McMaster University Faculty Association

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McMaster University Faculty Association's Budget Advisory Committee 2025-26 Report

Ten years later: an update on McMaster finances as they pertain to the mission of the University

July 6, 2026

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Executive Summary

This MUFA Budget Advisory Committee (BAC) 2025-2026 Report provides a long-term, data-driven analysis of McMaster University's finances, focusing on trends in enrolment, MUFA faculty complement, budget allocation, and student/faculty ratio. We view our report as a 10-year update on the 2016 MUFA BAC report, which addressed the Activity-based Budget Model which had been newly introduced at the time. We aim to support respectful, informed discussion among stakeholders.

1. Basic University-Level Trends

- **Enrolment vs. Faculty Growth, and Student/Faculty Ratio:**
  Undergraduate enrolment grew significantly between 2014–2020, then stabilized. Faculty numbers increased more modestly, resulting in a rise in the student/faculty ratio which peaked at around 2020–2021. The student-faculty ratio has decreased since 2021 but remains above the level in 2015.
- **Faculty Salaries:**
  Salary growth has closely tracked broader Canadian wage trends.

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2. University Revenue and Budget Allocation

- **Revenue Structure Shift:**
  - Tuition revenue has grown with student enrolment, and surpassed provincial grants around 2015.
  - Provincial funding has remained largely flat since 2015.
- **Operating Fund Budget Allocation:**
  - Roughly **60% of the Operating Fund is "Academic".**
  - About **40% goes to "non-Academic" central services**, and this proportion has remained relatively stable.
- Contrary to a commonly voiced concern, there has **not been a major shift of Operating funds toward central units/administration** over time.
- **Faculty Salaries and Benefits as a proportion of Operating Fund and Academic costs:**
  - MUFA faculty salaries and benefits declined as a share of Academic spending from 51.8% (2014–15) to ~42.7% (2020–21), followed by an increase to ~46.9% by 2024–25.
  - As a share of the total Operating Fund budget, MUFA faculty salaries and benefits fell from 29.4% to 26.1%, before partially rebounding.
- **Growth in Non-Faculty-Compensation Costs:**
  - In the period from 2015 to roughly 2020, there was slight growth in the *proportion* of the Academic component of the Operating Fund, which corresponded to absolute growth in the Faculty-level budgets. Much of this growth went to non-faculty-compensation expenditures within the Faculties, the proportion of which grew faster than faculty compensation costs and surpassed them in roughly 2016-2017.
- Budget pressures at both the University and Faculty level are unlikely to have been driven primarily by MUFA faculty salaries and benefits.

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3. Faculty-Level Data for Student-Faculty Ratio

- **Disparities in teaching environment and student-faculty ratio:** Faculty complement and student numbers, as well as the overall teaching environment, vary widely across our 6 Faculties, including **substantial differences in student–faculty ratios**.
- **Service Teaching Matters:**
    - About **27% of undergraduate teaching is inter-Faculty ("service teaching")**.
    - Service teaching levels vary widely across different Faculties. **The Faculty of Humanities is an outlier** in its high levels of service teaching.
    - When accounting for students taught (not just those enrolled in a given Faculty), **Science is an outlier** with a higher effective student-to-faculty ratio, and a larger average class size.
    - **Service teaching may be undercompensated**. Only tuition (at the domestic rate) flows with students under the current Budget Model's Undergraduate Cross Faculty Teaching Adjustment.

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4. Governance of the Budget Model

- The report reiterates a key concern and recommendation from 2016: consider the introduction of **formal, collegial governance oversight of the budget model itself**, separate from the annual Consolidated Budget process.

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Introduction

The MUFA Budget Advisory Committee (BAC) was initiated roughly two decades ago, "in response to growing concerns about the amount and allocation of University resources during a time of unprecedented growth"[1]. Moreover, the intention of the Annual Report of the MUFA Budget Advisory Committee was stated in 2008 as "[stimulating] further discussion and critical analysis"[2]. It is our hope that this retrospective 2026 Report will allow us to see how financial decisions made in the last decade or more have played out, and how these decisions impact our future -- in the current climate of financial challenges and austerity. We also maintain our hope to serve as a starting point for respectful, spirited conversation among all stakeholders at McMaster regarding financial matters concerning the University and its operations.

In particular, we view our Report as an alternative and complementary voice to that presented by the Administration in, for example, its annual Consolidated Budgets and Financial Statements. Our point of view is explicitly long-term in its perspective. This reflects the fact that most McMaster faculty members serve this University through decades-long careers. In particular, MUFA is committed to our shared long-term interest in safeguarding the integrity of our core academic mission, and the University finances which support it.

The reader may wonder, given that the BAC does not publish a Report every year, why the 2025-2026 BAC has decided to put one forward. The answer is multifaceted. Firstly, we note that, one decade ago, the 2016 MUFA BAC report addressed concerns and questions arising from the introduction of the Activity-based Budget Model at McMaster. In large part, we view our report as a 10-year update on the 2016 report. Secondly, the 2024-2025 Joint Administration-MUFA Remuneration Agreement contained a provision for the formation of a Joint Administration-MUFA Working Group on Student/Faculty Ratio and Faculty Workload. Both of these issues have undeniable connections with the University budget. As such, we felt that it would be beneficial to offer some data and analysis that may assist the Working Groups, as well as different stakeholders at McMaster, in thinking through these highly complex issues. We do not claim to have easy solutions; while our report contains some suggestions, we offer the data mainly in the spirit of sharing information.

In preparing this report, we have used publicly available data and documents from the Canadian Association of University Teachers (CAUT), the Ontario Confederation of University Faculty Associations (OCUFA), and McMaster, among others. [3]

Section 1: University-level data and discussion

In this section, we focus on data at the University-wide level.

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[1] "Do McMaster's Expenditures Reflect Its Mission?" MUFA Budget Advisory Committee Annual Report, 2008, p. 1.
[2] ibid.
[3] From McMaster, we used the McMaster Fact Books, the McMaster Consolidated Budgets, the McMaster Annual Financial Statements, the McMaster BI tool, and data available to us in the MUFA archives.

We first examine overall student enrolment. Figure 1 shows the levels of enrolment in undergraduate students (FFTE[4]) from 2014-2025. It is evident that undergraduate enrolment significantly increased in the period from 2015 to 2021, whereas since 2021 the level has been rather stable.[5]

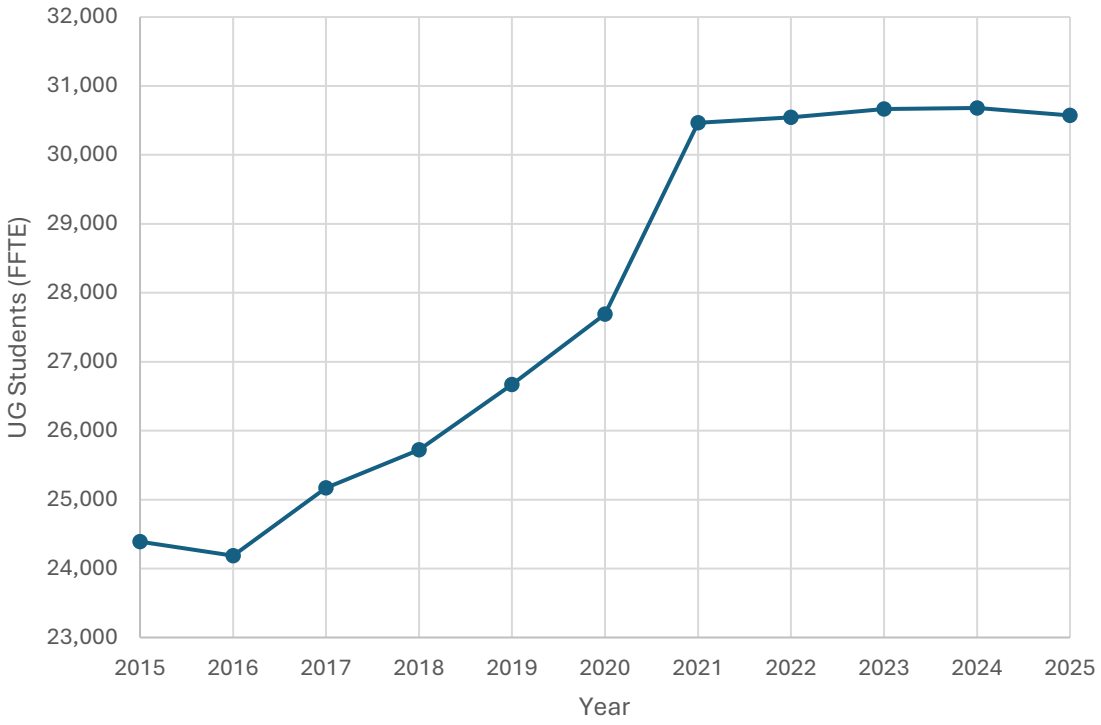

Figure 1. McMaster undergraduate enrolment numbers (in FFTE) from 2014-2025. Data from McMaster Fact Books

How does this compare to faculty complement over the same time period? In Figure 2, we show the number of MUFA faculty members from 2015 to 2025. [6]

[4] FFTE is "Fiscal Full Time Equivalent". The FFTE count includes Spring/ Summer, Fall, and Winter terms. FFTE is based on the undergraduate student load as a proportion of the normal unit load for that specific academic year within a program.

[5] In this Report, the year stated is the end of the academic year, i.e. 2015 refers to the 2014-15 academic year.

[6] Throughout this document, our numbers of faculty members are from MUFA Salary Statistics data, and in particular, we include *MUFA members only*. Thus, for FHS, our numbers only include the non-clinical (MUFA) faculty. In contrast, the FHS faculty numbers listed in the McMaster Fact Books include some Clinical (non-MUFA) faculty members.

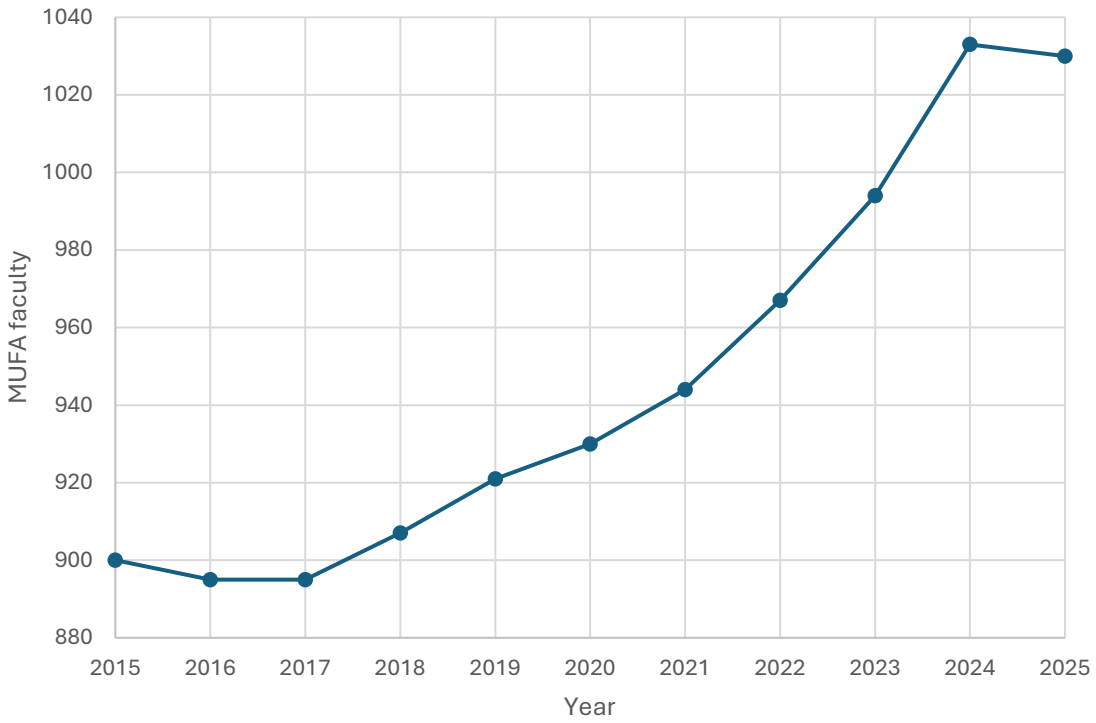

Figure 2. Number of MUFA faculty members from 2014-2025. Data from McMaster Salary Statistics (McMaster Office of Institutional Research & Analysis)

The data in Figure 1 and Figure 2 can be combined to examine the evolution of the *undergraduate (FFTE)* student/faculty ratio at McMaster, which in this report is the ratio obtained by taking the number of undergraduate students (FFTE) in Figure 1, and dividing by the number of MUFA faculty members[7] in Figure 2. The result is displayed in Figure 3. We make two observations. First, the growth in the number of undergraduate students outpaced the growth in the number of MUFA faculty in the period 2015-2021, resulting in a corresponding increase in student/faculty ratio, which reached a peak of 32.3 in 2021. Secondly, since 2021, there has been a levelling-off of undergraduate student numbers, while MUFA faculty numbers have continued to grow; this has led to a corresponding decrease in student/faculty ratio in this time period. However, we note that the ratio (29.7) in 2025 is still well above the ratio (27.1) we had in 2015. Moreover, in the 2025 Maclean's report, the overall student (undergraduate and graduate) to faculty ratio at McMaster was 38.7, which was the highest not only among medical doctoral universities, but all universities rated by Maclean's. [8] We will see below that the proportion of the total Operating Fund spent on MUFA faculty salaries and benefits in 2025 is below the corresponding proportion in 2015. This suggests that it is financially feasible for McMaster to commit to faculty renewal at an institutional level.

[7] We note that teaching is not fully captured by the number of MUFA faculty members, as teaching is also done by sessional instructors.

[8] Maclean's does not provide details on their definition of "student" and "faculty".

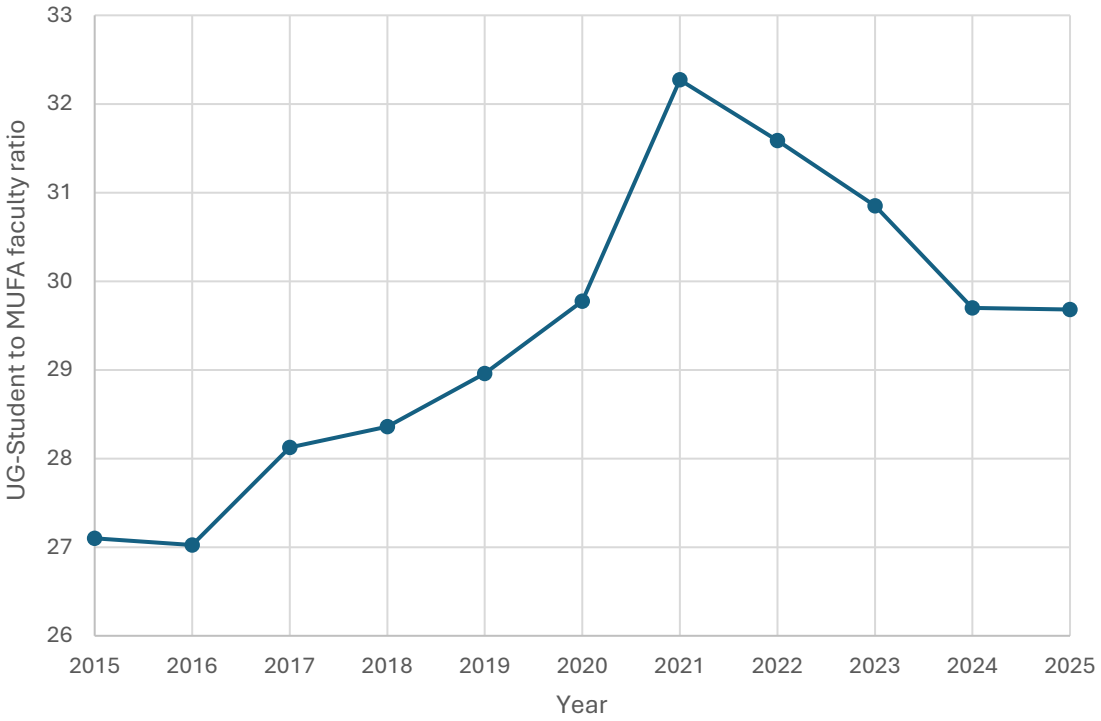

Figure 3. University-level UG-Student (FFTE)/Faculty ratio from 2015-2025.

We also wish to illustrate some evolving demographics of our MUFA members. Since the abolition of mandatory retirement in 2006, many MUFA members have personally experienced the reality within our academic units of the aging of the faculty cohort. Figure 4 graphs the average age of MUFA members since 2000. Starting at 2005, we see a gradual increase. This may be due to a combination of factors – for instance, faculty renewal below equilibrium levels, and/or faculty members working longer on average due to the abolition of mandatory retirement. Distinguishing root causes would require additional data not currently available to us. We also note that the plot shows a modest decline in average age starting in 2018.

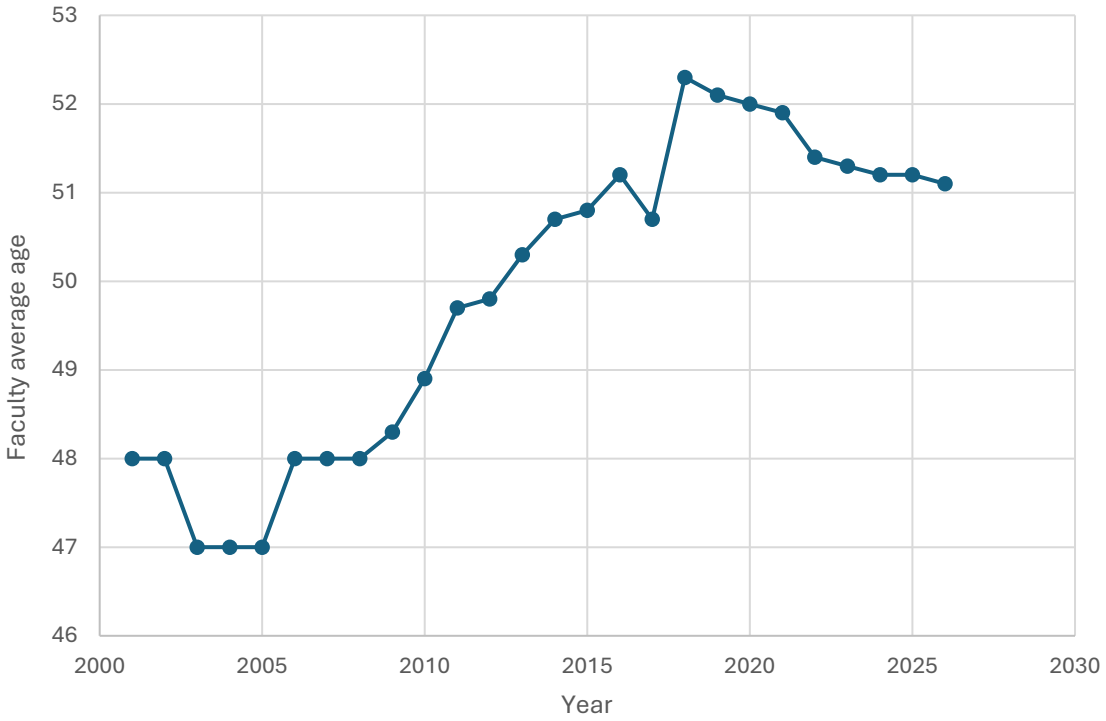

Figure 4. Average age of MUFA members. Data from McMaster Salary Statistics (McMaster Office of Institutional Research & Analysis)

Next, we illustrate trends in MUFA salary levels since 2007 in Figure 5, plotted ***on a logarithmic scale***.[9] We find it informative to compare the MUFA average salary growth to that of the national wage measure, as published by Statistics Canada[10]. A line showing a steady 3.16% increase per year is shown for reference, to assist in comparison of the trends. The close similarity in the trends shows that MUFA faculty salaries have neither fallen far behind nor jumped far ahead of general Canadian wage trends, dispelling myths to the contrary in both directions. Nevertheless, some subtle differences do appear. From roughly 2007 to 2017, MUFA salaries grew at a slightly higher rate than the wage measure, while the opposite is true for 2018-2025 during the Bill 124 and pandemic eras, with a correction related to the most recent MUFA remuneration agreement.

[9] We have chosen to use a logarithmic scale in Figure 5 and some later figures because, on a logarithmic scale, a straight line indicates steady exponential growth – and, moreover, the slope of the line gives the rate of this exponential growth. For this reason, on a logarithmic scale, it becomes more visually apparent when one quantity is growing at a more rapid rate than another even if they have a different starting point.

[10] Wage measure is a measure of the average weekly wages and salaries of the industrial aggregate in Canada, as published by Statistics Canada. See e.g. the Statistics Canada report, table 14-10-0203-01.

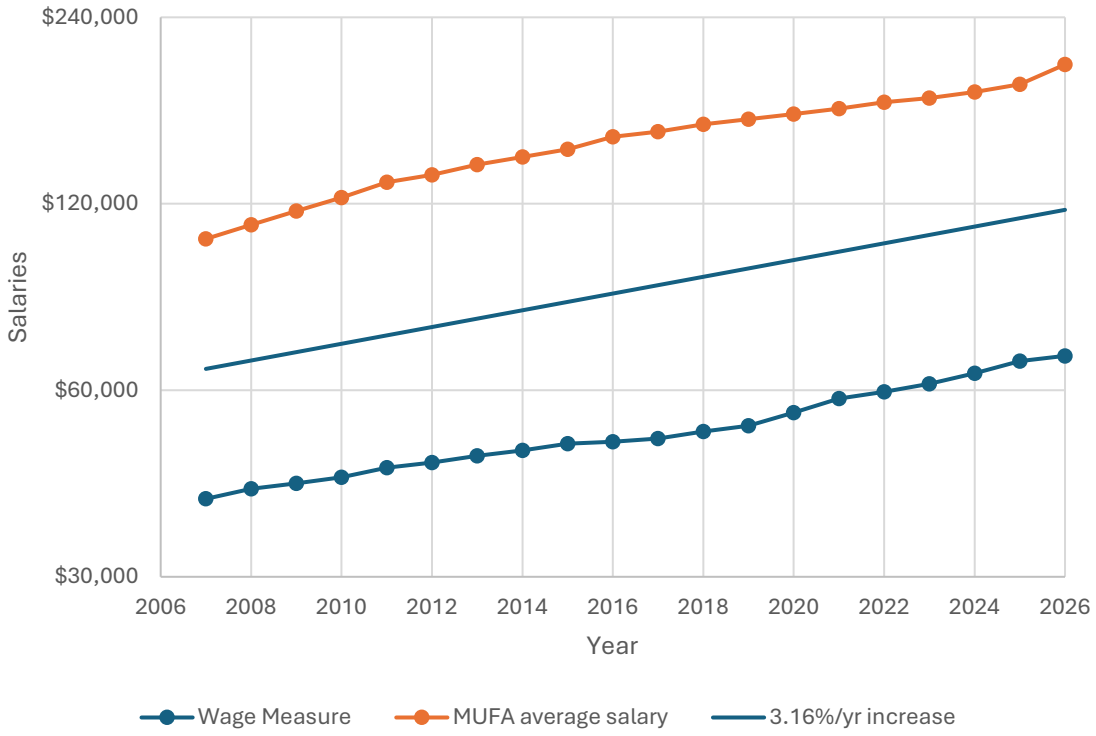

Figure 5. MUFA Average Salary versus Wage Measure, on a logarithmic scale. Wage measure data from Statistics Canada. Salary data from McMaster Salary Statistics (McMaster Office of Institutional Research & Analysis)

We now turn our attention to matters directly related to University finances.[11] We remind the reader that the total annual consolidated budget of McMaster University can be broken down into separate Funds, such as the Operating Fund, Research Fund, Capital Fund, External Endowment Fund, among others. Although all the Funds are significant in a broader discussion of University finances, in this Report, we have chosen to focus on the Operating Fund, which accounts for general revenues and expenses that are directly related to the core mission of the University, namely education and activities supporting research. It is also the largest of the component Funds, usually accounting for roughly 60% of the total consolidated budget. In Figure 6, we track the total revenue into the Operating Fund since 2015. We also break down this total into its two main components, namely tuition and provincial grants[12], with the remainder being labeled "Other". [13] We see that the revenue from provincial grants have stayed roughly flat for this time period, despite rapid growth in student numbers, while tuition growth followed the growth in student enrolment numbers. We also note that tuition overtook provincial grants as a revenue source in 2015.

[11] Many faculty members are attuned to the Operating Fund budget and/or individual Faculty-level budgets. For context, we note here that the total McMaster Consolidated Budget has been in surplus on a regular basis in recent years; for instance, over the 5 academic years from 2020-2025, the average of the consolidated surplus reported in McMaster's Annual Financial Statements is approximately $147 million.

[12] The tuition and grant amounts include those from/for graduate students.

[13] The "Other" category includes Research Overhead Income and Investment Income, among others.

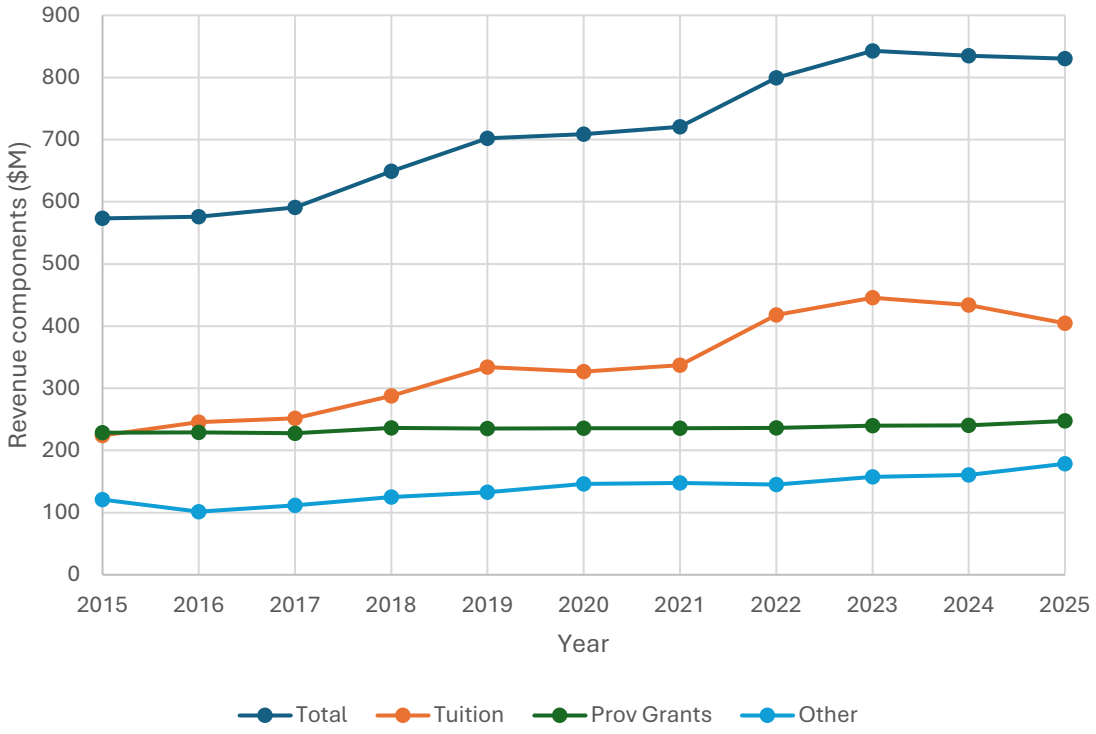

Figure 6. The McMaster Operating Fund total revenue, with breakdown into the main components of tuition, Provincial grants, and other income. Data from McMaster Consolidated Budgets

McMaster's Budget Model, which allocates resources within the annual Operating Fund, is an Activity-based Budget Model with a redistributive component.[14] The model was first implemented in 2014-2015, in part to improve transparency in funding decisions made at the University. Each Faculty's annual budget is determined through several steps. First, the model allocates Framework Revenues (e.g., tuition and provincial grants) to the Faculties based on their Activities (e.g. teaching and research). For this reason, the Faculties are also called Activity Units.[15] Then, a portion of each Faculty's initial allocation is re-allocated as a "fee" to three University-level strategic funds: the University Fund, the Research Infrastructure Fund, and the Vice-President Research Discretionary Fund. Similarly, Faculties also transfer fees to the non-Activity Units, namely the Central Support Units (e.g. Student Affairs, Human Resources, the libraries, UTS) based on Faculty-specific cost drivers (e.g. usage of space, employee FTEs, student FTEs). These fees support the operating costs

[14] For readers who are less familiar with McMaster's Budget Model, It may be useful to recall some context given in the April 2016 Budget Advisory Committee Report ("McMaster's New Budget Model"), Section 1.3: "*One can think of two extreme hypothetical polar case budgeting models. At one end of the spectrum, a budgeting process can first decide what activities the university wants to pursue and then fund those activities without much attention to which ones generate revenue. This is a highly redistributive model. At the other end, there is no redistribution at all and the revenue associated with each activity is directed to that activity. This is a revenue attribution model. Each has quite different incentives for behaviour. In the public sector context neither extreme is optimal.*" Our McMaster Budget Model is a hybrid model between these two extremes.

[15] The Arts and Science and Medical Radiation (Mohawk share) programs are also technically Activity Units under the McMaster Budget Model, but their budget allocations are very small (together they account for <2% of overall Activity Unit budgets). For simplicity, we have excluded them from our discussion.

of the Central Support Units. The final allocation to each Faculty is then what remains of its initial allocation, *after* payment of the above fees.

For our analysis, it is useful to examine the different parts of the Operating Fund as enumerated in the 8 categories used in the 2024-2025 McMaster Consolidated Budget. In the Appendix, we give more details about each of the 8 categories. For the purposes of the discussion below, we group Categories 1 and 2, "Faculties" (the Activity Units) and "Academic Priorities" respectively, as the "Academic" component within the Operating Fund, and group the remaining Categories 3-8 (which include the central unit services such as Facilities, UTS, Human Resources, and so on) as the "non-Academic" component.[16] With this terminology, we first plot – in Figure 7 below – the breakdown of the total Operating Fund into the Academic (Categories 1 and 2) and the non-Academic (Categories 3-8) components, on a logarithmic scale.

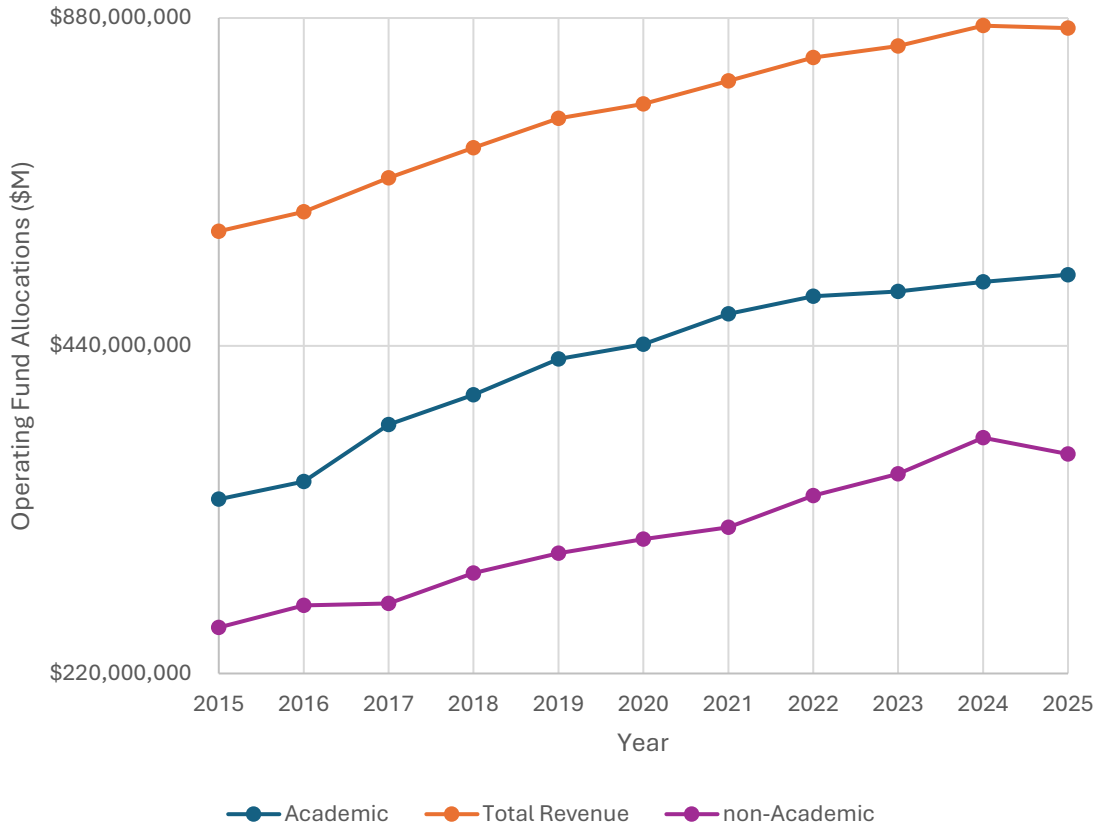

Figure 7. Operating Fund breakdown into Academic and non-Academic components, on a logarithmic scale. Data from McMaster Consolidated Budgets

[16] Strictly speaking, it is Category 1 which accounts for the annual incomes of the Faculties. However, we have chosen to include Category 2 in the "Academic" category for two reasons: firstly, the University Fund, which is in Category 2, is used at times to supplement Faculty (Activity Unit) budgets, and secondly, this is the language used in the Consolidated Budget.

Recall from footnote 9 that, in a logarithmic plot, the slope of the line is the exponential growth rate of the displayed quantity. With this in mind, in Figure 7 we see that the slope of the Academic line (6.8%/yr) is *greater* than the slope of the non-Academic line (3.6%/yr), from 2015-2021. In contrast, the slope of the Academic line (2.1%/yr) is *lower* than the slope of the non-Academic line (4.0%/yr) from 2021-2025. [17] Put differently, the slope of the non-Academic line is similar in both periods (3.6% vs. 4.0%/yr), while the slope of the Academic line is much lower in the later period (2.1%/yr) than in the earlier (6.8%/yr).

We present a different way of viewing these data in Figure 8 below, by plotting the percentage of the total Operating Fund allocated to the Academic component, as well as the percentage allocated to the non-Academic component. The sum of the two percentages adds to 100%. We can see from Figure 8 that, corresponding to the difference in growth rates mentioned above, the percentage of the Academic component grew modestly, to above 60% in the period up to 2021, after which it has decreased slightly overall. As explained above, the non-Academic component can be viewed, roughly, as fees paid by the Faculties to the central support units. We note that this fee has been rather stable and has an average of 40.3% since 2015.

In particular, the data suggest that there has not been a substantial redistribution of resources away from the Faculties towards the central service units in the displayed time period, despite the commonly voiced concern to the contrary.

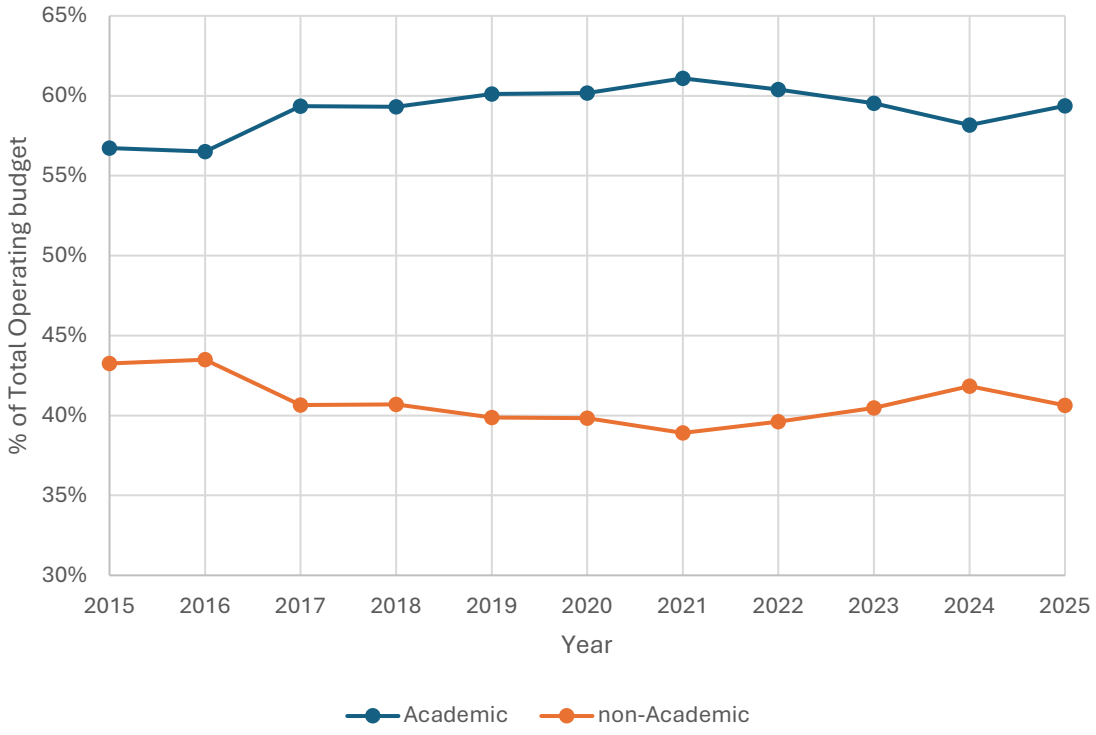

Figure 8. Operating Fund breakdown into Academic and non-Academic components, displayed as a percentage of the total. Data from McMaster Consolidated Budgets

[17] The graphs are not perfectly linear. By ”slope” we mean the average of the slopes over the intervals in question.

For readers who may be less familiar with the Consolidated Budget, we provide some context regarding the non-Academic component plotted in Figures 7 and 8. In Figure 9 below, we plot the 6 categories within the non-Academic component of the Operating Fund; recall that these are described in more detail in the Appendix. While most of the 6 categories within the non-Academic component have increased overall since 2015, none are growing more dramatically than others, and none appear to be outstripping the growth of the overall Operating Fund.

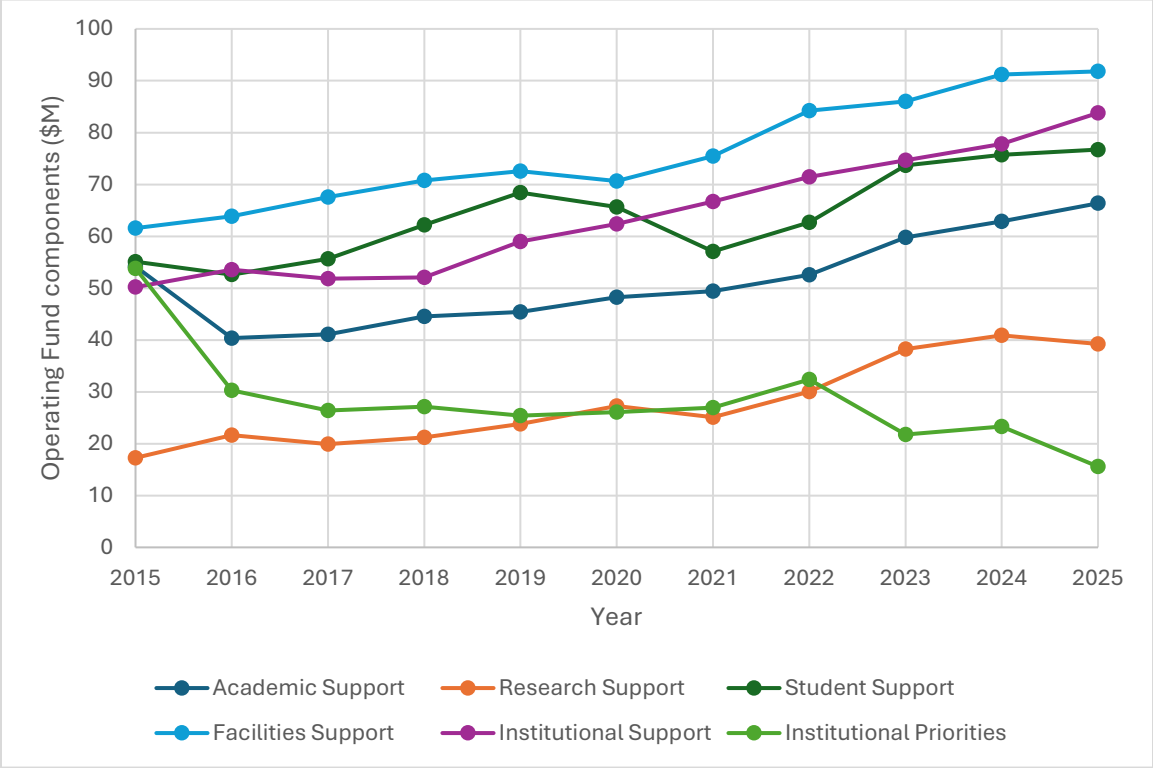

Figure 9. The 6 categories within the non-Academic component of the Operating Fund. More details on each of the 6 categories are in the Appendix. Data from the McMaster Consolidated Budgets

We now consider the distribution of expenses within the Academic component of the Operating Fund, with a focus on faculty salaries and benefits. First, we compute the total dollar amount spent on MUFA faculty salaries on an annual basis, by multiplying the average MUFA faculty salary and the number of MUFA faculty. These data are available through the MUFA Salary Statistics archives. We call the result of this computation the MUFA salary mass. Next, we estimate total benefit costs for MUFA faculty members to be 24.5% of the MUFA salary mass.[18] By taking the sum, we obtain a reasonable estimate of the total cost of MUFA faculty salaries and benefits, which we label "faculty compensation". In Figure 10 below, we plot three quantities on a logarithmic scale: (1) the total Academic component of the Operating Fund, (2) faculty compensation, and (3) the difference between these two numbers, which we call the "non-faculty-compensation part of the Academic

[18] The estimate is obtained from the data available at Benefit Rate Tables - Financial Affairs using the average salary for MUFA faculty. The benefit rate has varied from ~23% to 26% over this time period due to changes in pension and benefit obligations. The estimate errs on the high side due to the CRA maximum for pension contributions.

budget”. Faculty-specific budgets are not publicly available or tabulated in the Consolidated Budget, so this approach provides a simple way to evaluate Faculty allocations to these two envelopes based on available information.

Recall from our discussion of Figure 7 that the Academic component of the Operating Fund grew slightly more rapidly than the non-Academic component, until 2021, when the trend reversed. From Figure 10, we can see that the non-faculty-compensation share of this Academic component grew at a more rapid rate during the same time period, from 2015 to 2021, while faculty compensation grew less rapidly. Indeed, the non-faculty-compensation expenses overtook the faculty compensation expenses between 2016 and 2017. From 2021 to 2025, faculty compensation continued to grow at about the same rate as previous years, while the non-faculty-compensation expenses stopped growing and even declined slightly. We note that further analysis of the phenomena we have observed in this section would require data providing more visibility into the individual Faculty budgets, which are not currently at our disposal.

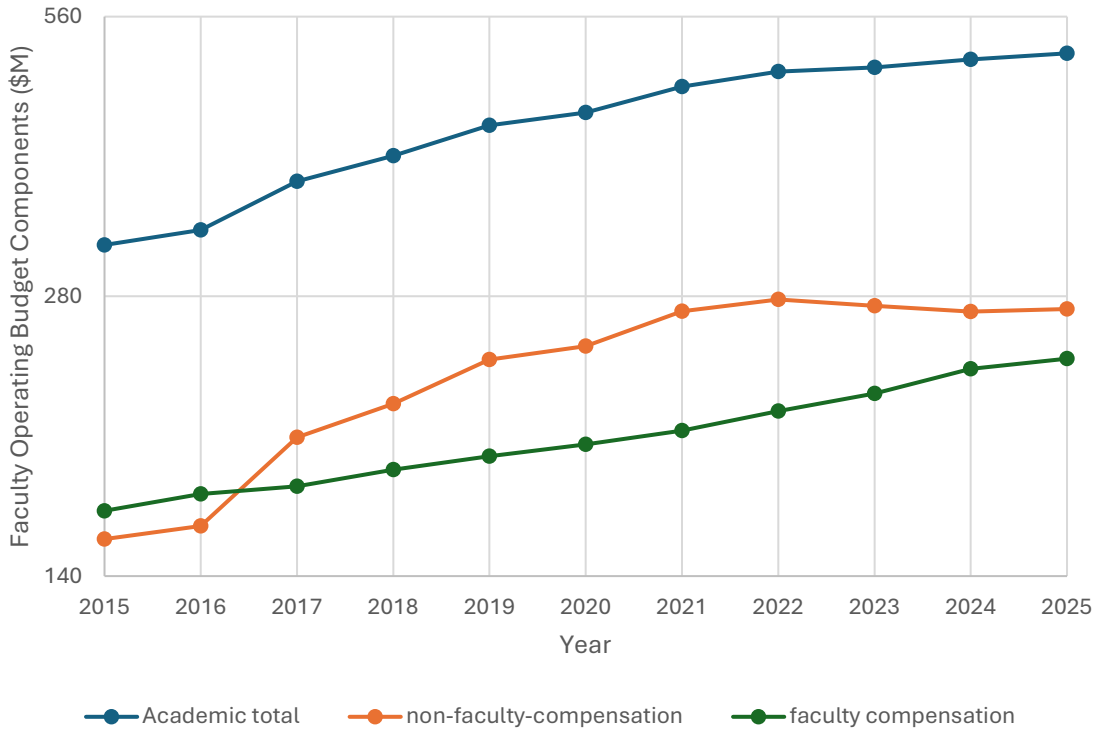

Figure 10. The Academic component of the Operating Fund, the total MUFA faculty compensation, and the difference of the two quantities (“the non-faculty-compensation part of the Academic budget”), on a logarithmic scale.

In Figure 11, we present a different view of the data in Figure 10. The upper line in Figure 11 shows the percentage of the Academic component of the Operating Fund which was occupied by faculty compensation. We see that in the last decade; this percentage decreased substantively from 51.8% in 2015 to a low of 42.7% in 2021. This was followed by an increase to 46.9% by 2025. To give context, the lower line in Figure 11 shows the percentage of the faculty compensation within the total Operating Fund. We see that from 2015 to 2021, the proportion of the total of the Operating

Fund spent on MUFA salaries-and-benefits, decreased from 29.4% to 26.1%, and since 2021 this proportion has increased modestly.

Comparing the two lines in Figure 11, we see that while there was both a modest decrease and a subsequent modest increase in the proportion of the total Operating Fund spent on faculty compensation, these changes are more pronounced at the Faculty level. On the other hand, we note that the most recent proportion of 27.9% of the Operating Fund spent on MUFA salaries and benefits is still less than it was a decade ago. While University budget challenges are often attributed to faculty salaries, the growth of faculty salaries shown in Figure 5, which is in line with the wage measure in Canada for the same time period, and the bounded percentage of faculty compensation as seen in Figure 11, suggest an alternative narrative.

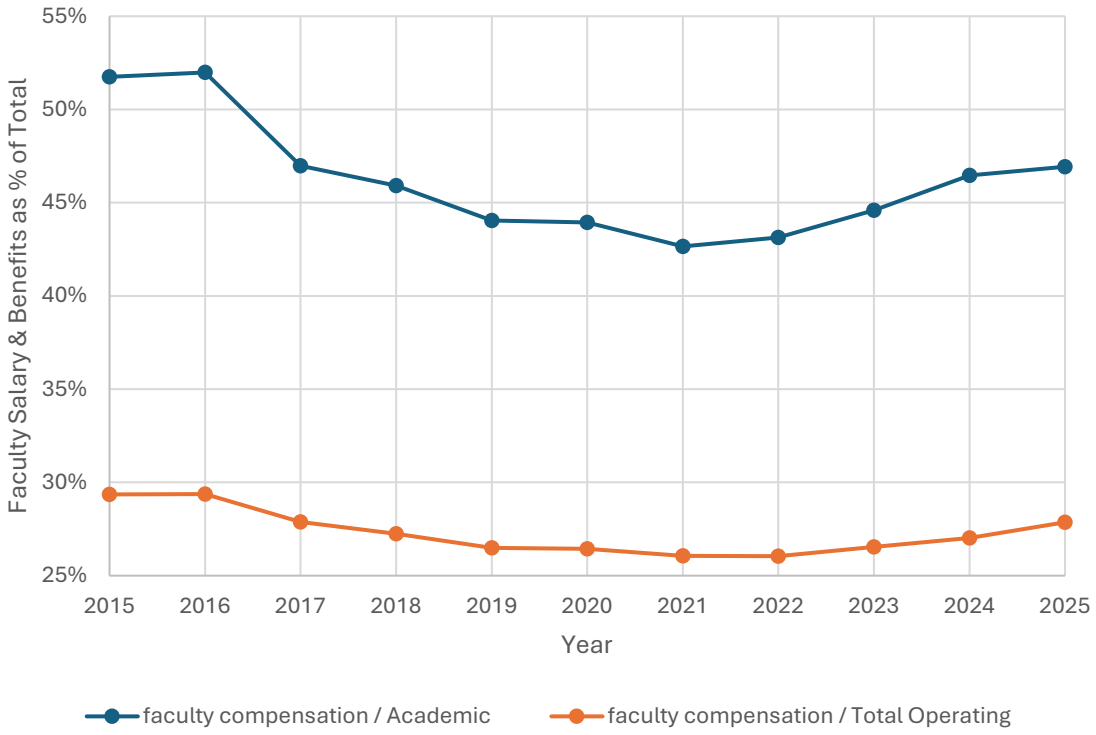

Figure 11. The proportion of the Academic allocation of the Operating Fund income (upper line) and of the total Operating Fund income (lower line) used to pay MUFA faculty salaries and benefits.

We summarize as follows. We saw in Figures 7 and 8 that the Academic component of the Operating Fund was increasing until 2021. In Figures 2 and 10, we see that this increase did not translate to a corresponding investment in faculty renewal. What appears to have happened instead is that funding for other expenses at the Faculty level increased significantly. The increase at the Faculty level as opposed to the University level is indicative of the natural ongoing tension between the jurisdictions of University-wide support services versus Faculty-specific services in a highly decentralized organization. We encourage further discussion on allocation of resources between the academic and non-academic funding envelopes to balance our needs with our priorities, and to achieve our shared goal of ensuring that our budgets (at both the University and Faculty levels) are designed to preserve the integrity of our core research and teaching mission as

well as our institution's financial health. In addition, optimization of centralized versus decentralized service delivery could drive efficiencies, further supporting our academic mission.

Section 2: Faculty-level data and discussion

In this section, we direct our attention to disaggregated, Faculty-specific data. As the 2016 MUFA BAC report pointed out, the framework of the McMaster Activity-based Budget Model places significant pressures and constraints on financial decision-making at the Faculty level. We also note that due to many factors, the different Faculties have different lived experiences with our Budget Model. Thus, the BAC believes that any discussion of finances and the Budget Model would be remiss to not acknowledge and analyze the situations at, and the experiences of, the individual Faculties.

It is our hope that this report can constructively contribute to the deliberations of the Joint Administration-MUFA Working Groups on Student/Faculty Ratio and Faculty Workload, which (as of this writing) are preparing to undertake their work. We believe that the data presented here are relevant to a thoughtful analysis of the issues at hand for these Working Groups.

Throughout this section, when we say "student" we mean "undergraduate student". We have focussed on the undergraduate population because it is the dominant driver of the faculty teaching experience and the Faculty budgets.

We begin with Figure 12, which illustrates the number of faculty members in all six Faculties in the period 2015-2025. As we noted in Section 1, there has been modest growth in overall faculty complement at McMaster since 2017; however, Figure 12 shows that this hiring has not been uniform across all Faculties.

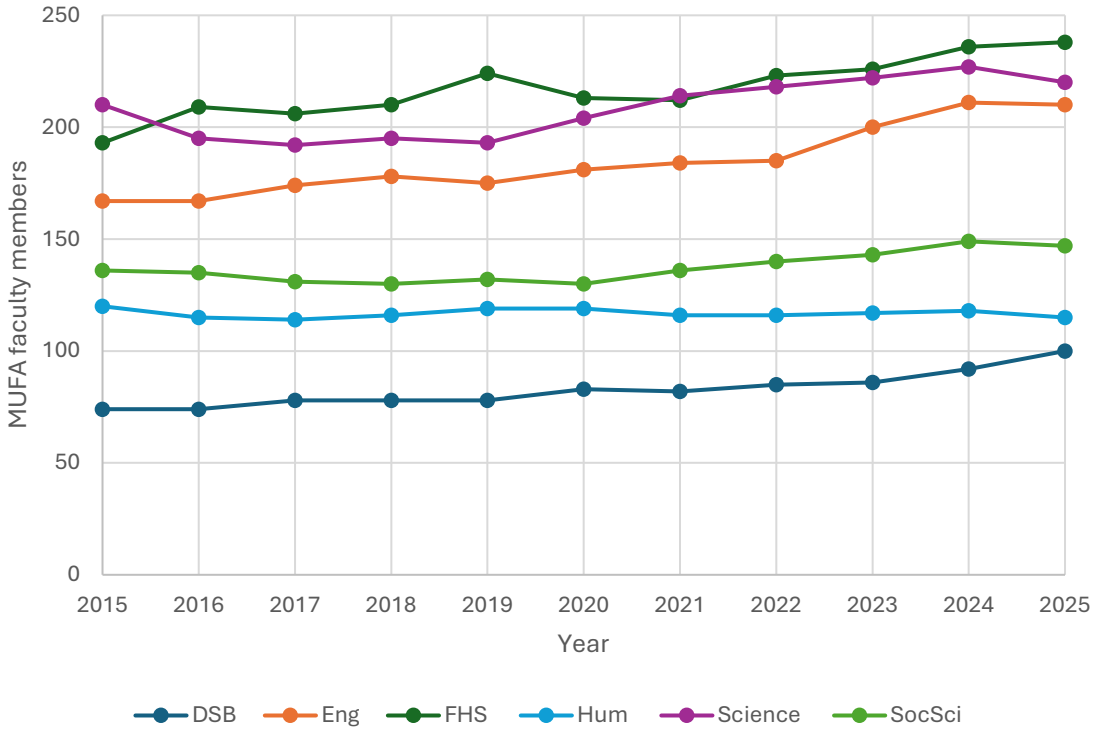

Figure 12. MUFA faculty complement, disaggregated into specific Faculties. Data from McMaster Salary Statistics (McMaster Office of Institutional Research & Analysis)

We next turn to the numbers of enrolled undergraduate students in our Faculties. We showed in Figure 1 the overall (aggregate) enrolment growth in our undergraduate (FFTE) population. It is worth noting, as we show in Figure 13 below, that this growth in student numbers (FFTE) has not been uniform across all Faculties.

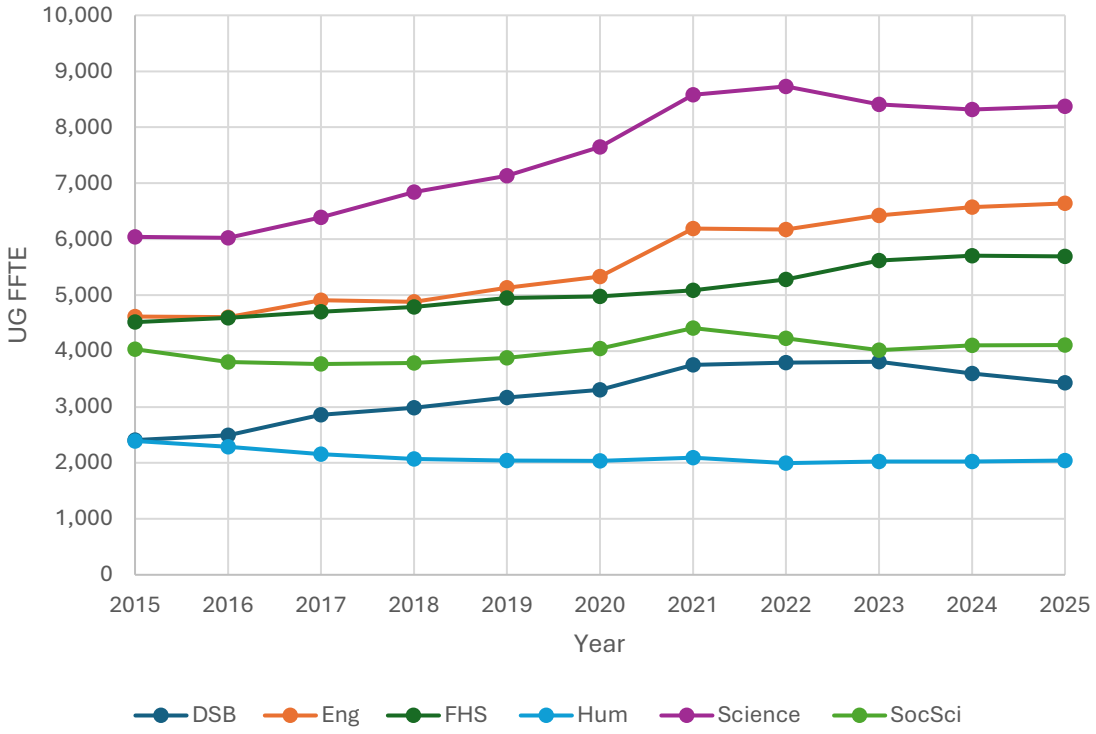

Figure 13. Enrolled UG student (FFTE) numbers, disaggregated to specific Faculties. Data from McMaster Fact Books

By computing the ratio of the data presented in Figure 12 and Figure 13, we have the "student/faculty ratio", based on enrolled students in each Faculty, disaggregated to the Faculty level. The result is plotted in Figure 14 below.[19] It may be surprising that we do not see greater uniformity in the student/faculty ratio across Faculties. These disparities can be explained, to some extent, by the significant level of inter-Faculty teaching, the topic to which we now turn.

[19] The FHS data needs to be treated with caution when comparing to the non-FHS Faculties. FHS has teaching modalities that are different from non-FHS Faculties, and instructors in FHS include clinical faculty and clinical educators, in addition to MUFA-affiliated, non-clinical FHS faculty. Despite this, we have decided to include the FHS data because the data presented in Section 2, when totalled, should add up to the aggregate (university-level) data in Section 1.

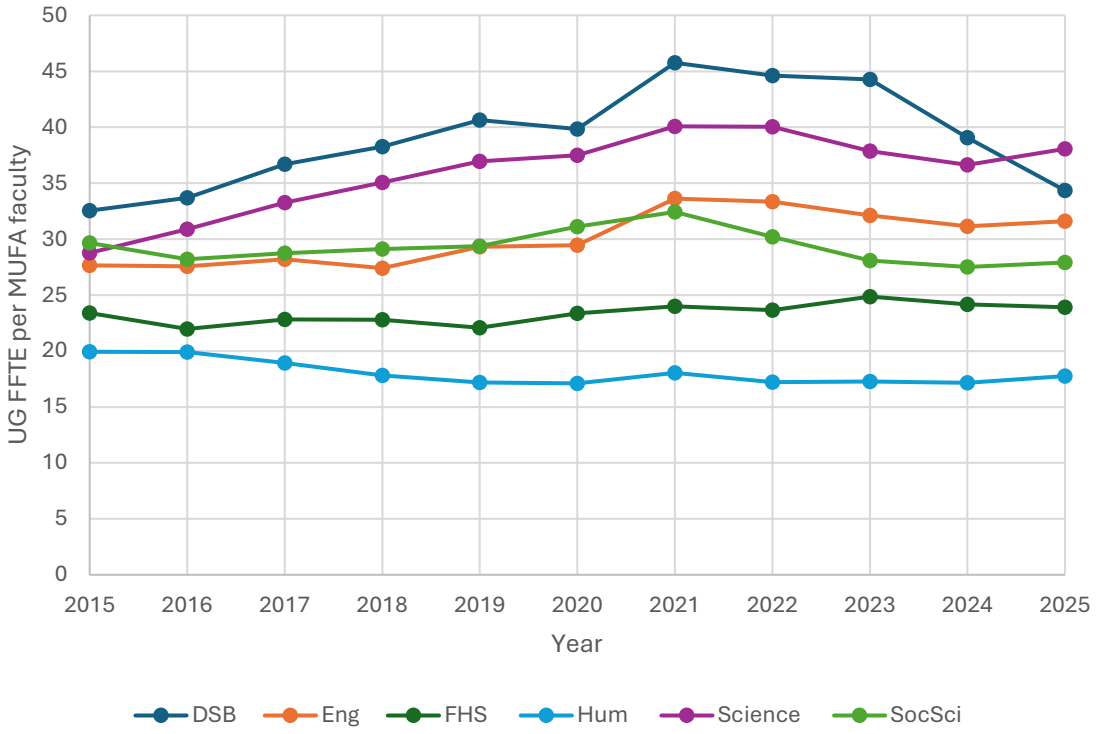

Figure 14. Enrolled-UG-student-per-faculty ratio, disaggregated to specific Faculties.

Inter-Faculty teaching is also more commonly called "service teaching", and we will use this latter term from now on. Here, by "service teaching", we mean the teaching that faculty members do to/for students who are enrolled in programs from *outside* of the Faculty that is offering the course. By way of example, the Faculty of Science offers mathematics courses that are taken by students from the Faculty of Engineering. As another example, many students from across the University take elective courses from the Faculty of Humanities. We note that service teaching is important for considerations not only of student/faculty ratio, but also for a robust understanding of faculty workload.

Before presenting any data, we acknowledge here that service teaching clearly serves an important academic and intellectual purpose which benefits our students – namely, to enable them to take courses that fit their interests, and where the right expertise is available. It is also undoubtedly a tribute to the success of McMaster's broad-based, interdisciplinary learning and teaching environment, that there is so much inter-Faculty learning occurring at McMaster.

The above being said, service teaching data informs a more complete understanding of faculty workload, student/faculty ratio, and Faculty budgets. We now turn to data that pertain to these issues.

First, we note that the amount of service teaching provided, and the amount of service teaching received, vary substantially across the Faculties. We illustrate this phenomenon in Table 1 below, which records for the academic year 2024-2025 the total undergraduate "student-units" taught by Faculty, disaggregated into the home Faculty of the students who are enrolled in the courses and the Faculty of the instructor delivering the course. To understand how the numbers in Table 1 are obtained, an example may help. If 100 students are enrolled in a 3-unit course, then this course

contributes “3 x 100 = 300 student-units taught”. Moreover, in Table 1, these 300 student-units are distributed according to the home Faculty of the students who are enrolled in the course. Thus, for example, the 300 student-units for a 100-student Mathematics course are recorded in the “Faculty of Science” column. Moreover, if this Mathematics course contains 25 students whose home Faculty is Engineering and 75 students from the Faculty of Science, then 3 x 25 = 75 student-units are allocated to the “Faculty of Engineering” row in the “Faculty of Science” column in Table 1, whereas 3 x 75 = 225 student-units are allocated to the “Faculty of Science” row in the same column.

The entries in Table 1 highlighted in bold represent the teaching within a Faculty that is delivered to students enrolled in the Faculty’s own programs. The other numbers in the same column represent the teaching done within that Faculty, to students enrolled in programs outside of that Faculty. For the whole University in 2024-2025, we see that there are 883,714 student-units taught, of which 645,180 student-units (73%) are delivered to the Faculties’ own students, while the remainder (27%) comprise the service teaching component.

Table 1: Undergraduate “Student-Units Taught” per Faculty (2024-2025 data)

		Faculty offering the course						
Faculty where students are enrolled		DeGroote School of Business	Faculty of Engineering	Faculty of Health Sciences	Faculty of Humanities	Faculty of Science	Faculty of Social Sciences	Total Enrolled Student Units
	DeGroote School of Business	**64,614**	6,597	78	8,160	8,712	13,770	101,931
	Faculty of Engineering	4,842	**180,743**	2,292	5,352	39,614	5,016	237,859
	Faculty of Health Sciences	846	3,781	**82,472**	7,323	11,437	2,856	108,715
	Faculty of Humanities	855	879	150	**49,893**	3,600	8,844	64,221
	Faculty of Science	2,511	9,353	10,122	22,563	**186,641**	15,183	246,373
	Faculty of Social Sciences	1,962	2,865	294	16,128	22,549	**80,817**	124,615
	Total Student Units Taught	75,630	204,218	95,408	109,419	272,553	126,486	883,714

(Data from McMaster BI Tool)

Several observations can be made from Table 1. Firstly, the data indicate that the amount of service teaching done by a given Faculty varies considerably across the different Faculties. Secondly, Table 1 suggests that a key variable determining the teaching experience, including the teaching workload, of MUFA members is the number of *students taught* by a particular Faculty, as opposed to the number of *students enrolled* in a particular Faculty. By way of example, we observe from Table 1 that the Faculty of Humanities does a lot of service teaching, and Humanities students do not enrol in out-of-Faculty courses very much. In comparison, the Faculty of Science also does a lot of service teaching, but on the other hand, many Faculty of Science students go outside of the Faculty of Science to take elective courses. This affects the overall experience of service teaching in

these two Faculties. It also has differing consequences in their budgets under our Budget Model, which we will discuss more below.

We propose that, when thinking about student/faculty ratio, some additional insight can be gained by calculating *not* the ratio of enrolled student per faculty member, but instead, the ratio of students actually taught per faculty member. The data in Table 1 is sufficient to accurately estimate the number of students taught by each Faculty. Using the total number of students enrolled in all non-FHS Faculties[20] (Figure 13, 2024-2025 values) and non-FHS Total Enrolled Student-Units from Table 1 (final column), we find that non-FHS students across the University, on average, enrolled in 31.5 units for 2024-2025 (i.e. 774,499/24,597), a sensible result given typical 30-unit programs. Using that aggregate average number of units, we can convert student-units taught to "students taught". For example, while Humanities has 2,044 enrolled students, they taught a much higher number of 3,473 (= 109,419 student-units/31.5 units) students. The same calculation can be done for each Faculty. This estimate can be further improved by considering the different number of units students take in each Faculty[21]. The result for "students taught" is shown in Figure 15.

As noted in footnotes 19 and 20, the nature of teaching and learning in FHS is substantively different from those in the other Faculties. We kept FHS student-units included in Table 1 to properly capture the service teaching to and from other Faculties, but we do not think that the methodology described in the above paragraph leads to a meaningful number for the students taught in FHS, nor the number of MUFA faculty members involved in instruction. For this reason, we have omitted FHS from the subsequent 2 plots and 1 table.

[20] We omit FHS student-units and students for reasons described in footnote 19.

[21] In fact, students take different numbers of units depending on the Faculty of their program. For example, in Engineering, we compute that their students take 35.8 units per year on average. We note that Engineering is the only significant outlier, but there are still minor differences among the others. To account for these differences, we compute the average units taken for students enrolled in each Faculty separately. We then use these numbers to convert each entry in the matrix in Table 1 to a number of students taught. By totaling these in each column, we obtain a number of "students taught" per Faculty. This is the data recorded in Figure 15 and used in Figure 16 below. The refinement, as just described, does not substantively change the numbers obtained by the simpler method that is described in the main text. For instance, for Humanities, our refined calculation yields their number of students taught as 3,543, while the simpler calculation yielded 3,473.

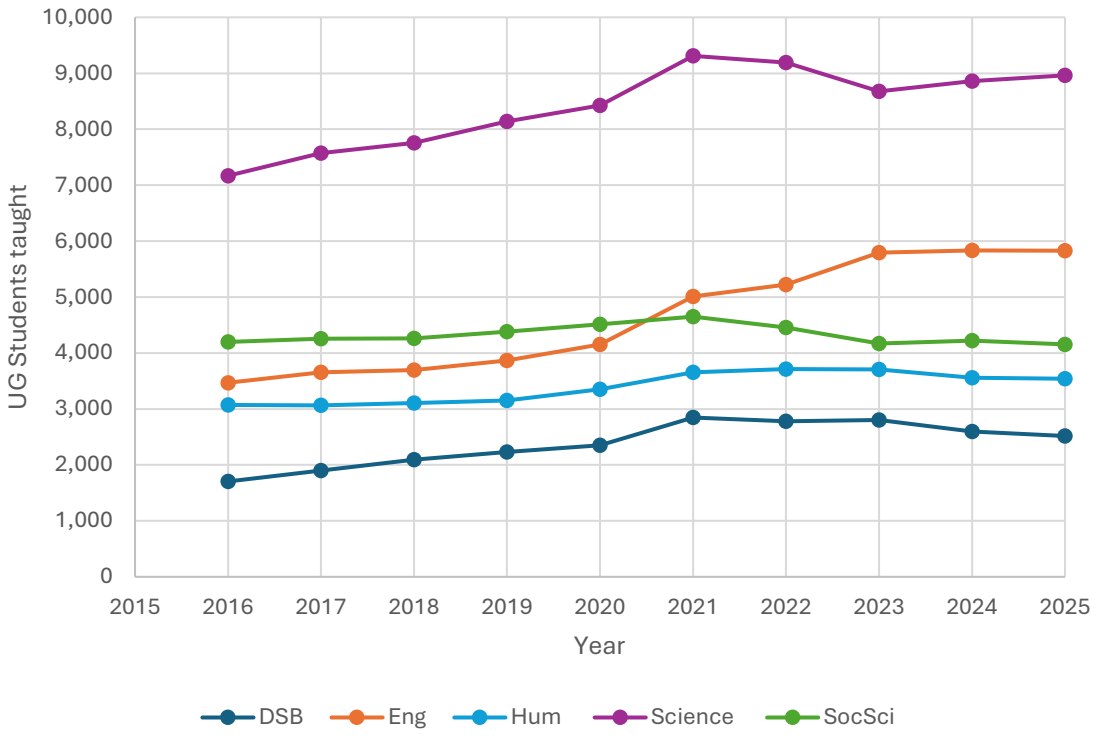

Figure 15. UG students taught, disaggregated to specific non-FHS Faculties. Data from McMaster BI Tool

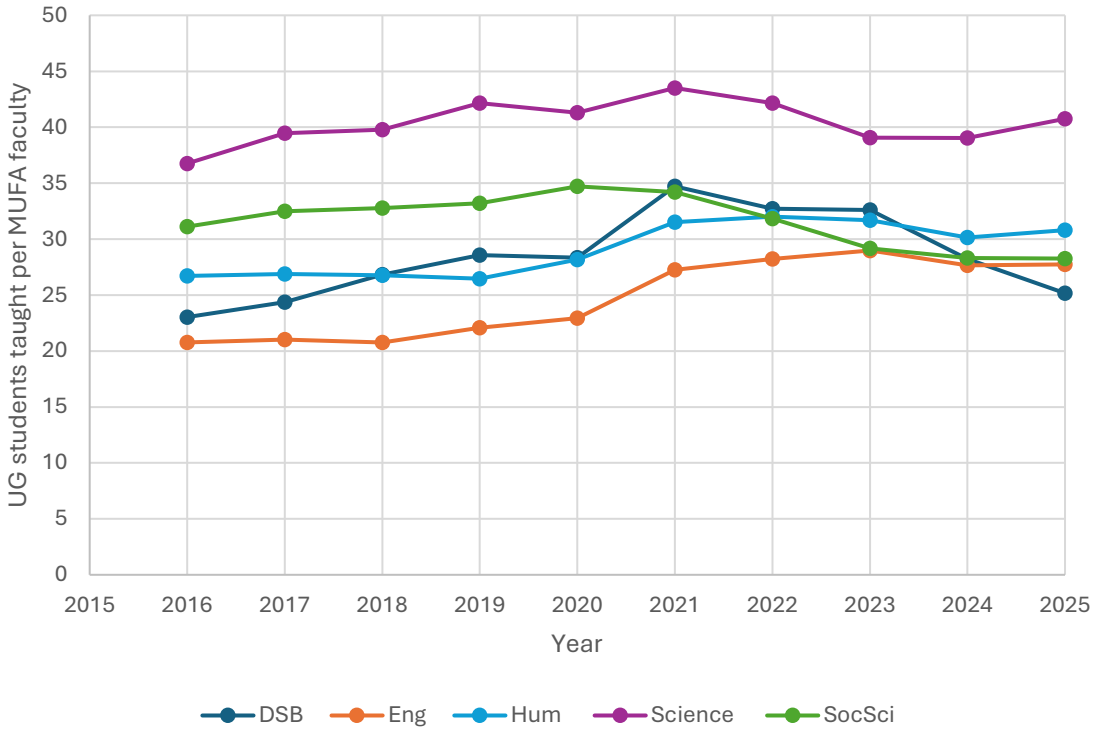

Figure 16. UG-students-taught-per-faculty member ratio (effective student/faculty ratio), disaggregated to specific non-FHS Faculties.

We can also use the data in Figure 12 and Figure 15 to compute a revised student/faculty ratio – namely, "UG students-taught per faculty member", or "effective student/faculty ratio"[22], as shown in Figure 16. Note that Figure 16 shows that the effective student/faculty ratio is much more closely grouped together than the student/faculty ratio based on enrolled students as shown in Figure 14. For example, in Figure 14, the ratio for students enrolled in Humanities was very low compared to the other Faculties, whereas the ratio is comparable to other Faculties for students taught by Humanities, due to their high level of net service teaching. Overall, this close grouping is expected in a budget model that aligns resources with costs, indicating that service teaching is at least partially compensated – a topic we will return to shortly. However, even after considering service teaching, Science remains a high outlier with an effective student/faculty ratio of 40.7.[23]

Table 2 summarizes data related to teaching for 2024-2025, disaggregated to specific Faculties. Column A shows the number of students taught, as indicated in Figure 15. Columns B and C show the amount of service teaching to students outside of the Faculty and the amount of service teaching received from other Faculties, respectively. The service teaching received (27% on

[22] We refer to the "effective student/faculty ratio" which is based on the number of students taught by the Faculty, in distinction to the "student/faculty ratio", which is based on the number of students enrolled in the Faculty.

[23] After analysis of data available to us, we believe that the reason that Science is an outlier is due to the net effect of multiple factors: lower ratio of international to domestic students, less faculty hiring, faculty salaries that are higher than the MUFA average, a higher rate of non-faculty costs (which may include space costs for research/student labs, and services provided at the Faculty level), incomplete compensation for service teaching, and possibly other factors.

average) is somewhat similar across the Faculties because of the requirement for students to take the majority of their courses from their own program. However, as we already noted above, the amount of service teaching done varies widely – from 11% for Engineering to 54% for Humanities. We observe that Humanities is the largest provider of service teaching whereas the DeGroote School of Business is the largest recipient. Column D shows the amount of net service teaching, where a positive value indicates more service teaching provided than received. This column shows the wide variation among our Faculties in their experience of service teaching. Column E shows the effective student/faculty ratio, corresponding to that shown in Figure 16. Based on MUFA faculty complement for each Faculty, we can attribute the teaching done by individual faculty members to the number of students taught and find the student-units taught per faculty member in Column F. These show a very similar pattern to Column E because the number of units per program are similar across the University. Nevertheless, both Columns E and F show Science as a significant outlier with respect to the other Faculties (effective student/faculty ratio of 40.7, and 1,239 student-units taught per faculty member). Additional data from the BI tool gives us the number of classes offered by each Faculty; from this, we can determine the average number of courses taught per faculty member (Column G), as well as the average class size (Column H). We note the significantly higher average class size (125.8) for Science relative to the other Faculties, which may be the result of managing a high teaching demand without requiring instructors to teach more courses or sections. Indeed, the average teaching load (courses taught per faculty member) in Science (3.40) is below the average for the 5 Faculties (3.82). In the other direction, the high number of courses taught per faculty member in Humanities (4.64), in this context, could be interpreted as a choice to teach more courses with fewer students on average, as opposed to fewer courses with more students.

Table 2: Data associated to undergraduate teaching, disaggregated to specific Faculties

2024-2025	A	B	C	D	E	F	G	H
DeGroote School of Business	2,516	15%	37%	-22%	25.2	756	4.33	67.1
Faculty of Engineering	5,827	11%	24%	-13%	27.7	972	3.98	75.7
Faculty of Humanities	3,543	54%	22%	32%	30.8	951	4.64	67.2
Faculty of Science	8,965	32%	24%	8%	40.7	1,239	3.40	125.8
Faculty of Social Sciences	4,154	36%	35%	1%	28.3	860	3.27	84.3
Weighted average for non-FHS		**27%**	**27%**	**0%**	**31.6**	**995**	**3.82**	**83.1**

(Data from McMaster BI Tool)

A) Number of students taught (based on analysis of Table 1)
B) % teaching to students outside of Faculty ("service teaching provided")
C) % courses taken by students outside of own Faculty ("service teaching received")
D) Net service teaching
E) Effective student-to-faculty ratio (as in Figure 16)
F) Student-units taught per faculty member
G) Courses taught per faculty member
H) Average class size

Having presented data that describe aspects of the current status at McMaster of undergraduate teaching in general, and service teaching in particular, we turn to the financial implications of these data in the Operating Fund and Faculty budgets. Service teaching has certain drivers within the McMaster Budget Model that are designed to financially compensate Faculties for their delivery of this service teaching. We start by describing the general parameters of this compensation and then

turn to its financial implications. We emphasize that at the aggregate, University level, service teaching is net neutral in terms of resources. However, as Column D of Table 2 suggests, at the disaggregated Faculty level, it has strong implications for individual Faculties. The current McMaster Budget Model reallocates resources to compensate for service teaching according to an "Undergraduate Cross Faculty Teaching Adjustment". Since roughly 2016, the Budget Model directs the average of the domestic tuition of the two Faculties associated with the service teaching to the Faculty teaching the student. This helps to compensate the teaching Faculty for the resources required to deliver the service teaching and provides an incentive to offer service courses. It also provides a clear and transparent financial framework upon which to plan and deliver interdisciplinary programs.

While conceptually sound, it is not clear to us whether the current method, described above, adequately compensates service teaching, for two reasons: (a) only the tuition at the domestic rate flows with the student, even if a given student may be paying much higher international tuition, and (b) while some of the tuition flows with the student to the teaching Faculty, the associated provincial funding[24] does not. Humanities, with the highest net service teaching, is the test case for evaluating this parameter of the McMaster Budget Model, and after an analysis of our Consolidated Budgets, we believe that Humanities is in structural deficit for this reason. An upward revision of the Undergraduate Cross Faculty Teaching Adjustments would positively impact the Humanities budget. Such a revision would also affect other Faculties, both positively and negatively, including the DeGroote School of Business, Science, and Engineering, but the impact would be much more limited. For example, while Science does a lot of service teaching, its net service teaching is not that high, and hence an upward revision of the service teaching transfers would have a positive, but limited, impact on its financial health. In particular, it would only be able to partially address the anomalously high effective student-faculty ratio in Science even if all the additional funding was directed to faculty hiring. Nevertheless, we believe overall that a revision of the transfers associated with service teaching would lead to a fairer allocation of resources based on actual activity and give appropriate incentives for service teaching and the development of new inter-Faculty programs. Our suggestion underscores the recommendation from the 2016 MUFA BAC Report, that we – as a university community -- make a "greater effort to eliminate the friction that presently impedes interdisciplinary endeavours within the NBM".[25]

Section 3. Governance of the Budget Model.

In this brief section, we wish to recall a recommendation from the 2016 MUFA BAC report, namely, that there needs to be collegial governance of *the Budget Model itself*, separate from our well-established governance process for the annual Consolidated Budget (involving the University Planning Committee, the Senate, the Board of Governors, and others).

We acknowledge here that McMaster's Budget Model has been assessed and evaluated, both internally and externally, since its introduction. Formal reviews of the Budget Model were conducted in both 2017 and in 2023, at the request of the Provost, leading to a number of revisions.

[24] By provincial funding, we mean the Weighted Grant Units (WGU).
[25] "McMaster University's New Budget Model", MUFA Budget Advisory Committee Report, 2016, p.1.

This being said, the current MUFA BAC maintains a concern that, while we have respect for McMaster's budget processes which produce our annual Consolidated Budgets, the Budget Model itself is not subject to the same level of attention and collegial governance. Put another way, our concern echoes, 10 years later, the recommendation expressed in the 2016 MUFA BAC report, which we now quote:

> …And though formal opportunities for discussion at the University Planning Committee's Budget Committee and Senate are envisioned, **too often, we fear, the focus is on the actual allocations and budget bottom-lines rather than the model that is producing them**. Beyond this, given the manifest responsibilities of the individuals and bodies charged with guiding McMaster, the BAC is concerned that there is inadequate oversight of the [Budget Model] – as distinct from the budget -- at the highest level of the university**. There is a need to ensure that the [Budget Model] aligns with McMaster's mission rather than establishing that mission.**[26]

We therefore recommend, as did the 2016 MUFA BAC report, that thought be given to establishing a collegial governance framework, with adequate faculty representation, that can provide regular oversight and review of the McMaster Budget Model.

[26] Ibid, p. 15-16.

Appendix: Operating Fund Categories in the McMaster Consolidated Budget

In Appendix 3 ("Operating Fund unit level tables") of the 2024-2025 McMaster Consolidated Budget, there are 8 categories listed. We briefly explain them below.

- Category 1: "Faculties". This category includes all the Activity Units.
- Category 2: "Academic Priorities". This includes the University Fund and some contingency funds.
- Category 3: "Academic Support". This includes, among others, the office of the Vice President – Academic, the Vice President—Teaching and Learning, as well as the Registrar and the campus libraries.
- Category 4: "Research Support". This includes, for instance, the VP Research office, the VP Research Discretionary Fund, and MILO.
- Category 5: "Student Support". This includes, among others, the Student Support services, the School of Graduate Studies, and Scholarships (both undergraduate- and graduate-level).
- Category 6: "Facilities Support". This category includes expenses for Facility Services, Utilities, Campus Safety Services, and Deferred Maintenance, among others.
- Category 7: "Institutional Support". This category includes central services such as the VP Operations and Finance, Human Resources, UTS, the University Secretariat, the President's Office, and University Advancement, among others.
- Category 8: "Institutional Priority Allocations" includes expenses for Marketing and Branding and the President's Strategic Support Fund, among others.