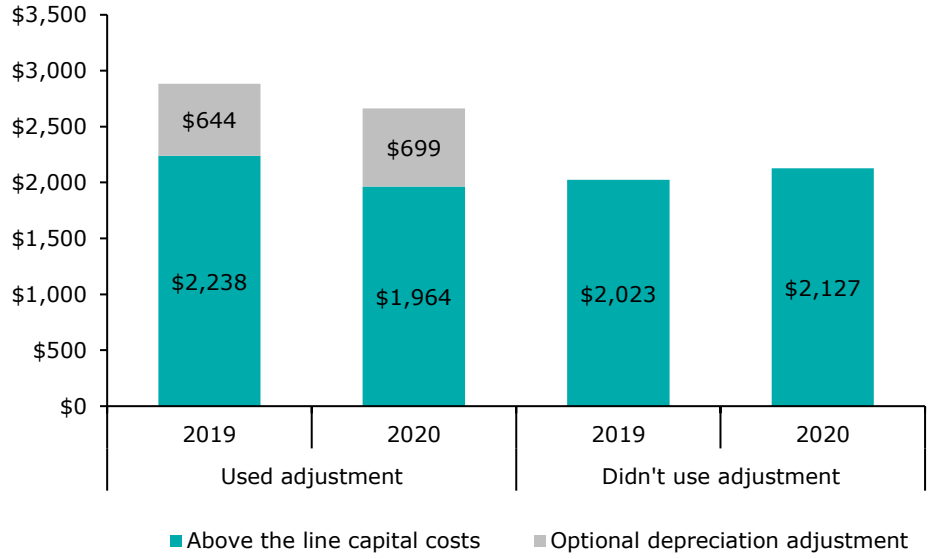
Note: 'Above the line' capital costs refers to depreciation, amortisation, repairs, maintenance, borrowing and bad debts.

Chart 2.27: Variation in capital costs per EFTSL reported 'above the line' and the optional depreciation adjustment by university (all levels) (2020)



Note: 'Above the line' capital costs refers to depreciation, amortisation, repairs, maintenance, borrowing and bad debts.

Chart 2.28: Capital costs per EFTSL reported 'above the line' and the optional depreciation adjustment (all levels) (2019 and 2020)



Note: 'Above the line' capital costs refers to depreciation, amortisation, repairs, maintenance, borrowing and bad debts.

2.6 Consideration of contextual factors

This section examines the extent to which variation in costs across universities is correlated with specific contextual factors. In particular, it explores the degree to which cost varies based on:

- Scale of delivery
- Location of the university in a metropolitan or regional area
- Research intensity of delivery
- State and territory
- FOE
- The number of international students at a university.

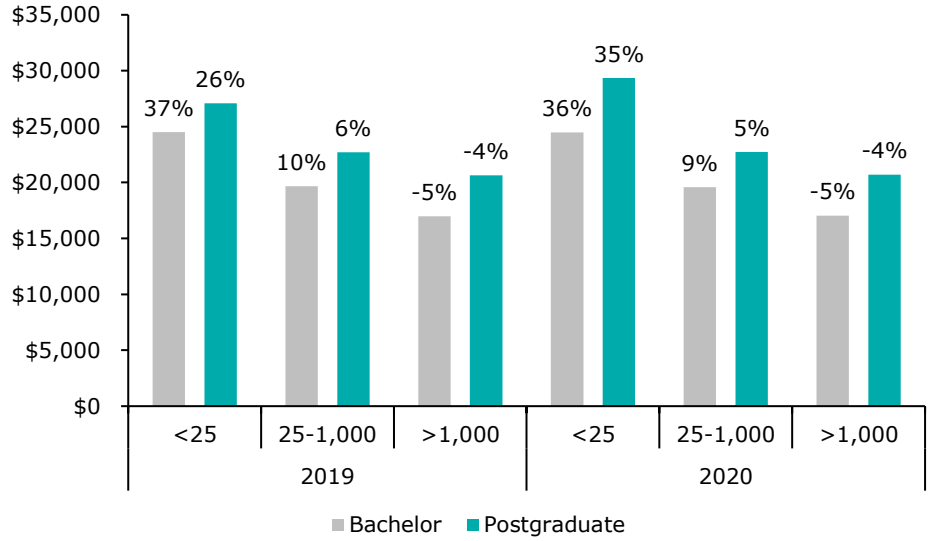
It is important to note that although universities with certain characteristics (e.g. regional universities) may, on average, have different costs to the rest of the sector, this correlation could be driven by a range of factors other than purely input costs. For example, higher costs on average could be due to differences in staff student ratios, scale effects or the need to provide additional support for students.

Variation by scale of delivery

The 2016 *Cost of delivery of higher education* report included a detailed econometric analysis of the drivers of cost (see Box 2.3 below). A key finding from this analysis and report was the significance (statistically and materially) of scale as a determinant of unit costs. This point was reiterated throughout the consultation process and by universities in their accompanying statements.

Chart 2.29 provides further evidence for the existence of 'economies of scale' in provision of higher education, whereby an increasing quantum of teaching delivery in a given FOE is associated with declining unit costs. In 2019, at the bachelor level of study, average costs for all instances where a university had fewer than 25 EFTSL was $24,500 compared to $19,700 for instances of between 25 and 100 EFTSL and $17,000 for all instances where a university had more than 1,000 students in a FOE. This equates to 37% above the mean for bachelor studies for instances of less than 25 EFTSL, 10% above the mean for instances of between 25 and 100 EFTSL, and 5% below the mean for instances above 1,000 EFTSL. Similar economies of scale are observed in 2020 for bachelor and postgraduate study.

Chart 2.29: Unit costs and deviation from average using different EFTSL thresholds, by level (2019 and 2020)



Note: % indicates deviation from average cost per EFTSL for the given level. Outliers excluded.

Box 2.3: Drivers of cost from *Cost of delivery of higher education (2016)*

The 2016 study had a scope that included the identification of the drivers of higher costs. Regression analysis was used to identify these cost drivers by (1) statistical significance and (2) magnitude of correlation. This type of analysis allows for the correlation effects to be disentangled among multiple competing drivers of a single outcome (in this instance, cost per EFTSL).

The key identified drivers that had a significant effect on costs:

- **Staff-student ratios** (teaching full-time equivalent (FTE)/student EFTSL) which was correlated with higher costs, reflecting labour as a key factor in the cost of teaching. Notably, this driver was consistently the largest determinant of cost.
- **Scale** (total student EFTSL) was correlated with lower costs, indicating some scale efficiencies, although the statistical significance weakened after controlling for additional drivers (particularly as some of this effect is likely to be captured through staff-student ratios).
- **Regionality** (proportion of regional EFTSL) correlated with higher costs, even after controlling for scale, suggesting that regional provision involves greater costs.[22]
- **Casualised workforce** (proportion of casual FTE) correlated with lower costs, which may reflect more adaptive workforces.

Other cost drivers were considered but were generally not found to be statistically significant drivers of cost after controlling for other factors:

- **External delivery** (proportion of external mode EFTSL) was correlated with lower costs, which may reflect efficiencies in online and off-campus delivery but was not statistically significant.

[22] Based on the home postcode of students.

- **International students** (proportion of EFTSL that comprised overseas students) was correlated with higher costs, however this effect was not statistically significant.
- **Research intensity** (level of Higher Degree Research (HDR)) correlated with higher costs, however this effect disappeared after controlling for fields of education. This may suggest that research intensities are partly reflecting systematic differences in costs across fields.

Notably, the key cost drivers remained generally statistically significant even after controlling for fields of education, which suggests these are common cost drivers, rather than reflections of idiosyncrasies among fields.

Furthermore, the analysis showed stronger field effects versus institution effects, which suggests that there are stronger variations in cost between disciplines than universities, which may be unsurprising given a regulated funding environment and wide scopes of delivery.

Variation between metropolitan and regional institutions and those with a greater degree of research focus

Universities that predominately operate in more regional settings often face distinctive local contexts, including:

- Less readily available scale economies due to thin markets and lower populations
- A higher share of distance or online learning
- Potentially lower per unit capital and/or labour costs
- A greater need for student support as many regional universities may cater to a more disadvantaged student cohort.

Overall, the cost per EFTSL for regional universities was found to be 7.7% higher in 2019 and 4.4% higher in 2020 compared to metropolitan universities after controlling for differences in the enrolment mix in terms of FOE and differences in the mix of enrolments across different levels of study between the two groups. However, results varied by level of study. In 2019, costs per EFTSL at regional universities were found to be 12.0% higher for bachelor degree students, but 2.7% lower for postgraduate students when compared to metropolitan universities. In 2020, costs per EFTSL at regional universities were found to be 9.8% higher for bachelor degree students, but 7.9% lower for postgraduate students when compared to metropolitan universities.

Variation between institutions with a greater degree of research focus

Universities with a greater focus on research activity may also have differential costs of teaching to other universities. This may arise due to more senior staff tending to be involved in joint teaching and research functions as well as other higher cost resources (such as facilities or equipment) used for both teaching and research, which may be more prevalent when a university has a research-focus. Alternatively, it is possible that some institutions with a greater research focus may allocate a greater proportion of available resources to research relative to teaching.

In 2019, the cost per EFTSL across Group of Eight (Go8) universities was found to be 7.3% higher than non-Go8 universities. However, after also controlling for differences in the enrolment mix across FOEs, costs at Go8 universities were found to be 0.1% lower than non-Go8 universities suggesting that differences in cost between the two groups was largely driven by differences in enrolment patterns by FOE. A similar trend was observed in 2020 where Go8 universities were found to have a cost per EFTSL 8.5% higher than non-Go8 universities but only 1.0% higher after controlling for differences in the enrolment mix.

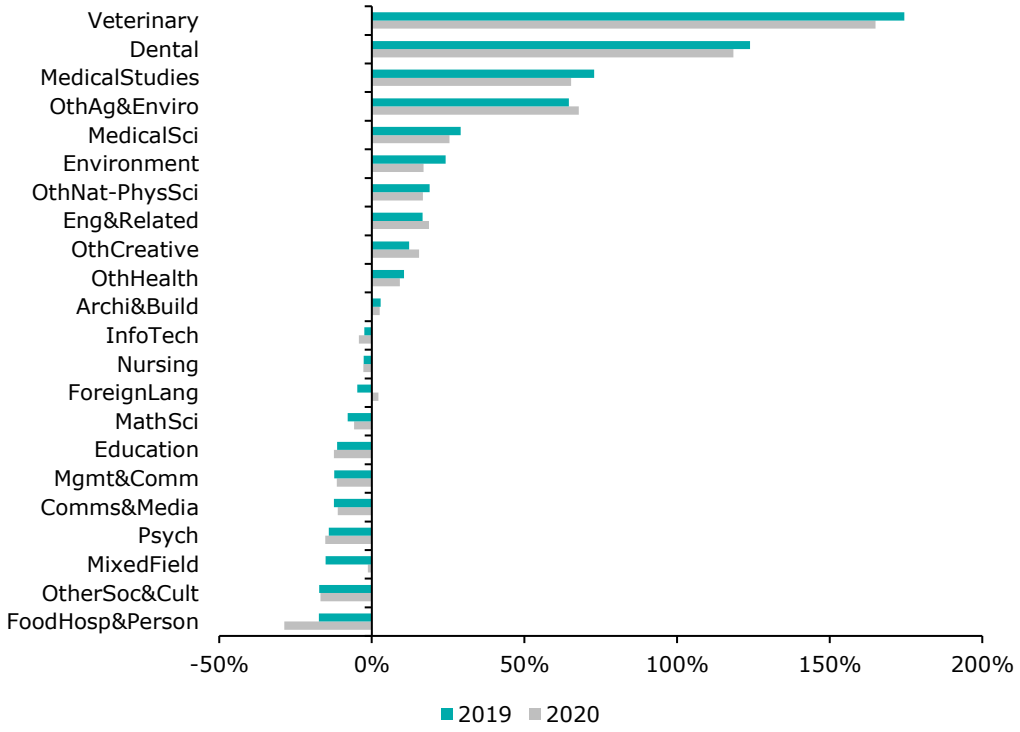
Variation by FOE

Costs also tend to differ across fields of education reflecting various factors including the number of students enrolled, equipment and capital costs, practical experience, and pedagogy requirements.

Chart 2.30 shows the costs of teaching across fields of education relative to the mean in both 2019 and 2020. The highest cost FOE was Veterinary Studies, with costs that were 165% above the mean in 2019 and 174% above the mean in 2020. Costs were also above the mean in both 2019 and 2020 for health related FOEs such as Dental Studies and Medical Studies. These FOEs typically include significant costs related to placements and practical experience that are not incurred to the same extent in other fields.

Overall, most FOEs are relatively close to the average cost per EFTSL with 18 of the 22 FOEs within 30% of the mean in 2019 and 2020. Of these, five are within 10% of the mean in 2019 and six are within 10% of the mean in 2020.

Chart 2.30: Cost per EFTSL, percentage deviation from mean, all levels (2019 and 2020)



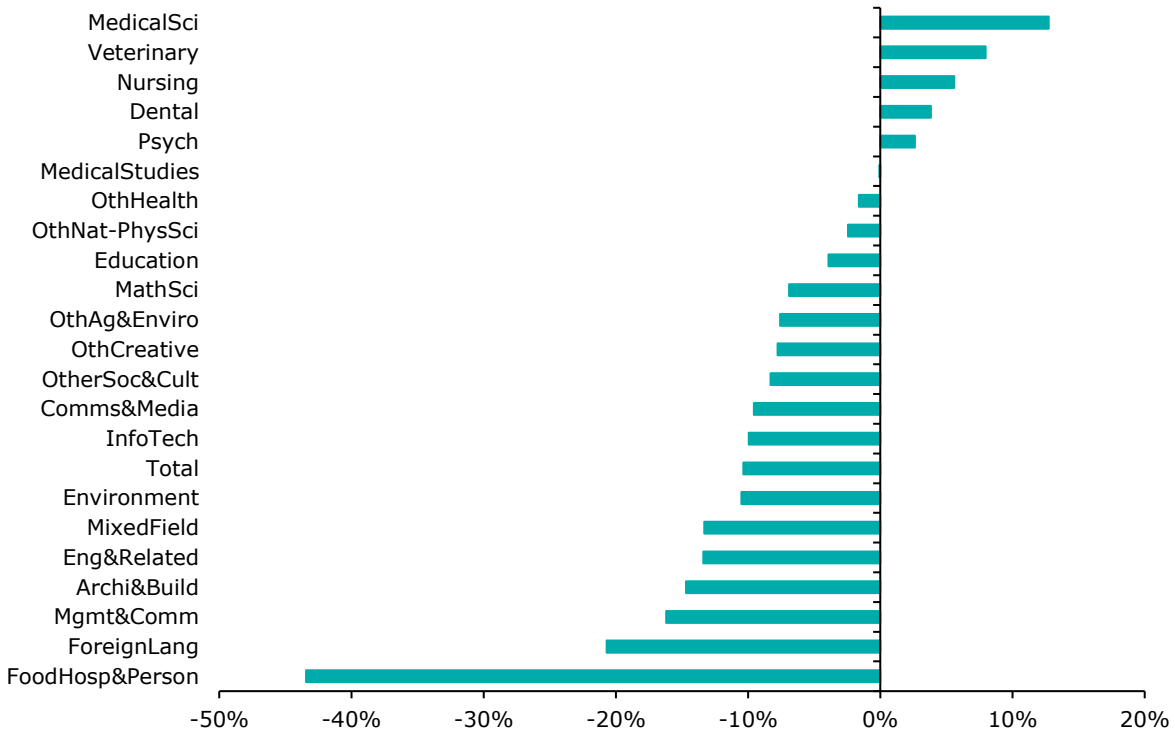
Variation by change in international student enrolments

The closure of Australia's international border to non-residents from 20 March 2020 to 21 February 2022 weighed on the number of international student enrolments at Australian universities. In-scope overseas EFTSL enrolled for study at an Australian campus fell 10% in 2020. Yet the effects of this decline were uneven across FOEs and universities.

Chart 2.31 below shows the change in overseas EFTSL by FOE from 2019 to 2020. Most FOEs (17 out of 22) saw a decline in EFTSL, with the largest declines being in Food, Hospitality and Personal Services largely reflecting the small number of overseas EFTSL to begin with (there were fewer than 50 overseas EFTSL across all universities in 2019). Other FOEs that saw larger falls were Foreign Language Studies (-21%), Management and Commerce (-16%) and Architecture (-15%).

The five FOEs that experienced an increase in overseas student EFTSL were largely those related to medical degrees such as Medical Science (12%), Veterinary Studies (8%), Nursing (6%), Dental (4%) and Psychology (2%).

Chart 2.31: Percentage change in in-scope overseas student EFTSL by FOE, all levels (2020)



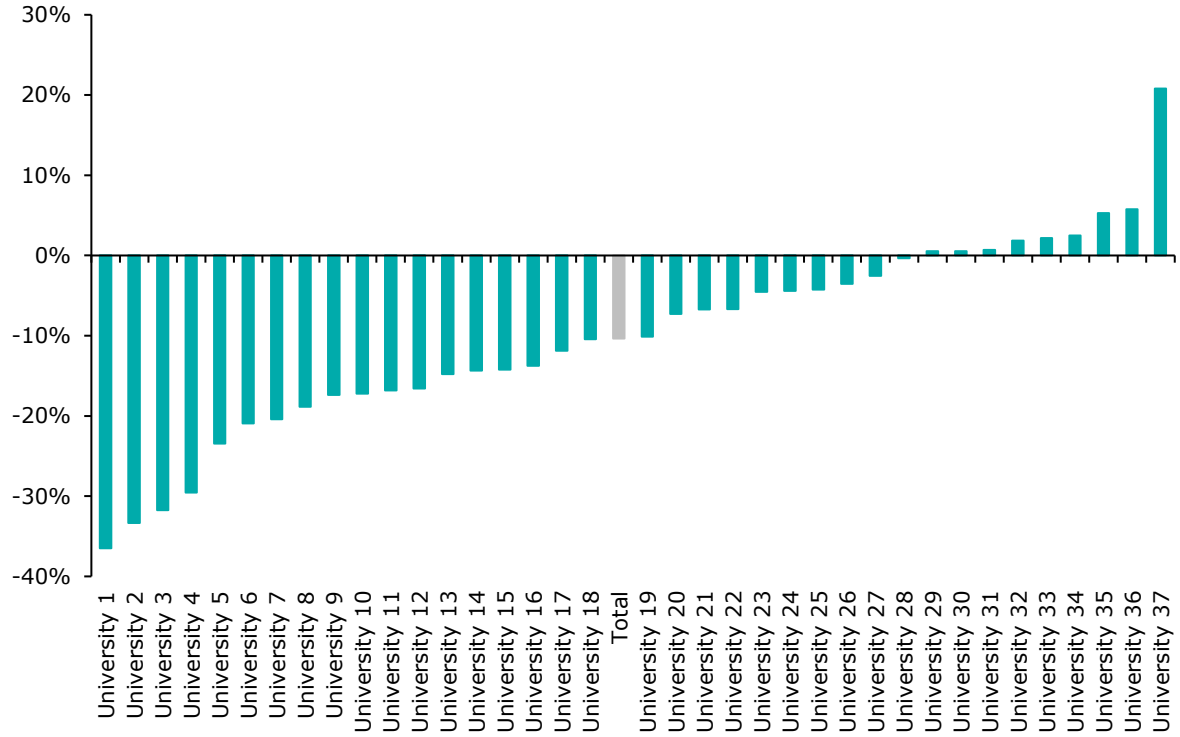
Source: Deloitte Access Economics. Change in EFTSL excludes short courses which were only introduced in 2020

Overall, there is a small positive correlation (0.07) between the change in overseas EFTSL and change in costs between 2019 and 2020. For bachelor level study the correlation is much higher, at 0.57 while for postgraduate the correlation is negative (-0.20). Correlation is not reported for sub bachelor students as there are relatively few overseas EFTSL.

Overall, 28 out of 37 universities saw a decline in in-scope overseas student EFTSL in 2020 while nine saw an increase. For those 28 universities, the average fall in overseas EFTSL was 14.7% while for the nine that saw an increase the average increase was around 4.5%.

The largest falls recorded tended to be for regional universities, with the largest declines for Central Queensland University (-36.5%), Charles Sturt University (-33.4%) and The University of the Sunshine Coast (-31.7%). The largest gains were seen at Charles Darwin University (20.8%), the University of Adelaide (5.8%) and the University of Canberra (5.3%).

Chart 2.32: Change in overseas student EFTSL by university (2020)



Note: Change in EFTSL excludes short courses which were only introduced in 2020.

Overall, there is a negative correlation between the change in overseas EFTSL and change in costs by university. For all levels of study, the correlation is -0.37 while for bachelor and postgraduate levels of study the correlations are -0.30 and -0.29 respectively. Correlation for sub bachelor level of study is not reported due to relatively low EFTSL.

3 Effects of COVID-19 on teaching and scholarship costs

The COVID-19 pandemic had a significant impact on the financial performance of many Australian universities in 2020. This chapter examines the effects of the pandemic on university teaching and scholarship costs. The analysis uses data provided by universities that were able to quantify the effect of COVID-19 on teaching costs, as well as reflections from universities on how COVID-19 has affected operations.

The remainder of this chapter is structured as follows:

- Section 3.1 presents the key considerations from the optional COVID-19 tab that was completed as part of the 2022 study.
- Section 3.2 discusses university reflections on the impact of COVID-19 on the cost of teaching gathered via consultation with the sector during the 2022 study and commentary from universities provided in the Supporting Statement for 2020 data.
- Section 3.3 discusses the key caveats and limitations in examining COVID-19 related costs.

This chapter considers the impact COVID-19 had on teaching and scholarship costs, to the extent that universities outlined these impacts in the additional option COVID-19 tab prepared for the 2022 study. These costs are used for reference only. All universities, to varying extents, will have had costs affected by COVID-19. This chapter examines COVID-related changes to teaching costs for institutions able to quantify these costs, as well as trends in overall costs for universities unable to quantify COVID-related costs.

3.1 COVID-19 data

To allow for additional analysis of the impact of COVID-19 on teaching and scholarship costs, Deloitte included an optional additional tab in the Transparent Costing Worksheet to capture the financial impact of university responses to COVID-19.

The purpose of this additional tab was to understand the cost or revenue components changed most materially in response to COVID-19. The cost per EFTSL output is based on the costs included in the main tab, with the optional COVID-19 tab designed purely to collect information on changes in cost attributable to COVID-19.

Universities have also had the opportunity to outline how COVID-19 has affected teaching costs in the Supporting Statement.

Deloitte understands that the impact of COVID-19 on university expenditure can be grouped into three broad categories, including:

- **Financial incentives and support for students** including scholarships, bursaries and stipends, hardship payments and tuition fee discounts
- **Management of staff costs** including redundancy costs, deferral of salary increases, leave and balance sheet provisions, temporary salary cuts and temporary payroll tax exemptions
- **Management of non-staff costs** including higher IT investment and COVID-related cleaning and consumables; lower spending on travel, conferences and events; and deferred spending on maintenance and capital projects.

The measures in the COVID-19 tab are split into three categories identified above (financial incentives and support, staff costs and non-staff costs). Within each of these three categories are

specific line items. These line items are designed to identify the different potential areas where COVID-19 has impacted university operations.

Data was only provided at the total level for the institution (i.e. not by level of education or FOE). More detail on the structure of the optional COVID-19 tab can be found in Appendix B.

Nine universities completed the optional COVID-19 tab while another five universities provided information in the Supporting Statement that allowed further analysis of COVID-19 related costs.

The nine universities who provided COVID-19 measures data reported an average of $23.0 million worth of financial incentives and support, staff costs and non-staff costs. This equates to an average of 4.9% of total teaching costs for those nine universities in 2020.[23]

More than three quarters of reported COVID-19 measures related to redundancy costs, which increased by an average of $17.4 million across the nine universities (or 4.2% of total expenses in 2020). Many universities reduced staff numbers in response to COVID-19, triggering redundancy payments.

Universities also provided financial incentives and support to students. This included an average of $3.2 million per university on student scholarships, bursaries, stipends and hardship payments (or 0.7% of total expenses in 2020). Universities also offered tuition fee discounts amounting to an average of $2.7 million per university. Only four of the nine universities that provided COVID-19 measures data reported changes in revenue for their institution. And while tuition fee discounts are recognised as a form of student hardship assistance provided in 2020, the focus of the exercise remains on understanding the costs of teaching and scholarship.

Reductions in staff remuneration or delays in scheduled pay increases reduced staff costs by an average of $1.7 million per university (or around 0.2% of total expenses in 2020). Only one university reported changes in expenses due to leave provisions (e.g. the compulsory use of leave), while there were smaller changes in response to other staff costs.

Eight universities reported an increase in expenditure relating to non-staff costs. This includes actions such as higher investment in IT and costs related to cleaning and the purchase of consumables, as well as lower spending on travel, conferences and events. One university reported a decrease in non-staff costs amounting to 1.9% of total teaching expenses.

Table 3.1: Impact of COVID-19 costs on teaching and scholarship costs for universities that completed the COVID-measures tab (2020)

	Total	*Average*	
	$ million	*$ million*	*% share of teaching costs*
Financial incentives and support			
Changes in expenditure (includes student scholarships, bursaries, stipends and hardship payments)	$25,632,965	$3,204,121	0.7%
Changes in revenue (includes tuition fee discounts)	$19,059,775	$2,722,825	-
Total*	$44,692,740	$5,926,946	0.7%
Staff costs			
Redundancy costs	$156,715,879	$17,412,875	4.2%
Salary changes including deferral of salary increases	-$8,426,108	-$1,685,222	-0.2%
Leave provisions (e.g. compulsory use of leave)	$2,233,307	$372,218	0.1%

[23] The percentage share of total teaching costs excludes costs associated with changes in revenue

Other costs (e.g. temporary payroll tax exemptions)	$438,698	$62,671	0.0%
Total	$150,961,776	$16,162,543	4.0%
Non-staff costs			
Changes in expenditure (includes higher IT investment and costs for cleaning and purchase of consumables, reduction in travel expenses)	$8,337,246	$926,361	0.2%
Total*	**$203,991,762**	**$23,015,849**	**4.9%**

*Note: the percentage share of teaching costs excludes costs associated with changes in revenue

Teaching costs per EFTSL were an average of $1,100 (or 5.5%) higher for the nine universities that completed the optional COVID-19 tab. That is, COVID-19 measures introduced by these nine universities accounted for 5.5% of the teaching costs recorded 'above the line' in 2020. A further five universities provided data in the Supporting Statement quantifying the impact of COVID-19 measures on total teaching costs in 2020. For the fourteen universities that reported, teaching costs per EFTSL were an average of $600 (3.2%) higher due to the effect of COVID-19 measures.

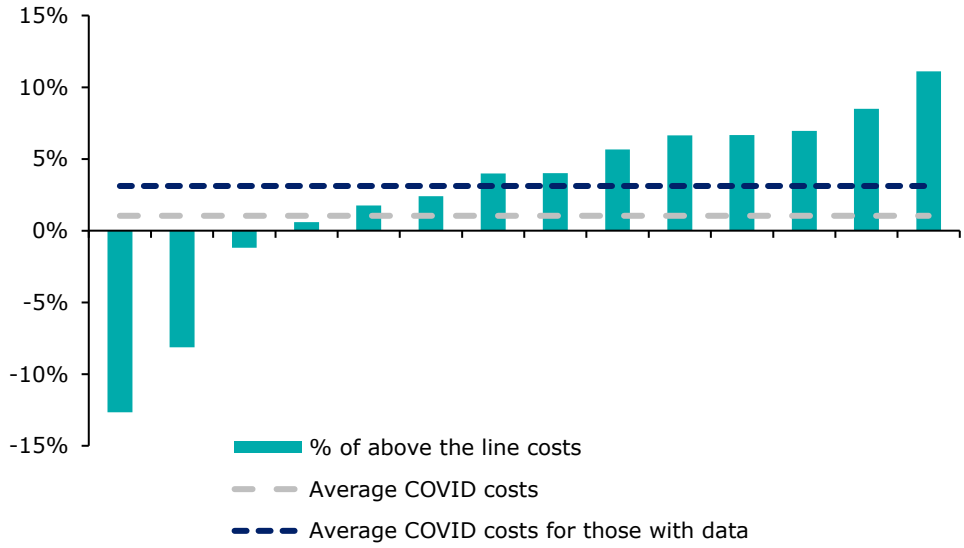
It should be noted that many universities were unable to separate COVID-19 costs from other costs and were therefore unable to complete the optional tab or provide more detailed COIVD cost estimates.

Table 3.2 Total average impact of COVID-19 costs on teaching and scholarship costs (2020)

	Impact on cost per EFTSL (all universities)	*% impact on total teaching and scholarship costs per EFTSL (all universities)*	*Impact on cost per EFTSL (for universities who report)*	*% impact on total teaching and scholarship costs per EFTSL (for universities who report)*	*Number of universities reporting COVID-19 costs*
COVID-19 optional tab costs	$225	1.2%	$1,101	5.5%	9
COVID-19 optional tab plus info from supporting statements	$195	1.0%	$613	3.2%	14

However, not all universities reported increased costs because of COVID-19. Three universities (out of fourteen that reported data) observed a decrease in costs in 2020 because of COVID-19 (Chart 3.1). All three universities reported COVID-19 costs data via the Supporting Statements with declines in costs primarily due to falls in non-staff costs such as declines in travel rated costs.

Chart 3.1: Total COVID-19 related costs by university as a percentage of above the line costs (2020)



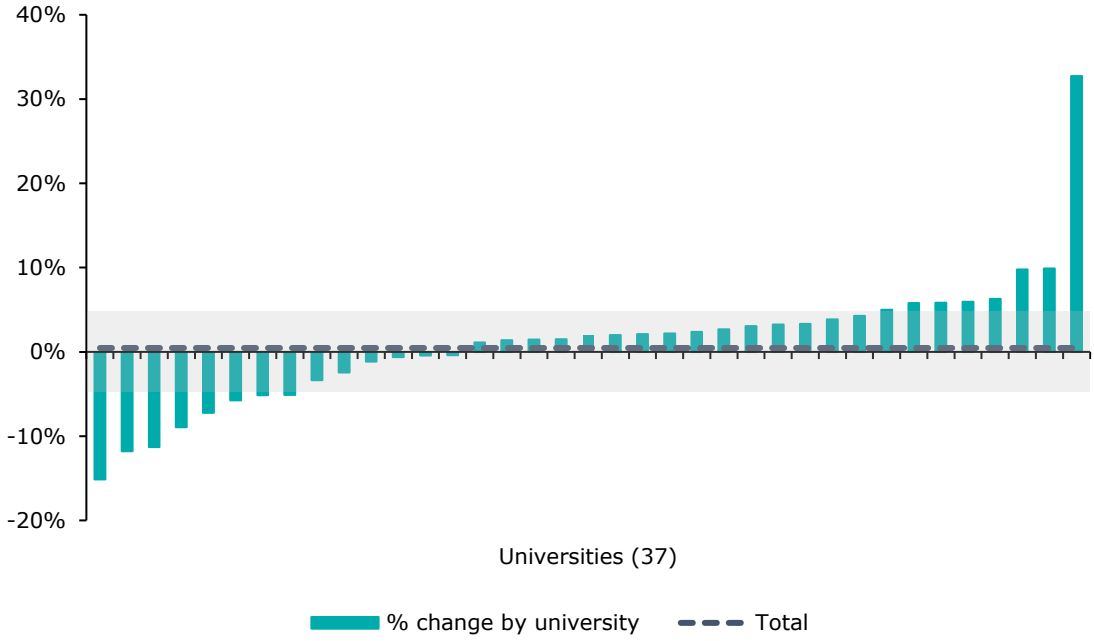
Overall changes in costs per EFTSL between 2019 and 2020 provides a broader look at how COVID-19 affected university teaching costs. This is particularly useful given that many universities did not complete the COVID-19 optional tab or provide sufficient information to analyse their costs in the Supporting Statement.

Overall cost per EFTSL increased from $18,700 in 2019 to $18,800 in 2020, a gain of 0.5%. A total of 23 universities saw costs increase (by an average of $933 per EFTSL, or 5.1%) and 14 universities saw costs decrease (by an average of $1,079 per EFTSL, or 5.8%).

A total of 22 of the 37 universities saw total cost per EFTSL increase or decrease by no more than 5% in 2020. Yet there were several universities that reported large cost changes. The largest increase in the total cost per EFTSL at a university was 32.7%, while the largest decrease was 15.1%. The university that reported a 32.7% increase in costs per EFTSL saw a 15.4% increase in total teaching costs and a 13.0% decrease in EFTSL, while the university that saw a 15.1% decrease in the cost per EFTSL saw a 0.3% increase in costs and a 18.2% increase in EFTSL. In 2020, increases in teaching costs were largely driven by increased redundancy and restructuring costs. The rest of this chapter discusses this in more detail.

This points to some universities being heavily impacted by COVID, with relatively large increases or decreases in unit costs (noting that other events in 2020 could have also affected unit costs) while other universities were less affected. It is also possible that many universities were forced to cut expenditure drastically to offset declining revenue and therefore appeared to have little change in cost per EFTSL.

Chart 3.2: Average unit costs by university (all fields and all levels) % change in 2020



3.2 Reflections from universities

The pandemic had significant effects on teaching and scholarship costs across the university sector. Not all universities provided detailed data on the quantitative effects of the pandemic on university finances. However, many universities provided broader qualitative reflections on how COVID-19 has affected their university and the sector at large.

Universities identified a range of areas in which the pandemic impacted their operations, including:

- Travel restrictions and international students
- Changes to staff arrangements
- Online learning/teaching
- Ongoing effects of the pandemic in 2021 and early 2022 as well as potential future effects.

These are discussed in more detail in the sections below.

Travel restrictions and international students

With Australia's international border closed for much of 2020 the number of international students that could enter the country and enrol at Australian universities was restricted. This led to a decline in international students across many universities. However, some universities noted that the Semester 1 commencement date was before the international border closed (on 20 March 2020). This meant that for some universities, much of the international student cohort were already in Australia before the introduction of travel restrictions.

However, most universities reported that declines in international student enrolment and revenues had applied financial pressure to the university, particularly with uncertainty over future international student numbers.

Many universities reported declines in non-staff costs. The closure of the international border, state borders and other restrictions on mobility placed downward pressure on university expenditure on travel, events and conferences.

These measures implemented in 2020 may have resulted in lower average cost per EFTSL relative to prior years. However, some universities noted that these savings were temporary and were achieved largely due to the restrictions imposed in 2020 (e.g. bans on international travel, stay-at-home orders) and costs could increase over the coming years.

Changes to staff costs
Teaching related staff costs per EFTSL rose at 28 of the 37 universities who provided data in 2020. Approximately one half of the universities reporting higher staff costs in 2020 saw growth of less than 5%, but cost increases ranged from 1-30%. Several universities reported that staff costs were higher than would otherwise have been expected due to restructuring programs implemented in response to COVID-19 and the associated increase in redundancy costs. Some universities reported that costs increased due to changes in the mix of casual and full-time staff at their institution.

While these measures tended to lead to a one-off increase in staff costs for 2020 only, other measures (such as deferral of salary increases) reduced costs in 2020 but were expected to lead to cost growth in 2021 and beyond.

A small number of universities reported that restructures undertaken prior to 2020 reduced the impact of COVID-19 on staff costs in 2020.

Online learning/teaching
Universities with mature online teaching offerings prior to 2020 reported fewer additional costs associated with the shift towards online learning that occurred in response to COVID-19 lockdowns and restrictions in 2020. These universities required smaller investments in IT assets and staff training.

One issue reported was that the academic workload allocation systems did not necessarily fully capture the move to online teaching at some institutions. This was reportedly due to the rapid pace at which learning shifted online.

It was also noted by one university that the transition to online learning has been accompanied by some efficiency improvements in the delivery of teaching. The subsequent reduction in academic workload was reflected in the university costing model by way of reduced delivery hours for some units.

The shift towards online learning/teaching also had implications for on-campus activity. There were generally mixed results across the sector. Some universities reported materially higher costs associated with COVID-compliance measures such as higher cleaning costs, while other institutions noted that these costs were not significant. This variation may reflect the variation in COVID-19 restrictions across Australian states and territories in 2020.

Other savings were generally more difficult to quantify. For example, utilities costs (electricity, water, gas, etc.) fell in 2020 at several universities amid the reduction in the number of people on campus, but universities were unable to provide an estimate of the change in teaching related costs.

Future/ongoing impacts
As part of the Supporting Statement, universities commented on how the pandemic has affected costs in 2021 and early 2022 and may affect costs going forward. Universities indicated that there was still significant uncertainty around how COVID-19 will affect university operations and finances in the future.

Several universities noted that the negative effect of lower international student enrolments was worse in 2021 compared to 2020. This was due to the continued closure of the international border and the way cohorts of students move through the university (e.g. the 2020 commencing cohort was lower in 2020, but the commencing and continuing cohort were both lower in 2021). This could have flow on effects if universities look to constrain staff and non-staff costs. Universities are also uncertain whether international students will return in 2022 or 2023 at the same scale as in 2019.

A few universities noted that costs could decrease in 2021 because of lower staff levels amid redundancies and restructures implemented in 2020. However, additional resources may need to be deployed if international student enrolments increase faster than previously expected.

Some universities noted that COVID-19 has changed university operation for the longer term in areas such as:

- Blended work arrangements for some teams with the shift to working from home and reviews of campus space utilisation
- Increased online delivery of teaching, potentially requiring increased investment into online learning for some universities
- Potentially fewer travel costs compared to pre-COVID-19 levels
- More student hardship payments and tuition fee discounts (which could be used to attract international students)
- Deferred expenditure in 2020 may mean higher expenditure in future years.

There are many other aspects of university operations that have changed, ranging from recruitment to graduation. As Australia is in the early stages of living with active community transmission of COVID, it is unknown whether these changes are permanent or temporary.

Universities also tended to report that because of financial pressures they made reductions in strategic investments (e.g. capital expenditure in infrastructure and technology). The extent to which these investments are simply being deferred to future years or cancelled outright remains uncertain and may differ across universities.

Universities have also considered changes to their capital investment program in order to support dual-mode teaching and work-at-home staffing models.

3.3 Considerations and limitations

This chapter has outlined a number of impacts of COVID-19 on the university sector. However, the data from the COVID-19 tab should be interpreted with a number of important caveats in mind:

- Many universities were not able to separate COVID-19 costs from total costs in 2020. This was often because internal university systems did not code costs as COVID-related or because costs (or savings) were too small to identify.
- Eleven of the fourteen universities filling out the tab identified increases in costs associated with COVID-19. However, teaching costs across the sector only rose by 0.5% relative to 2019 and over a third of universities saw costs per EFTSL decrease in 2020.
- Institutions' response to the pandemic have been highly varied, for example some universities have provided students with hardship payments (i.e. increased expenditure) while others have offered tuition discounts (i.e. decreased revenue). The inclusion of one-off costs in 2020 (specifically those related to the sector's response to the pandemic) makes the 2020 data more difficult to compare across the sector.
- There was heterogeneity in the effect of COVID-19 on universities. Several factors contributed to this including:
    - The proportion of international enrolments typically seen at an institution
    - Whether universities had undergone a restructuring in prior years
    - Different state and territory COVID-19 restrictions (including border restrictions and other health-related restrictions).

4 Discussion and key limitations

This chapter complements the quantitative analysis in the previous chapter by highlighting a number of key considerations in interpreting the results and limitations of the findings. In doing so the chapter draws on a range of reflections provided by universities during the data collection process including reflections from the consultations and university Supporting Statements.

The remainder of this chapter is structured as follows:

- Section 4.1 presents the key considerations for interpreting the quantitative analysis, including relevant limitations in interpreting the findings.
- Section 4.2 reflects on the apportioning of costs to major activities by universities, in particular, the approach universities have taken to identifying and separating teaching and scholarship costs from research.
- Section 4.3 discusses the treatment of capital costs.
- Section 4.4 provides some reflections on the range of methodologies used, from apportioning costs top down to unit-level activity-based costing models, and the extent to which these methodological considerations may affect the results.
- Section 4.5 summarises some of the other issues raised by universities during this process.
- Section 4.6 outlines potential areas for improvement in subsequent analysis

4.1 Key considerations in interpreting the analysis

The key limitations of this analysis are set out in Table 4.1 below. These limitations were recognised at the outset of this exercise and are ongoing challenges faced by exercises of this nature. Importantly, strategies have been undertaken to minimise their impact over time, including working with universities to improve the accuracy of their cost allocation processes and promote consistency in approaches to completing the TCW.

Table 4.1: Key limitations of the exercise

Limitation	Detail and implications
Accurately separating university functions to teaching, scholarship, research and other.	An ongoing challenge faced by universities is the accurate attribution of costs between teaching and research functions, recognising that these are often interrelated. A number of universities identified difficulties in systematically and consistently identifying staff time related to research and scholarship, employing a range of methods from broad based assumptions based on Enterprise Bargaining Agreements, to workload allocation models, to detailed timesheets. Due to differences in university processes and ability to apportion staff time, there was not a prescribed methodology, but rather a set of principles described for universities to employ. There was evidence, however, of universities improving their internal data collection processes to estimate these splits with greater precision. Some universities were also currently undertaking these processes to support future data collection.

Limitation	Detail and implications
Cost variation between levels within the same field.	There remain a number of universities (9 of 37) who noted that while they were able to isolate costs between different fields of education, they were not able to separate costs between levels – that is, costs specific to each level within a given faculty or school. In these instances, unit costs were reported as identical within the same faculty or school and were often similar across levels within a FOE (depending on the mix of schools and faculties within a given field), and hence the results are likely to have a convergence in costs between levels. This is discussed in more detail in Section 2.2.
Identifying specific FOE costs within a given school or faculty or relevant business unit.	Some universities noted a level of convergence between certain fields of education, where they were unable to systematically separate costs specifically between those fields. This is particularly pertinent for universities that undertook a top-down approach using relatively large business units (e.g. a small number of faculties, compared to a larger number of schools). As costs may be allocated using only an EFTSL driver this can lead to the same unit costs being applied to several different fields. However, in many instances, universities stated that these fields do indeed have very similar costs for the delivery of teaching.
Differences in methodology across universities, including broad method and use of cost drivers.	The level of sophistication and ability to identify appropriate cost drivers to allocate costs has broadly improved year-on-year across the sector. For some universities this has meant the implementation of activity-based costing models (for purposes not exclusively associated with this exercise) or the engagement of external contractors to assist in their submission.
Incorporation of quality.	In measuring the cost of delivery of teaching and scholarship, this exercise only considers quantity of teaching as the unit to distribute costs. This exercise does not capture variations in quality (however defined), where higher quality may be correlated with higher costs. Relatedly, this exercise also does not make adjustments for differences in student cohort mix, specifically differences in average student needs and levels of disadvantage. Some universities are likely to systematically enrol more students with greater need for student supports, which will in turn result in higher costs. As a result, there is likely to be a degree of variation in costs across the sector due to contextual factors and differences in quality across the sector and across FOEs.
Difficulties in specifying and isolating certain cost items.	Differences in internal processes and systems across universities meant that some universities were unable to identify specific costs that align with the line items specified as part of the costing template.

Limitation	Detail and implications
	The implication of this is that the examination of some specific line items may not be accurate in instances where a university was unable to separate costs appropriately (and where costs were instead included elsewhere in the template). An example of this was placement costs which many universities capture as part of staff costs in their internal cost allocation models. While this does not impact the overall unit cost calculation, it does caveat any comparison of specific costs, e.g. when comparing specific line items of non-staff costs. For this reason, analysis of these items has not been a significant focus of this report.
Costs will reflect the current funding arrangements.	Costs for a given FOE are likely to be partly driven by current funding arrangements, which may to some degree affect internal resource allocations within a university. That is, costs for a given FOE may in part be driven by current funding allocations to that FOE and may differ from those that would occur under different funding arrangements from those currently in place.

4.2 Reflections on splitting teaching and research

The split of staff time between teaching and research activities[24] remains an area where there was large variation in approaches across universities. Given the significant share of total teaching and scholarship costs that is allocated to staff – 59% in 2019 and 62% in 2020 – the precision of measuring staff time has arguably the most material influence on the measurement of the economic cost of teaching and scholarship.

The majority of universities (21 of 37) used workload allocation models, which varied in their sophistication in splitting teaching and scholarship time from research and other activities. In other cases, universities used Enterprise Bargaining Agreements (EBAs), timetables or staff timesheets to record staff time and the split between teaching and research.

Where universities used EBAs these tended to specify a division of time which may vary in accuracy across staff levels and disciplines while in other cases, allocation of staff time was based on estimates at the whole-of-faculty level. Several universities indicated that the split of staff time was largely based on EBAs or notional allocation of staff time captured in human resources systems. It was highlighted through consultations that these time splits based on EBAs are often out of date and unlikely to reflect the true distribution of time across activities.

Despite a range of methodologies, university membership nevertheless provides evidence that teaching and research staff time is being split in a way that is in line with expectations (see Chart 2.3). Teaching costs as a share of total costs is lower for the research-intensive Group of Eight universities, and higher for regional universities who are typically less research intensive.

4.3 Treatment and accounting for capital costs

The capital costs involved in providing university buildings, infrastructure, plant and equipment is a significant component of the sector's costs. The cost of capital can also vary considerably from year to year, depending on whether or not a university is currently undertaking a capital expansion program.

[24] For those academic staff classified as 'teaching and research' as well as non-academic staff tasked with supporting teaching and research academic staff.

The approach to capturing capital costs related to teaching and scholarship is an issue that has been raised by universities on a number of occasions, both through the Universities Australia reference group and through individual consultations and Supporting Statements.

Reflecting these concerns, the approach used to capture capital costs has been refined iteratively in each year of the Transparency in Higher Education Expenditure exercise. The approach used in the 2016 study to capture capital costs was to include the costs of depreciation, amortisation, repairs and maintenance, borrowing costs and bad debts associated with teaching and scholarship. This focus on depreciation represents the standard accounting-based approach to capturing capital costs.

Some universities raised concerns about this approach. These concerns can be broadly categorised into two types of concerns:

1. That the application of accounting standards or treatments are such that reported levels of depreciation are not reflective of the economic cost of replacing the capital stock. This could be due to a range of reasons such as:
    a. Use of fully depreciated assets e.g. older buildings
    b. Calculating depreciation based on historical costs rather than regularly undertaking asset revaluations
    c. Assumptions around the useful life of specific assets that are not reflective of actual useful lives
2. That current reported levels of depreciation (even if appropriate) do not cover the costs of replacing assets in the future due to functional obsolescence and changes in technology. In other words, even if depreciation is sufficient to replace current assets it will not cover the costs of replacing those assets with assets that reflect modern pedagogical practices. Related to this is the concept of maintaining a sufficient margin for sustainable investment to allow universities the flexibility to invest in strategically planned investments.

These issues were discussed in a 2007 OECD working paper entitled *On the Edge: Securing a Sustainable Future for Higher Education*. The report focuses on the concept of a "Full Economic Cost", which encompasses:

- consumption of assets (depreciation)
- renewing assets
- financing (costs of capital)
- risk.

The report suggests that in order to be sustainable, universities must generate appropriate operating surpluses such that the full economic cost is recovered. The OECD report also argues that it is appropriate for universities to plan for an ongoing operating surplus, which it notes would normally be 3-4% of income to finance strategically planned investment, rather than the replacement of existing buildings:

"In any event, future investment needs should be determined by institutional strategic plans, not simply renewing historic infrastructure, some of which may be no longer required..."

The OECD report cites the UK example of the Transparent Approach to Costing (TRAC) methodology. TRAC was first implemented in the UK in 2000, following a national survey of university infrastructure. Since its introduction, the method to determine the cost of capital, and appropriate surplus, has developed over time. The current iteration of TRAC-UK includes a Margin for Sustainability and Investment (MSI). Importantly, this is institution-specific, rather than a sector-wide benchmark, as discussed in the TRAC guidance for 2016-17 returns:

"The MSI provides an institution-specific margin that is based on an average of past financial performance and forecast performance. This will reflect each institution's own financial strategy and is based on an agreed definition of the 'Earnings Before Interest, Taxation, Depreciation and Amortisation' (EBITDA)."

While relevant to a discussion of university finances more broadly, the adoption of an equivalent to the MSI in the Australian context should be the result of a specific and deliberate policy discussion

that is outside the parameters of the current project. From the UK experience, establishing a process for an appropriate margin would require a significant amount of preparatory work, to understand current asset stocks and building maintenance backlogs, for example. In particular, the precise MSI is likely to vary across the sector.

To gather more insights on issues relating to the capital costs associated with teaching and scholarship, the 2022 Transparency in Higher Education Expenditure exercise have included a range of questions both in the Supporting Statements and in the Consultation Guide to elicit universities' views on issues related to capital costs.

Moreover, following feedback from discussions with the Universities Australia Reference Group, in addition to capturing the costs of depreciation and amortisation, repairs and maintenance, borrowing costs and bad debts associated with teaching and scholarship, an additional below the line allowing for an optional depreciation adjustment was included in the 2019 exercise. The purpose of this optional depreciation adjustment is set out in the Guidelines:

"In cases where a university has fully depreciated assets that are still in use or where historical book value differs from the cost of replacing a building in its current condition, depreciation may not accurately reflect the full economic costs of using these buildings for teaching activities. This may also apply to assets other than buildings such as, plant and equipment assets … This is intended for universities who either have fully depreciated assets that are still in use or who do not conduct regular revaluations of their assets for the purpose of calculating depreciation."

The inclusion of this below the line adjustment sought to address the first major concern around the potential for accounting standards or treatments to result in an underestimate of capital costs. It does not seek to address the second major concern of universities noted above, concerning the additional costs of replacing capital to meet modern teaching standards and practices. This was explored through the consultations in the 2018 and 2019 exercise although did not feature as prominently in consultations for the 2022 exercise given the focus on COVID-19.

Reflections on the appropriateness of reported depreciation levels

To understand university perspectives on capital costs, Deloitte Access Economics analysed the responses of universities through the Supporting Statements and consultations. In relation to whether reported levels of depreciation were a reasonable reflection of the true costs of depreciation:

- Around 44% of universities who provided this information indicated that their reported levels of depreciation were an appropriate measure of capital costs for their university.
- Of those that did not believe it was a reasonable measure reasons included that either depreciation was underestimated or more commonly that it did not capture the true replacement cost of bringing facilities to a contemporary standard for teaching and learning.
- Relevantly, in 2019 twelve universities (and eleven in 2020) chose to adopt an optional depreciation adjustment to reflect either the presence of fully depreciated assets or that assets were not valued in line with fair value.

Overall, this suggests that there are a mixture of views on the appropriateness of recorded depreciation levels across the sector. There are a significant number who do not view depreciation as consistent with long term sustainable maintenance costs - in many cases because assets that are fully depreciated continue to be in use or because assets are valued on a historical cost basis rather than a fair value basis.

These findings point to the value of continuing to allow for an optional depreciation adjustment to help capture aspects of capital costs that are not captured in reported depreciation levels- reflecting in part differences in the asset profile and valuation practices across the sector.

Repairs and maintenance

A large number of universities noted that they had a significant backlog of repairs and maintenance and had not invested sufficiently in repairs in maintenance in 2019 and 2020 partly in response to the adverse revenue impacts of COVID-19. However, some universities also acknowledged that

underinvestment in repairs and maintenance was a strategic decision reflecting a willingness to spend on other strategic priorities or initiatives but with the risk that failing to invest in repairs and maintenance could result in higher rectification costs in later years.

4.4 The ability to allocate costs to a unit of study level

Universities vary in their models and methodologies used to determine costs. These largely depend on the internal costing methodologies used by each university. Some universities have detailed activity-based costing (ABC) models available to estimate costs at a relatively granular level (often the unit of study) based on a range of drivers. The use of an ABC model is often referred to as a 'bottom-up' approach to the extent that costs at the unit level may be aggregated up to a FOE level. However, even when using an ABC models some costs may still be apportioned from a whole-of-university basis using a cost driver, known as a 'top-down' approach.

Other universities which do not have cost allocation models that estimate costs at the unit of study level, will rely predominately on a 'top-down methodology'. On this basis, bottom-up approaches will on average provide more differentiated cost information, and hence are typically considered to provide more accurate results by field and level of education. Notwithstanding this, the accuracy of any cost allocation model (whether or not it allocates costs down to a unit of study level) will ultimately depend on the accuracy of the assumptions i.e. cost drivers which are used and the information that is used to populate it.

Over the course of the Transparency Costing exercise, universities have generally moved to more sophisticated methodologies to allocate costs. This includes a move to more widespread adoption of ABC models, as well as more nuanced assumptions and drivers of costs.

The most advanced cost allocation models were generally informed by:

- Detailed information on the use of staff time for teaching and research and in some cases identifying the individual staff members who taught each unit of study
- The use of a space model that allocates the use of teaching space to specific schools and in some cases units of study
- A range of drivers to allocate central overheads appropriately.

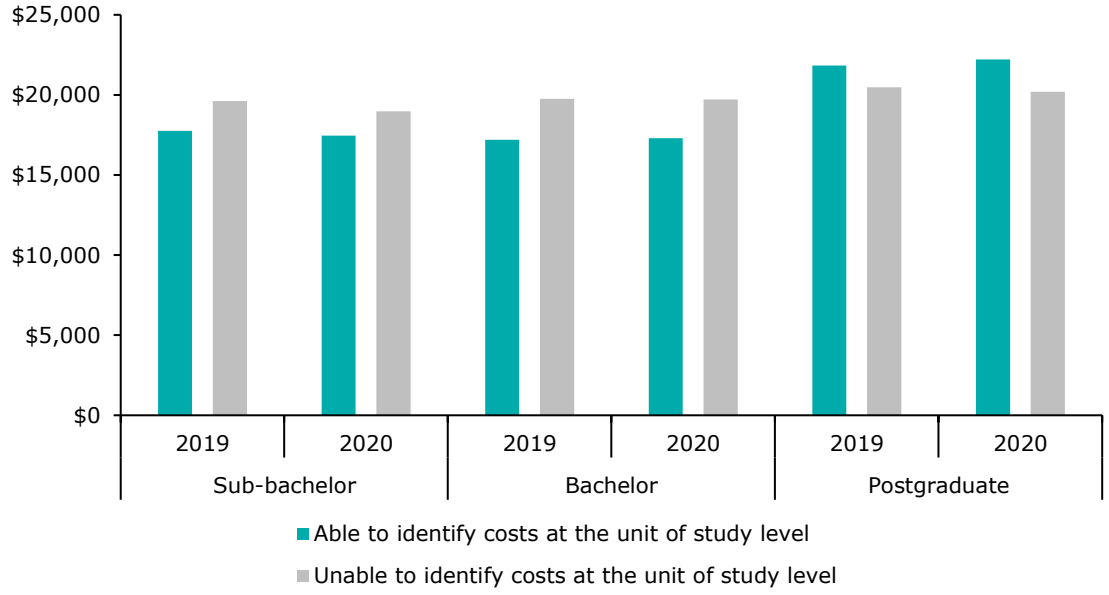
One advantage of cost allocation models that estimate costs at a unit of study level is that it is more straightforward to aggregate costs to a FOE level – since many schools may teach courses across multiple fields – and to identify differences in cost by level.

Extent of variation in practice

In the 2022 Transparency in Higher Education Expenditure exercise, 76% of universities indicated that they were able to identify costs at a unit of study level with the remainder adopting a top-down approach or not explicitly indicating which approach they use. Importantly, some universities may use a mixture of both top-down and bottom-up approaches, particularly in relation to costs that are in the scope of this exercise but would not be captured in internal cost allocation exercises.

Universities that can identify costs at the unit of study level reported lower costs per EFTSL, on average (after controlling for differences in the enrolment mix in terms of FOE), compared to universities that were unable to identify costs at the unit of study level (see Chart 4.1). In 2020, teaching and scholarship costs were 8.0% lower for sub-bachelor study (9.5% lower in 2019), 12.2% lower for bachelor (13.0% lower in 2019) but 10.0% higher at the postgraduate level (6.6% higher in 2019).

Chart 4.1: Average unit costs for institutions able to identify costs at a unit of study level, by level of study (all fields) (2019 and 2020)

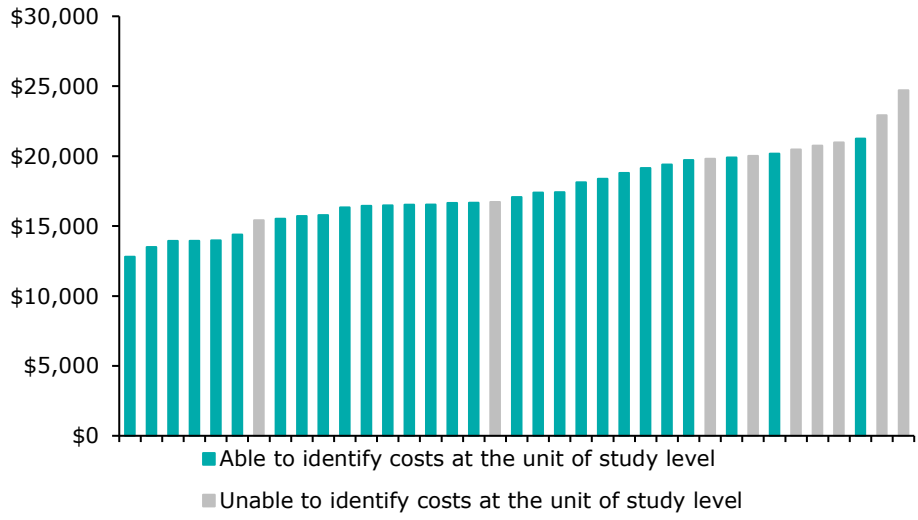


Note: Costs are adjusted to account for FOE composition.

The absolute percentage difference decreased in 2020 for sub-bachelor and bachelor average units costs, but increased for postgraduate average unit costs.

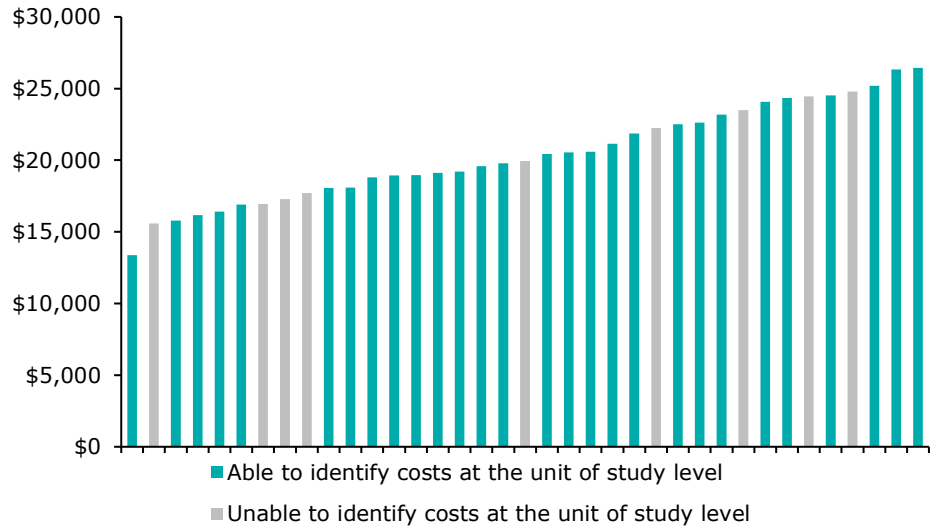
A number of the universities with higher average teaching and scholarship costs per EFTSL are institutions that are unable to identify costs at the unit of study level (see Chart 4.2 and Chart 4.3). It is not clear whether this simply reflects underlying differences in cost for these institutions or that those able to identify costs at a unit of study level may have greater information on costs and the split of teaching and research time that makes them less likely to underestimate costs.

Chart 4.2: Average unit costs for institutions able to identify costs at a unit of study level, by university, bachelor level of study (FOEs where all 37 universities have reported a cost observation) (2019)



Note: Costs are adjusted to account for FOE composition.

Chart 4.3: Average unit costs for institutions able to identify costs at a unit of study level, by university, bachelor level of study (FOEs where all 37 universities have reported a cost observation) (2020)

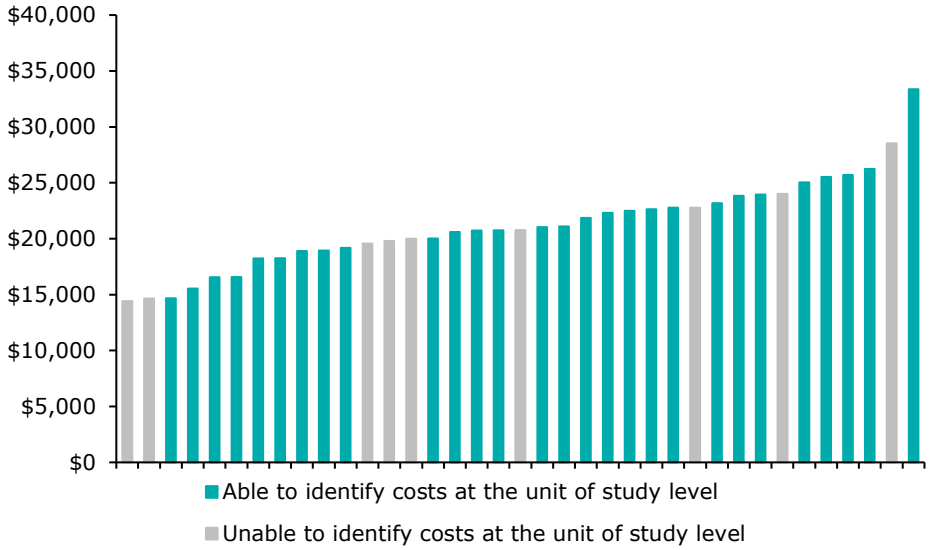


Note: Costs are adjusted to account for FOE composition.

Costs for most FOEs are broadly similar between universities who are and are not able to identify costs at the unit of study level. The main exceptions to that are Medical Science; Food, Hospitality and Personal Services (for which no university could identify costs at a unit of study level); and Veterinary Studies. However, these fields typically have few observations, so these results are likely to be driven by higher costs for a small number of universities unable to estimate costs at the unit of study level.

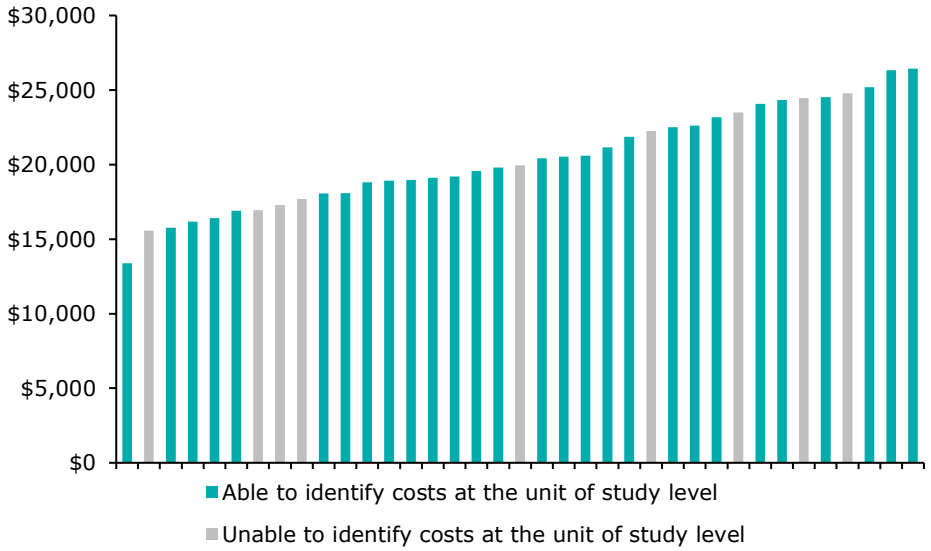
Those universities who cannot estimate costs at a unit of study level are found throughout the cost distribution but there are a handful that appear to have relatively high costs of bachelor level delivery. This could reflect the innate characteristics of these universities who may for other reasons have high costs of delivery. It is also possible that the inability to identify costs at a unit study level may mean that these universities are unable to sufficiently distinguish between the costs of bachelor and postgraduate study within a FOE. Although only 4 FOEs are common across all universities at a postgraduate level, in the case of postgraduate study relatively few universities who cannot estimate costs at the unit of study level are found in the upper end of the distribution.

Chart 4.4: Average unit costs for institutions able to identify costs at a unit of study level, by university, postgraduate level of study (FOEs where all 37 universities have reported a cost observation) (2019)



Note: Costs are adjusted to account for FOE composition.

Chart 4.5: Average unit costs for institutions able to identify costs at a unit of study level, by university, postgraduate level of study (FOEs where all 37 universities have reported a cost observation) (2020)



Note: Costs are adjusted to account for FOE composition.

Chart 4.6: Average unit costs for institutions able to identify costs at a unit of study by FOE for bachelor level study (2019)

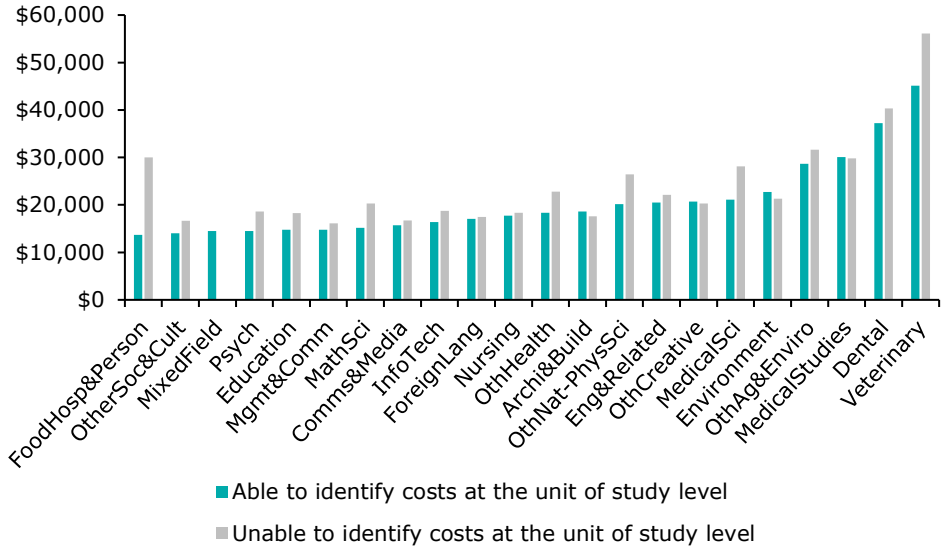
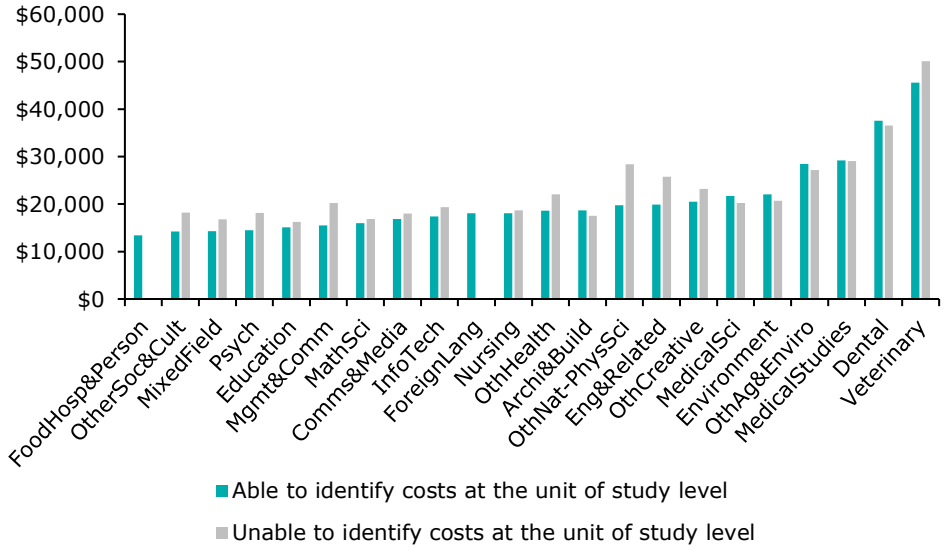


Chart 4.7: Average unit costs for institutions able to identify costs at a unit of study by FOE for bachelor level study (2020)



4.5 Other reflections from universities

Universities remained highly engaged in the Transparency in Higher Education Expenditure project in 2022 and those that had participated previously appreciated the relative consistency in the structure of the cost collection template.

Throughout the process, universities provided a range of reflections both in relation to:

- The data collection process and the interpretation of results
- The comparability of results across universities

The sector's concerns were broadly consistent with those raised in the prior exercises and are set out in greater detail in the sections below.

Reflections from universities on the data collection process and interpretation of results
Universities expressed a range of views regarding the process and its broader objectives. The issues most frequently articulated by universities included:

- The decision to exclude research from the analysis, which many universities saw as being inherently included in the scope of CGS funding. Relatedly, it was noted that universities have multiple missions (such as teaching, research, community and civic engagement, commitment to social responsibility, etc.) and the exclusion of many of these from the costing exercise, could create an imbalance in assessing university use of revenue. Several universities noted that it was difficult to separate teaching costs from other activities - particularly for academic staff where it can be difficult to split teaching and research time - which points to the potential for efficiencies in jointly delivering teaching and research.

  One university also suggested that it would be beneficial to have a common set of guiding principles about the split between teaching and research time made available to universities using a top-down approach to drive consistency in assumptions and methodology.

- Some universities noted that their activities and operations are not managed at an FOE level, but at different organisational unit levels (i.e., at the School or Faculty level). This makes collection of data on an FOE basis inconsistent with universities' underlying operating structures. While many universities have relatively granular data on teaching costs at the faculty or school level, mapping this to individual FOEs proved a challenge for some. Universities also differed in the assumptions made to map costs to an FOE level. Further, because universities provide courses, which are more granular than FOEs, there will be some variation in the offerings (that is, differences in the weightings of particular courses) included within an FOE across institutions.

  This was generally less of an issue for universities with more sophisticated cost allocation methods (typically those with activity-based or bottom-up methodologies).

- For any given year there can be university-specific one-off costs which limit how meaningful it can be to draw broader conclusions about a university's operations. For example, non-recurring events, such as faculty restructures, redundancies, creation of new faculties, or the timing of capital expenditure which may impact a given university's depreciation profile. This can lead to substantial year-to-year variation in financial results. One university suggested undertaking the data collection process over a three-year period to help minimise the potential impact of these non-recurring costs by providing a profile of costs for the sector over a longer period of time.

- Several issues were raised regarding below the line expenditures (i.e. those not recorded in the financial statements). According to one university, they only included payments made to external placement providers which understated the overall level of expenditure on placements. In a similar vein, one university noted voluntary in-kind contributions by unpaid staff were difficult to quantify and were not captured in their submission.

- A small number of universities discussed the potential for a greater focus on capital costs. This includes the potential for the consideration of a margin for sustainability and investment (see section 4.3). Establishing a process for an appropriate margin would require significant preparatory work in understanding current university assets and maintenance backlogs – which is beyond the scope of the current Transparency in Higher Education Expenditure exercise.

- Another concern raised by a university was that current funding caps are requiring universities to reduce costs in areas outside the scope of this exercise (e.g. research) in order to maintain current teaching standards and student outcomes and there is some evidence for this in the fact that teaching costs grew slightly in 2020 against a backdrop of a small decline in overall continuing expenditure. Although, it is important to note that this increase in teaching costs could be a result of university responses to the COVID-19 pandemic.

- A number of universities raised concerns about how the results would be presented and whether individual universities would be identified, either now or in the future. They often

emphasised that contextual factors should be considered when presenting results such as clear statements that are published along with the data to ensure that users understand the data, how to compare it and proper contextual factors. In particular, some universities preferred that cost information be presented alongside quality measures, such as student satisfaction, student success and graduate outcomes before any assessment of the reasonableness or efficiency of university costs can be drawn from the data.

Challenges in comparing results across universities

In addition to the items noted above, many universities commented on the validity of comparing results across the sector.

Universities raised concerns around the extent to which differences in costs across the sector might be driven by differences in methodologies and the sophistication of cost allocation models. As discussed previously, several universities are unable to differentiate between costs at different levels of study within an FOE. Questions were also raised about the potential for the results to be driven by different degrees in accuracy of allocating costs between teaching and research, although approaches to estimating these components were discussed in the course of university consultations.

It was also noted that some universities have been involved in this exercise for several years, while others are undertaking it for the first time. As such, costing expertise can vary from across universities as some institutions have a history of sophisticated methodologies (e.g. ABC models) being used for both internal decision-making and for prior years' data collection. Therefore, having sophisticated systems already in place can make it easier to produce high quality data relatively easily.

Other universities are less equipped and will have needed to develop more ad hoc methods for collating the data in their first year of participation. This could then create some disparity in the quality of data collected.

Another issue raised was the concept of 'teaching scholarship' and the subjective nature of the term leading to different interpretations and variability between universities. It was also noted that it can be difficult to disentangle teaching scholarship from an academic's research time. While this is a valid concern, the purpose of the consultations and Guidelines were to ensure a consistent definition of scholarship was adopted across the sector with the intent of improving comparability. The exclusion of scholarship would also run the risk of reducing comparability in results over time.

Other concerns related to the inclusion of additional and optional line items which could reduce comparability of costs due to inconsistencies in approaches across universities. One university also expressed caution about comparing results to international jurisdictions noting that it would be very difficult to compare to overseas universities.

Questions were also raised regarding the extent to which differences in costs across the sector are likely to be driven by contextual factors at a university level, and by differences in strategic objectives. Factors that were noted by universities included:

- Scale (universities with higher EFTSL could spread capital and other fixed costs across more students resulting in lower costs per EFTSL)
- Capital footprint (universities differ in the amount of capital investments for several reasons, including the size of the campus, research intensity and strategic goals)
- Regional presence, which could raise the cost of certain types of delivery and may require universities to provide a range of support services.
  - On the other hand, some universities operating campuses in the CBD of larger cities could have high costs reflecting in part the cost of operating in those cities - which may impact both staff costs and the costs of leasing facilities
- The proportion of international students, which may help fund greater expenditure on teaching and scholarship but also create some international student specific teaching costs
  - One university noted that international students are viewed as a necessity to help cover an apportionment of fixed overheads associated with the cost of teaching. While they do carry

an incremental recruitment and support cost, without international students, the cost per EFTSL would be significantly higher.
- The research profile of a university (while research costs are excluded from the exercise, universities have noted above that it is difficult to split teaching and research costs and could affect results)
- Different delivery modes (costs per EFTSL can vary significantly depending on delivery methods, for example higher online content, lab time and the associated investment to develop and deliver alternative teaching methods)
- Differing enrolment density (i.e. a high proportion of student EFTSL are studying part-time). Therefore, the student headcount would significantly be different to EFTSL, which would have an impact on many costs which are driven by headcount rather than study load
- The level of disadvantage in the student cohort, with additional costs potentially borne in supporting the retention and progression of these students
- Universities are each bound by enterprise agreements that could constrain responsiveness to changes in funding.

These concerns tend to relate less to whether or not the exercise is accurately capturing the costs of teaching and scholarship, and more to the extent to which inferences can reliably be drawn in relation to university efficiency based on comparisons across individual universities. Put simply, there is concern that contextual factors may mean that two equally efficient universities could have very different costs, reflecting differences in context, strategic objectives and teaching methods. This is an important consideration when comparing differences in both total costs across the sector and costs within a FOE.

4.6 Potential areas for improvement in subsequent analysis

While the principle of consistency is critical to the exercise – and many universities reiterated its value in ensuring the comparability of results over time and reducing the need to modify reporting systems – a number of potential areas for improvement were identified in the course of university consultations and in university Supporting Statements. This includes:

- Providing the date of the Transforming the Collection of Student Information (TCSI) submission used to calculate the pre-filled EFTSL data in the Transparent Costing Worksheet
- Revisions to the Supporting Statement to reduce administrative burden on universities
- Further investigation into the feasibility of a margin for sustainable investment (an institution-specific margin that is based on an average of past financial performance and forecast performance)
- Reflection on the way in which below the line items for in-kind costs, third-party and partnership costs and the optional depreciation adjustment are collected and reported
- Timing the data collection exercise to avoid clashing, as best as possible, with internal financial processes at universities. Future submissions could also be signalled well in advance to allow universities to incorporate the data collection process into annual planning processes.

Appendix A: Transparent Costing Worksheet

[see over page]

Figure A.1: Transparent Costing Worksheet (2019)

Study of teaching costs

Name of university:

Reporting data for the year ending: 2019

$ costs	% share	Formula	Pre filled	Not required

$ costs	% share	Formula	Pre filled	Not required

	FOE 01 Natural and Physical Sciences			FOE 02 Information Technology	FOE 03 Engineering and Related Technologies	FOE 04 Architecture and Building	FOE 05 Agriculture, Environmental and Related Studies		FOE 06 Health					FOE 07 Education	FOE 08 Management and Commerce	FOE 09 Society and Culture			FOE 10 Creative Arts		FOE 11 Food, Hospitality and Personal Services	FOE 12 Mixed Field Programmes	Total
	FOE 0101 Mathematical Science	FOE 019901 Medical Science	Other				FOE 0509 Environmental Studies	Other	FOE 0601 Medical Studies	FOE 0603 Nursing	FOE 0607 Dental Studies	FOE 0611 Veterinary Studies	Other			FOE 091503 to 091519 Foreign Languages and Translating	FOE 090701 Psychology	Other	FOE 1007 Communication and Media Studies	Other			
Resourcing																							
Staff Costs - Employee benefits and on-costs (i.e. total wage bill)																							
Academic staff costs attributable to teaching and scholarship																							
Academic staff costs, Teaching only ($)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Academic staff costs, Teaching & Research ($)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Casual academic staff costs attributable to teaching and scholarship																							
Casual academic staff costs, Teaching only ($)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Casual academic staff costs, Teaching & Research ($)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Non-academic staff costs attributable to teaching and scholarship																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Academic staff costs ($) - teaching and scholarship	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Casual academic staff costs ($) - teaching and scholarship	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Non-academic staff costs ($) - teaching and scholarship	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total staff costs - employee benefits and on-costs (i.e. total wage bill) - teaching and scholarship ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total staff costs - employee benefits and on-costs for staff excluding teaching and scholarship activities (e.g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$0
Total staff costs - employee benefits and on-costs for all staff (i.e. total wage bill) ($)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
% of staff costs for teaching and scholarship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Non-staff costs attributable to teaching and scholarship																							
Cost of materials, utilities, equipment ($)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Expenses that relate to placements ($) (optional)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Depreciation, amortisation, repairs, maintenance, borrowing, bad debts ($)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Other non-staff expenses ($)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total sub-bachelor teaching - non-staff costs ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total bachelor teaching - non-staff costs ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total coursework postgraduate teaching - non-staff costs ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total non-staff costs attributable to teaching and scholarship ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total non-staff costs excluding teaching and scholarship activities (e.g. research, community activities etc.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$0
Total non-staff costs for the whole institution ($)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
% of non-staff costs for teaching and scholarship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total higher education expenses for whole institution (teaching and scholarship and all other activities)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Calculations																							
TOTAL TEACHING AND SCHOLARSHIP COSTS ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for SUB-BACHELOR STUDENTS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for BACHELOR STUDENTS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for COURSEWORK POSTGRADUATE STUDENTS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Additional items																							
In-kind costs incurred by the university (not third parties) ($) (optional)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Third-party and partnership costs ($) (costs of partners not captured in university financial statements)																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Depreciation adjustment (optional) [for universities who either have fully depreciated assets that are still in use or who do not conduct regular revaluations of their assets for the purpose of calculating depreciation. See the 'Depreciation adjustment' tab for further details.]																							$0
Share of above attributable to sub-bachelor teaching activities (%)																							
Share of above attributable to bachelor teaching activities (%)																							
Share of above attributable to coursework postgraduate teaching activities (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Calculations																							
TOTAL TEACHING COSTS - INCLUDING ADDITIONAL ITEMS ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for SUB-BACHELOR STUDENTS - INCLUDING ADDITIONAL ITEMS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for BACHELOR STUDENTS - INCLUDING ADDITIONAL ITEMS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for COURSEWORK POSTGRADUATE STUDENTS - INCLUDING ADDITIONAL ITEMS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Onshore EFTSL (excluding non-award and enabling courses)																							
Sub-bachelor EFTSL																							
Bachelor EFTSL																							
Postgraduate coursework EFTSL																							

Note: EFTSL is as per the final 2019 verified dataset signed off on 15th May 2020. The EFTSL value does not include EFTSL changed in subsequent adjustments. Data includes cross institutional students reported to the Department through element 310 (course code 41 allocated to bachelor EFTSL, course code 42 allocated to coursework postgraduate EFTSL)

Figure A.2: Transparent Costing Worksheet (2020)

Study of teaching costs

Name of university:

Reporting data for the year ending: 2020

	$ costs	% share	Formula	Pre filled	Not required

	$ costs	% share	Formula	Pre filled	Not required

	FOE 01 Natural and Physical Sciences			FOE 02 Information Technology	FOE 03 Engineering and Related Technologies	FOE 04 Architecture and Building	FOE 05 Agriculture, Environmental and Related Studies		FOE 06 Health					FOE 07 Education	FOE 08 Management and Commerce	FOE 09 Society and Culture			FOE 10 Creative Arts		FOE 11 Food, Hospitality and Personal Services	FOE 12 Mixed Field Programmes	Total
	FOE 0101 Mathematical Science	FOE 019901 Medical Science	Other				FOE 0509 Environmental	Other	FOE 0601 Medical Studies	FOE 0603 Nursing	FOE 0607 Dental Studies	FOE 0611 Veterinary Studies	Other			FOE 091503 to 091519 Foreign Languages	FOE 090701 Psychology	Other	FOE 1007 Communication and	Other			

Resourcing

Staff Costs - Employee benefits and on-costs (i.e. total wage bill)

Academic staff costs attributable to teaching and scholarship

Academic staff costs, Teaching only ($) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Academic staff costs, Teaching & Research ($) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Casual academic staff costs attributable to teaching and scholarship

Casual academic staff costs, Teaching only ($) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Casual academic staff costs, Teaching & Research ($) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Non-academic staff costs attributable to teaching and scholarship $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Academic staff costs ($) - teaching and scholarship	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Casual academic staff costs ($) - teaching and scholarship	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Non-academic staff costs ($) - teaching and scholarship	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total staff costs - employee benefits and on-costs (i.e. total wage bill) - teaching and scholarship ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total staff costs - employee benefits and on-costs for staff excluding teaching and scholarship activities (e.g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$0
Total staff costs - employee benefits and on-costs for all staff (i.e. total wage bill) ($)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
% of staff costs for teaching and scholarship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Non-staff costs attributable to teaching and scholarship

Cost of materials, utilities, equipment ($) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Expenses that relate to placements ($) (optional) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Depreciation, amortisation, repairs, maintenance, borrowing, bad debts ($) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Other non-staff expenses ($) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Total sub-bachelor teaching - non-staff costs ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total bachelor teaching - non-staff costs ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total coursework postgraduate teaching - non-staff costs ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total non-staff costs attributable to teaching and scholarship ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total non-staff costs excluding teaching and scholarship activities (e.g. research, community activities etc.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$0
Total non-staff costs for the whole institution ($)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
% of non-staff costs for teaching and scholarship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Total higher education expenses for whole institution (teaching and scholarship and all other activities)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Calculations

TOTAL TEACHING AND SCHOLARSHIP COSTS ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for SUB-BACHELOR STUDENTS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for BACHELOR STUDENTS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for COURSEWORK POSTGRADUATE STUDENTS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Additional items

In-kind costs incurred by the university (not third parties) ($) (optional) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Third-party and partnership costs ($) (costs of partners not captured in university financial statements) $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Depreciation adjustment (optional) [for universities who either have fully depreciated assets that are still in use or who do not conduct regular revaluations of their assets for the purpose of calculating depreciation. See the 'Depreciation adjustment' tab for further details.] $0

Share of above attributable to sub-bachelor teaching activities (%)
Share of above attributable to bachelor teaching activities (%)
Share of above attributable to coursework postgraduate teaching activities (%) 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

Calculations

TOTAL TEACHING COSTS - INCLUDING ADDITIONAL ITEMS ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for SUB-BACHELOR STUDENTS - INCLUDING ADDITIONAL ITEMS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for BACHELOR STUDENTS - INCLUDING ADDITIONAL ITEMS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
COST for COURSEWORK POSTGRADUATE STUDENTS - INCLUDING ADDITIONAL ITEMS, ($)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Total Onshore EFTSL (excluding non-award and enabling courses)
Sub-bachelor EFTSL
Bachelor EFTSL
Postgraduate coursework EFTSL

Note: Data includes cross institutional students reported to the Department through element 310 (course code 41 allocated to bachelor EFTSL, course code 42 allocated to coursework postgraduate EFTSL)

Appendix B: Data collection Guidelines

Definitions

Term	Description
Field of education	Fields of education are defined using the Australian Standard Classification of Education (ASCED). The specific categorisation of fields has been determined by the Department.
Sub-bachelor	Sub-bachelor covers all courses delivered at the diploma, advanced diploma and associate degree level. Excludes non-award and enabling courses.
Bachelor	Bachelor covers all courses delivered at a Bachelor degree level. This includes Bachelor's Pass, Bachelor's Honours and Bachelor's Graduate Entry. Excludes non-award and enabling courses.
Postgraduate coursework	Postgraduate coursework includes all postgraduate degrees that are delivered predominantly through coursework (e.g. those courses for which research makes up less than two thirds of the student load as per the Commonwealth Scholarships Guidelines (Research) 2017), including Masters and coursework PhDs. Where a coursework postgraduate degree includes a research component, this should be included as postgraduate coursework. Excludes non-award and enabling courses.
Academic staff	Members of staff, whether full-time or part-time, who are employed wholly or principally in teaching and/or research or to whom such persons are responsible in relation to their teaching or research. This includes staff who are employed wholly or principally to assist other academic staff in teaching and/or research activities (e.g. tutors, research assistants, etc.). This excludes casual academic staff.
Casual academic staff	Members of staff employed on a casual basis, wholly or principally involved in teaching and/or research (e.g. tutors, research assistants, and labour hire arrangements, where a 3rd party is contracted to provide teaching services on a casual basis). This excludes members of staff employed on a full-time or part-time basis.
Non-academic staff	Both permanent and casual members of staff who are not academic staff (teaching and/or research), and instead provide support functions for the university, e.g. administrative staff, IT staff, those involved in student enrolments and learning assistance. Non-academic staffing levels should amount to total staff minus academic staff and casual academic staff.
Teaching	Teaching time includes all of the following: lecturing, tutoring, demonstrating, reading and preparation for classes (lecture and tutorial content, handouts, workbooks, placing material on the Web, laboratories), all forms of marking and assessment, discussion and feedback to students (both face-to-face and electronically), administration of subjects, course advice and enrolment, organisation and supervision of practicum (including work experience and excursions), supervision of Honours students and committee work related to teaching. Teaching only staff are those whose time is spent exclusively on teaching and scholarship activities.
Teaching & Research	Time spent by staff members that are involved in both teaching and research activities. This category recognises that staff may be involved in a variety of activities including teaching, supervising research students and engaging in research and scholarship.

Term	Description
Research only	Certain staff will only be employed for research, i.e. staff with no teaching responsibilities. These staff, activities and costs are explicitly excluded.
Employee wages, benefits and on-costs (i.e. total wage bill)	All staff-related expenses. The wage bill should include all expenditure on staff compensation including gross salaries and salary on-costs such as superannuation and leave entitlements (i.e. annual leave, personal leave and long service leave).
Cost of materials, utilities, equipment	Cost of teaching-related expenses such as materials, utilities and equipment by field of education
Expenses that relate to placements	Cost of teaching-related expenses associated with the placements by field of education.
Depreciation, amortisation, repairs and maintenance, borrowing and bad debts.	Cost associated with asset and capital management.
Other non-staff expenses	All remaining costs by field of education, i.e. costs not captured by 'staff costs', 'cost of materials, utilities and equipment', 'expenses relating to labs/practicum/field work' and 'depreciation, amortisation, repairs, maintenance, borrowing and bad debts'.

Background

Deloitte Access Economics has been engaged by the Department of Education, Skills and Employment (the Department) to collect and analyse data on the cost of delivering higher education – the costs of teaching and scholarship – at Australia's public universities.

This exercise extends on previous studies in 2019 and 2018 where Deloitte Access Economics collected teaching and scholarship cost data related to activity in the 2018 and 2017 calendar years from universities. Similar studies were also conducted in 2016 and 2011. Each year, the coverage of the university sector has expanded, with the 2021 collection to include all public universities.

Introduction and context

At a high level, the key objectives that the Department is seeking to achieve with this exercise include:

- Accurately measuring the costs of teaching (including scholarship[25]) by field and level of education.
- The continued transition to a more comprehensive, systematic and streamlined data collection process over period from 2018 to 2020 (and beyond).

As part of this important study, Deloitte Access Economics will work closely with universities to support the successful collection of data. This document forms one element of this support, and has been developed to assist universities in reporting their data on a consistent basis, and to cover common questions that are likely to arise in the course of collecting and allocating the costs of teaching.

Importantly, while this document intends to cover a number of issues and clarifications, it is unlikely to cover all scenarios or questions that you may have for your institution. For this reason, the Deloitte Access Economics team will arrange a time (if it has not already done so) to conduct an extended discussion with each institution, which will address:

- any issues or queries you have with respect to the data collection tool;
- any contextual points specific to your university that we should be aware of in interpreting the data provided; and
- any further background on the decision-making regarding the relative costs of teaching within your institution.

Alongside the Excel-based Transparent Costing Worksheet, universities will also be provided with guidelines for a Supporting Statement in order to provide additional commentary on how they have completed the data collection exercise.

In addition, the Deloitte Access Economics team is available to answer questions as they arise. In any instances where you require clarification or guidance, please contact the project email address at HEcosting@deloitte.com.au.

We thank you for your participation in this important research and look forward to being in contact.

Some guiding principles

The objective of this exercise, as outlined above, is to estimate the cost of teaching (including scholarship) in higher education. While the collection is intended to reconcile against universities' statutory financial accounts, the basis upon which costs are characterised in the collection differs to standard accounting approaches.[26]

[25] Note: For simplicity in this document, 'teaching and scholarship' and 'teaching' are used and referred to synonymously throughout.

[26] A university's parent entity accounts are most applicable to this exercise and these are used for the purposes of reconciliation. However, in the event that there are entities in a university's consolidated accounts but not the parent entity accounts which incur relevant teaching and scholarship costs, these should be captured by this exercise. Where this occurs, it should be noted in the Supporting Statement.

In seeking to appropriately estimate the cost of higher education teaching (including scholarship), the exercise is concerned with the economic cost attributable to each field and level of education. This may see costs allocated across activities in a manner, which differs to how they might be allocated for other – accounting – purposes.

With this in mind, the design of the approach and methodology has been geared toward achieving the overarching objectives of this exercise and has been informed by a number of guiding principles. These principles are intended to support the generation of a final dataset in which costs are characterised and captured in a manner that is:

1. **Reliable** - such that a suitable level of assurance can be established regarding the underlying data.
2. **Comparable** - across universities, given differences in university context, and over time.
3. **Attributable** - ensuring costs are captured only to the extent that they are incurred as a result of a defined and in-scope activity.
4. **Actual** - in that the economic rather than the accounting measure of cost is of primary interest to the exercise.

The practical application of these principles necessitates an approach which:

- scrutinises existing information sources carefully
- applies common definitions while allowing for local context
- requires the application of standards and rules for apportioning shared costs in line with appropriate economic attribution
- sees iterative interaction through the course of the collection to support real time guidance and moderation.

Their application can be further understood with reference to two practical examples.

Example 1: Pro-rating common costs by a common cost driver
Using common cost drivers to allocate central costs is an example of applying the 'attributable' principle, whereby a common cost driver (or drivers) is chosen that allows systematic alignment of costs to specific teaching activities.

For example – IT systems and computer labs may be a central cost for the whole-of-institution, but clearly have a role in teaching and may not be equally shared or used by each teaching unit. Depending on the systems available, and a university's understanding of how to most reliably allocate costs to where they are ultimately incurred, one or multiple cost drivers may be used to partition this central cost (e.g. EFTSL, staff numbers, student login counts, etc.).

Example 2: Recognising scholarship activities that are required for teaching
The inclusion of 'scholarship' costs is another example of the 'attributable' principle, by recognising that activities such as presenting public lectures or keeping up to date with contemporary discipline knowledge is important and necessary for the delivery of teaching and learning by staff.[27]

Noting that the breadth and depth of scholarship activities can vary by staff type and discipline, universities are required to consider the principle of attributable costs in identifying and defining costs of scholarship, as they necessarily relate to the delivery of teaching.

[27] More detail on the types of activities that may be considered 'scholarship' is provided in Section 2.2 of these guidelines.

Guidelines

Structure of the template

At a high level, the Transparent Costing Worksheet is structured by cost item and level of education (along rows), and by field of education (across columns). Data is collected for each combination of these three elements, which are described in detail below.

Levels of education

The levels of education to be reported separately are sub-bachelor, bachelor, and coursework postgraduate. These are defined in Table B.1. Only onshore enrolments are included in the scope of the data collection.

Table B.1: Levels of education

Level of education	Definition
Sub-bachelor	Sub-bachelor covers all courses delivered at the diploma, advanced diploma and associate degree level. Excludes non-award and enabling courses.
Bachelor	Bachelor covers all courses delivered at a Bachelor degree level. This includes Bachelor's Pass, Bachelor's Honours, Undergraduate certificates and Bachelor's Graduate Entry. Excludes non-award and enabling courses.
Postgraduate coursework	Postgraduate coursework includes all postgraduate degrees that are delivered predominantly through coursework (e.g. those courses for which research makes up less than two thirds of the student load as per the Commonwealth Scholarships Guidelines (Research) 2017), including Masters and coursework PhDs. Where a coursework postgraduate degree includes a research component, this should be included as postgraduate coursework. Excludes non-award and enabling courses.

The scope of the data collection includes all students in award courses at the sub-bachelor, bachelor and postgraduate coursework level including Commonwealth Supported Places, domestic fee-paying students and onshore international students. Student in non-award courses and enabling programs are not included within the scope of the data collection exercise.

Students who are enrolled in short-term coursework exchange programs are in scope.[28] While a student is on exchange, some of their teaching costs are likely to be incurred by the institution they are doing their exchange at (i.e. the host institution), which will typically be overseas. As a result, a university may not face all the teaching costs for students who are on exchange and these should not be included in the exercise. However, a university will incur additional teaching costs for inbound exchange students – that is, students who come to a university for a short-term exchange program but who are based at other institutions.

In practice, the number of outbound exchange students may not always match the number of inbound exchange students. However, it is reasonable to include the costs of inbound exchange students in this exercise. Although only outbound students are included as reported EFTSL (and not inbound exchange students), the cost of teaching inbound exchange students reflects the costs of offering an exchange program for an institution's students and thus should be included in the costs of teaching and scholarship reported here.

Cost items

The cost items are distinguishable types of costs and have been chosen to reflect commonly understood categories of disaggregation. These cost types are:

- Total staff costs - employee benefits and on-costs (i.e. total wage bill)[29] – teaching and scholarship:

[28] Students who are enrolled in study abroad programs (where a formal agreement does not exist between institutions) are out of scope for this exercise.
[29] Including termination payments.

- Academic staff costs attributable to teaching and scholarship
- Casual academic staff costs attributable to teaching and scholarship
- Non-academic staff costs attributable to teaching and scholarship.
- Non-staff costs attributable to teaching and learning:
- Cost of materials, utilities, equipment
- Expenses that relate to placements (optional)[30]
- Depreciation, amortisation, repairs, maintenance, borrowing, bad debts
- Other non-staff expenses.

Some further cost measures are defined which relate to total costs across the institution (i.e. including research and non-teaching-related commercial activities) and total costs for non-teaching activities, to be used for the purposes of reconciliation with institution-wide financial reporting. These additional cost types are:

- Total staff costs - employee benefits and on-costs for staff excluding teaching and scholarship activities (e.g. research, community activities etc.)
- Total staff costs - employee benefits and on-costs for all staff (i.e. total wage bill)
- Total non-staff costs excluding teaching and scholarship activities (e.g. research, community activities etc.)
- Total non-staff costs for the whole institution.

It is not required that these costs be provided by field of education, but rather at the whole of institution level.

Three additional items are also separately identified below the main costing collection area of the template – 'in-kind' costs, 'third-party and partnership' costs and an optional 'depreciation adjustment'. These items are collected to inform a broader picture of costs, but are not used in reconciliation with financial reporting. These three items are described in more detail in later.

Fields of education

Fields of education are defined using 22 ASCED code groupings in Table B.2. These fields of education have been chosen by the Department. The current categories were adopted in the 2018 exercise and are broadly consistent with those chosen in the previous 2016 exercise. The columns representing fields of education should be considered to be exhaustive, such that all courses and teaching activity are captured. A full six-digit concordance tab is also provided in the Transparent Costing Worksheet.

[30] In cases where it is difficult to separately identify the cost of placements these can be appropriately recorded in other rows of the Transparent Costing Worksheet. For example under other non staff expenses, or, in the case of payroll costs for staff involved in supervising placements these costs can be included under staff costs.

Table B.2: Fields of education

Number	ASCED Code	Title
1	0101	Mathematical Science
2	0109901	Medical Science
3	01 – Other	Other Science
4	02	Information Technology
5	03	Engineering and Related Technology
6	04	Architecture and Building
7	0509	Environmental Science
8	05 – Other	Other Agriculture, Environmental and Related Studies
9	0601	Medical Studies
10	0603	Nursing
11	0607	Dental Studies
12	0611	Veterinary Studies
13	06 – Other	Other Health
14	07	Education
15	08	Management and Commerce
16	090701	Psychology*
17	091503 to 091519	Foreign Languages and Translating
18	09 – Other	Other Society and Culture
19	1007	Communication and Media Studies
20	10 – Other	Other Creative Arts
21	11	Food, Hospitality and Personal Services
22	12	Mixed Field Programmes

* This field is intended to represent all psychology, not just 'clinical psychology'.

The structure of the data collection template is not to be changed, however the Deloitte Access Economics team welcomes suggestions from universities regarding any potential refinements for future versions of the survey.

Which activities and costs are in-scope?
The focus of this research is to collect and analyse costs related to teaching and scholarship for 2019 and 2020, such that only costs relevant to these activities should be included. Other university operations should be separated and excluded, such as costs related to research, community outreach and commercial activities (not related to teaching).

This study recognises that teaching requires some 'scholarship' activities to support teaching, i.e. activities that maintain and advance the knowledge of an academic discipline required for staff to deliver teaching and training.

The level of scholarship may vary across field of education, and may include activities such as:

- Keeping up-to-date with contemporary discipline knowledge

- Writing textbooks or newspaper articles
- Participating in conferences
- Delivering public lectures
- Participating in government inquiries, among other relevant activities.

Universities are required to proportionally separate time spent by staff on teaching and scholarship activities, from other non-teaching activities. Those staff who teach across multiple fields should have their costs appropriately partitioned across each of these fields based on staff time or alternatively EFTSL taught. Based on the approach agreed in the 2016 study, other areas of university activity that are included to the extent that they are related to delivery of teaching are:

- Student support and welfare systems
- Marketing related to teaching e.g. coursework student recruitment, or a reasonable proportion of brand marketing
- Central administration costs that relate to university operations.

Costs for low EFTSL

Costing data will be collected for 22 fields of education by level of education, i.e. Management and Commerce at the bachelor level.

All field-level combinations are to be reported in the template. Minimum EFTSL thresholds will be applied in the reporting and analysis of data to exclude low EFTSL counts but institutions are asked to report all data as per the template even for field-level combinations with minimal EFTSL.

Irregular costs

Additional costs may be incurred in a given year, for example, to support the development of new courses, or due to organisational restructures. These can be included in the template, but the irregular nature of these costs should be noted in the accompanying Supporting Statement.

Another example might arise where a given FOE is located in a relatively expensive building on campus or where an expanding university footprint results in the lease of additional space at an elevated cost compared to existing campus space. Deloitte Access Economics recognises this may lead to higher costs for those FOEs which happen to be located in more expensive buildings. This cost differential may not necessarily reflect differences in the cost of teaching for that particular FOE.

Given the objective of the exercise is to capture the costs actually incurred by each FOE, it is advised that such irregular costs be included and allocated to the FOE in question. Universities can note in the Supporting Statement if this approach leads to a notable increase in costs for a specific FOE or group of FOEs.

Costs for overseas students

Costs for overseas students who studied at or through an Australian campus are to be included in the Transparent Costing Worksheet. These students will be included in in-scope EFTSL (through use of the campus postcode), ensuring that costs associated with overseas students who studied outside Australia (e.g. due to international border restrictions in 2020) will be included in the Transparent Costing Worksheet.

Which costs and activities should be excluded?

All costs and activities not directly related to 'teaching' are considered out-of-scope and excluded from this analysis based on the scope for the exercise established by the Department. A non-exhaustive list of activities and costs which should be excluded – based on the agreed approach in the 2016 exercise – is provided below:

- Non-award program and enabling courses, and any education not reported to the Department as EFTSL, examples including:
  - English language commercial courses
  - Open Academies/continuing education businesses for a Conservatorium
  - Rural Schools for Medicine/Dentistry funded by State Governments

- Off-shore activity and international campuses (unless teaching students enrolled at Australian campuses)
- Most commercial activities, including investments and investment funds management business (see further clarification in relation to commercial activities below)
- Student and staff support services, provided on the basis of a fee for service or co-payment, for example childcare, health services (including IVF clinics), and student accommodation services (further clarification is provided below on services that are included to the extent that they contribute to education of students)
- Research activities, including research training and HDR supervision and expenditure related to research time of research only staff
- Marketing not related to coursework student recruitment
- Philanthropic and community engagement activities
- All activities and staff that are for VET-training or administration (where that training and administration does not overlap with higher education activity).

Other university activities (including commercial activities) which may have a teaching component

Many university activities have multiple purposes, where one of those is to support teaching. For example, some commercial activities may also serve to provide teaching or placements to students.

For activities with multiple purposes, universities should include an estimate of the portion of costs that is associated with teaching and report this in the template, while excluding any other costs unrelated to teaching.

The aim is to capture the costs associated with teaching activities and to separate these from other costs associated with running other university activities (commercial or otherwise) that are not associated with teaching.

Since the focus is on the costs of teaching and scholarship, there is no requirement to offset these costs with revenue received. Commercial activities that have no role in teaching students are excluded from the scope of the data collection.

Examples of other university activities (including commercial activities) in which the costs of teaching may be included are:

- Veterinary teaching hospitals used for training veterinary students
- Physio clinics used for training physiotherapy students
- Farms used for training agriculture students
- Performing Arts theatres for training theatre and performance students
- Reciprocal arrangements in medical hospitals or medical clinics where services are provided in return for teaching services from non-University staff, e.g. professional administrative staff provided in return for 'no cost teaching' from hospital staff.

Vocational Education and Training (VET) delivered by Dual-sector universities

Universities that also deliver VET-training should not include any enrolment activity in VET courses. All costs for VET-training or administration (where that training and administration does not overlap with higher education activity) are explicitly excluded. However, all centralised administration costs associated with teaching of higher education students should be included.

Additional collection items

Below the main data collection area of the Transparent Costing Worksheet, there are three additional items. These items are collected to inform a broader picture of costs, but are not used in reconciliation with financial reporting. These items include: (1) Third-party and partnership costs, (2) In-kind costs, (3) the Optional depreciation adjustment, and (4) Impact of COVID-19 on university costs of teaching.

1. Third-party and partnership arrangement costs

All costs to the institution related to the delivery of teaching by any partner organisations (for EFTSL applicable to the institution) are to be included, as well as any administrative and management costs associated with the partnership agreement.

The key principle in assigning partnership costs is that all teaching costs attributable to EFTSL attributed to the university (or reasonable proxies thereof) should be included. If a partnership arrangement involves, for example, the sharing of revenue with partner institutions, the revenue (foregone by the university) which accrues to the partner for the purposes of teaching can be included. This represents a reasonable proxy for the teaching costs that would otherwise be incurred by the university if it had taught these students itself.[31]

However, costs which are incurred (or estimated to have been incurred) by a partner organisation may need to be recorded in a different part of the Transparent Costing Worksheet to costs incurred by a university depending on the specific arrangement involved.

Where universities incur teaching costs in relation to a partnership agreement which is recorded in their statutory accounts, these costs are to be included in the main cost collection area of the Transparent Costing Worksheet (i.e. in the first 70 rows of the worksheet). This could include teaching, administration or management costs incurred by the university itself or payments to third parties for teaching activities. In this case there is no need to separately include these costs in relation to 'Third-party and partnership costs' in rows 85 to 88 of the Transparent Costing Worksheet.

In cases where costs related to teaching are incurred by a partner organisation, and these costs are not reflected in a university's financial statement (e.g. where revenue is shared with a partner to cover these teaching costs), the revenue received by the partner should be recorded in rows 85 to 88 of the Transparent Costing Worksheet. The relevant rows are labelled 'Third-party and partnership costs'. This revenue is used to proxy the cost of teaching these students as if this teaching had been done by the university rather than a third party. Any costs included here should not appear in a university's statutory accounts.

While each university relationship with a partner organisation may vary, there are likely to be some common types of arrangements. For example:

- A university may collect all revenue (and report the EFTSL), while the partner institution delivers all teaching. The partner receives some share of the revenue collected as payment. In the likely absence of cost data for the partner institution, the revenue shared is likely to be the most suitable measure of the cost of teaching and should be used as a proxy measure of the actual cost of teaching.
  - The revenue shared should be included in the separate line item for third-party and partnership costs in rows 85 to 88 of the worksheet (assuming it is not captured as a cost to the university in its statutory accounts).
- A university may collect all revenue (and report the EFTSL), but pay a partner institution to undertake some teaching with these payments recorded in a university's statutory accounts. In this case, payments to the partner institution should be recorded in the main part of the Transparent Costing Worksheet (most likely under 'Other non-staff payments' in rows 56 to 59) and no costs should be included under 'Third-party and partnership costs' in rows 85 to 88.
- The partner may collect all the revenue, deliver all the teaching and distribute some share of the revenue to the university. The revenue share of the partner, as a proxy measure of the actual cost of teaching, should be included in the separate line item for 'Third-party and partnership costs' in rows 85 to 88 of the worksheet.
- A partner (or offshore campus of a university) may have performed some teaching in 2020 to international students unable to travel to Australia. These teaching costs can be included under

[31] Since the focus is on the teaching costs that a university would otherwise have incurred, whether or not the partner makes a margin on delivery of its teaching services is not a relevant consideration in completing the Transparent Costing Worksheet.

third-party and partnership costs in the 2020 calendar year collection to the extent they relate to students enrolled at an Australian campus.

In some instances, the EFTSL may be recorded to the partner institution (and not the host university). As the EFTSL is not attributable, no costs of teaching are to be included.

2. Indirect or in-kind costs of teaching (optional)

In some instances, teaching may be delivered by another institution, or using another institution's staff or other resources. The university may provide certain resources in-kind in relation to this teaching. Such in-kind contributions may include use of university buildings, research and library facilities or other resources.

Universities may include a reasonable estimate of their in-kind costs such as the building and facility utilisation, staff time or other resources that they provide to the other institution. Only the in-kind costs to the university in the teaching arrangement should be included, and not any costs borne by the other institution.

These in-kind costs will need to be converted to a dollar figure and included in the template. The high-level process for calculating in-kind costs and any relevant considerations in interpreting these figures should be included in the Supporting Statement.

Deloitte Access Economics recognises that in some cases in-kind costs may be difficult or burdensome for universities to estimate or may be relatively immaterial. For this reason, the inclusion of in-kind costs is optional for universities.

The case study below provides an example of some of the potential in-kind costs that may be incurred by a university.

Case study on estimating in-kind costs

One university noted that the direct and indirect costs of clinical education and training are incurred through arrangements that vary between disciplines and jurisdictions by affiliates employed by third-party partners, such as local health districts, private and community health practices, schools, veterinary practices and other organisations.

While the university does not incur direct salary costs for student clinical placements in many disciplines, it regularly invests in research infrastructure and equipment located in health services or research institutes, the use of which is shared by hospital, university and institute staff, affiliates and students. For example, the Health Faculty has a range of arrangements in place to share the costs of clinical and research academics with partner local health districts and research institutes. The full costs of these staff, who contribute to the university's teaching activities would be excluded or not fully captured above the line in the Transparent Costing Worksheet.

To account for the reciprocal services provided by the university in return for teaching services provided by unpaid affiliates, the university can seek to include an estimate of the in-kind costs that it incurs as part of its relationship with unpaid affiliates who provide teaching to a university's students.

This could include calculating the value of:

- Library, ICT and research support services provided to affiliates, based on their relative usage of these services.
- Capital contributions the university makes towards collaborative teaching, research and service delivery with partners- recognising that only those contributions made in exchange for teaching services should be included not contributions purely for research purposes.

In practice such relationships also provide other value to partner organisations such as the value of being associated with the university's brand, although these may be more difficult to quantify.

3. Capital replacement costs and the optional depreciation adjustment

Costs associated with asset and capital management including depreciation, amortisation, repairs and maintenance, borrowing and bad debts should be included in the template, as reflected in universities' financial reporting.

It is noted that future upgrades, refurbishment, or replacement of an asset may be needed, due to changes in function, new pedagogy, technological advancement or changes in legal or regulatory requirements. This provisioning for future capital expenditure via retained operating margins, borrowing, and/or other means is an important consideration for universities. This future provisioning should nonetheless be kept separate from current depreciation and asset costs in the template.

Universities are able to provide a description of their processes and budget for sufficient future investment as part of the Supporting Statement that accompanies the Transparent Costing Worksheet.

Optional depreciation adjustment

Universities employ a wide range of approaches to value the depreciation of buildings and other infrastructure assets. Some universities regularly re-value assets, with use of actuarial assessments to adjust buildings to fair value, while others use historical book value. Similarly, it is common for universities to adopt policies that assume straight-line depreciation, which may differ from actual real estate usage. The latter approach produces consistent results from year-to-year, but may not accurately measure the decline in value associated with teaching activities.

Depreciation costs, as they appear in a universities' income and expense statements, only account for the cost associated with the decline in value of an asset over its 'useful life'. Accounting standards often assume that assets have the same defined and consistent useful life, resulting in a constant rate of depreciation expenses. However, universities may continue teaching activities

using assets that are beyond their accounting useful life. For example, if the useful life of a building is assumed to be 50 years, buildings older than 50 years may be statutorily depreciated at the rate of zero per cent, despite continuing to be actively used for teaching activities.

In cases where a university has fully depreciated assets that are still in use or where historical book value differs from the cost of replacing a building in its current condition, depreciation may not accurately reflect the full economic costs of using these buildings for teaching activities. This may also apply to assets other than buildings such as, plant and equipment assets.

To better understand the extent to which current measures of depreciation are impacted by these issues, universities are given the option to include a depreciation adjustment in rows 90 to 93 of the Transparent Costing Worksheet (i.e. below the line). This is intended for universities who either have fully depreciated assets that are still in use or who do not conduct regular revaluations of their assets for the purpose of calculating depreciation. Universities that conduct regular revaluations or actuarial assessments and do not have fully depreciated assets which are used for teaching purposes will not need to make this adjustment.

An example of this adjustment (based on the methodology detailed in section 3.2 of the 2016 UK Transparent Approach to Costing (TRAC) v2.1 Guidance) is included below and in the Depreciation adjustment tab of the Transparent Costing Worksheet.

The net infrastructure adjustment can then be included in rows 90 to 93 of the Transparent Costing Worksheet. Only the proportion attributable to teaching and scholarship should be included. Universities should seek to allocate this adjustment to each Field of Education and level of study.

Optional depreciation adjustment

Universities can calculate the differential between the fair value of buildings or facilities (measured from either the insurance replacement value (IRV) or actuarial assessments) against recorded statutory depreciation for these assets.

Calculation of depreciation adjustment (*if applicable*)

		$m	
Gross book value of assets (i.e. before deduction of accumulated depreciation) as reported in financial statements, for buildings			
2017		962.883	
2018		1005.031	
Average		983.957	A
Depreciation for 2018 for buildings, reported in financial statements, less any amounts relating to impairment		22.092	B
Calculated depreciation rate		2.2%	C1
Historic buildings depreciation rate (where applicable)	Institution to select the rate	0.50%	C2
Insurance value on buildings			
Non-historic buildings		1536.760	D1
Historic buildings		627.130	D2
Gross infrastructure adjustment			
Non-historic buildings		34.504	C1*D1
Historic buildings		3.136	C2*D2
Total gross infrastructure adjustment		37.639	E
less depreciation		-22.092	B
less any long-term maintenance leading to a significant upgrade to functionality		-0.792	F
Net infrastructure adjustment (to be included in Costing Worksheet)		14.755	E+B+F

4. Impact of COVID-19 on university costs of teaching

The COVID-19 pandemic is expected to have had a significant impact on university revenue and expenditure in 2020. Deloitte understands that the impact of COVID-19 on university expenditure can be grouped into three broad categories, including:

- Financial incentives and support for students including scholarships, bursaries and stipends, hardship payments and tuition fee discounts
- Management of staff costs including redundancy costs, deferral of salary increases, leave and balance sheet provisions, temporary salary cuts and temporary payroll tax exemptions
- Management of non-staff costs including higher IT investment and COVID-related cleaning and consumables; lower spending on travel, conferences and events; and deferred spending on maintenance and capital projects.

For the purposes of the Transparent Costing exercise Deloitte is looking to capture only the costs associated with teaching and scholarship and how they have been affected by COVID-19.

Optional COVID-19 measures adjustment

To allow for additional analysis of the impact of COVID-19 on teaching and scholarship costs, Deloitte has included an optional additional tab in the Transparent Costing Worksheet to capture the financial impact of university responses to COVID-19. Universities would also have the opportunity to outline how COVID-19 has affected teaching costs in the Supporting Statement. To

facilitate this Deloitte has provided a set of additional COVID-19 specific questions in the Supporting Statement document.

All actual costs for 2020 should continue to be included in the main tab of the worksheet. The purpose of this additional tab is simply to understand the impact of specific components on those components of costs (or revenue) specifically attributable to COVID-19. The cost per EFTSL output will be based on the costs included in the main tab, with this tab designed to collect information to provide additional information in the report.

The table below provides a screenshot of the optional COVID-19 measures tab. Data is only required to be provided at the total level. That is, data does not need to be provided for specific FOEs or levels of study. The measures in the COVID-19 tab are split into three categories identified above (financial incentives and support, staff costs and non-staff costs). Within each of these three categories are specific line items. These line items are designed to identify the different potential areas where COVID-19 has impacted university operations.

If university responses to COVID-19 have not changed expenditure or revenue for a particular line item, please enter a zero in the relevant cell. Measures that increase expenditure or revenue should be recorded as positive values and measures that reduce expenditure or revenue should be recorded as negative values. While one line item seeks to understand changes in revenue as a result of tuition fee discounts (recognising that some forms of student hardship assistance may be in this form), the focus of the exercise remains on understanding the costs of teaching and scholarship.

COVID-19 measures (optional)

Universities can record COVID-19 measures specific to 2020 in the additional tab in the 2020 Transparent Costing Worksheet.

COVID-19 measures *(optional)*	
For further details on whether this adjustment is relevant to your institution please see section 2.4 of the Transparent Costing Guidelines.	*University to input ($)*
	Formula
Financial incentives and support	
Changes in expenditure (includes student scholarships, bursaries, stipends and hardship payments)	
Changes in revenue (includes tuition fee discounts)	
Staff costs	
Redundancy costs	
Salary changes including deferral of salary increases	
Leave provisions (e.g. compulsory use of leave)	
Other costs (e.g. temporary payroll tax exemptions)	
Non-staff costs	
Changes in expenditure (includes higher IT investment and costs for cleaning and purchase of consumables, reduction in travel expenses)	
COVID-19 financial incentives and support measures ($) - teaching and scholarship	$0
COVID-19 staff costs ($) - teaching and scholarship	$0
COVID-19 non-staff costs ($) - teaching and scholarship	$0
Total COVID-19 costs ($) - teaching and scholarship	*$0*

Staff costs: Allocating between teaching, scholarship and research
To estimate the costs of teaching, only staffing costs related to 'teaching and scholarship' are to be included in the data collection. Universities will have different methods of allocating staff activities and costs between teaching, scholarship and research (and others). Common methods include:

- Activity-based costing tools
- Detailed timesheets
- Workload models
- Enterprise Bargaining Agreements and other employment contracts that dictate specific allocations of time.

Universities should use the most rigorous and consistent method of allocating staff activities available to them to reflect the true time spent on teaching and scholarship. Where detailed time allocation data is not available, reasonable assumptions can be used.

If administrative costs would be incurred even in the absence of other activities, such as research or commercial activities, they should be included in teaching costs.

Non-staff costs: allocating assets and facilities costs across different fields of education
Similar to staffing costs, only the proportion of asset and facilities costs that relate to delivering teaching should be included in the data collection.

In the 2016 exercise, universities used various approaches to allocate non-salary costs to different FOEs. The approaches tended to be based on the drivers that were judged to be most appropriate for each cost category. Some of the common drivers used included:

- floor space – used to apportion building (depreciation or maintenance) costs across FOEs
- FTEs – used to apportion staff support services (such as a university's finance function)
- EFTSL – used to apportion non-salary costs driven by students (such as student support services)
- enrolment headcount – used to apportion those costs driven by student numbers rather than load intensity (such as IT or enrolment costs).

Other potential drivers which could be used include: whether the student is a domestic or international student; level of study; delivery mode and number of staff by type. Deloitte Access Economics will discuss the approach used with individual institutions to ensure consistency across the data collection exercise.

Instances of underutilisation attributable to teaching can be apportioned centrally. These central costs can then be allocated equally across all university EFTSL.

Due to social distancing restrictions, there are likely to be lower building utilisation levels in 2020. Where appropriate, universities can adopt utilisation levels from 2019 to allocate these costs to FOEs. This assumption may need to be revised where there are material shifts in enrolments shares by FOE between 2019 and 2020.

EFTSL data will be pre-populated in the data collection template for 2019 and 2020 at the beginning of the data collection process. Expenses data will be pre-populated in the data collection template for 2019, but not the template for 2020 (due to the timing of data availability). Universities were provided with the Transparent Costing Worksheet for 2019 on the 19th of May 2021. Universities will receive the 2020 Transparent Costing Worksheet in July 2021.

Trimesters and summer semesters
Many universities offer summer subjects or a trimester option for students. For subjects/units that have census dates in the same calendar year, e.g. 2019, the EFTSL for the subjects/units will be recorded for 2019, even if the subjects/units are delivered across 2 calendar years – 2019 and 2020.

This means there may be a misalignment between EFTSL data and cost data for a given calendar year. Universities should apportion the costs for these units consistently across different collection

years and if EFTSL for these units differ significantly year-on-year, it should be outlined in the Supporting Statement.

Reconciliation

Total expenses reported in the template (excluding in-kind costs and third-party and partnership costs) should be reconciled to statutory accounts, in particular Total Expenses from Continuing Operations (including deferred superannuation).[32] This total expenses figure will be pre-populated for universities using data provided to the Department.[33]

When reconciling the costs of teaching and scholarship with total expenses, the difference between total expenses and the costs of teaching and scholarship will include costs associated with activities that are outside the scope of this project such as research, community activities and costs for non-award students, enabling programs, higher degree research students and offshore enrolments.

Noting the guiding principle regarding a focus on actual economic costs (as opposed to accounting costs), there may be some additional variations in reported costs. Any differences can be explained in the Supporting Statement provided by the university.

[32] 2019 expenses data is based on the expense data supplied by the Department of Education, Skills and Employment in May 2021. Subsequent revisions to 2019 expenses (e.g. in 2020 financial reports) may not be reflected in these figures.

[33] For the 2021 data collection exercise, 2020 financial data will not be available for all universities at the start of the data collection process. To avoid delay, Deloitte Access Economics will send a version of the Transparent Costing Worksheet without pre-filled financial data in the first instance. A version of the Transparent Costing Worksheet with this data pre-populated will be sent to universities once it is available from the Department.

Appendix C: Comparison to 2017 data

Chart C.1: Distribution of the average unit costs to base funding ratio 2017, 2018, 2019, and 2020 (2015 common sample (25 universities))

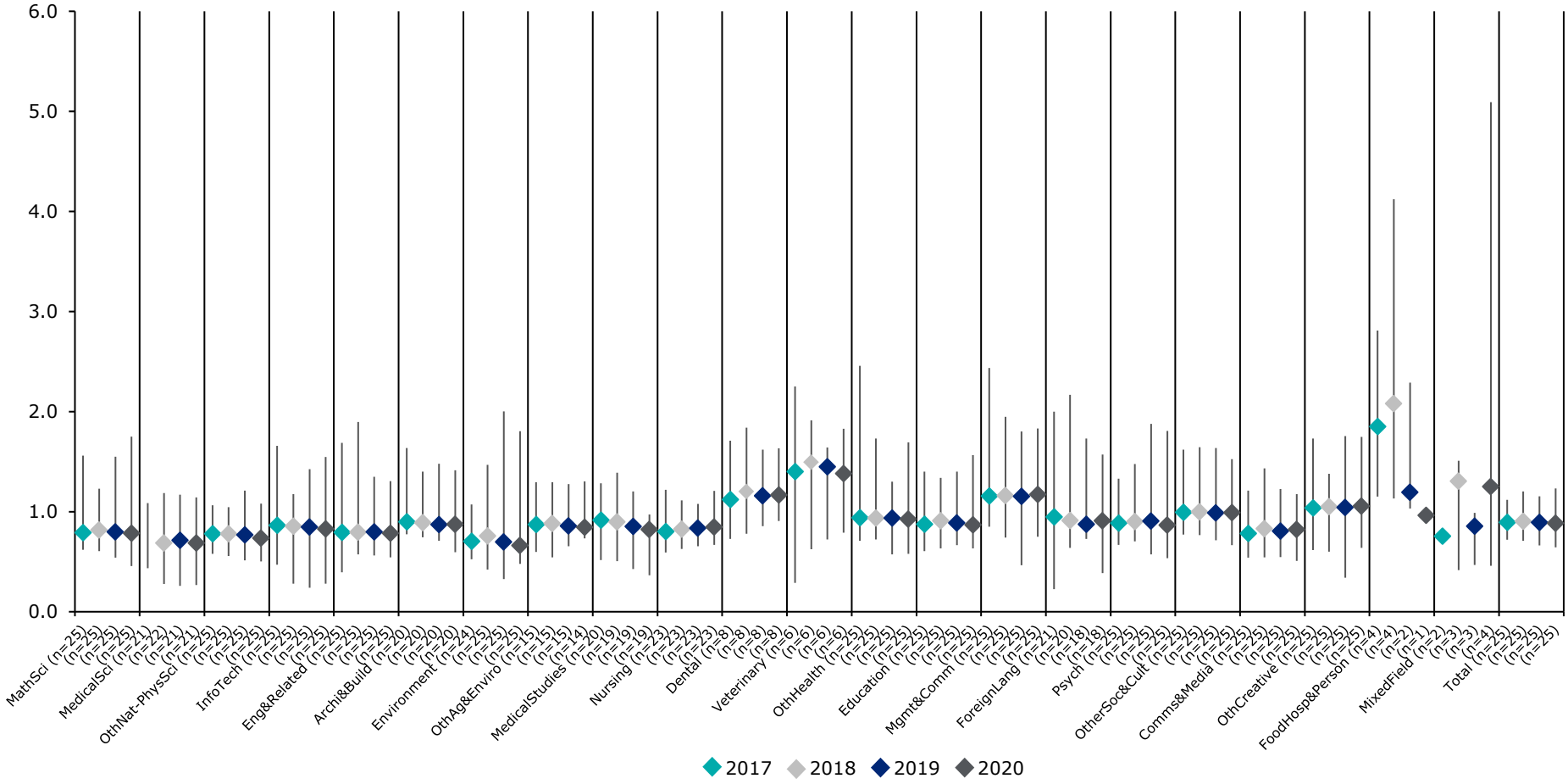
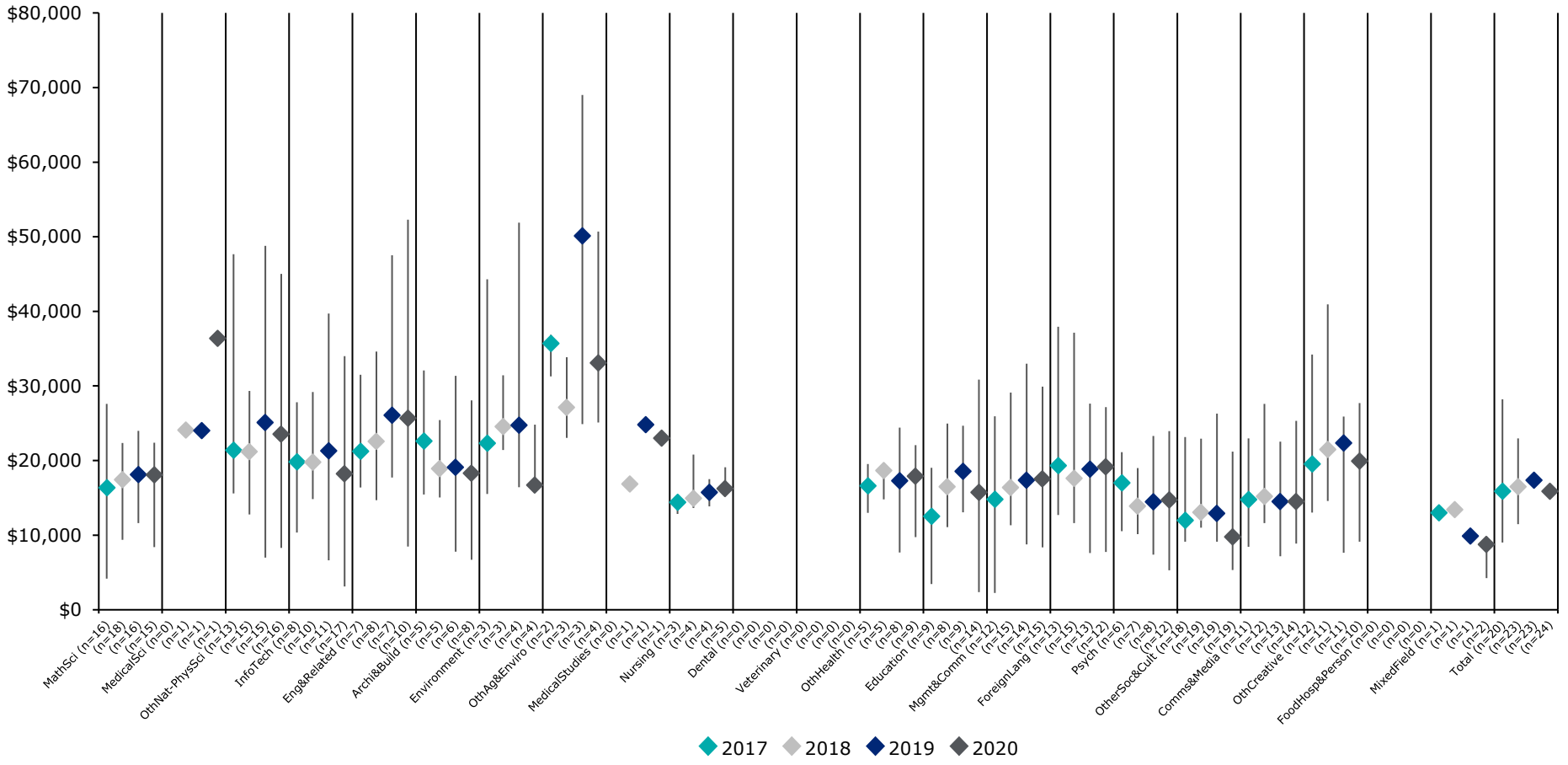
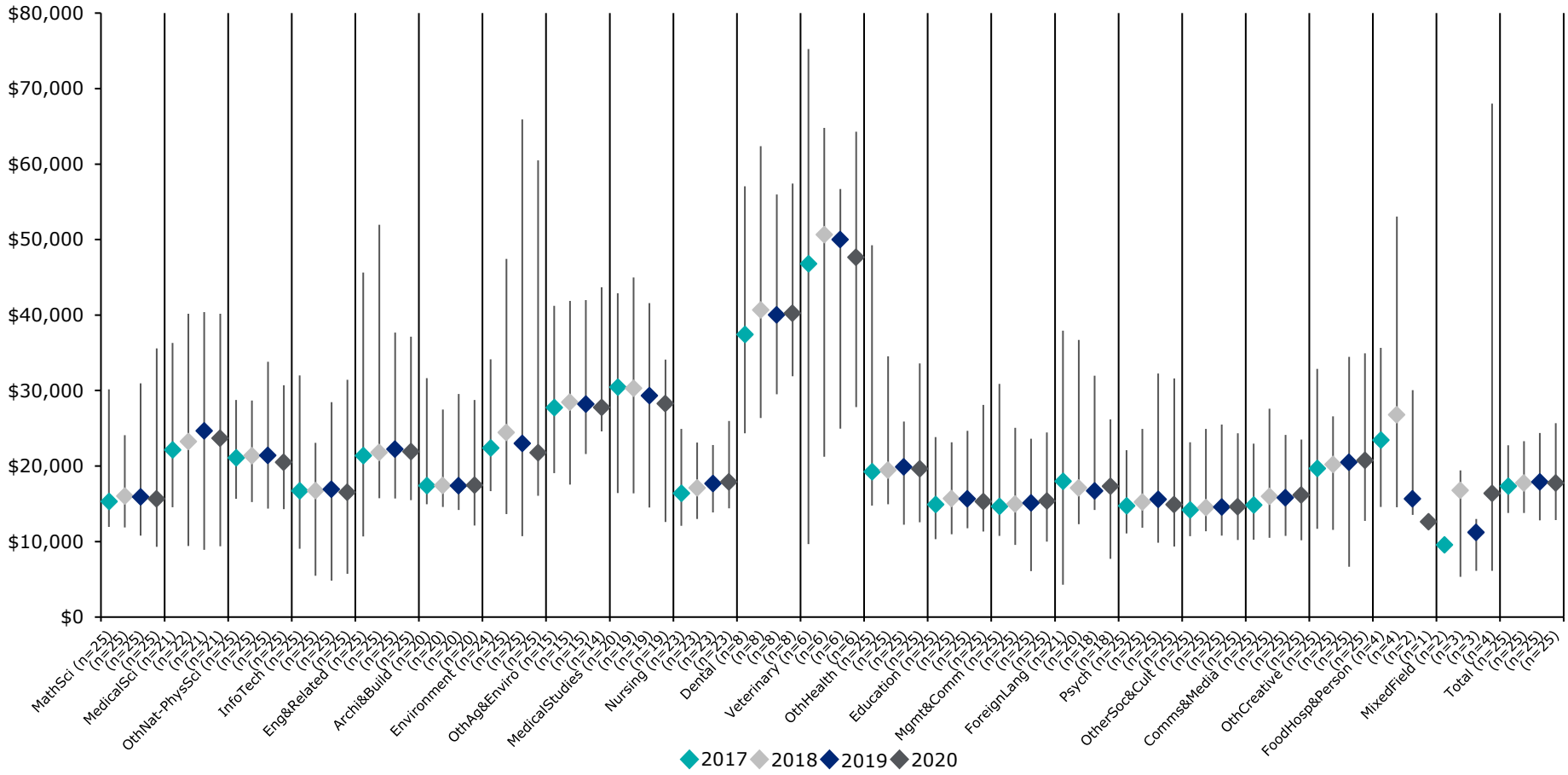


Chart C.2: Comparing costs between 2017 and 2020 for sub-bachelor (2017 common sample (25 universities))



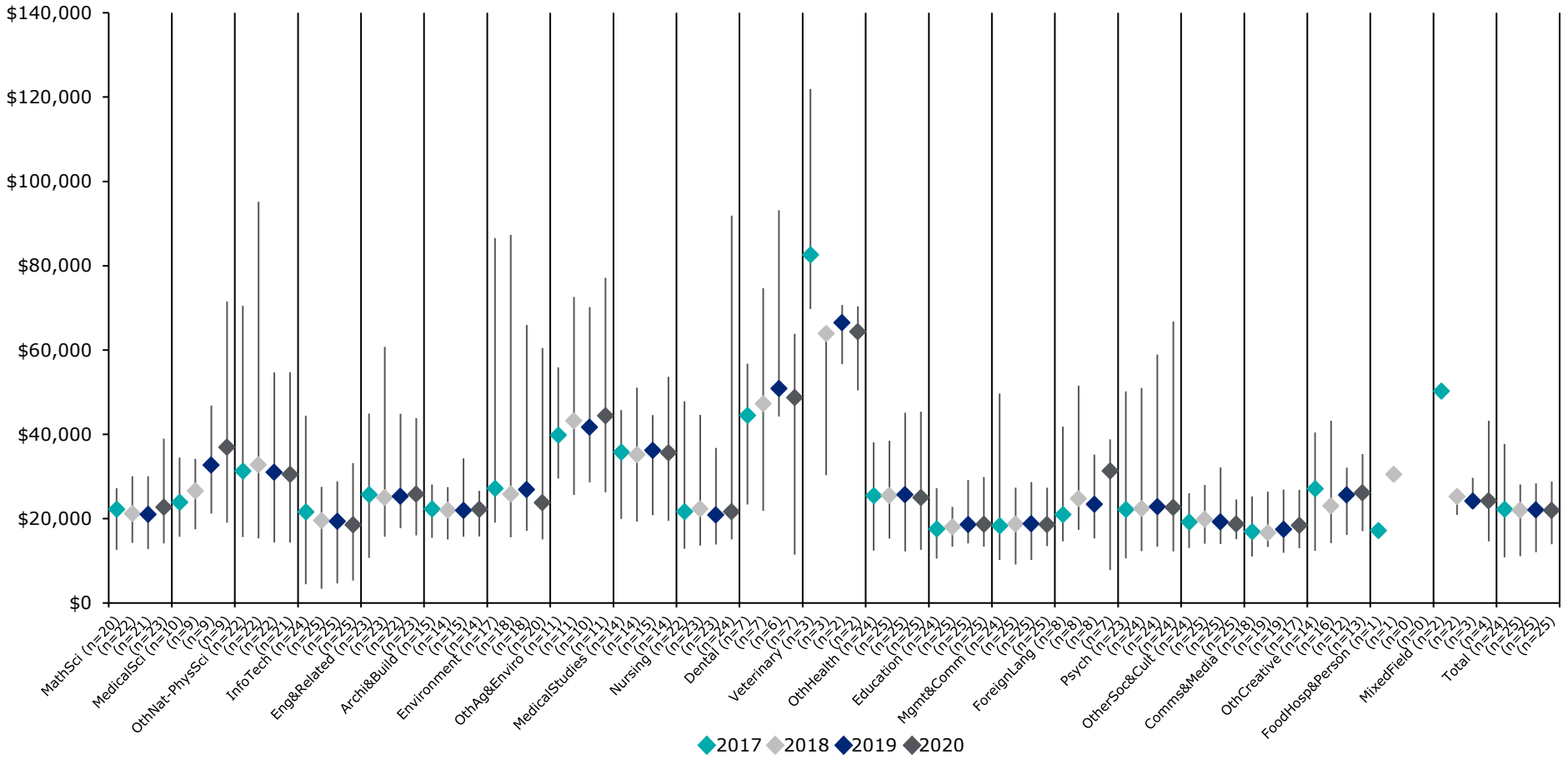
Note: For comparability, only the 25 universities that provided data for 2017, 2018, 2019 and 2020 are included. Markers are at mean.

Chart C.3: Comparing costs between 2017 and 2020 for bachelor (2017 common sample (25 universities))



Note: For comparability, only the 25 universities that provided data for 2017, 2018, 2019 and 2020 are included. Markers are at mean.

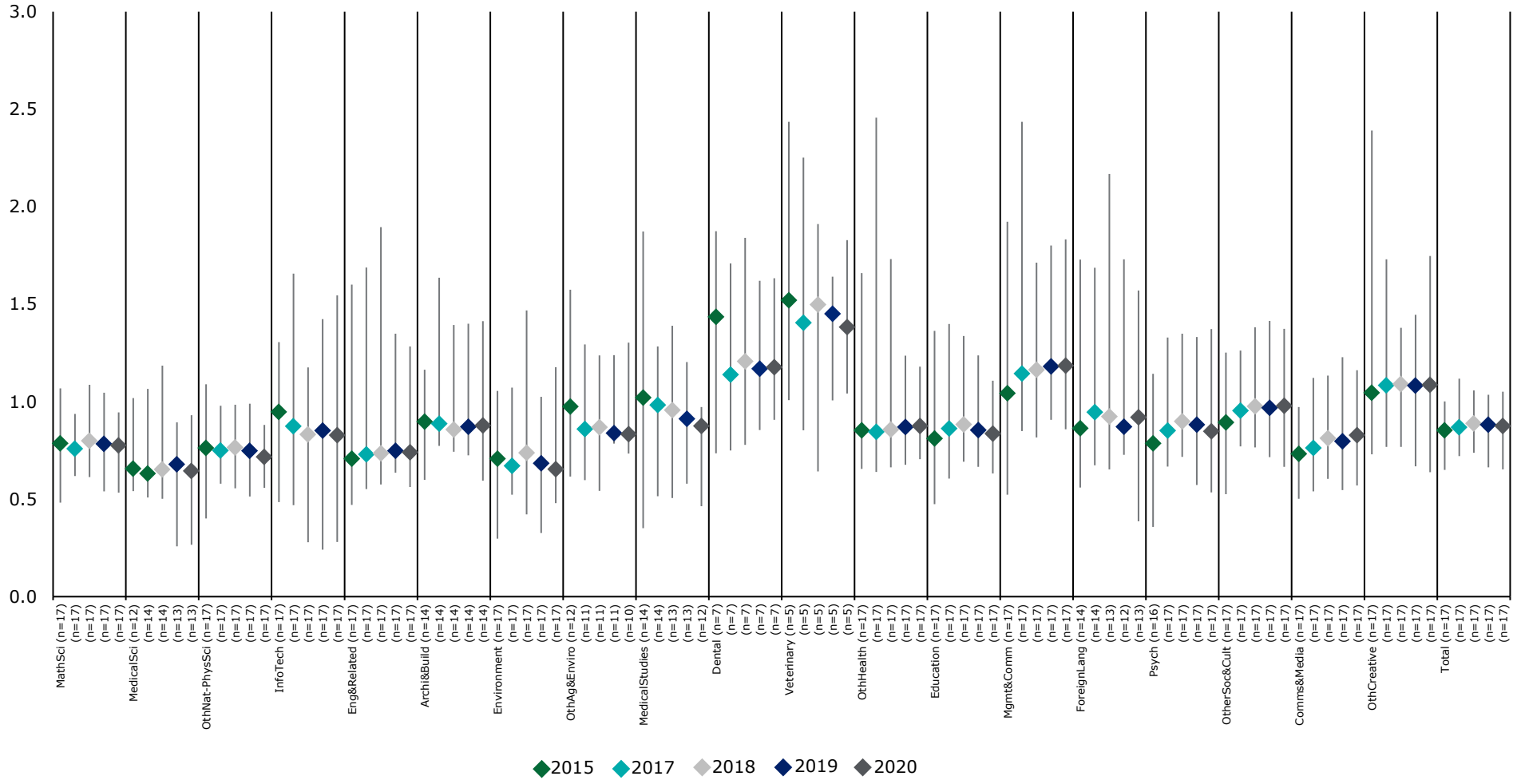
Chart C.4: Comparing costs between 2017 and 2020 for postgraduate (2017 common sample (25 universities))



Note: For comparability, only the 25 universities that provided data for 2017, 2018, 2019 and 2020 are included. Markers are at mean

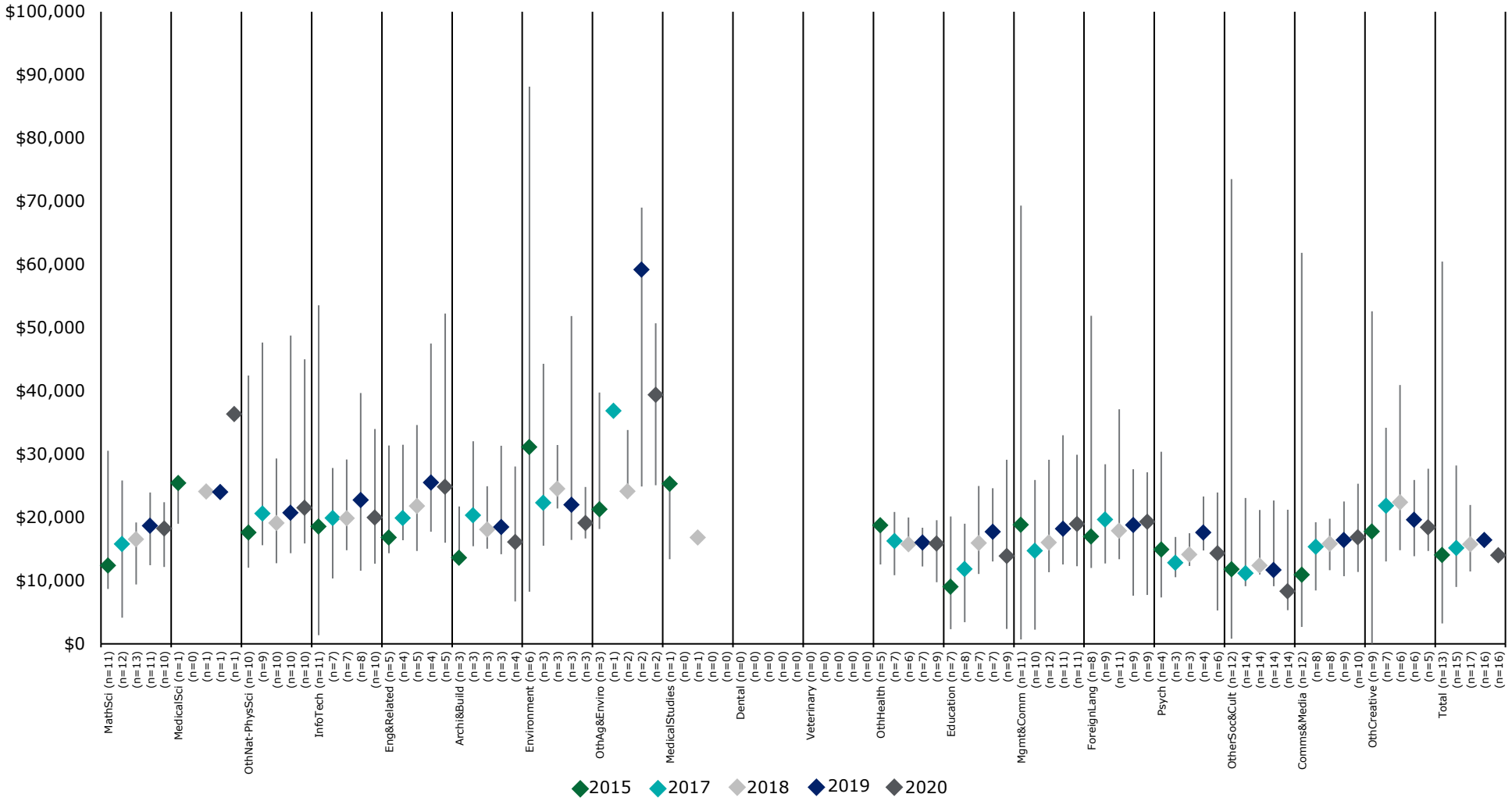
Appendix D: Comparison to 2015 data

Chart D.1: Distribution of the average unit costs to base funding ratio, 2015, 2017, 2018, 2019, and 2020 (2015 common sample (17 universities))



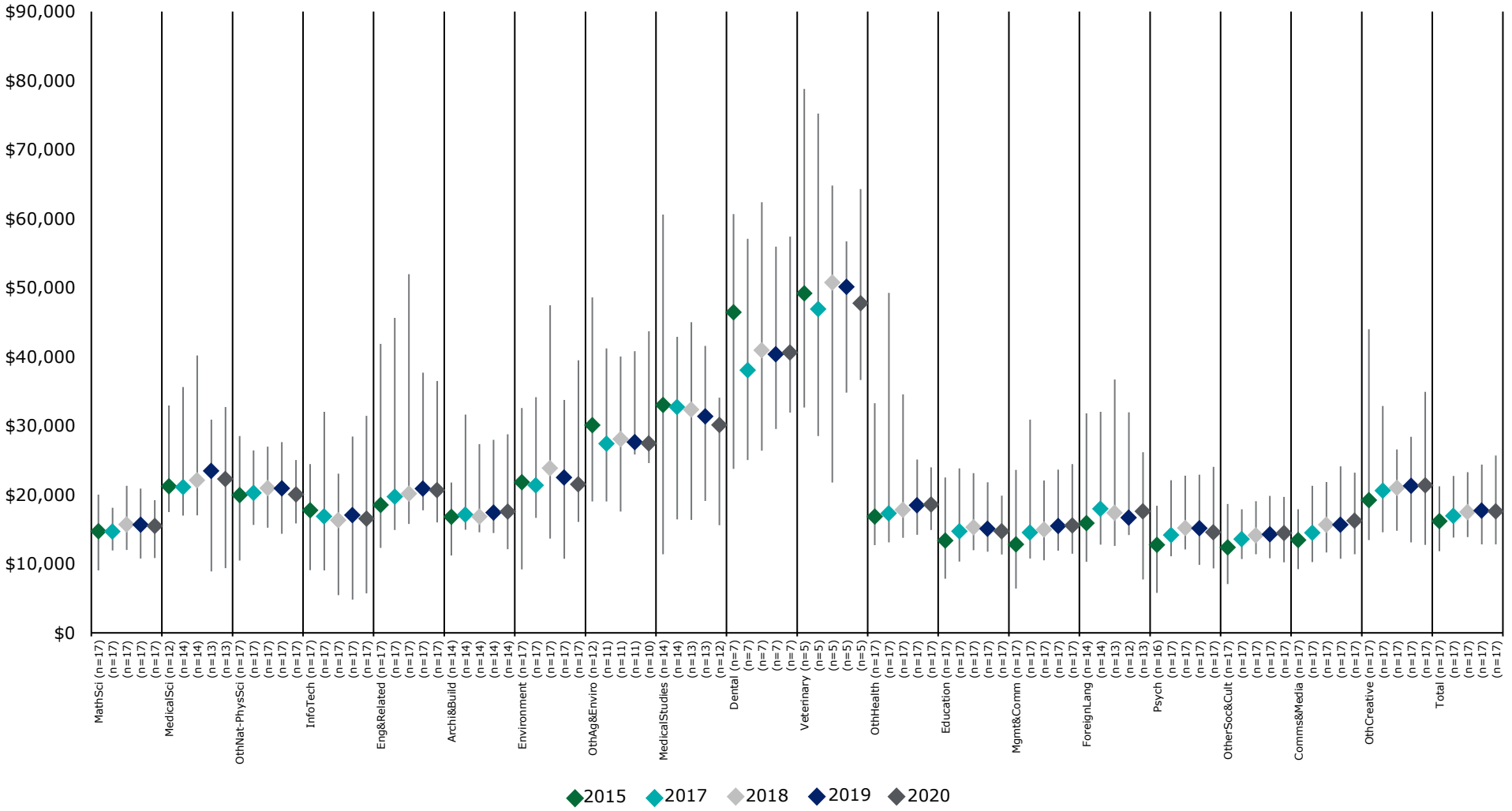
Note: Marker at average value, lines represent range from minimum to maximum. Notably, these results only include universities that provided data for 2015, 2017, 2018, 2019 and 2020.

Chart D.2: Comparing costs between 2015, 2017, 2018, 2019, and 2020 for sub-bachelor (2015 common sample (17 universities))



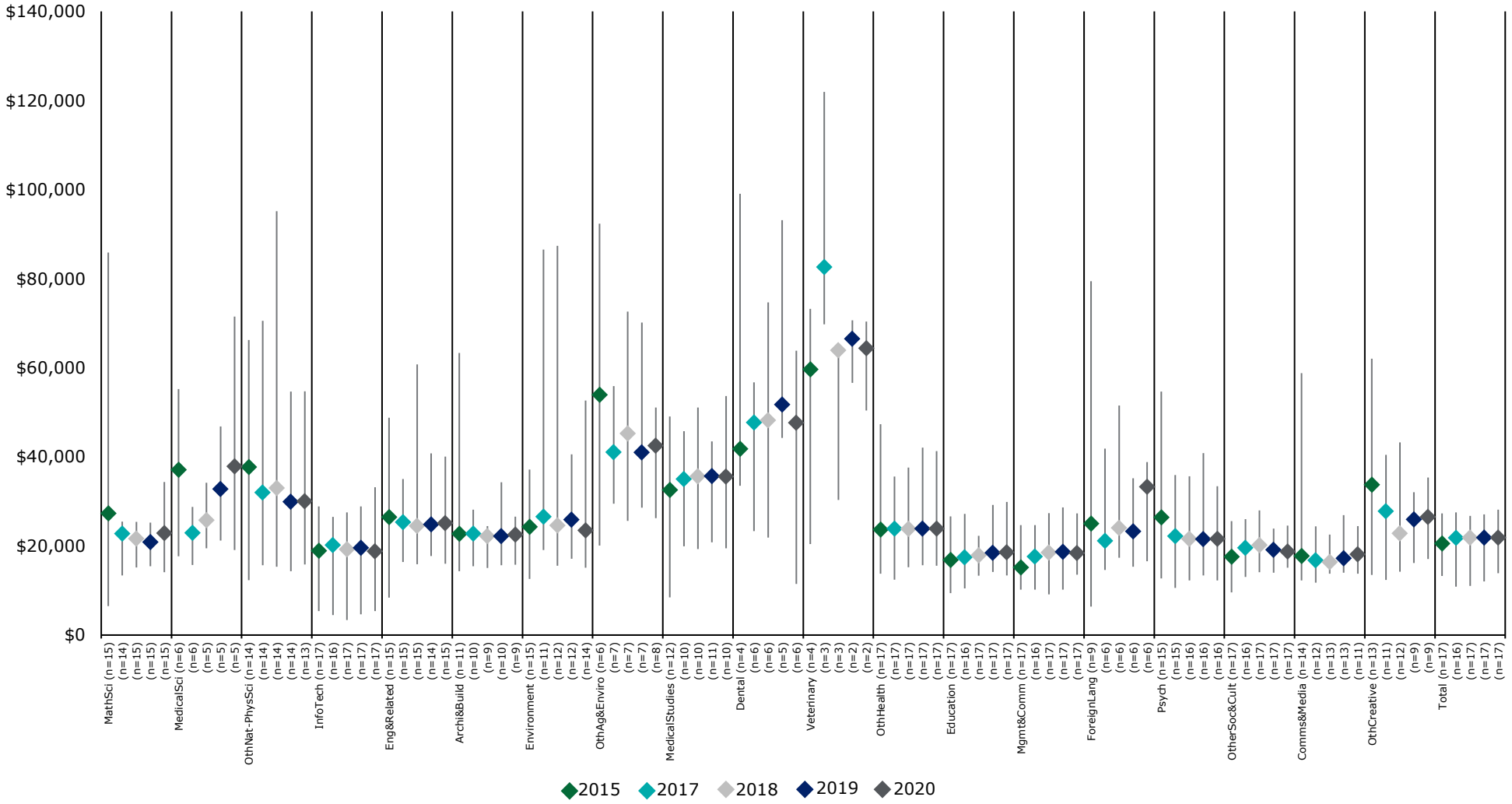
Note: For comparability, only the 17 universities that provided data for 2015, 2017, 2019, 2019, 2020 are included. Markers are at mean. Nursing is included in Other – Health.

Chart D.3: Comparing costs between 2015, 2017, 2018, 2019, and 2020 for bachelor (2015 common sample (17 universities))



Note: For comparability, only the 17 universities that provided data for 2015, 2017, 2018, 2019, and 2020 are included. Markers are at mean. Nursing is included in Other – Health.

Chart D.4: Comparing costs between 2015, 2017, 2018, 2019, and 2020 for postgraduate (2015 common sample (17 universities))



Note: For comparability, only the 17 universities that provided data for 2015, 2017, 2018, 2019, and 2020 are included. Markers are at mean. Nursing is included in Other – Health.

Limitation of our work

General use restriction

This report is prepared solely for the use of the Australian Government Department of Education Skills and Employment. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose of assessing the cost of teaching and scholarship in the higher education sector. You should not refer to or use our name or the advice for any other purpose.

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