



University of Colorado **Boulder**

2020 Program Review

Department of Economics

Academic Review and Planning
Advisory Committee Report

Approved

DocuSigned by:

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Provost and Executive Vice Chancellor for Academic Affairs | Date

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Process Overview

The Academic Review and Planning Advisory Committee (ARPAC) review of the Department of Economics (ECON) was conducted in accordance with the 2020 program review guidelines. Self-study responses were prepared by the unit and checked by an internal review committee composed of two University of Colorado Boulder (CU Boulder) faculty members outside of the unit. The internal reviewers submitted a summary of findings derived from the self-study and from interviews and/or surveys with faculty, staff, and student unit members. An external review committee, consisting of two experts from outside of CU Boulder, submitted a report based upon review of relevant documents and interviews with faculty, staff, and student unit members and university administrators. Owing to the COVID-19 emergency, ARPAC staff facilitated the external review as a remote visit on April 27 and 28, 2020, using web conferencing tools. Internal and external reviewer comments and recommendations are shared when relevant throughout this report.

Unit Overview

The campus' standardized description of the Department of Economics is available on the website of the [Office of Data Analytics \(ODA\)](#). ODA updates the profile annually in the fall semester. This report cites data posted in October 2019, reflecting the state of the Department of Economics as of the academic year (AY) 2018-2019.

Additional data and information from the divisional dean for social sciences in the College of Arts and Sciences and the chair of the Department of Economics are also cited where relevant.

Disciplinary Context

The department website defines economics as:

“A quantitative, policy-oriented social science with a highly developed body of theory and a wide range of real-world applications. Economists seek to describe the process by which societies use scarce resources to attain societal goals and predict the consequences of changes in those processes. Theoretical models, understanding of economic and policy-

making institutions, quantitative analysis, and the examination of data embody this field of knowledge.”

The Department of Economics offers graduate and undergraduate degree programs, with the latter having the largest count of majors among the nine social science units in the College of Arts and Sciences as of AY 2018-2019. Economics collaborates with the Division of Continuing Education in offering online education. The department’s faculty members engage in interdisciplinary research and teaching across the campus and around the world. They also serve in advisory capacities to local, state, and national legislators, government agencies, and non-governmental organizations, and to the International Monetary Fund. According to the November 2019 Research Papers in Economics (REPEC) ranking of economics programs nationwide, CU Boulder’s department ranks 41st, ahead of the University of Arizona (75th) and the University of Pittsburgh (48th). The department ranks below Arizona State University (31st) and the University of California Santa Barbara (33rd).

Research and Scholarship

The self-study describes the department’s research and scholarship as focused on 11 subfields, including econometrics; economic development; economic history; international trade and finance; environmental and natural resource economics; industrial organization; microeconomic theory; macroeconomic theory; labor economics, human resources, and demography; public economics; and urban economics. Some faculty members contribute to more than one subfield.

The self-study explains that the discipline especially prizes a faculty member’s success in publishing journal articles, which explains why consideration of a journal’s prestige weighs so heavily in determining the value of a faculty member’s contributions and the department’s overall research quality. The self-study goes on to classify various publication categories that are used to benchmark faculty research output and to note the department’s particular strengths in contributing to publications focused on international trade and finance, industrial organization, environmental and natural resources economics, and econometrics.

According to the self-study, between 2013–2019, the department’s faculty members published 259 refereed journal articles and secured \$8.5 million in external funding from various

organizations including the Colorado Department of Human Services, the National Science Foundation (NSF), the Russell Sage Foundation, and the Kazakhstan Ministry of Education and Science. The self-study notes that the Humboldt Foundation awarded Economics' faculty members with two fellowships, as did the Hoover Foundation (likewise two).

Collaborations

Economics' strategic plan links the department's success to its ability to help facilitate interdisciplinary research and teaching activities, both on campus and around the world. Within CU Boulder, the department's faculty members are affiliated with various research centers, including the Center for Asian Studies; the Center of the American West; the Bruce D. Benson Center for the Study of Western Civilization; the Institute for Behavioral Genetics (IBG); the Institute of Behavioral Science (IBS); and the Renewable and Sustainable Energy Institute (RASEI). Economics faculty members hold either dual or courtesy appointments in the departments of Classics, History, Philosophy, and Political Science, as well as in the Environmental Studies Program and the International Affairs Program. One faculty member serves as director of the Center to Advance Research and Teaching in the Social Sciences (CARTSS), a CU Boulder social science research incubator. Finally, Economics faculty members collaborate with students beyond their department by helping to support undergraduate research sponsored by the Undergraduate Research Opportunities Program (UROP) or by serving as co-advisors to undergraduate honors thesis and doctoral candidates.

Beyond the Boulder campus, the department's faculty members nurture collaborations with various research groups, including with the Association for Analytical Learning on Islam and Muslim Societies, the Economic History Association, the Kazakhstan Institute of Mathematics and Mathematical Modeling, the National Renewable Energy Laboratory (NREL), the Peterson Institute for International Economics, Power Auctions LLC, the Regulatory and Policy Institute (IRPRI), the U.S. Census Research Data Center, and the U.S. Census Bureau. The self-study also notes that Economics faculty members have worked as editors for various interdisciplinary journals and for handbooks.

Campus Context

In addition to nurturing research collaborations, the department defines its mission as educating students in "economic theory and applied economic methods, equipping them with

the skills to be productive, thoughtful citizens and use the tools of economics analysis throughout their lives.” The self-study describes the department’s commitment to graduating students who are “well educated, well supported, and feel part of a large cohesive intellectual community.” At the time of the fall 2018 campus census, Economics enrolled 1,270 undergraduate majors, 141 undergraduate minors, and 70 graduate students. The department also serves a large population of students from other programs; for example, one-quarter to one-third of its microeconomics course enrollees are non-majors, predominantly from the finance and accounting divisions of the Leeds School of Business.

A 2014 CU Boulder academic prioritization exercise ranked Economics fifth out of all CU Boulder units for effectiveness. Additionally, the department was one of six academic units to earn a “highly effective” score that year. A 2018 follow-up prioritization dropped the department’s ranking to ninth place among all CU Boulder units, but it retained a “very effective” score. The drop can be attributed to a reduced 2018 scholarly accomplishment score, a measure that “summarizes the research and creative achievements of [a unit’s] faculty”.

Strategic Planning

In the fall of 2019, Economics undertook a strategic planning exercise designed to explore options for optimizing key department functions, to facilitate aspirations toward a world-class undergraduate program, and to elevate its PhD program’s national ranking.

The resulting plan includes the following strategic goals:

- Implement an outcomes assessment plan;
- Improve online distance learning course offerings;
- Develop new sources to fund undergraduate scholarships and graduate student support;
- Hire an undergraduate program coordinator;
- Increase outreach to and enrollment by individuals who identify as belonging to historically underrepresented groups.

The plan also addresses how to future-proof the department's tenure-stream and instructor-rank faculty contingent. Economics is acutely aware that recent faculty member losses and anticipated retirements will further affect faculty workloads.

Faculty and Research Personnel

According to the AY 2018-2019 ODA unit profile, the department employs 31 tenure-stream faculty members, two instructor-rank faculty members, and two lecturers. The self-study contextualizes this count, noting that the department reached a peak of 34 tenure-stream faculty members in AY 2014-2015, but has since experienced multiple retirements and one resignation. A personnel roster included with the self-study deviates slightly from the ODA count; it lists three instructor-rank faculty members and one lecturer, and includes one adjunct faculty member and three Division of Continuing Education instructors as affiliates, with the latter employed to teach the department's online and evening courses. The self-study indicates that the department anticipates two additional tenure-stream faculty member retirements (one having already transpired in 2019 and another expected in 2021). Economics expects to conduct searches to replace these individuals, with the goal being to return to a total of 31 tenure-stream faculty members. The department estimates that it will ultimately require 35 tenure-stream faculty members to adequately address teaching demands, especially to reduce the teaching burden now borne by PhD students, as well to elevate the department's research profile.

The AY 2018-2019 ODA unit profile shows that the department's faculty members at all ranks earn less than their peers within the Association of American Universities (AAU). The disparity widens with higher ranks: assistant professors of economics at CU Boulder earn on average \$128,773 (which is 94% of the AAU average), associate professors average \$147,535 (91% of the AAU average), and full professors average \$177,569 (77% of the AAU average).

Staff

The ODA unit profile and the self-study both describe Economics as employing five full-time staff members. This group includes an operations and business manager who also works as the chair's assistant, a PhD program manager, an administrative assistant who works as the office receptionist, a website manager who also works as a graphic designer, and a curriculum and seminar series coordinator. The self-study indicates that the latter employee is nearing

retirement and that a search is underway to find a successor. Additionally, the college has assigned four undergraduate academic advisors to Economics; two are exclusively dedicated to the department, and the other two are shared among the departments of Economics, Anthropology, and Political Science.

The department requests funding to expand its staff contingent; in particular, three hire requests to aid the undergraduate program, including:

- An undergraduate program manager to mirror the position assigned to support the PhD program. The department plans to task this role with organizing, tracking, and analyzing undergraduate student data used to improve student retention and academic success; with coordinating and maintaining outcomes assessment data; with organizing community-building events; with coordinating outreach efforts; and with undergraduate scholarship administration. The position could also share in the work currently done by the undergraduate studies associate chair and the curriculum coordinator, especially duties related to scheduling and student experience.
- An additional half-time administrative assistant to do work currently tasked to student employees. The students, while highly valued as employees, do not have schedules conducive to completing larger, more focused projects, according to the self-study.
- An additional academic advisor fully dedicated to the department's undergraduates. The department cites not only the high caseloads carried by its current advisors, but a need for focused mastery of the degree program requirements.

Undergraduate Education

The Department of Economics offers the bachelor's degree (BA) in economics and four specialized programs with extended requirements through which majors can graduate with special emphases. These emphases include the environmental and natural resources, international studies, public policy, and quantitative analysis. Students can also earn certificates in actuarial studies and quantitative finance.

According to the AY 2018-2019 ODA unit profile, Economics has seen its population of majors grow 28% over the past five years. In AY 2018-2019, the department generated 32,057 student credit hours, representing a five-year 5% increase. Economics ranks first out of the ten social

science units for student credit hour generation and sixth among all CU Boulder degree-granting units. Non-majors accounted for more than half (58%) of the department's student credit hours taught. Over the past five years, the department awarded 285 bachelor's degrees, of which 6% were bestowed with honors (up 202% in five years).

Since the 2013 review, Economics has introduced new 3000- and 4000-level course electives, restructured its intermediate microeconomics course, and established standard curricula "to ensure comparability across the multiple sections taught in each semester." According to the self-study, the department intends to make additional undergraduate curriculum revisions, including to add a recitation to the intermediate macroeconomics course to make it worth four credits, as it did previously for the microeconomics course. In addition, the department hopes to offer online sections of all its courses that fulfill the major's requirements. In proposing these revisions, the department describes a need for gaining additional personnel, especially to oversee online course delivery. Economics also points to the uncertainty of the future of the university's online education funding policies as a source of trepidation.

The self-study notes concerns related to large class sizes, a lack of undergraduate student interaction with Economics tenure-stream faculty members, and the inconsistent availability of upper-division courses. While classes of more than 50 students pose logistical and pedagogical challenges, the current faculty complement has not kept up with the growth of undergraduate enrollments, leaving Economics no choice but to hold larger classes. According to the AY 2018-2019 ODA unit profile, the average class taught by tenure-stream Economics faculty members enrolls 72 students, representing a 14% decrease from five years ago. Classes taught by graduate part-time instructors (GPTIs) or teaching assistants (TAs) enroll 88 students on average, a 22% five-year increase. The department's instructor-rank faculty appear to be sheltered from these large classes; the ODA unit profile records an average class size of 22 students, representing a 47% decline from five years ago.

The department's undergraduate program offers more than 50 courses, including two at the 1000-level, two at the 2000-level, eight at the 3000-level and 39 at the 4000-level, according to the self-study. However, the self-study notes that the "current [faculty] staffing [level] implies that many of the courses in our 4000-level curriculum are given infrequently, if at all." Sentiments noted by the external reviewers from interviews with students affirm this, with the students saying that they have difficulty ascertaining when and how often some upper-division

courses are offered. These courses, which are also heavily subscribed by students outside the major, “change from one year to the next and sometimes on short notice,” the external reviewers note, impeding majors’ timely progress toward completing their desired fields of study. The external reviewers recommend that the department remove courses that are no longer being taught from the catalog and “attempt to commit to the same set and sequence of upper-level classes each year.”

A January 2020 survey conducted by the internal reviewers and addressed to Economics undergraduates received 288 responses (representing an 18% response rate), with 71% of respondents being juniors or seniors. The internal reviewers asked the students to rate their overall experience with Economics: 64% said they were “satisfied”, and almost 20% were “very satisfied”. The survey also asked about satisfaction factors in more detail, revealing that 89% of respondents were satisfied/very satisfied with the logical sequencing and continuity of economics courses, 82% were satisfied/very satisfied with the availability of required courses, and 72% of respondents were satisfied/very satisfied with the availability of elective courses. Despite these majorities, the open-ended survey responses, like the external reviewers’ interviews with students, revealed concerns about students’ access to upper-division electives. The student survey also revealed other areas of possible concern: only 44% of respondents reported being satisfied/very satisfied with Economics’ role in preparing students for job placements and their careers, 30% of respondents were satisfied/very satisfied with departmental support for research projects, and 29% were satisfied/very satisfied with the department’s scholarship support.

The 2020 internal reviewer survey echoes findings from a spring 2016 senior survey administered by ODA. The ODA survey revealed that 34% of the department's graduating students reported relatively meager satisfaction levels with the undergraduate program. More specifically, 32% of respondents reported dissatisfaction with the major as a whole; 33% with the effectiveness of courses in providing a good general education; 35% with opportunities for faculty interaction and engagement; and 35% with the program’s meeting their educational goals. The department ranked last on all these measures among nine degree-granting social science units. The 2016 survey also revealed students’ dissatisfaction with job and career preparation: 49% of the respondents felt that Economics courses are effective in preparing them for employment or graduate school, 53% that the department's career advising is satisfactory, and 57% that CU Boulder prepares them for the job market.

Graduate Education

At the graduate level, Economics confers the doctoral (PhD) degree. Students in the process of completing their PhD requirements also earn a master's degree (MA) in economics but the department does not offer a terminal, standalone master's degree.

According to the ODA unit profile, in AY 2018-2019 Economics enrolled 70 doctoral students, of whom 56% were in-state residents and 31% were international students. The latter metric ranks the department first among the social science units, and eighth across all CU Boulder academic degree-granting units. The total number of graduate students in AY 2018-2019 also represents a 10% decline from five years prior. According to the self-study, between 2014 through 2019, incoming doctoral student cohorts varied from between 10 to 16 students.

In AY 2018-2019, the department awarded 11 master's and 12 doctoral degrees, with the median PhD student earning their degree in 5.72 years, according to the ODA unit profile. This ranks the department second out of the six PhD-granting social science units, and 23rd across campus. The ODA unit profile also reports that 10% of Economics doctoral students graduate within five years; 40% within six years, 52% within eight years, and 56% within ten years. The department's self-study explains that the graduation percentages reflect the attrition that occurs during the first two years of graduate study, when students might perform poorly in core courses or on the preliminary exam. To improve student retention, the department has prioritized its graduate application screening, especially to more carefully consider an applicant's mathematical comprehension, taking into consideration their prior coursework, especially in mathematics, calculus, and statistics, and their GRE test scores. For its enrolled students, the department prioritizes job market preparation through a series of meetings with faculty members in the fall semester. These meetings entail an overview of the job market, preparation of key application materials, mock interviews, job talks, and Q&A sessions with faculty. According to the self-study, these efforts have yielded tenure-track faculty placements for approximately 55% of Economics' PhD graduates, while the balance of the department's PhDs enter the private sector or government in various positions, including as consultants.

Of the 70 doctoral students enrolled in AY 2018-2019, 65 of them receive funding from the department via teaching appointments: 28 of them as graduate part-time instructors, 36 as teaching assistants, and one as a student research assistant. While almost all Economics

doctoral students are fully funded, the department recognizes that programs elsewhere often make better admission offers. According to the self-study, “many higher-ranked PhD programs in economics offer funding packages that do not require students [to] teach during their first year.” This teaching abeyance allows students to focus on their coursework and commence research, potentially compressing their time to degree. Noteworthy is the degree of Economics' reliance on graduate students for course delivery, with student teaching accounting for 51% of the department's undergraduate student credit hours in FY 2018-2019, a 16% five-year increase. Moreover, with an average class size of 88 students per course, graduate students teach much larger classes than the department's tenure-stream faculty members (average size of 72 students) and instructor-rank faculty members (average size of 22 students). According to the external reviewers, the significant teaching load is an "unusual aspect of the program" to the extent that some dissertation completion fellowships go unused. A more recent development is a decision by the dean of the College of Arts and Sciences to disallow the use of monies from the college's leaves and replacements process to pay graduate students to teach. This money, which represents faculty sabbaticals or funds that faculty members earn from grants that they can use to “buy down” their teaching duties, had previously funded 28% of Economics graduate student teaching stipends.

In their exit interview with the provost and ARPAC members, the external reviewers report that anxiety about funding animated their conversations with Economics graduate students, saying that they heard more than a normal level of grumbling about how transparently the department awards financial aid. About half of the students enter the program without funding, and even students who are in good standing after their first year sometimes do not receive support. At best, these students can hope to receive fractional appointments that do not fully cover their tuition. A further source of anxiety for students is that the department awards teaching assistantships primarily on the basis of grade point averages. While the department has introduced other milestones, such as passing core exams in a timely way, the averages play the larger role in awarding teaching assistantships. Because of the scarcity of the teaching assistantships, small differences in the students' first-year grade point averages can have a large and persistent impact on their funding. This approach has resulted in students' dropping challenging courses in an attempt to improve their grade point averages. Also, this approach appears to place new students at a disadvantage vis-à-vis their more advanced classmates, whose grade point averages tend to rise as they take more specialized field courses.

The internal reviewers' January 2020 survey of Economics graduate students received 46 responses (a 62% response rate), with 61% of the surveyed students indicating that they were "satisfied" with their overall experience in Economics, and 21% indicating that they were "very satisfied". The survey also probed other factors of student satisfaction, and garnered the following results: 85% of Economics graduate students were satisfied/very satisfied with the clarity of their degree program requirements, 84% were satisfied/very satisfied with the availability of required courses, and 72% were satisfied/very satisfied with the availability of supplemental campus resources, such as the University Libraries and the Writing Center. By contrast, the department scored less well on student satisfaction with the availability of elective courses: only 40% of respondents said they were satisfied/very satisfied, and only 46% said that they were satisfied/very satisfied with post-PhD employment guidance. Additionally, 29% of survey participants skipped a question asking them to assess the ease of identifying an advisor, 35% skipped assessing the quality of advising, and 30% skipped a prompt to assess their opportunity to publish and present papers.

An earlier Campus and Workplace Culture (CWC) Survey administered by ODA to Economics graduate students in September 2019 corroborates the existence of a mentoring support gap. The survey yielded a 64% response rate from the department's graduate students, with only about half (53%) reporting that they have a mentor, which is substantially lower than the overall rate for social science units (73%). According to the self-study, the department has responded in part by sponsoring Coactive Training Institute career coaching programs for its graduate students. Instituted in fall of 2018, this initiative is still in its infancy and at the time of the self-study, had yet to receive strong student engagement.

Budget

Economics has a large budget relative to other CU Boulder social science departments. According to the self-study, the department receives money from a combination of regular (and recurring) or supplemental sources, including:

- A salary pool totaling \$5.2 million in fiscal year 2020 that pays the department's faculty and staff members and comprises the "largest funding source for the department in terms of resource flows", according to the self-study. The adequacy of these funds has come into question as the department experiences departures, declining and non-competitive starting

salaries for faculty, as well as small merit increases, making the department's "most productive faculty good targets for other departments to hire", according to the self-study.

- An annual operating budget of \$83,864 in fiscal year 2020 furnished by the college to support the department's teaching mission as well as administrative needs. The self-study calls the current operating budget inadequate, noting that the department regularly backfills the budget from other funding sources.
- Economics participates in the Summer School Incentives Program, which the self-study report describes as "a revenue share from the [Division] of Continuing Education (CE) to the College and then the College returns a part of this revenue to departments." Participation in the program netted the department \$54,368 in fiscal year 2020. The self-study notes that this income source is heavily dependent on the college's budget and that a recent campus strategic realignment might reorganize the revenue shares that this program generates, creating some uncertainty.
- The possible reorganization of the revenue share model, as well as the potential implementation of a block-rate tuition structure, might also impact revenues that Economics earns from teaching online and evening courses. The department has employed this revenue stream (some \$291,498 in 2020) to cover instructional salaries, benefits, and other programmatic costs, to the extent that "[a]fter fall 2019 there are enough reserves to cover the entire cost of the [online and evening] program without any new revenue," according to the self-study.
- The department reports having 28 permanent endowments that total \$11.4 million. According to the self-study, 24 of the endowments are "designated for specific graduate fellowships, undergraduate scholarships, or teaching awards." Of these 28 funds, two that account for nearly half of the total, some \$5.4 million, cover costs associated with the Eugene Eaton and Stanford Calderwood chair positions. Another two endowments provide a "flow of funds that can be used at the department's discretion" and are used to fill gaps in startup and retention packages, and cover costs associated with the department's seminar series.
- Finally, the department received \$4,494 in fiscal year 2020 in direct and indirect cost recovery (DAICR) monies from externally funded research grants. The self-study reports that the bulk of DAICR generated by Economics faculty members is redirected to the CU Boulder research institutes with which they are affiliated, including the Institute of Behavioral Science (IBS) and the Renewable and Sustainable Energy Institute (RASEI).

According to the self-study, the department's DAICR share is typically distributed back to the research principal investigators (PIs).

Both the internal and external reviewers praise the department for its initiative in augmenting and optimizing its funding. More specifically, the internal reviewers cite the department's success expanding into online distance education and the external reviewers commend the chair's fundraising diligence. That said, both review committees also say that Economics will require additional resources to further its growth. Over the years, Economics has successfully established the Eugene Eaton Chair endowment and assigned a distinguished senior economist for this position, further elevating the department's profile. Looking toward the future, the department has expressed its plan to convert the Stanford Calderwood Chair—which was established in 2000 and was initially envisioned as a rotating appointment among meritorious full professors—into a permanent, single appointment. This conversion will require considerable additional funding from the college; as yet, the college has not granted the department's request. Although the external reviewers speculate that the “stalemate” between the department and college lies in part in a difference of opinion about the ideal candidate for the position, the impasse might also reflect college resource constraints, as suggested by the department's request for both a “completely unconstrained search” and funding sufficient to have the endowment support a competitive salary, according to the internal review report. Both the internal and external reviewers urge a swift resolution to mitigate possible strained donor relations and ensure the department's fundraising reputation and efforts remain unhampered.

Space, Infrastructure, and Support Needs

The department is housed in the Economics Building, originally built in 1921 as the World War I University Memorial Center. The department's website provides additional history and details about the building, including a description of the marble feature that memorializes the names of the fallen soldiers of World War I from Colorado, Utah, and Montana. The building housed the School of Business from 1953 to 1971, when it became home to the Department of Economics.

According to the self-study, the building “is overflowing with faculty, staff, and graduate students.” The space includes 47 faculty and staff member offices, divided across three floors.

Thirty-eight of these are private with a window, eight are semi-private, and another private office is windowless. Since the 2013 review, the department split some of its spaces to create three additional private offices with windows. The department's 65 graduate students share ten office spaces, and the self-study notes that 16 first-year doctoral students share one of these; an arrangement it calls suboptimal. Additionally, the self-study notes that faculty, graduate, and undergraduate students have no common space.

The self-study, internal and external review reports all draw attention to the department's need for increased and improved space. According to the external reviewers, the space issue is problematic "for a number of reasons, not the least being the fact that the PhD students teach a number of the undergraduate courses and need to hold office hours." The internal reviewers also echo these space concerns in the context of graduate student support.

The self-study identifies possible space solutions, noting that the department is keen to gain control of the basement, including spaces currently controlled by the university, saying these could be renovated to meet department needs. In particular, Economics wants permission to renovate a basement computer laboratory and several classrooms and employ these for additional offices or a graduate student shared space. The department appears confident about tackling these conversions for "under \$125,000 per space." The external reviewers lend their support to these solutions, and recommend the university approve the department's space allocation requests.

As it relates to university-provided services, the department appears content, noting for example that assistance provided to Economics by the Office of Information Technology (OIT) is generally sufficient, except for occasional issues with non-functional computers in the applied econometrics laboratory. The self-study also notes several other computing-related needs, including a wish to gain a secure space for researchers to share as they assess restricted data.

Governance

The department revised its standing rules in 2015, with a focus on enfranchising instructors. According to a copy of the rules appended to the self-study, instructors can now "vote on the hire, appointment, and reappointment of other instructors and matters of undergraduate

curriculum that come to the full faculty for a vote." The standing rules outline the role and responsibilities of the department's officers, including the chair, associate chairs, and affiliated center directors, and describe the proper function of the department's standing committees and centers. They also detail meeting and voting procedures, department standards and processes, and procedures for faculty personnel actions including for registering a grievance, as well as faculty leave policies, and rules for salary adjustments upon tenure or promotion.

The department rules specify that the chair is the department's executive officer and serves a renewable four-year term. The chair appoints the associate chairs for undergraduate and graduate studies and is advised by the department's executive committee on faculty personnel issues and on the oversight of the Center for Economic Analysis and the Carl McGuire Center for International Studies.

The self-study describes a further standing rules update planned for AY 2020-2021 that would add budgeting procedures intended to enhance transparency and broaden department involvement. Currently, agency for budget decision-making falls solely with the chair:

"Historically the department chair is responsible for budgeting, including budget allocations. As has always been the case, the chair is responsible for negotiating faculty salaries on behalf of the department for hires and retentions as well as faculty research and teaching support packages. Faculty merit evaluations are implemented by the chair using the department's merit evaluation procedures."

Along with the standing rules, the self-study includes an eight-page "Merit Evaluation for Research" document from September 2016 which outlines a detailed point system for merit evaluation, including a ranked list of journals. As the department weighs journal rankings heavily in making tenure or promotion decisions, the external reviewers recommended an update, saying that as currently scored, the list is "inconsistent and a bit antiquated". Finally, the self-study includes a third governance document from February 2008 titled "Merit Evaluation for Teaching" that specifies merit scoring for teaching activities.

From their interviews with faculty members, the external reviewers learned that Economics has no formal and efficient process for faculty members to suggest departmental policy changes (for example, to the curriculum). The external reviewers recommend designating an individual

or one of the associate chairs who would be responsible for “presenting the suggestion to the executive committee for discussion and [...] reporting back to the faculty member the executive committee’s proposal for next steps in reasonable time.”

The self-study indicates that Economics has instituted a mentoring and career development program for pre-tenure faculty members. The documentation notes that the program has formally been in place since AY 2009-2010. Senior faculty members are assigned to mentor the department’s assistant professors with regards to their teaching and research portfolios, as well as their service loads. According to the self-study, the department also makes every effort “to ensure that untenured faculty members receive the advice that is representative for the Department as a whole,” and alternates the mentor-mentee matches on an annual basis. The department chair mentors associate professors (tracking their progress towards promotion to full professor), as well as instructor-rank faculty (providing feedback on their teaching and service performance as well as professional development). The chair also supervises the department’s manager of operations and business. The manager, in turn, mentors the department’s other staff members.

Inclusive Excellence

According to the AY 2018-2019 ODA unit profile, 20% of Economics undergraduate majors identify as women, 29% as belonging to a minority population (i.e., Asian American, African American, Hispanic/Latino, Native American, Pacific Islander), and 21% as belonging to an underrepresented minority population (i.e., African American, Hispanic/Latino, Native American, Pacific Islander). Compared to five years ago, these numbers reflect a 9% decline of undergraduate women, but a 34% increase for majors who identify as belonging to a minority population, and a 48% increase for majors who identify as belonging to an underrepresented minority population. Of note, 16% of the department’s undergraduates are international students, a 112% five-year increase. In an effort to increase the visibility and representation of women in economics, the department has participated in outreach work, including to support the Undergraduate Women in Economics (UWE) initiative. The department has also worked to adapt recruitment emails to appeal to a wider set of high school students and to incorporate diverse global and historical themes into the undergraduate curriculum.

Among the department's graduate students, the ODA unit profile shows that 30% identify as women, 18% as belonging to a minority population, and 5% as belonging to an underrepresented minority population. Unlike the undergraduate statistics, these numbers reflect declines over five years among graduate students identifying as women (down 16%), and among graduate students who identify as belonging to a minority population or underrepresented minority population (down 3% and 27%, respectively). Finally, almost a third (31%) of the department's graduate students are international students, although this represents a 2% decline from the last five years. According to the self-study, the department "finds that this has been part of a broader nationwide decline in international students studying at the graduate level."

Economics says in its self-study that the department is trying "to increase the representation of women and other underrepresented groups" through its recruiting process, but admits that these efforts have been surpassed by more lucrative offers and funding packages from other PhD programs. Nevertheless, Economics continues to pursue efforts to increase the disciplines' diversity. For example, the self-study reports that one of the department's faculty members maintains close ties with the American Economic Association's (AEA) Summer Program and Mentoring Program; the latter program in particular, "seeks to increase mentoring networks among graduate students of color, raise PhD completion rates, and improve placement of scholars of color in academic institutions."

Among 33 tenure-stream faculty members counted in the ODA unit profile, 21% identify as women, 33% as belonging to a minority population, and 11% as belonging to an underrepresented minority population. The self-study provides a detailed chronology of changes in the tenure-stream faculty's composition since AY 2012-2013 and notes that, despite having the same number of women faculty members as it did in AY 2012-2013, the numbers alone do not describe how it has "successfully promoted and tenured women, as well as retained them when met with offers from other institutions", and maintains that the proportion of women faculty in the department is on par with that of economics departments in other PhD-granting institutions. The department aspires to improve faculty diversity both in terms of gender and racial/ethnic demographics. Given the rising enrollments of women in PhD programs, it is especially optimistic about future opportunities to hire more women faculty members. However, the department also acknowledges that "the very low numbers of PhD graduates from underrepresented minority groups presents a significant limitation" to its efforts

of diversifying its faculty contingent. The internal reviewers remark on this admission, and note that the department's efforts must continue despite "recogniz[ing] the difficulty associated with increasing the diversity of their membership."

The external reviewers identify a need for the department to introduce a formal mechanism for furthering diversity, equity, and inclusion (DEI), and recommend that the department recruit a DEI officer from among its tenured faculty members. Among other work, they say a DEI officer could advise on hiring and admissions best practices, and communicate directly with the department and college leadership when concerns arise touching on diversity, equity, and inclusion.

Unit Culture

In September 2019, the Office of Data Analytics (ODA) and the Office of Institutional Equity and Compliance (OIEC) conducted a survey that asked participants to rate their perceptions of the campus and their workplace. Within Economics, 74 graduate students and 40 faculty and staff members participated (representing 64% and 60% response rates, respectively). Of note, a summary of survey findings generated by ODA and OIEC acknowledges that "while women are underrepresented within the Economics population for faculty and staff (14 of 40, or 35%), they are even more underrepresented within the survey responses", comprising just 21% of the faculty and staff survey participants.

Among faculty and staff member respondents, the survey reveals positive perceptions of the department's work culture, with 88% of Economics personnel indicating that their workplace culture is positive; 88% that their work is respected by colleagues; 87% that their comments and ideas are taken seriously; and 88% saying that people are treated with respect by department leaders. Further, 83% indicate that they feel welcome within the department, and 79% that they feel a sense of community within the department. These sentiments translate to the institutional level, too, with 88% of participating Economics faculty and staff members reporting that they feel welcome at CU Boulder; 75% feeling a sense of community at CU Boulder; and given a chance, 79% would choose to work at CU Boulder again.

Among Economics graduate students, 85% rated the intellectual climate of the graduate program as positive; 86% reported positive perceptions when asked whether faculty members

are invested in their success, 77% indicated that they had made friends at CU Boulder; and 76% positively rated the overall social climate of their graduate program. In addition, 68% of the graduate student respondents reported feeling welcome at CU Boulder; 68% said that they felt like a respected member of the CU Boulder community; and 66% reported pride in their graduate program. The external reviewers echo these findings, saying:

"In literally every single interview we conducted, participants stressed that the general department culture is great. There seems to be a culture of collegiality across faculty ranks, between staff and faculty, and faculty, students, and staff. This is not super common. Economics is a pretty fragmented discipline by subfields and many departments are somewhat fragmented and fight over resources for their respective fields. This is not the case here. The culture is truly admirable. This is a place that people want to spend time at and this makes for a productive and supportive workplace."

The ODA and OIEC culture survey responses also reveal areas for improvement, especially for Economics graduate students. The survey results show high proportions of graduate students "perceive the academic/workplace culture as somewhat disrespectful, antagonistic, and lacking a sense of community." Among student respondents, only 49% feel valued in their graduate program; 45% feel respected in their graduate program; 43% find that rude behavior is not accepted within the department; and only 44% find that the department's faculty effectively address employees' problematic behaviors that undermine the academic/work environment. Graduate students also appear to face administrative challenges within the department. When asked about how transparently the department allocates resources and how transparently it conducts performance evaluations, only 44% and 49%, respectively, said it did so. In addition, only 57% of the respondents agree/strongly agree that they feel a sense of community in their program. This metric drops further in the institutional context, with only 53% of graduate student respondents feeling a sense of community at CU Boulder, and only 51% reporting they would choose to attend school here, if they had to do it over again.

The external reviewers say that both graduate and undergraduate students they met with "lamented the lack of access to the broader research culture in the department". They recommend that the department establish research luncheons for graduate students and engage the undergraduate Economics Club in organizing faculty brown bag presentations.

According to the reviewers, such events could improve student awareness of the department's research work and enhance the department's culture of collegiality.

Past Reviews

The Department of Economics has made a concerted effort to address most of the recommendations raised in the 2013 ARPAC report. The following summarizes the department's progress in key areas:

- Faculty teaching loads: As part of a reformulation being piloted across the social science units of the College of Arts and Sciences, Economics' research-active tenure-stream faculty members have shifted to a 2:1 teaching load.
- Faculty hiring and salaries: The department has worked with the college to identify ways to mitigate the need to pursue retention-based salary adjustments, including to offer faculty members fixed-dollar salary adjustments that are tied to promotion steps (such as promotion from associate to full professor). However, the department acknowledges that budget constraints faced by the college may not permit the implementation of such strategies. That said, in 2016–2017, the provost funded a salary adjustment exercise within the department that resulted in salary increases for most Economics tenure-stream faculty members. The department has also seen recent success in recruiting and retaining women faculty members and faculty members of color. Economics' 2016 reply to ARPAC notes that it successfully retained two professors from underrepresented groups, and in its 2020 self-study, the department notes that it succeeded in hiring a woman assistant professor, and that two other women faculty members recently attained tenure.
- Graduate program and student instruction: Economics has worked with the college to relax minimum enrollment requirements for graduate seminars; this change will permit Economics students to take more of these courses, speeding their time to degree. As was recommended by ARPAC in 2013, the department has succeeded in stabilizing the funding offered to its graduate part-time instructors (GPTIs) and teaching assistants (TAs). Economics now requires its PhD students to enroll in the Graduate School's teacher training program. Economics has also funded a "lead" graduate student teacher position, staffed on a one-year term beginning each spring, to provide the department's GPTIs with feedback and training. Additionally, the department has increased faculty oversight of graduate student teaching, including to better synchronize lower-division courses to improve quality and consistency, and to reassign some courses from GPTIs to faculty members to improve student satisfaction. That said, ARPAC's concern about the

department's heavy reliance on GPTIs and TAs for undergraduate course delivery remains significantly unaddressed.

- Undergraduate outcomes assessments: Economics acknowledges that it has been slow to respond to this recommendation; however, the self-study notes that the department has assembled an outcomes assessment team that has done extensive work on this front. Additionally, Economics has drafted a series of program learning objectives and mapped these to CU Boulder's baccalaureate learning goals. According to the self-study, the department's implementation of the assessment plan commences in spring 2020.
- Governance: Since the last review, the department has amended its standing rules to give instructors voting rights on instructor-rank reappointments and hires, as well as on undergraduate curriculum matters.

Analysis

The self-study, internal and external reports all describe the Department of Economics as a productive unit with a growing student body and a well-earned research reputation. The department, led by its current chair for the past 14 years, has an enviable fundraising track record. Economics' early embrace of online instruction has proved prescient, and its online distance learning partnership with the Division of Continuing Education has further elevated the department's profile and provided Economics and the university a much-needed revenue stream.

That said, this year's review shows a large and growing department under strain, suggesting that further planning, investment, and support will be required in the years ahead. For one, national average salaries for economics faculty across all ranks have risen and Economics will need to keep up or face the risk of faculty losses. Additionally, graduate students working as teaching assistants and graduate part-time instructors have largely shouldered the burden of accommodating ballooning teaching needs that have followed a spike in undergraduate enrollments. While the department has taken steps to remedy this situation, more monitoring and thoughtful planning are required. The department's heavy reliance on graduate students working as instructors should prompt discussions about the optimal size of the PhD program, and how well the department is positioned to deploy its faculty members to meet teaching needs.

The department should also make additional progress on cultivating a more inclusive and positive departmental culture. ARPAC concurs with the external reviewers who recommend that Economics establish formal structures and channels to advocate on behalf of greater inclusivity, collegiality, and transparency. Moreover, the department should also implement a more collaborative decision-making model—one that involves more than just input from department leaders—especially given recent surveys that show significant percentages of department members expressing skepticism about how transparently resources are allocated, including following merit evaluations.

Strategic Planning

Economics ought to develop a strategic hiring plan that accounts for current and anticipated gaps resulting from recent departures and anticipated retirements; that addresses instructional needs, including those resulting from growing enrollments and the department's expansion into distance learning; and that furthers the diversity and inclusive excellence of its employees and students. ARPAC is convinced that such a plan should focus attention on increasing the department's instructor-rank faculty, both to support classroom instruction needs currently met by graduate students and to support the department's growing involvement with online and distance learning.

In planning its upcoming hires, Economics should consider developing a two-track approach: one track focused on immediate hiring needs (within the next two to three years) and another that takes a longer-term view of such needs (say, up to seven years out). As already noted, the department's enterprising venture with the Division of Continuing Education regarding distance learning is proving successful, but uncertainties remain, especially as the university shifts to a new budget model. In light of what the current public health crisis has taught us about being poised to offer course content across multiple instruction modes, the university would be wise to learn from Economics and to help the department with establishing its revenue-sharing enterprise on a more predictable footing. Doing so will help Economics to better plan its resource allocations.

The department's proposal to repurpose the Stanford Calderwood endowment to allow it to support a permanent appointment of a prominent economist is unlikely to succeed without significant additional funds from the College of Arts and Sciences. This prospect is unlikely. Instead, ARPAC recommends that the department work with the college to develop alternative ways to apply the Stanford Calderwood endowment.

Undergraduate Education

The department's resources have been stretched to accommodate an increase in student enrollments; in particular, the size of the department's instructional faculty has not kept pace with teaching needs. As a result, the department deploys its tenure-track faculty members to teach large classes, including "jumbo principles classes" that enroll at least 400 students. While such classes may improve the student credit hour metrics for tenure-track teaching

faculty, the reality is that large classes are not conducive environments for student-faculty interaction and engagement. Further, the department appears to have developed a growing reliance on graduate students to fulfill these needs; as previously noted, graduate students working as part-time instructors and teaching assistants taught 51% of the department's undergraduate student credit hours in FY 2018-2019, representing a five-year 16% increase. Efforts to reverse this trend have been the focus of recent conversations between the college divisional dean and the department chair, but a long-term solution is still needed. ARPAC cautions against making a reliance on graduate student instructors a routine practice. ARPAC believes that the continuity of undergraduate instruction would be improved by the hiring of several professional instructors who could be assigned to teach large lecture classes and to offer online instruction, including to teach some of the department's foundational courses. Finding good instructors will be imperative as these courses often serve as a gateway to the discipline and the major.

Economics should be commended for developing a detailed student learning outcomes assessment plan across its curriculum, and the committee looks forward to seeing the plan implemented. The department is also to be lauded for its undergraduate scholarship fundraising, which currently generates some \$50,000 annually for scholarships focused on assisting outstanding Economics majors as well as those who are in financial need.

Economics makes a convincing case for permission to hire an undergraduate program manager, including to say that such a position would support programmatic and community-building initiatives and aid the department in completing outcomes assessments. The current financial crisis has dimmed prospects for gaining approval for such a position. Perhaps interim options for sustaining momentum on these objectives are possible, such as supplementing the salary of the associate chair for undergraduate education in return for completing additional labor, or allotting part of an instructor's service workload towards administrative duties. Alternatively, some of the position's proposed duties could be bundled to create a graduate student job.

As part of the department's undergraduate program planning, it should also look at ways to streamline its upper-division course offerings and to de-list obsolete courses. Additionally, setting a regular cadence for offered courses would help undergraduates make timely progress

in completing their degrees, as well as give the department a measure of standardization that might benefit resource allocation and faculty teaching assignment planning.

Graduate Education

Economics has a robust and rigorous doctoral program that in AY 2018-2019 enrolled the largest cohort of students among seven social science doctoral programs. The department strives to fund the vast majority of its graduate students, but it is faced with increasing competition from peer institutions that offer prospective students more money and fewer teaching responsibilities. Historically, Economics has offered its graduate students GPTI and TA appointments. Although the department has considered shifting graduate funding away from teaching, external circumstances (including the reduction of tenure-stream faculty teaching loads to 2:1 and ballooning undergraduate enrollments) have complicated this possibility, resulting in increased teaching loads and class sizes for GPTIs and TAs. ARPAC surmises that the significant teaching burdens placed on the department's graduate students, which take time away from their focus on coursework and research, might also contribute to those students' increasing time-to-degree. The situation appears serious enough that some dissertation completion fellowships go unused. ARPAC concurs with the external reviewers that the department should significantly decrease the teaching burdens placed on its graduate students.

As noted earlier, until recently, the department employed monies from the college's leaves and replacements process to fund 28% of its graduate students, a practice that was halted by the college this year. ARPAC agrees with this decision, and sees this as an additional nudge to the department to pivot away from its reliance on GPTIs and TAs to deliver undergraduate course instruction. Instead, the department should consider aligning the size of its doctoral program with available resources; for example, how might decreasing the number of PhD enrollments open up more funding support and opportunities for current students and improve student success overall? In the long term, right-sizing the doctoral program could also alleviate pressure on the department to gain more usable space, while decreasing program administration needs, increasing student morale, and improving relations between undergraduate and graduate students.

Budget

The department's budgetary outlook has improved significantly since the last review, attributable to the department's fundraising prowess as well as its collaboration with the Division of Continuing Education in offering online and evening courses. The revenue surpluses from this partnership provide Economics the rare opportunity to engage in budgeting decisions that are less "out of necessity" and more strategic, allowing it to address needs beyond its regular costs. At the same time, the surplus has led to increased calls for budgeting and resource allocation transparency, an area of decision-making in which the chair traditionally holds a great deal of discretion. ARPAC recommends that the department follow through with its intent to revisit its bylaws, including to outline and clarify decision-making criteria and processes used to prioritize funding requests and budget allocations. Taking this step would enhance transparency and promote a more positive work environment.

At the campus level, the department is concerned with how CU Boulder's budget model redesign will impact its shared revenue model with the Division of Continuing Education. Since the partnership income is essential to the department budget, this concern is warranted. ARPAC suggests that Economics continue to work with leaders of the College of Arts and Sciences and the Division of Continuing Education, the senior vice provost of online education, and other relevant campus leaders, to clarify the department's gain and long-term prospects from contributing to online and evening instruction.

Regarding circumstances related to the Stanford Calderwood endowment, ARPAC agrees with the internal and external reviewers that this matter should be resolved expeditiously so as not to jeopardize donor relations. In lieu of the original plan to employ the endowment towards a senior hire, Economics should reconsider its long-term recruitment and retention strategy and how these might impact and reconfigure its endowment plans. The department should work with the College of Art and Sciences in developing ways of utilizing these funds that would still abide by the donor's endowment terms.

Space, Infrastructure, and Support Needs

As noted earlier, the self-study, internal and external review reports draw attention to the department's need for increased and improved space. The department self-study suggests that it should be given control of classrooms in the basement to transform into office space.

But assuming in-person instruction and the related student enrollment return to normal in the next one to two years, such classrooms are always needed for campus-wide teaching needs. ARPAC believes that the department could benefit from a closer analysis of its current spaces, especially to consider how faculty hiring plans and a right-sized doctoral program, might affect its long-term space prioritizations. A resolution to the department's space shortage may require some degree of campus-level intervention and support. A thoughtful prioritization of the department's needs would set the stage for fruitful discussions between Economics and college and campus leaders.

In addition to its space needs, the Economics self-study also notes the department's computing needs, including for access to secure computing spaces where several researchers could concurrently access restricted data sources at any given time. As a next step, the department should translate its information technology needs into a formal request and initiate discussions with the Office of Information Technology (OIT) to explore solutions.

Governance

The Department of Economics has enjoyed many successes during the 14-year tenure of its current chair, including ramped up fundraising and the start of a successful online education program. The chair has also succeeded in mentoring the department's faculty and staff members, in making numerous budgetary decisions, and in fulfilling other governance duties. These needs have been met by the current chair's considerable leadership skills. Looking ahead, Economics should institute a succession plan to ensure continuity and stability in building on these remarkable successes. ARPAC suggests that the current chair consider apportioning some of the position's duties and responsibilities to the associate chairs and other tenured faculty members as part of a formal succession plan. Such a plan would ensure opportunities for the associate chairs to demonstrate and hone their leadership skills. In addition, ARPAC recommends that the associate chairs, and others in Economics interested in leadership, participate in workshops and training opportunities offered by the Office of Faculty Affairs focused on leadership skill development and the nuances of faculty governance. The trainings also familiarize participants with the broader campus landscape. A thoughtful consideration of the future also occasions a review of the department's current governance processes: how can decision-making responsiveness be further enhanced, and what mechanisms could be put in place to increase accountability and transparency?

ARPAC also recommends that Economics review, streamline, and consolidate its list of ranked journals outlined in the eight-page "Merit Evaluation for Research" document. This review revealed concerns about the list's consistency and currency. More importantly, the department should assess the list's significance and magnitude, and its frequency of use for tenure, promotion, and annual faculty merit evaluation decisions. Do these publication metrics account for the newer research methodologies and practices, and accurately reflect faculty research productivity? If the department chooses to continue to use the list, it must clarify which publications count towards tenure and promotion decisions.

Inclusive Excellence

The department states that it is committed to bringing about greater diversity among its faculty members and students, and that it supports inclusive excellence as defined by the recently adopted CU Boulder Inclusion, Diversity, and Excellence in Academics (IDEA) Plan. In its self-study, Economics highlights the promotion rates of its women faculty members and states that both the undergraduate and graduate committees are making concerted efforts to attract more women students. However, the department's efforts seem to be either directed towards national economics initiatives (e.g., affiliation with the Undergraduate Women in Economics Challenge sponsored by the American Economic Association) or dependent upon broader trends (e.g., rising doctoral program enrollments among women leading to a growing pool of potential women faculty). ARPAC believes a more proactive approach is also feasible. In developing its long-term strategic plan, Economics should emphasize the pursuit of inclusive excellence as a goal in its recruitment, hiring, and retention practices and detail a strategy to achieve greater faculty, student, and staff diversity.

While achieving hiring goals will depend on financial support from the college, it is nevertheless crucial that the department take steps to develop a culture of inclusive excellence from within. Economics would benefit in the long term by examining its policies, processes, and practices. How is inclusive excellence embodied in Economics' current pedagogical approaches, cultural values, and community engagement? How can Economics improve access to high-quality research and learning for historically underrepresented populations? The external reviewers also note that the department does not have a diversity, equity, and inclusion (DEI) officer and instead funnels all DEI-related issues and inquiries through the chair. They suggest that the department designate a tenured faculty member to such a role. This is an excellent suggestion,

and ARPAC further recommends that Economics establish a committee dedicated to facilitating conversations and addressing diversity and inclusion-related issues. Such a committee could be led by a tenured faculty member and advocate for specific strategies to improve and change the department from within. Representation from among faculty and staff members, graduate and undergraduate students will be key.

Unit Culture

The findings of the Campus and Workplace Culture (CWC) Survey, the internal reviewers' student surveys, and the external reviewers' interviews all suggest that Economics has a positive culture and work environment, and that people enjoy working in the department. However, there are several indications of potential difficulties that department leaders should examine, including that the culture survey received disproportionately fewer responses from women, and that graduate student respondents across both surveys highlighted less positive perceptions of the department, in particular to note rudeness, a lack of respect, and a tolerance for angry outbursts. The students also shared a wish for greater community. A report that accompanies the CWC Survey recommends that the department address these concerns by working with the Office of Institutional Equity and Compliance (OIEC) and the Ombuds Office to deliver ongoing training, including to learn how to collectively clarify department values and reset norms, and for individuals to become aware workplace bystanders, and to manage difficult conversations.

Economics appears to be aware of the challenges noted by its graduate students and has initiated steps to create a more positive environment. The self-study indicates that the chair, graduate program manager, and associate chair for graduate studies regularly hold town hall meetings that provide opportunities for students to submit anonymous questions, suggestions, and feedback about the program, funding, course scheduling, and workplace culture. However, less directly approachable factors might also be at fault. Tensions might arise from space constraints, or be inherent to the supervisory relationship between graduate part-time instructors and teaching assistants. Both the self-study and culture survey report also highlight a need for Economics graduate students to receive more structured mentoring; improved mentoring could ease students' transition into the PhD program and empower them by making them feel more connected and heard. In addition, the department could improve the graduate

students' sense of community by involving them more significantly in research lunches and seminars, and encouraging their participation on appropriate department standing committees.

Recommendations

The members of the Academic Review and Planning Advisory Committee address the following recommendations to the Department of Economics and to the offices of responsible administrators. ARPAC notes that some of its recommendations require resources, and the committee wishes to acknowledge that this report is being written during the COVID-19 pandemic when CU Boulder's financial outlook is uncertain. Committee members understand that recommendations requiring monetary resources might not be actionable in the near term. However, it is a part of ARPAC's responsibility to record these recommendations in its report in order to describe and document the department's needs at the point of its 2020 academic review.

To the Unit:

1. Work with the College of Arts and Sciences to develop a long-term strategic hiring plan that accounts for the loss of senior faculty members. The plan should emphasize the pursuit of inclusive excellence as a hiring goal and detail a strategy to achieve greater diversity. The plan should also focus on increasing the number of instructor-track Economics faculty and describe an instructor mentoring program.
2. Work with the College of Arts and Sciences to develop alternative ways of employing the Stanford Calderwood endowment, taking into account the recruitment and retention priorities of the strategic hiring plan.
3. Review the ranked publications list used for tenure, promotion, and annual faculty merit evaluation decisions for currency and completeness. If Economics chooses to continue to use the list, revise the policy to clarify which publications count towards tenure and promotion decisions.
4. Improve the transparency of decision-making related to funding requests, budget allocations, and grievances. Consider implementing a collaborative decision-making model that involves input from more than the chair and members of the executive committee, and the department's other standing committees. Incorporate these changes into the bylaws or departmental policy.

5. Constitute a committee to facilitate conversations about diversity and inclusion. Such a committee should be chaired by a tenured faculty member, draw its membership from among faculty of all ranks, and include graduate and undergraduate student members.
6. Organize regular diversity, equity, and inclusion training sessions.
7. Complete a leadership succession plan and institute mentoring and training opportunities for future department leaders, including via the Academic Leaders Institute in the Office of Faculty Affairs.
8. Reduce the department's reliance on graduate student part-time instructors and teaching assistants to deliver undergraduate instruction.
9. Streamline undergraduate and graduate course offerings and remove unused courses from the books. Optimize course sequencing to make it easier for students to make timely progress toward their degrees.
10. Consider alternative undergraduate program management options, including supplementing the associate chair's stipend, creating a graduate student position to provide clerical support, and/or allotting part of an instructor's workload toward undergraduate program administration.
11. Consider decreasing the size of the doctoral program to free up more funding support and opportunities for current PhD students.
12. Continue to implement strategies to improve Economics graduate students' sense of community and inclusion, including to enhance faculty-student mentoring, involve students more significantly in research lunches and seminars, and include students on department governance committees, as appropriate.
13. Work with the dean of the College of Arts and Sciences, the dean of the Division of Continuing Education, and the senior vice provost of online education to clarify the department's gain from future contributions to online and evening instruction and whether changes to the terms of contribution warrant a reassessment of the department's

involvement.

14. Continue fundraising work focused on securing additional endowments and on graduate and undergraduate scholarships and awards.
15. Consider conducting a space needs assessment and prioritization exercise that takes into account the department's plans related to hiring and a possible resized doctoral program. Use the results of such an exercise to initiate discussions with the college and relevant campus units in defining future resource requests, such as for improved IT access.

To the Divisional Dean for Social Sciences and Dean of the College of Arts and Sciences:

16. Support Economics in developing a hiring plan that enhances the department's teaching capacity and academic ranking. Consider the department's request to hire instructor-track faculty as a way to reduce the department's reliance on graduate student part-time instructors and teaching assistants to deliver undergraduate instruction.
17. Work with the department to develop alternative strategies for using the Stanford Calderwood endowment.
18. In collaboration with the dean of the Division of Continuing Education and the senior vice provost of online education, assist Economics in clarifying its gains from contributing to online and evening instruction.
19. Assist the department in completing a space assessment and prioritization.

To the Senior Associate Vice Chancellor for Information Technology and Chief Information Officer:

20. Assist the department in securing spaces where multiple researchers may concurrently access restricted and classified data.

Required Follow-Up

The chair of the Department of Economics shall report annually on the first of April for a period of three years following the year of the receipt of this report (i.e., April 1st of 2022, 2023, and 2024) to the divisional dean for social sciences and the dean of the College of Arts and Sciences and to the provost on the implementation of these recommendations. Likewise, the dean of the College of Arts and Sciences shall report annually on the first of May to the provost on the implementation of recommendations addressed to the program.