UNIVERSITY OF CAMBRIDGE
Academic Division
Cambridge Admissions Office

Further self-assessment of undergraduate admissions gaps by age at the University of Cambridge

Executive summary

In 2019 the University of Cambridge conducted a self-assessment of undergraduate admissions as part of the development of the current 2020-21 to 2024-25 Access and Participation Plan (APP). This self-assessment included an examination of the collegiate University's current, and recent, proportions of mature and young student admissions, and a comparison between Cambridge and the sector, using data provided by the Office for Students (OfS) in their Access and Participation data dashboard and accompanying aggregate-level datasets. This revealed that the University has a much lower proportion of mature entrants compared to the sector, and furthermore that the University's proportion has been in decline over the last 5 years whereas the sector's proportion has been increasing. In its APP the University therefore committed to "investigate further the reasons why the proportion of our mature entrants has decreased over the last five years, especially when the proportion of mature entrants across the sector has increased", and to feed the findings into the University's undergraduate admissions review.

Drawing on a comparison between several data sources, the analyses reported in this paper show that the recent decline in Cambridge's mature student admissions seen in the OfS Access and Participation data is actually dubious (and in any case, it has likely ceased), and that the sector's recent increase in mature admissions appears to only be in the numbers of apprenticeships and direct applications (which Cambridge does not offer/accept).

The subsequent analyses reported in this paper focussed instead on investigating the reasons for the University's overall mature admissions gap compared to the sector (i.e. the fact that in 2017/18, Cambridge had 3.8% mature entrants compared to 27.8% for the sector). More specifically, the investigation focussed on factors that might explain the low proportion of mature applications to Cambridge rather than the lower success rates of mature applicants to Cambridge (having applied), partly because the former appears to account for the majority of the overall mature admissions gap, and partly because the latter has previously been investigated. The investigation found that the following factors are *likely* to contribute to explaining Cambridge's low mature student application proportion, whilst region of domicile and application timing are unlikely to:

- Course subject choice: Nationally, mature students are more likely to take courses that Cambridge does not offer. It is estimated that this could explain around a third of the overall mature admissions gap at Cambridge.
- Distance of study from home: Nationally, mature students are more likely to stay living at home, or at least to attend a provider near their home, whereas (mature) students at Cambridge rarely do either
- Type and grade(s) of Higher Education (HE) entry qualifications: Nationally, mature students may be more likely to have entry qualification types and/or grades that are incompatible with entry to Cambridge.

This further self-assessment has therefore increased our understanding of the admissions gap by age for UK-domiciled applicants to the University of Cambridge. These findings have been referred to appropriate committees of the collegiate University for consideration.

Introduction

In 2019 the University of Cambridge conducted a self-assessment of undergraduate admissions as part of the development of the current 2020-21 to 2024-25 Access and Participation Plan (APP)[1]. This self-assessment included an examination of the collegiate University's current, and recent, proportions of mature and young student admissions, and a comparison between Cambridge and the sector, using data provided by the Office for Students (OfS) in their Access and Participation data dashboard and accompanying aggregate-level datasets[2]. This revealed that the University has a much lower proportion of UK-domiciled mature entrants compared to the sector (for 2017/18, 3.8% compared to 27.8%), and furthermore that the University's proportion has been in decline over the last 5 years whereas the sector's proportion has been increasing. In its APP the University therefore committed to "investigate further the reasons why the proportion of our mature entrants has decreased over the last five years, especially when the proportion of mature entrants across the sector has increased", and to feed the findings into the University's undergraduate admissions review which "should mean that we are able to outline our approach to minimising gaps for this group by June 2020."

The aims of the research in the present paper were therefore to investigate the fundamental characteristics of Cambridge's mature admissions gap and these recent trends, in comparison to the sector, and then to investigate the reasons for any fundamental difference(s) identified between Cambridge and the sector.

Methodology

Data sources and population used

Data were obtained from several sources, detailed below and in Table A. As shown (Table A), the data used were always for fulltime (FT) UK-domiciled students, but they were variously for applicants, accepted applicants, or entrants to an undergraduate course at the University of Cambridge ("Cambridge"), or to any Higher Education Institution (HEI) nationally ("national"), or occasionally to a small number of other specified HEIs ("peers"). Analyses are presented by entry year or closest matching apply year[3] for comparability with the reporting format used by the OfS.

Source A: OfS Access and Participation data ("OfS AP data")

Sourced from the publicly accessible OfS aggregate-level Access and Participation datasets released in March 2019 with the Access and Participation data dashboard.[4] This includes separate datasets for the sector as a whole (i.e. national), for Cambridge, and for each other HEI that is registered with the OfS.

[1] Access and Participation Plan 2020-21 to 2024-25
https://www.undergraduate.study.cam.ac.uk/files/publications/university_of_cambridge_app_2020_25.pdf

[2] Guide to the access and participation data resources
https://www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/guide-to-the-access-and-participation-data-resources/get-the-underlying-data/

[3] 2013 entry year means the course usually starts Sep/Oct 2013. The closest matching apply year is 2013, which means application during the 2012/13 cycle and entry in 2013 unless entry is deferred.

[4] Guide to the access and participation data resources
https://www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/guide-to-the-access-and-participation-data-resources/get-the-underlying-data/

Source B: UCAS Cambridge Provider EXACT Record Supplies (PERS) ("UCAS Cambridge data")

Sourced from an individual-level dataset provided annually by UCAS to each HEI, which contains information about all applicants to their institution in the current and recent years. This dataset is not publicly available, but rather is provided confidentially to each HEI and is ordinarily for internal use only (although in this instance UCAS have kindly provided permission for publication).

Source C: UCAS public dashboard and data ("UCAS public data")

Sourced from the publicly accessible end of cycle data resources that UCAS provide in the form of an online dashboard and supplementary downloadable data files[5].

Source D: UCAS mature students report ("UCAS mature report data")

Sourced from UCAS' publicly accessible report on mature students[6], and supporting data tables.

Source E: HESA UK Performance Indicators (UKPI) Table WP2 ("HESA UKPI data")

Sourced from HESA UKPI Table WP2[7].

Source F: Cambridge internal data ("Cambridge internal data")

Sourced from the internal datasets held by the Cambridge Admissions Office.

Characteristic examined

The characteristic examined in the present paper was age of entry to an undergraduate degree, as a binary of "young" or "mature". Generally speaking, a student is considered to be mature if they are 21 or over at the time of entry to their undergraduate degree, although the exact annual time point used to determine this varies by dataset as detailed in Table A.

Analyses conducted

The analyses in the present paper are largely descriptive, and usually involved no more than obtaining data and manipulating them in Excel. Further details are provided throughout the Findings where relevant (in the 'Approach' part of each section).

[5] UCAS Undergraduate sector-level end of cycle data resources 2019
https://www.ucas.com/data-and-analysis/undergraduate-statistics-and-reports/ucas-undergraduate-end-cycle-data-resources-2019

[6] UCAS (June 2018) *Admissions patterns for mature applicants 2017 cycle*
https://www.ucas.com/file/175936/download?token=UVSBJLVD

[7] HESA Table WP2 – Entrants to full-time first degree courses by subject and entry qualifications 2016/17 to 2017/18
https://www.hesa.ac.uk/data-and-analysis/ukpis/widening-participation/table-WP2-1718

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Table A

Summary of data sources A – F.

	SOURCE A: OfS AP data	**SOURCE B: UCAS Cambridge data**	**SOURCE C: UCAS public data**	**SOURCE D: UCAS mature report data**	**SOURCE E: HESA UKPI data**	**SOURCE F: Cambridge internal data**
Cambridge or national	Cambridge, National, Peers	Cambridge	National	National	National	Cambridge
Study type	FT undergraduates AND APPRENTICES	FT undergraduates	FT undergraduates	FT undergraduates	FT undergraduates	FT undergraduates
Domicile	UK only	Filtered to UK only	Filtered to UK only	UK only	UK only	Filtered to UK only
Nationality	Any	Any	Any	Any	Any	Any
Counts of	Entrants	Acceptances	Acceptances	Applicants/ Acceptances/ Entrants	Entrants	Applicants/ Acceptances/ Entrants
Entry or Apply year	Entry	Apply/Entry	Apply	Apply	Entry	Apply/Entry
Mature age entrant definition	21 or over on 31 Aug	21 or over on 31 Aug (Eng, Wales) or 1 July (NI) or 28 Feb next year (Scot)			21 or over on 30 Sep	21 or over on 1 Oct
Graduate medics	Included	Included unless otherwise stated	Included	Included	Included	Included unless otherwise stated

Findings

1 Investigation of the fundamental characteristics of Cambridge's mature admissions gap and recent trends, in comparison to the sector

1.1 Further investigation of the sector data and trend

Approach

As noted in the Introduction, previous work using OfS AP data (Source A) indicated that the proportion of mature entrants across the sector has been increasing in recent years. This was investigated further here by comparing against national data from an alternative national data source (Source C, UCAS public data), and using both data sources to examine absolute numbers of mature students (Table 1.1b and Figure 1.1b) as well as the proportion of all students that they account for (Table 1.1a and Figure 1.1a). Examining absolute numbers is additionally informative because the proportions can be affected by changes in the numbers of non-mature students only.

Results

Table 1.1a and Figure 1.1a

The proportions of young and mature acceptances or entrants from two different data sources, Source A (OfS AP data) and Source C (UCAS public data), by entry year or closest matching apply year. Details of these sources are provided in the Data Sources section above.

Percentages reported to 1 d.p.

		OfS AP entry year or UCAS apply year				
		2013	**2014**	**2015**	**2016**	**2017**
Young	AP entrants	75.3%	73.6%	73.1%	72.6%	72.2%
	UCAS accepts	78.5%	77.9%	78.0%	78.4%	78.6%
Mature	AP entrants	24.7%	26.4%	26.9%	27.4%	27.8%
	UCAS accepts	21.5%	22.1%	22.0%	21.6%	21.4%

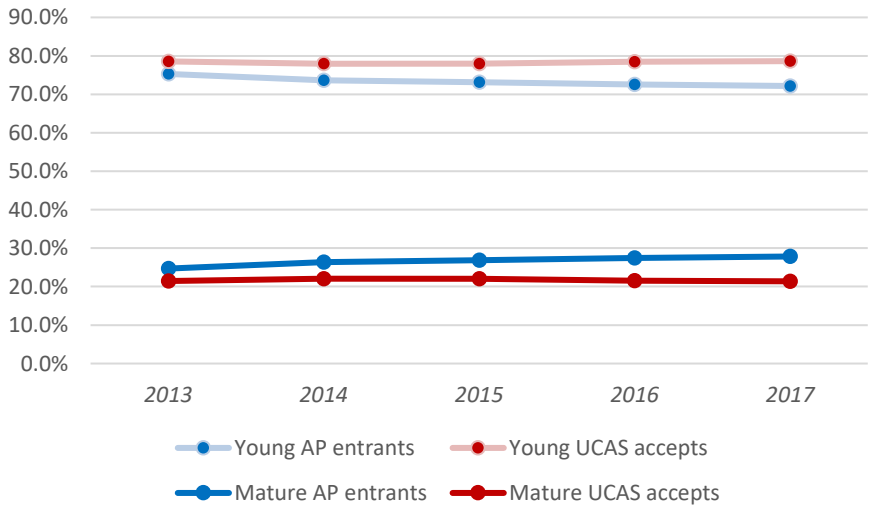
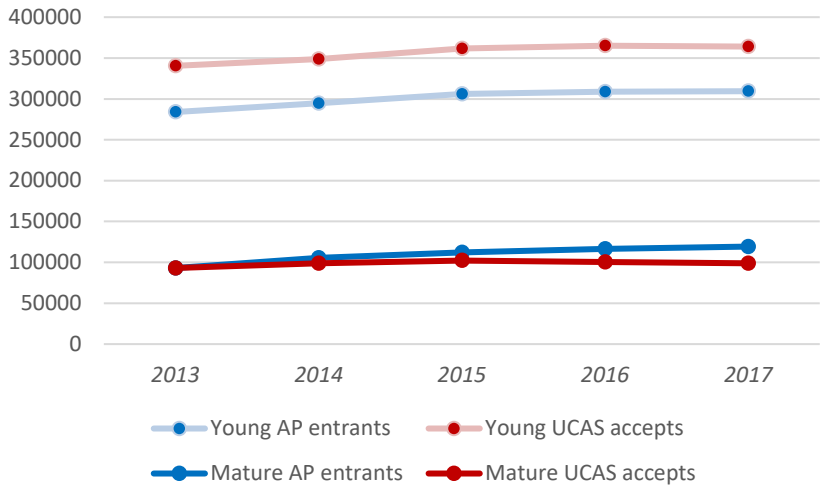


Table 1.1b and Figure 1.1b

The number of young and mature acceptances or entrants from two different data sources, Source A (OfS AP data) and Source C (UCAS public data), by entry year or closest matching apply year. Details of these sources are provided in the Data Sources section above.

		OfS AP entry year or UCAS apply year				
		2013	**2014**	**2015**	**2016**	**2017**
Young	AP entrants	283950	294790	306090	308720	309420
	UCAS accepts	340470	348750	361500	365100	363985
Mature	AP entrants	93110	105530	112380	116600	119320
	UCAS accepts	93135	98695	102210	100385	98960



Interpretation

The national mature student proportion differs quite considerably depending on data source (Table 1.1a and Figure 1.1a): firstly, when based on UCAS instead of OfS AP data it is lower, and secondly, instead of an increase from 2013 to 2017 there is a negligible *decrease*. Because these mature student figures are proportions of the total population, it is unclear whether any changes (or lack of changes) are due to changes in the mature student population, or to changes in the young student population. When absolute student numbers are produced using both datasets (Table 1.1b and Figure 1.1b), several things are apparent. Firstly, numbers of acceptances from the UCAS data source are higher than the numbers of entrants from the OfS AP data source by c.15% for young students, but the opposite is true to some extent for mature students (except in 2013). Secondly, although the numbers of mature students in each dataset were very similar in the first year of data included, this increased (relatively) by 28.1% in the OfS AP data source between 2013 and 2017, whereas the increase seen in UCAS data between the same years was much more modest (6.3%).

The finding that OfS AP data show an increase in the number (and proportion) of mature students whilst the UCAS data show a much smaller increase in number (and a negligible change in proportion) could be due to a couple of differences between the datasets. Specifically, these are that the OfS AP dataset inextricably includes apprenticeships as well as full-time degrees, and includes entrants that made direct (or non-UCAS) applications, whereas the UCAS dataset does not. The mature student increase seen in the OfS AP data could be attributable to an increase in mature student uptake of apprenticeships and/or direct applications (which Cambridge does not offer/accept), whilst uptake of other undergraduate degrees via UCAS (more comparable to the offering at Cambridge) has remained much more stable.

The fact that there are c.15% more young students in the national UCAS data compared to OfS AP data is likely largely attributable to another difference between the two datasets, specifically that the UCAS data are for accepted applicants, and a certain proportion of those can be expected not to progress to the stage of becoming an entrant in the OfS AP data. If it is hypothesised that mature students are more likely than young students to undertake an apprenticeship as opposed to a degree, or to make a direct application, then under this hypothesis the presence of these entrants in the OfS AP data only would also explain the observation that numbers of mature students are actually usually a little lower in the latter rather than higher, because the increase in numbers from apprenticeships and direct applications would counteract the effect of the decline from acceptance to entrance for them more so than for young students.

Unfortunately, to the author's knowledge, apprenticeships data are only available with ages 19-24 aggregated together, so although this seems to make sense, it has not been possible to test the hypothesis about apprenticeships (and direct applications). However, regardless of the explanation for the difference between data from the OfS AP and UCAS datasets, the fact remains that in the UCAS dataset there is a smaller increase in mature student numbers, and no increase in mature student proportion.

In summary, if apprenticeships and direct applications were not included in the OfS AP dataset, which would make the courses included more comparable to the offering at Cambridge, it is likely that – instead of increasing – the sector's proportion of mature entrants would have remained more-or-less stable between 2013 and 2017, as it does in data sourced from UCAS.

1.2 Further investigation of Cambridge data and trend

Approach

As noted in the Introduction, previous work using OfS AP data (Source A) indicated that the proportion of mature entrants at Cambridge has been decreasing in recent years. This was investigated further here primarily by comparing Cambridge data from three sources: Source A (OfS AP data), Source B (UCAS Cambridge data) and Source F (Cambridge internal data) (Figure 1.2a). The effect of excluding applicants for the Cambridge Graduate Course in Medicine (CGCM) was also examined (Figure 1.2b).

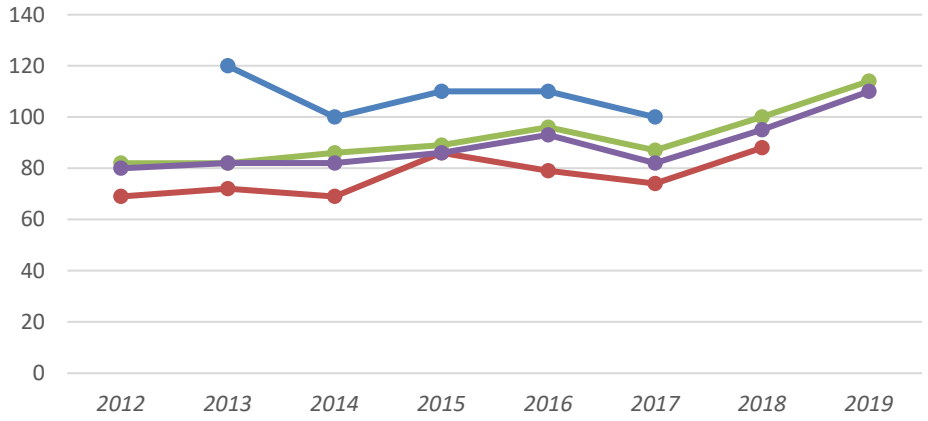
The effect of using Apply Year as opposed to Entry Year in Sources B and D was also assessed initially, but was found to have little impact on the total numbers of students or proportion of mature students, certainly since 2014. This is quite unsurprising as students in a given Apply Year will usually be in the same Entry Year unless they defer entry. Therefore because Source A is only available by Entry Year, Entry Year was used rather than Apply Year for all analyses in this section.

Results

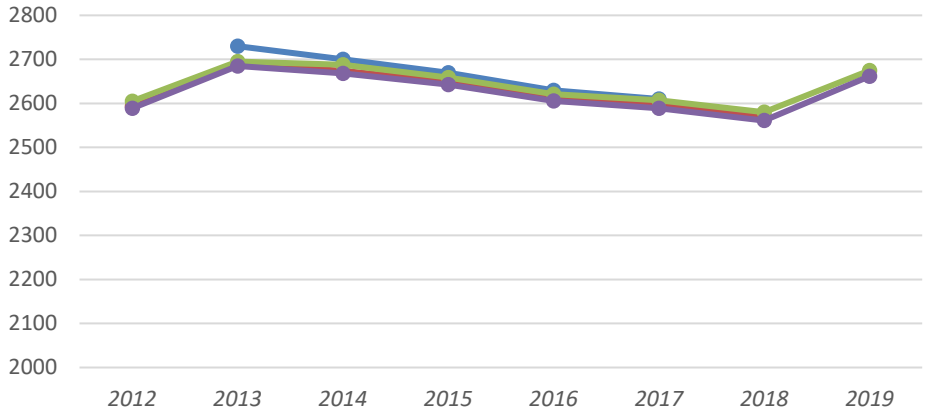
Figure 1.2a

These graphs show either (i) the number of mature acceptances or entrants, (ii) the total number of all acceptances or entrants or (iii) the proportion of mature acceptances or entrants, by Entry Year, according to data from three difference sources: Source A (OfS AP data; Entrant counts only), Source B (UCAS Cambridge data; Acceptances counts only) and Source F (Cambridge internal data; Entrant and Acceptances counts). Details of these data sources are provided in the Data Sources section above. Acceptances/entrants for the CGMC are included in all cases.

(i) number of mature acceptances or entrants



(ii) total number of acceptances or entrants



(iii) proportion of mature acceptances or entrants

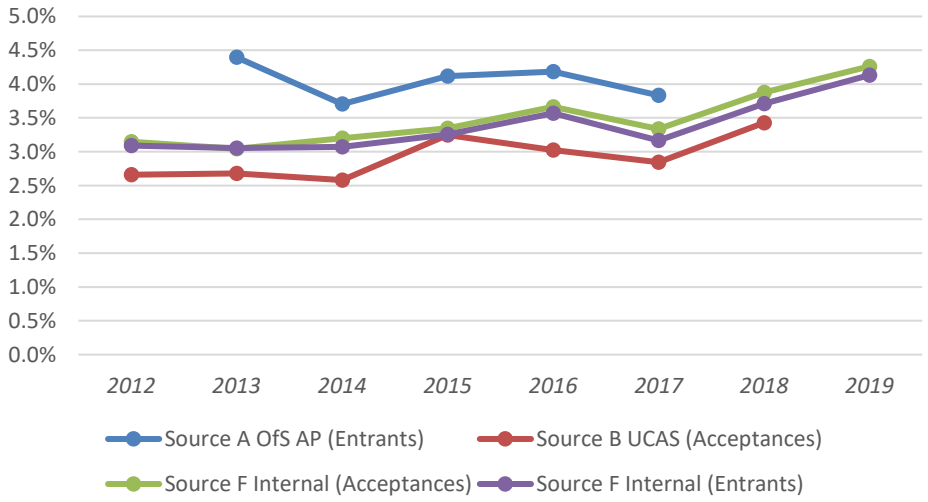
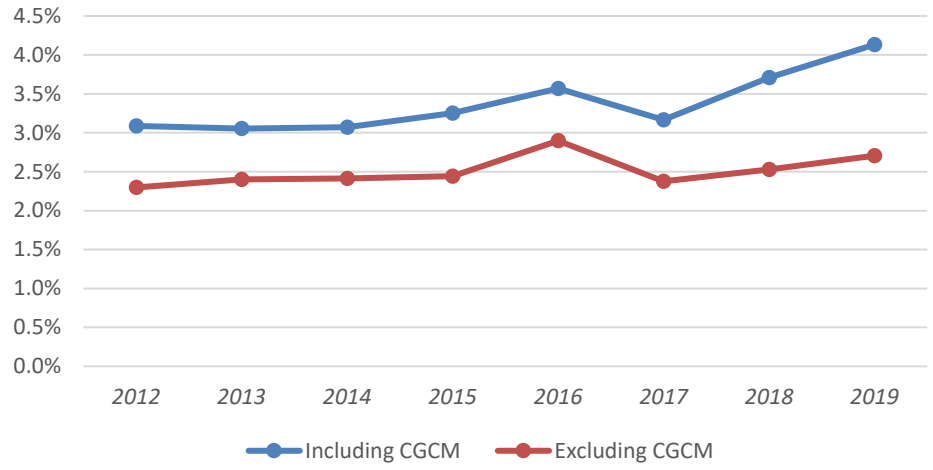


Figure 1.2b

The proportion of mature entrants to Cambridge, by Entry Year, with or without CGCM students included, according to data from Source F (Cambridge internal data). Details of this data source are provided in the Data Sources section above.



Interpretation

Comparisons of Cambridge data from alternative data sources (Figure 1.2a) reveal that in contrast to the mature entrant figures from OfS AP data (Source A), where there is a decline of 20 mature student entrants between 2013 and 2017, there is no evidence of a sustained decline in mature student numbers from the other two data sources (UCAS and Cambridge internal data). Indeed, if just 2013 is treated as an anomaly in the OfS AP data and instead the change between 2014 and 2017 is examined, there is no longer a decline according to the OfS AP data either. The decline in Cambridge mature entrants between 2013 and 2017 which the University committed to investigate thus appears likely to be an anomaly unique to the OfS AP dataset and to the particular data years used, rather than a substantive trend. Furthermore, when UCAS and Cambridge internal data are used to look at additional more recent years of data that are not available in the OfS AP dataset, they indicate that there has been a recent increase in the number and proportion of mature entrants at Cambridge. Given that the OfS AP source figures broadly mirrored Cambridge internal source figures in 2016 and 2017 (albeit generally higher), it seems likely that when the OfS AP source dataset is extended to more recent years, a similar increase will be seen.

Students for the Cambridge Graduate Course in Medicine (CGCM) are included in aggregate OfS AP data (Source A), and therefore they were included in the data from all sources in Figure 1.2a for comparability. The impact of including or excluding CGCM students was investigated (Figure 1.2b) to understand how numbers of such students contribute to the overall mature admissions figures. Examining Cambridge internal data (Source F) shows that for each year between 2012-2017 there were 18-22 CGCM entrants. In the most recent two years 2018 and 2019, this has risen (intentionally) to 31 and 39 students, respectively. CGCM is an undergraduate course but it is unusual in that it is only open to those who already have a first degree and who are therefore, in practice, over 21 on entry, so inclusion of these students in any figures raises the number of mature students with no increase to the number of non-mature students. 18-39 students is a substantial component of Cambridge's total mature student intake, and when CGCM students are excluded the mature student proportion is substantially reduced (Figure 1.2b). Excluding CGCM students reveals that Cambridge's recent increase in mature entrant proportion is almost entirely due to an increase in CGCM entrants only.

In summary, the evidence for a decline in Cambridge's mature student admissions proportion between 2013 and 2017 appears dubious, and in any case, such admissions appear to be on the rise in the two most recent years (almost entirely due to an increase in CGCM entrants).

Although not the primary matter of interest, these results also demonstrate that the source of data has quite a large impact on the number of mature students (Figure 1.2a; numbers vary from a low of 69-88 per year in the UCAS data up to 100-120 per year in the OfS AP data), despite having very little effect (proportionally) on the total number of students of all ages (Figure 1.2a). The effects of data source seen in Figure 1.2a can be largely explained, as follows.

The small difference between the Entrants and Acceptances numbers from Cambridge internal data (Source F) in Figure 1.2a can be explained by some students failing to progress from Acceptance to Entry.

The difference between the OfS AP source data and Cambridge internal source data is entirely explained by the fact that the OfS AP dataset includes students for several courses that are not included in Cambridge internal data (as they are not considered comparable to other undergraduate degrees), specifically the Graduate Diploma in Economics (or similar) and Theology exams[8]. These courses can be excluded from the OfS AP data using individual-level AP data files[9], and doing so reduces the number of mature students in the OfS AP data to the same or slightly fewer than are in the Cambridge internal data (data not shown). These courses are taken almost exclusively by mature students, hence the inclusion of these courses also increases Cambridge's mature student proportion similarly.

The difference between the UCAS source data and Cambridge internal data is at least partly explained by differences in the time point at which a student becomes defined as mature in these datasets – this is summarised above in the Data Sources section, but essentially it is typically an earlier time point in the UCAS (and OfS AP) dataset than in the Cambridge internal dataset. As would be expected in light of this, the total number of students is unaffected, but the number (and proportion) defined as mature is somewhat lower in the UCAS dataset. This could also explain why numbers of mature students in the OfS AP source data actually end up being a little lower than in Cambridge internal data when the Graduate Diploma in Economics (or similar) and Theology exams are excluded.

In summary, the number and proportion of mature students at Cambridge differs depending on the data source used, in an explainable way. It is important to be aware that these differences exist, particularly when selecting datasets to use and/or comparing between datasets.

1.3 Investigation of peer group

Approach

As noted in the Introduction, previous work using OfS AP data (Source A) showed that the University of Cambridge has a much lower proportion of mature entrants compared to the sector, and furthermore that the University's proportion has been in decline over the last 5 years whereas the sector's proportion has been increasing, although these latter findings now seem dubious. Of course the sector is very broad, encompassing a large number of HE providers, many with a very different

[8] Although the OfS AP dataset includes apprenticeships, it does not include them for Cambridge in practice because the University of Cambridge does not offer any. CGCM students are included in all data sources in Figure 1.2a so this is also not an explanation.
[9] Unlike the aggregate-level OfS AP datasets (Source A), these are not publicly available. The OfS sent each institution's individual-level data directly to them, only.

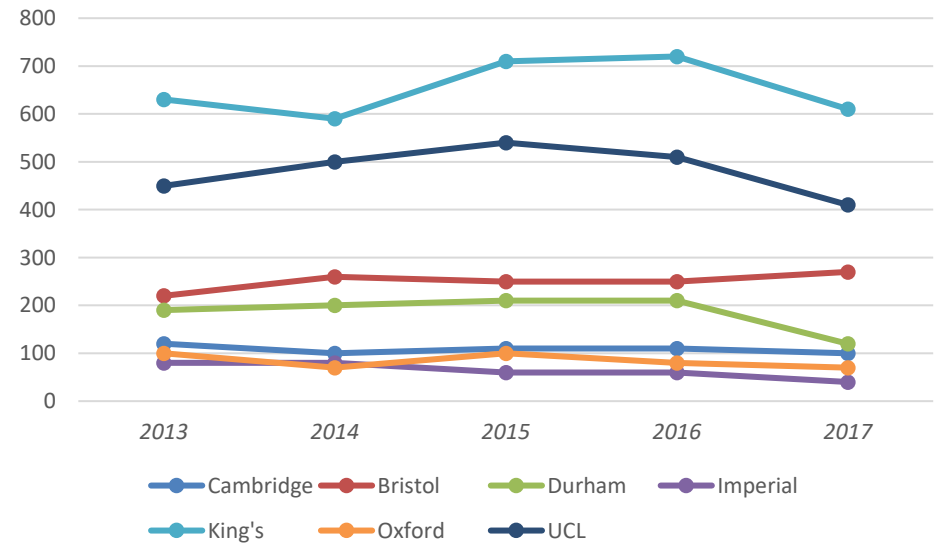
offering to Cambridge. Therefore a brief comparison of Cambridge's mature admissions with those of some peer institutions which also highly selective was undertaken to contextualise the Cambridge figures, using the same OfS AP data. For this purpose, the following institutions were used as a peer group, as in previous work[10]: Oxford, Bristol, Durham, Imperial, King's and University College London (UCL). The comparison included numbers (Table 1.3a and Figure 1.3a) and proportions (Table 1.3b and Figure 1.3b) of mature entrants, as well as the relative change in these (Tables 1.3c and 1.3d). The overall sector figures were included for reference.

Results

Table 1.3a and Figure 1.3a

The numbers of mature entrants for Cambridge, several other individual HE providers and the sector, by entry year. Data are from Source A (OfS AP data), details of which are provided in the Data Sources section above.

	2013	2014	2015	2016	2017	CHANGE
Cambridge	120	100	110	110	100	-20
Bristol	220	260	250	250	270	50
Durham	190	200	210	210	120	-70
Imperial	80	80	60	60	40	-50
King's	630	590	710	720	610	-20
Oxford	100	70	100	80	70	-20
UCL	450	500	540	510	410	-30
SECTOR	93110	105530	112380	116600	119320	26210



[10] R. Sequeira (May 2019) *Summary of our Home undergraduate admissions data (by overall number of entrants, and their POLAR4 and IMD quintile breakdown) compared to six peer institutions*

Table 1.3b and Figure 1.3b

The proportions of mature entrants for Cambridge, several other individual HE providers and the sector, by entry year. Data are from Source A (OfS AP data), details of which are provided in the Data Sources section above.

Percentages reported to 1 d.p.

	2013	2014	2015	2016	2017	CHANGE
Cambridge	4.4%	3.7%	4.1%	4.3%	3.8%	-0.6%
Bristol	5.8%	6.1%	5.8%	5.5%	5.9%	0.1%
Durham	5.7%	5.9%	6.3%	5.8%	3.4%	-2.3%
Imperial	6.5%	6.3%	4.7%	4.4%	2.8%	-3.7%
King's	20.5%	18.3%	20.6%	20.0%	18.0%	-2.5%
Oxford	3.6%	2.8%	3.6%	3.2%	2.9%	-0.7%
UCL	14.1%	15.5%	17.1%	16.6%	13.3%	-0.8%
SECTOR	24.7%	26.4%	26.9%	27.4%	27.8%	3.1%

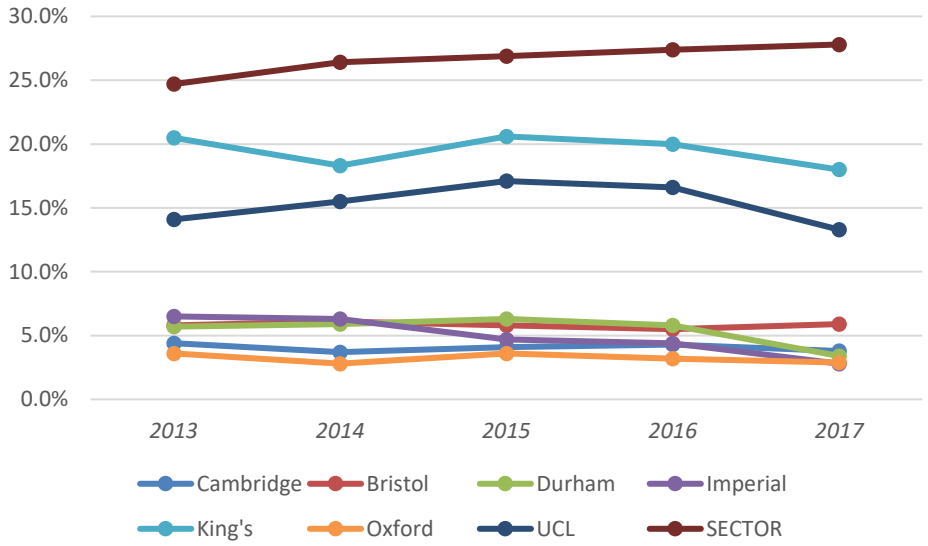


Table 1.3c

The relative change in number of mature students compared to the first year of data (i.e. 2013) for Cambridge, several other individual HE providers and the sector, by entry year. Data are from Source A (OfS AP data), details of which are provided in the Data Sources section above.

Percentages reported to 1 d.p.

	2013	2014	2015	2016	2017
Cambridge	*n/a*	-16.7%	-8.3%	-8.3%	-16.7%
Bristol	*n/a*	18.2%	13.6%	13.6%	22.7%
Durham	*n/a*	5.3%	10.5%	10.5%	-36.8%
Imperial	*n/a*	0.0%	-25.0%	-25.0%	-50.0%
King's	*n/a*	-6.3%	12.7%	14.3%	-3.2%
Oxford	*n/a*	-30.0%	0.0%	-20.0%	-30.0%
UCL	*n/a*	11.1%	20.0%	13.3%	-8.9%
SECTOR	*n/a*	13.3%	20.7%	25.2%	28.1%

Table 1.3d

The relative change in proportion of mature students comapred to the first year of data (i.e. 2013) for Cambridge, several other individual HE providers and the sector, by entry year. Data are from Source A (OfS AP data), details of which are provided in the Data Sources section above.

Percentages reported to 1 d.p.

	2013	2014	2015	2016	2017
Cambridge	*n/a*	-15.9%	-6.8%	-2.3%	-13.6%
Bristol	*n/a*	5.2%	0.0%	-5.2%	1.7%
Durham	*n/a*	3.5%	10.5%	1.8%	-40.4%
Imperial	*n/a*	-3.1%	-27.7%	-32.3%	-56.9%
King's	*n/a*	-10.7%	0.5%	-2.4%	-12.2%
Oxford	*n/a*	-22.2%	0.0%	-11.1%	-19.4%
UCL	*n/a*	9.9%	21.3%	17.7%	-5.7%
SECTOR	*n/a*	6.9%	8.9%	10.9%	12.6%

Interpretation

The absolute number of mature student entrants that Cambridge admitted in 2013-17 only exceeded that of Oxford and Imperial (Table 1.3a and Figure 1.3a), whilst the rest of the selected peer group admitted many more mature students than Cambridge (with the exception of Durham in 2017/18 only). These differences could simply reflect size of institution, so mature entrant proportion was considered next. The proportion of mature students admitted to Cambridge only consistently exceeded the proportion for Oxford (Table 1.3b and Figure 1.3b), although in 2017 it also exceeded that of Durham and Imperial. King's and UCL both consistently have much higher proportions of mature students than Cambridge, although they still fall short of the overall proportion for the sector.

In terms of relative changes in number and proportion of mature students between 2013 and 2017 (Tables 1.3c and 1.3d), Cambridge is unremarkable compared to the selected peer institutions. Although (according to these OfS AP data) Cambridge's number and proportion of mature students have declined whilst those of the sector have increased, most of the other institutions here have also seen declines, with those of Durham, Imperial and Oxford notably steep compared to Cambridge.

In summary, Cambridge is not unique in having low numbers and proportions of mature students compared to the sector, nor in the fact that these have been declining in recent years (according to the OfS AP dataset). In fact, in 2017, Oxford, Imperial and Durham all had lower proportions of mature students than Cambridge, and they have all seen steeper relative declines between 2013 and 2017 than Cambridge.

2 Investigation of the mature admissions gap between Cambridge and the sector: When in the admissions process does the gap primarily occur?

The findings presented in Section 1 show that the recent decline in Cambridge's mature student admissions seen in OfS AP data (Source A) is actually dubious (and in any case, it has likely ceased), and that the sector's recent increase in mature admissions may only be in numbers of apprenticeships and direct applications (which Cambridge does not offer/accept). This fulfils the commitment in the University's APP to "investigate further the reasons why the proportion of our mature entrants has decreased over the last five years, especially when the proportion of mature entrants across the sector has increased"[11]. However, these recent trends aside, the University of Cambridge also has a very large mature admissions gap compared to the sector (with only 3.8% of entrants being mature in 2017/18 compared to 27.8% for the sector[12]), and this warrants further investigation in order to understand the reasons for it and to facilitate progress on the second commitment in the University's APP relating to mature admissions: that the University expects to be "able to outline our approach to minimising gaps for this group by June 2020." In order to provide focus for an investigation of the reasons for the large overall mature admissions gap, the stage of the admissions process at which it primarily occurs was examined first.

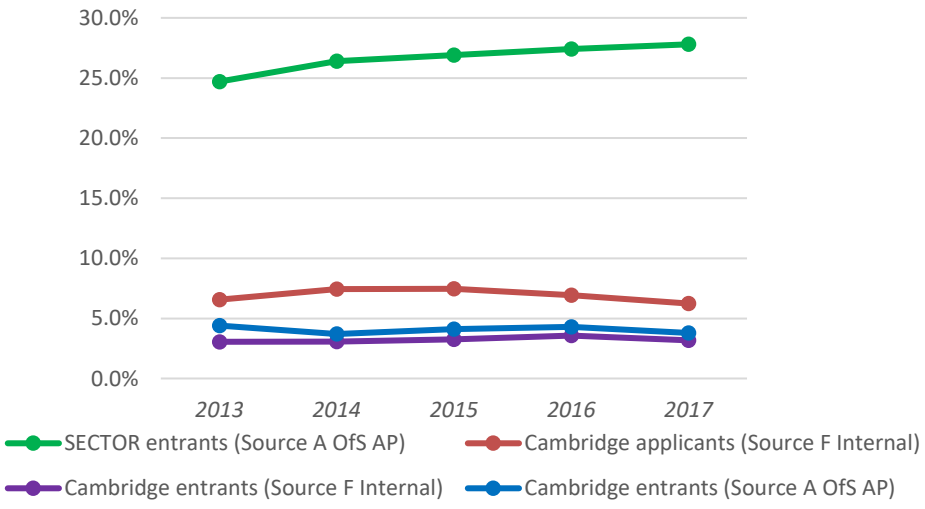
Approach

To investigate when in the admissions process the mature admissions gap between Cambridge and the sector primarily occurs, this gap was compared to the gap between the mature proportions of Cambridge applicants and entrants (Figure 2).

Results

Figure 2

The proportion of mature applicants or entrants to Cambridge or the sector, by Entry Year, according to data from two sources: Source A (OfS AP data; sector and Cambridge entrant proportions) and Source F (Cambridge internal data; Cambridge applicant and entrant proportions). Details of these data sources are provided in the Data Sources section above. Acceptances/entrants for the CGMC are included in all cases.



[11] Access and Participation Plan 2020-21 to 2024-25
https://www.undergraduate.study.cam.ac.uk/files/publications/university_of_cambridge_app_2020_25.pdf

[12] *ibid*

Interpretation

The magnitude of the overall mature admissions gap is shown in Figure 2, as the difference between Cambridge's entrant proportion (blue line) and the sector's entrant proportion (green line) based on OfS AP data (Source A). To get a sense of the amount of this gap that is due to a low proportion of mature applications to Cambridge as opposed to a relatively low mature student success rate having applied, the mature proportion of Cambridge applicants is plotted (red line). The Cambridge internal data source was used for this because applicant data are not available from the OfS AP source. These Cambridge internal data should not be compared directly to data from the OfS AP source because (as shown in Section 1) the number and proportion of mature students is lower in the internal data (because the OfS AP data include courses that the internal data do not). The mature applicant proportion from internal data (red line) can safely be compared to the mature entrant proportion from internal data (purple line) though, and the difference between these lines indicates the part of the overall gap that is due to a lower success rate having applied (because if mature students had the same chance of admission having applied as their young counterparts, their entrant proportion (purple line) would be expected to be the same as their applicant proportion (red line)).

The remainder of the overall mature admissions gap would then be the component that is due to a lower proportion of mature applications to Cambridge in the first place. It is not possible to say precisely what the size of this component is because this would require comparing the mismatching datasets, but it would be approximately the size of the overall gap in OfS AP data (blue - green) minus the part of the gap that internal data show is due to lower success rate (red - purple); this would certainly appear to be the majority of the overall gap. Although this is only an approximation because it involves comparing differences in proportion from mismatching datasets, the impact of the mismatch is likely to be relatively small – the effect this has on the proportion of Cambridge entrants is only the difference between the purple and blue lines. As such, the conclusion that the part of the gap due to low mature application proportion is greater than the part due to lower success rate is robust.

In summary, the majority of the overall mature admissions gap is accounted for by a low proportion of mature applicants to Cambridge, rather than by a low success rate of mature applicants to Cambridge. The implication of this finding is that the low mature application proportion should be the focus of the present investigation into reasons for the overall gap. Another reason for focussing on applications instead of success rate is that the latter has already been investigated[13].

[13] R Sequeira (February 2019) *Self-assessment for the Access and Participation Plan - Identifying applicant characteristics for which there are admissions gaps at the University of Cambridge* https://www.cao.cam.ac.uk/sites/www.cao.cam.ac.uk/files/2019_entry_rate_self-assessment_paper.pdf

3 Investigation of the mature admissions gap between Cambridge and the sector: Exploring factors which could explain why mature students comprise a relatively small proportion of Cambridge applicants

The findings in Section 2 demonstrate that the majority of the overall Cambridge mature admissions gap is accounted for by a low proportion of mature applicants to Cambridge, rather than by a low success rate of mature applicants to Cambridge. This section will explore the following factors that might contribute to explaining why mature students comprise a relatively small proportion of Cambridge applicants:

- course subject choice;
- distance of study from home;
- region of domicile;
- application timing;
- type and grade(s) of HE entry qualifications.

Factors have only been included here if they could contribute to the mature admissions gap between Cambridge and the sector in the OfS AP dataset. Mature students may be more likely to study part-time than young students, but the AP dataset figures are for fulltime courses only so this cannot explain any of the gap in those figures, and this factor is not included here. Mature students may also be more likely to undertake distance learning courses, but since the majority of these would be part-time and therefore also not included in the OfS AP dataset figures, this factor is not investigated here either.

Approach

In order for a factor to likely be a contributing explanatory factor to Cambridge's low mature student application proportion, there must be reason to think it would disproportionately discourage or prevent mature students from applying to Cambridge, more so than young students. These factors will therefore be things that mature students are disposed towards or are more likely to do than young students, and which are restricted for them at Cambridge or incompatible with entry to Cambridge.

Generally the extent of what it has been possible to conclude about each of the factors considered is whether or not each is likely to be a contributing explanatory factor to Cambridge's low mature student application proportion. With the exception of course subject choice, the impact they might have has not been quantified. Further work could attempt to quantify the impact that some or all of the other factors have; this is discussed further in the Conclusions section.

3.1 Course subject choice

Approach

The role of course subject choice was investigated in line with the overall Approach for Section 3 explained above. Specifically, the investigation looked to identify course subjects that mature students are more likely to choose compared to young students, but which are not offered at Cambridge, as the existence of such course subjects could be a contributing explanatory factor. The proportion of the overall Cambridge mature admissions gap that might be accounted for by this factor was then estimated by adjusting the sector proportion of mature admissions to include only courses for which there is a corresponding Cambridge course.

Results

The UCAS mature report (Source D) found that "mature students [are] typically drawn to a smaller range of courses", and specifically that they were far more likely to study subjects in JACS[14] Group B "Subjects allied to medicine" than their younger counterparts, and also more likely to study subjects in Group X "Education". The report data revealed that in 2017, 24.7% of mature students nationally were studying "subjects allied to medicine" (JACS Group B), compared to only 6.8% of 18-year-old students. The University of Cambridge does not offer courses corresponding to most of the subgroups within JACS Group B, the arguable exceptions being JACS Group B subgroups B0 and B1 which have similarity to elements of the Cambridge Natural Sciences course. Considering the remaining JACS Group B subgroups for which Cambridge does not offer corresponding course(s) (B2-9, BB), analysis of UCAS public data (Source C) reveals that in 2017 23.6% of mature students nationally were studying these, compared to only 6.9% of young students. Thus, even if JACS Group B subgroups B2-9 and BB were the only course subjects unavailable at Cambridge, 23.6% of all mature students would be unable to study their apparently desired course at Cambridge, compared to only 6.9% of young students. This analysis can be extended across all JACS Groups: considering all JACS subgroups for which there is no corresponding Cambridge course (Appendix 1), 58.7% of all mature students would be unable to study a course akin to their apparently desired course at Cambridge, compared to only 36.1% of young students.

The proportion of the overall Cambridge mature admissions gap that might be accounted for by this factor was estimated by adjusting the sector proportion of mature admissions to include only JACS subgroup courses for which there is a corresponding Cambridge course (Appendix 1). Unfortunately this was not possible with data from the OfS AP dataset (Source A) because JACS (sub)group information is not available, so UCAS public data (Source C) was used instead. This is not ideal because there is a considerable difference in the mature admissions proportion based on each of these sources (in 2017, the proportion was 27.8% and 21.4% for OfS AP and UCAS sources, respectively; Section 1.1). Nonetheless, when the 2017 national proportion of mature admissions based on UCAS data is adjusted (to include only JACS subgroup courses for which there is a corresponding Cambridge course), it falls from 21.4% to 14.9%. A similar proportional decrease to the 2017 mature proportion based on OfS AP data would reduce it from 27.8% to 19.4%.

Interpretation

A group of course subjects were identified which are not offered at Cambridge but which are disproportionately chosen by mature students nationally as opposed to young students (58.7% compared to 36.1%). Course subject choice is therefore likely to be an explanatory factor contributing to Cambridge's low mature student application proportion.

By adjusting the sector's proportion of mature admissions to include only JACS subgroup courses for which there is a corresponding Cambridge course it was estimated that around a third of the overall 2017 mature admissions gap between Cambridge and the sector (sector 27.8%, Cambridge 3.8%, gap 24%) might be explained by this factor.

[14] HESA guide to JACS 3.0: Principal subject codes
https://www.hesa.ac.uk/support/documentation/jacs/jacs3-principal

3.2 Distance of study from home

Approach

The role of distance of study from home was investigated in line with the overall Approach for Section 3. Specifically, the investigation compared typical distance of study from home for mature and young students nationally, and how this compares to students at Cambridge. If mature students nationally are more likely to study close to home and this is to some extent incompatible with studying at Cambridge, this could be a contributing explanatory factor.

Results

Data from UCAS mature report (Source D) show that mature students nationally tend to travel shorter distances to their HE provider from their home than 18 year old students; an exploration of the underlying drive time data (drive time from home postcode to provider [using specific campus location where applicable], rounded to the nearest 10 minutes) revealed that 57.1% of mature students lived 20 or fewer minutes away and only 21.4% lived 60 or more minutes away. By contrast, only 23.9% of 18-year-olds lived 20 or fewer minutes away and 58.4% lived 60 or more minutes away. This is consistent with another finding of UCAS report – that mature students are likely to live at home whilst studying: in 2017 52% aged 21-25 did, and over 75% of those aged over 30.

The vast majority of Cambridge students - both mature and non-mature – tend to be from at least an hour away (Table 3.2). This means that the vast majority will also not be living at home because Cambridge undergraduates usually need to be resident in Cambridge "within 3 miles of Great St. Mary's church" during term time.[15]

Table 3.2

The proportions of Cambridge and sector mature students, and of Cambridge non-mature and sector 18 year old students, that have a travel drive time (rounded to the nearest 10 minutes) of 60 minutes or more from home to their HE provider. Sector data are sourced from Source D (UCAS mature report), whilst Cambridge data are from Source B (UCAS Cambridge data) and are for all accepted applicants in the 2012-2018 Apply years combined. Further details are provided in the Data Sources section above.

Percentages reported to 1 d.p.

	Cambridge	Sector
Non-mature (Cambridge) or 18 only (national)	93.3%	58.4%
Mature	87.6%	21.4%

Interpretation

These results show that mature students nationally - more so than young students nationally - prefer to stay living at home, or at least to attend a provider near their home even if they live away from home. By contrast, (mature) students at Cambridge rarely do either, which is indicative of the fact that doing so is often incompatible with study at Cambridge. This is therefore likely to be a contributing explanatory factor to Cambridge's low mature student application proportion.

[15] Cambridge students - Residing outside the University's precincts https://www.cambridgestudents.cam.ac.uk/new-students/manage-your-student-information/personal-information/residing-outside-universitys

3.3 Region of domicile

Approach

Region of domicile was investigated as a potential explanatory factor (but its interaction with region of study was not, as this is already covered by the "distance of study from home" factor above), in line with the overall Approach for Section 3. Specifically, applying the usual criterion for determining that a factor is likely to be explanatory, the investigation looked to identify region(s) that mature students are more likely to be from than young students (Figure 3.3), and that could make attending Cambridge particularly problematic, because the existence of such regions could be a contributing explanatory factor.

Results

Figure 3.3

The proportions of sector non-mature and mature students from each UK region of domicile, from data Source C (UCAS public data; details of which are provided in the Data Sources section above). Figures are derived from accepted applicant numbers for 2012-2018 Apply year cycles combined.

Interpretation

Figure 3.3 shows that there are unsurprisingly some differences in the regional domicile distributions of young and mature students nationally. Most of these are small, the two largest (in the direction of mature student over-representation) being for Scotland and London. Of these, London is one of the closest domicile regions to Cambridge so would actually seem a relatively unproblematic domicile (and indeed nearly a third of Cambridge's mature student acceptances in the 2012-2018 Apply Years came from there according to UCAS Cambridge data (Source B), figures not shown). Although Scotland is far away, such a small proportion of Cambridge students (of any age) come from Scotland that it seems unlikely that this would have much impact on Cambridge's mature student application proportion. It is also worth noting that mature students are somewhat less likely to be from the region in which the University of Cambridge is located i.e. the South East, and an argument (converse to the usual criterion) could be made for this contributing to Cambridge's low mature application proportion, but one might expect this to be largely offset by the over-representation of mature students from London which is also close to Cambridge.

In summary, it seems unlikely that the differences in the regional domicile distributions of young and mature students nationally are severe enough overall to disproportionately discourage or prevent mature students from applying to Cambridge, more so than young students. In the author's view, region of domicile is unlikely to be a substantive explanatory factor for Cambridge's low mature student application proportion.

3.4 Application timing

Approach

The role of course subject choice was investigated in line with the overall Approach for Section 3. Specifically, the investigation looked to identify whether or not mature students nationally are more likely than young students to apply through UCAS after the October Cambridge application deadline, because application after that deadline is incompatible with entry to most Cambridge Colleges (the exception to this is four Colleges which only accept mature students; they have a second, later deadline in March). Application timing could therefore be a contributing explanatory factor if so.

Results

Data from UCAS mature report (Source D) show that mature students are less likely than young students to apply before the UCAS October deadline (2.7% do compared to 8.4%).

Interpretation

Mature students nationally are more likely than young students to apply through UCAS after the October deadline. Mature students applying after the October deadline would not actually be prevented from applying to Cambridge, but they would be limited to applying for a place at a mature College, and these four Colleges only offer a fraction of the places potentially available at Cambridge[16]. Therefore, on the face of it, application timing could be explanatory factor: mature students nationally are more likely to apply after the October deadline, and this is incompatible with entry to the majority of Cambridge Colleges. However, although this could disproportionately inhibit mature student applications, it is unclear why mature students would be *unable* to apply before the October deadline if they wanted to apply for a place at a non-mature Cambridge College. Rather, the fact that fewer mature students nationally tend in practice to apply by the October deadline is probably simply because they are less likely (for other reasons) to be applying to courses that require it. In the author's view, this is unlikely to be a substantive explanatory factor for Cambridge's low mature student application proportion.

3.5 Type and grade(s) of HE entry qualifications

Approach

The role of type and grade(s) of HE entry qualifications was investigated in line with the overall Approach for Section 3. Specifically, the investigation looked to identify whether or not mature students are more likely than young students to have entry qualification types and/or grades that are incompatible with entry to Cambridge, as if so this could be a contributing explanatory factor.

This research would ideally have utilised complete national data of all HE entrant qualifications and grades (or at least tariff) broken down by age. Unfortunately, despite an extensive search of potential

[16] This proportion may decrease somewhat for 2021 entry onwards when one of the four mature Colleges - Lucy Cavendish College - changes its admissions policy to accept non-mature students.

data sources (particularly UCAS and HESA), the necessary data could not be found either publicly available or available to purchase through the UCAS EXACT service. The relevant data that it was possible to obtain and analyse are presented below.

Results

Data concerning the proportions of mature and young UK students that were accepted to providers classified by UCAS as higher, medium and lower tariff point providers were obtained from UCAS mature report (Source D). More than 55% of mature students were accepted to lower tariff point institutions in 2017, and less than 15% to higher tariff point institutions. By definition, approximately equal numbers of UK 18 year olds are accepted to providers in each category.

Data concerning the most common types of entry qualification were obtained from the UCAS mature report (Source D) for mature students (Table 3.5a) and UCAS public data (Source C) for 18 years olds (Table 3.5b).

Table 3.5a

The proportions of each mature age group that hold each type of entry qualification. Data are from Source D (UCAS mature report; details of which are provided in the Data Sources section above), and are for accepted applicants in the 2017 Apply year.

Percentages reported to 1 d.p.

Qualification type	Age category			
	21-25	26-30	31-35	36 and over
A level only	12.7%	5.5%	3.4%	2.9%
Access course	15.8%	25.7%	26.7%	20.7%
Degree	16.6%	17.7%	15.0%	15.4%
GCSE/O level	3.5%	5.6%	7.0%	7.3%
Occupational/Vocational/QCF only	26.4%	16.2%	15.7%	18.4%
Other	12.6%	15.1%	17.9%	24.0%
Other non UK	3.3%	4.8%	5.5%	4.7%
Scottish only	9.1%	9.4%	8.8%	6.8%

Table 3.5b

The proportions of 18 year olds that hold each type of entry qualification. Data are from Source C (UCAS public data; details of which are provided in the Data Sources section above), and are for accepted applicants in the 2017 Apply year.

Percentages reported to 1 d.p.

Qualification type	Age 18
A Level only	62.6%
BTEC only	10.4%
A Level & BTEC	7.8%
SQA only	5.8%
IB only	0.9%
Other	12.5%

Alternative data concerning the proportions of young and mature HE entrants with different types of entry qualification were obtained from HESA UKPI data (Source E; Table 3.5c). Some entry qualification grade data for young and mature HE entrants were also obtained from this source (Figure 3.5a).

Table 3.5c

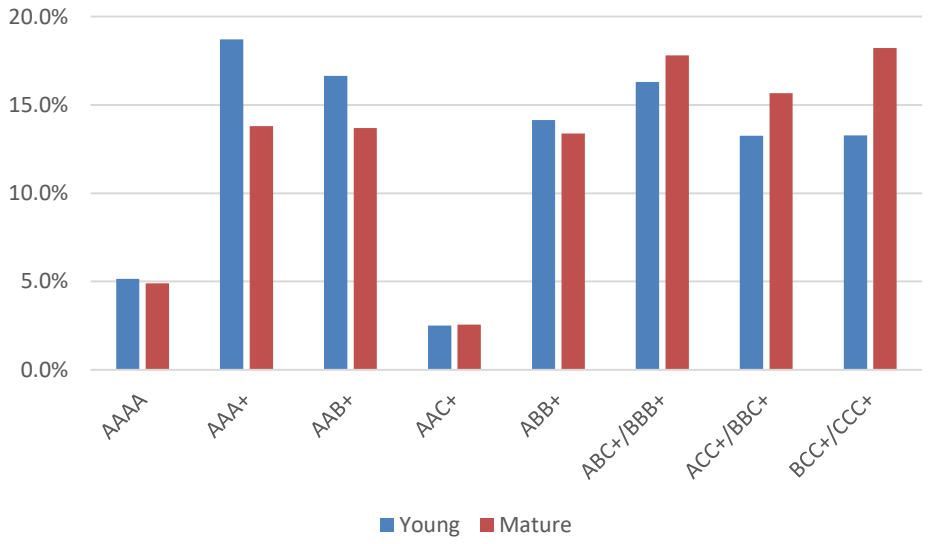
Entry qualification type proportions for young and mature entrants to full-time first degree courses, from Source E (HESA UKPI data)[17]. Data are for the 2016 and 2017 Entry Years combined.

Percentages reported to 1 d.p.

Qualification type	Young	Mature
Groups 1-8: A level/VCE/Advanced Higher/Scottish Highers (BCC+/CCC+)	46.5%	5.4%
Group 19: International Baccalaureate	1.0%	0.2%
Group 22: BTEC	23.2%	11.9%
Groups 9-15: Tariff-bearing, but NOT in groups 1-8, 19, 22	23.3%	9.3%
Group 20: HE level foundation course	0.2%	0.5%
Group 21: Access course	0.8%	18.1%
Group 23: Higher education qualification – Postgraduate	0.0%	1.5%
Group 24: Higher education qualification – First degree	0.1%	8.3%
Group 25: Higher education qualification – Other undergraduate	3.3%	26.9%
Group 26: No previous qualification	0.1%	4.6%
Groups 17, 27, 28: Other & unknown	1.5%	13.2%

Figure 3.5a

Distribution of entry qualification grades for young and mature entrants to full-time first degree courses with a Group 1-8 qualification (i.e. A level, VCE, Advanced Higher or Scottish Highers at grade BCC+/CCC+), from Source E (HESA UKPI data)[18]. Data are for the 2016 and 2017 Entry Years combined.



Interpretation

As explained above, the present investigation looked to identify whether or not mature students are more likely than young students to have entry qualification types and/or grades that are incompatible with entry to Cambridge.

The data concerning tariff point category of provider (from Source D) which show that mature students apply disproportionately to lower tariff point providers could suggest that mature students

[17] Further detail on the 28 entry qualification groups is available under the "entry qualification groups" heading on the HESA Performance Indicators definitions webpage
https://www.hesa.ac.uk/data-and-analysis/performance-indicators/definitions

[18] *ibid*

tend to have lower qualification tariff points on entry *if* it is assumed that mature and young students alike tend to apply for the highest category of tariff point provider that they can given their actual attained tariff points. In any case, these data show that applying to lower tariff point providers is something that mature students are more likely to do than young students, and that is incompatible with applying to Cambridge (which is a higher tariff point institution).

The UCAS data presented above concerning the most common types of entry qualifications for young and mature students (Tables 3.5a and 3.5b) are not easy to compare because the categories do not align well, but they show that A Levels in particular are much more common for young students compared to mature students, whilst for mature learners more common qualifications include an Access Course, degree, or occupational/vocational/QCF qualification. A very basic comparison (not taking grades or subject requirements into account) of the common qualifications that mature and 18 year old entrants present with nationally (Tables 3.5a and 3.5b) with typical Cambridge entry requirements for some of the most common specified UK qualifications for entry (Table 3.5d) suggests that mature students are more likely to have qualifications that are incompatible with entry to Cambridge: only 18.3-29.3% (depending on age category) of mature students have qualification types that are definitely accepted (indicated in green in Table 3.5d; A Levels and Degrees), compared to 69.3% of 18 year olds (A Levels, SQA, IB).

Table 3.5d

Typical Cambridge entry requirements, showing for each common UK qualification type whether or not it is typically accepted for entry to Cambridge, and if so what the typical offer level is.

SQA = Scottish Qualifications Authority, IB = International Baccalaureate, BTEC = Business and Technology Education Council, QCF = Qualifications and Credit Framework

Qualification type	Whether or not typically accepted for entry to Cambridge
A Levels only	Yes (A*AA or A*A*A)
Degree	Yes (2.1 or above)
SQA only	Yes (AAA, bands may be specified)
IB only	Yes (40-42, 776 in Higher)
Access course only	Yes for PBS and most Arts (all Distinctions); not accepted Sciences or Economics
BTEC & A Level	Could be acceptable depending on specifics
Occupation/Vocational/QCF only	Usually no
BTEC only	Usually no
GCSE/O level only	No

In comparison to the UCAS data concerning the most common types of entry qualifications for young and mature students, the comparable data from HESA UKPI data (Source E; Table 3.5c) are obtained from exactly the same source so there is no issue with aligning categories. However, the categories are far from ideal for the present purpose[19]. For example, A Levels and Advanced Highers which Cambridge does accept for entry are combined with Scottish Highers, which Cambridge does not accept. There are actually very few qualification categories in this data source that are definitely acceptable for entry to Cambridge – just the IB and First degree groups. Therefore these data are not suitable for assessing the proportions of mature and young students that have entry qualification types and/or grades that are incompatible with entry to Cambridge.

[19] Further detail on the 28 entry qualification groups is available under the "entry qualification groups" heading on the HESA Performance Indicators definitions webpage
https://www.hesa.ac.uk/data-and-analysis/performance-indicators/definitions

The entry qualification grade data for young and mature HE entrants (Figure 3.5a), for HESA Group 1-8 qualifications only, show that mature entrants are somewhat less likely than young entrants to have AAA+ grade profiles in A Levels or equivalent, or in other words they are less likely to have qualifications compatible with entry to Cambridge. However, this only applies to the 5.4% of mature entrants that have this type of qualification.

In summary, although it is very difficult to examine conclusively with the available data, the evidence presented here is at least consistent with the conclusion that mature students are more likely than young students to have entry qualification types and/or grades that are incompatible with entry to Cambridge. It is reasonable to assume that most potential applicants with incompatible qualifications would not apply to Cambridge, so this factor would contribute primarily to Cambridge's low mature student application proportion rather than affecting application success rate. Overall this seems likely to be a contributing factor to Cambridge's low mature student application proportion.

Conclusion

This paper set out initially to investigate two fundamental characteristics of the collegiate University's mature admissions gap and recent trends, in comparison to the sector, which had been identified in previous analysis using OfS Access and Participation data[20,21]. Specifically, these were that the University's proportion of mature entrants had been in decline between 2013 and 2017, and that this was in contrast to the sector's proportion increasing during the same period.

Drawing on a comparison between data sources, I found that the recent decline in Cambridge's mature student entrants is actually dubious (it appears likely to be an anomaly unique to the OfS AP dataset and to the particular data years used) and in any case, that Cambridge mature admissions appear to be on the rise in two more recent data years (almost entirely due to an increase in CGCM entrants). By comparing Cambridge to a selected peer group of other Universities using the OfS AP dataset I also found that Cambridge is not unique (in that dataset) in having low numbers and proportions of mature students compared to the sector, nor in the fact that these have been declining in recent years. In fact, in 2017, Oxford, Imperial and Durham all had lower proportions of mature students than Cambridge, and they all had steeper relative declines between 2013 and 2017 than Cambridge. Moreover, I found that the sector's recent increase in mature admissions is likely only in numbers of apprenticeships and direct applications (which Cambridge does not offer/accept), and that without these included (increasing comparability with Cambridge) the sector's mature entrant proportion would likely have remained more-or-less stable during the time period.

Having completed the initial part of the investigation, I turned to investigating the reasons for the University's overall admissions gap compared to the sector (i.e. the fact that in 2017/18, Cambridge had 3.8% mature entrants compared to 27.8% for the sector). I focussed on exploring factors that might explain the low proportion of mature applicants to Cambridge, because I found that the majority of the overall admissions gap is due to this (as opposed to the lower success rate of mature applicants to Cambridge, having applied). I found that the following factors are *likely* to contribute to

[20] Guide to the access and participation data resources
https://www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/guide-to-the-access-and-participation-data-resources/get-the-underlying-data/

[21] Access and Participation Plan 2020-21 to 2024-25
https://www.undergraduate.study.cam.ac.uk/files/publications/university_of_cambridge_app_2020_25.pdf

explaining Cambridge's low mature student application proportion, whilst region of domicile and application timing are unlikely to:

- Course subject choice: Nationally, mature students are more likely to take courses that Cambridge does not offer. I estimate that this could explain around a third of the overall mature admissions gap at Cambridge.
- Distance of study from home: Nationally, mature students are more likely to stay living at home, or at least to attend a provider near their home, whereas (mature) students at Cambridge rarely do either.
- Type and grade(s) of HE entry qualifications: Nationally, mature students may be more likely to have entry qualification types and/or grades that are incompatible with entry to Cambridge.

Although in light of these factors the low proportion of mature applicants to Cambridge seems unsurprising, the investigation presented here does not prove conclusively that any of these factors *do* contribute to the low application proportion, nor in most cases does it show what the magnitude of any factor's contribution might be. Further research could attempt to explore this, if a suitable national dataset can be obtained. When considering national data relating to course subject choice and distance of study from home, prior academic attainment should ideally be taken into account (if the dataset allows) because the preferences and behaviours of students with high prior attainment compatible with entry to the collegiate University could be atypical. However, I believe it is unlikely that further analysis of national data would conclusively prove the impact of any behavioural or choice factors on applications to Cambridge, because a student doing something does not mean they did it because it was the only suitable option for them, and we do not know the actual reason for their choice. For example, if a student chooses to study a course in a subject that is not offered at the University, this does not necessarily mean that an application to Cambridge was not an option for them, let alone for this reason – they might have been quite happy to study a different or somewhat related subject at Cambridge. To find out with certainty the reason(s) that a student did not apply to Cambridge would require actually asking them.

Another potential future research topic is further investigation of factors that could contribute to or explain the lower entry success rate of mature applicants to Cambridge compared to young applicants. Although this was found in Section 2 to account for a smaller component of the overall Cambridge admissions gap than application rate, a difference in entry rate does nonetheless account for part of the gap, and although some previous research[22] has been conducted to explore the reasons for it, it remains largely unexplained.

This further self-assessment has increased our understanding of the admissions gaps by age for UK-domiciled applicants to the University of Cambridge, including identifying the stage of the admissions process at which this primarily occurs (i.e. applications), and identifying likely explanatory factors. These findings have been referred to appropriate committees of the collegiate University for consideration.

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[22] R. Sequeira (February 2019) *Self-assessment for the Access and Participation Plan - Identifying applicant characteristics for which there are admissions gaps at the University of Cambridge*
https://www.cao.cam.ac.uk/sites/www.cao.cam.ac.uk/files/2019_entry_rate_self-assessment_paper.pdf

Appendix 1

Table A1

A list (by JACS group[23]) of which JACS subgroups existing in relevant national UCAS data have a (similar) corresponding matching course at Cambridge, and which do not.

JACS Group	Subgroup with match	Subgroup without match
A Medicine & dentistry	A1 Pre-clinical medicine	A2 Pre-clinical dentistry A9 Others
B Subjects allied to medicine	B0 Broadly based programmes B1 Anatomy, physiology & pathology	All except B0, B1
C Biological sciences	All except C6	C6 Sport and exercise science
D Veterinary science, agriculture & related	D1 Pre-clinical veterinary medicine D2 Clinical veterinary medicine & dentistry	All except D1, D2
F Physical sciences	All	None
G Mathematical sciences	All	None
H Engineering	All	None
I Computer science	All	None
J Technology	None	All
K Architecture, building & planning	All except K2, K3	K2 Building K3 Landscape & garden design
L Social studies	All except L5	L5 Social work
M Law	All	None
N Business & administrative studies	N2 Management studies	All except N2
P Mass communications & documentation	None	All
Q Linguistics, classics & related	All	None
R European languages, literature & related	All	None
T Non-european languages, literature & related	All	None
V Historical & philosophical studies	All	None
W Creative arts & design	W3 Music	All except W3
X Education	All except X1	X1 Training teachers
Y Combinations	All	None
Z General, other & unknown	All	None

[23] HESA guide to JACS 3.0: Principal subject codes
https://www.hesa.ac.uk/support/documentation/jacs/jacs3-principal