

## **CSUF Economics Program Performance Review Report**

### **1. Introduction**

The review team of Kelly Bedard (UC Santa Barbara Economics), Kathleen Preston (CSUF Psychology), and Aric Shafran (Cal Poly SLO Economics) met with faculty, lecturers, and staff on March 15, 2018, as well as reviewing the departmental self-study. Overall, this is a well-functioning department that is committed to excellence in teaching and research. The faculty and staff work well together, and their students, both undergraduate and graduate, are very satisfied. The high level of function and the positive attitudes of all stakeholders is in no small part a reflection of the excellent leadership of Department Chair Professor Dipankar Purkayastha.

Of course, even well-functioning departments face challenges. In our view, the primary challenges faced by the CSUF Department of Economics are:

- Growing their undergraduate majors and expanding programs
- Determining the optimal MA program structure and size
- Balancing teaching and research.

These topics, as well as others, are discussed in detail in the sections to follow.

### **2. Undergraduate Education**

#### *Undergraduate Student Report*

The undergraduate students provided an overwhelmingly positive report of the Economics Department and their experience as Economics majors. They reported appreciating the smaller class sizes because the faculty can focus on the students, and they praised the faculty for being passionate and giving them opportunities to become involved in research. The students voiced concern that many courses they were interested in taking are not frequently offered due to a lack of faculty available to teach those courses, specifically the 400-level elective courses. It is recommended that the department work to plan and publish the course schedule a year in advance so that students can create their academic plan accordingly. Students expressed an interest in earning a Bachelor of Science degree rather than a Bachelor of Arts degree based on the mathematical nature of many of the major required courses. Finally, the students conveyed a desire for the major capstone course to contain an internship component, so they could learn how to apply the material learned during the theory-oriented courses. It is recommended the department reconsider the structure of the capstone course to include an applied or research internship by partnering with faculty, the Center for Internships and Community (CICE), the Woods Center, and the Center for Economic Education.

### *Student Learning Outcomes (SLOs) and Assessment*

The SLOs are clearly defined and are aligned with the university's strategic plan, although the assessment procedures for the SLOs could be improved to alleviate some of the burden placed on the Assessment Committee members. It is recommended that the department consider a 4-year assessment cycle to assess 2 SLOs during each academic year, which is in alignment with other departments including Psychology. Furthermore, it is only necessary to collect a random sample of assessment data rather than collect this information from all of the students enrolled in the course with the SLO being assessed. Furthermore, it would benefit the department and assessment committee to emphasize that the SLO is being assessed rather than the course. The PPR was rather vague in presenting this information. Finally, the department will need to continue to adjust the curriculum to 'close the loop' for the SLOs with assessment resulting in "Needs Improvement." The current PPR plans to improve outcomes by splitting Economics 340 into two courses, which will likely assist in closing the achievement gap. It is further recommended that the department reconsider the sequencing of the major courses as well as the prerequisites required for the upper-division major courses. It is possible that the SLOs are not being met because the students are not yet prepared based on the course sequencing.

Another method to support student success and 'close the loop' is to increase support for the graduate student assistants and investigate the creation of a Teaching in Economics course where Undergraduate Classroom Assistants (UCAs) are trained during workshops and can serve as classroom assistants while earning course credit (e.g., Economics 494B). Graduate students may also be interested in gaining the experience without needing financial compensation, so it is recommended that the department investigate the possibility of allowing graduate students to earn elective course credit (e.g., Economics 599) to serve as course graduate assistants.

### *Enrollment and Recruitment*

There is a clear concern regarding the small number of declared Economics majors. Several excellent recruitment and curriculum improvement ideas were brought forth in the PPR that promise to improve enrollment numbers. Specifically, the suggestions of creating interdisciplinary tracks, attracting minors, and actively recruiting pre-majors and majors from local community colleges and high schools. It is recommended that the undergraduate advisor work with the College to encourage pre-majors to attend academic advising sessions with the Economics major advisor. Additionally, the department should partner with the college advisors during group advising sessions with non-majors to highlight the major and career opportunities. The department should also consider working with related departments to assist in advertising the Economics minor.

Another recruitment and student support opportunity could be to create a Peer Mentors group, which would alleviate some of the workload for the current Undergraduate Advisor. The focus of this group would be a student organization that consisting of graduate and undergraduate students who provide outreach and mentoring to CSUF students who plan to major or minor in Economics. The goal would be to provide a source of information to students who want to pursue a career in economics or related fields. The organization could provide information about academic/career planning, Economics clubs/organizations, class scheduling, study skills/tutoring, internship/research opportunities, graduate school, and much more. In addition to providing

information to CSUF students, the program could also provide outreach services to local Community College and High School students as a means of recruitment. Students identified as Peer Mentors would be enrolled in an upper-division Economics electives course (e.g., Economics 494A).

Finally, the department should consider hosting a ‘What is Economics?’ night geared toward informing non- and pre-majors what it means to be an Economics major and highlight the career options. This event could be advertised to lower-division Economics courses that non-majors are enrolled in, especially the larger sections.

### *Undergraduate Advisement*

The undergraduate advisor is responsible for curriculum as well as providing one-on-one advising support for the students. It is clear that the department undergraduate advisor needs additional support at the college- and department-level. Interfacing with advisors at the college level appears to be somewhat difficult as the roles and authorities of the college- and major-level advisors are not clearly defined. It is recommended that the department work with the college to improve this communication.

## **3. Graduate Education**

CSU Fullerton offers a Master of Arts (MA) in Economics aimed at preparing students for careers in the private or government sectors or for continued graduate study at the PhD level. Students complete five required 500-level economics courses in microeconomics, macroeconomics, micro- and macro-econometrics, and research methods as well as several electives. They have the option of completing a thesis or passing a comprehensive exam. Enrollment has fluctuated between 8 and 20 students over the past five years, and the department has identified increased enrollment as an important goal. Graduates of the program have successfully placed into highly regarded PhD programs, a variety of local, state, and federal government agencies, and well-known companies in finance, consulting, entertainment, and other sectors.

The major plans for the future include launching a 4+1 program that allows CSUF undergraduates to complete a BA and MA in 5 years and developing two interdisciplinary programs, one with Information and Decision Sciences in Computational Economics and one with Finance.

The graduate students who participated in the site visit were all satisfied with their graduate experience at CSUF, and all indicated that the faculty who teach in the program excelled in their knowledge and their level of enthusiasm and engagement with graduate students. On the other hand, there was a good amount of uncertainty about what they would do following completion of their degree. Other comments were that students would like to see a wider variety of electives, more training in math, and workshops in computer packages like R or SAS. The review team also feels that the graduate program has a lack of focus which may contribute to students’ uncertainty about what career paths are available with an MA Economics degree. We lay out

several potential strategies for attracting more students and provide would help draw a clearer link between the program and potential career outcomes:

1. Restructure MA degree to focus on training for private and government sector careers
2. Develop curriculum that can be completed in less than 12 months
3. Exposure to more econometric/statistical software
4. Preparation for careers in “Big Data”/Data Analytics
5. STEM classification

*Restructure MA degree to focus on training for private and government sector careers*

The two most common goals of an MA student following graduation are to find a job in private or government sectors or to continue graduate studies in a PhD program. The curricular needs of these two paths are somewhat different. Students going on to a PhD will need more mathematical training and more exposure to economic and econometric theory while students who plan to enter the workforce would benefit from more applied econometrics. Because it is relatively common in economics to enter a PhD program directly after completing an undergraduate degree, we believe the larger market for MA students is for those who plan to enter the workforce after degree completion. As such, recommend that you consider restructuring the MA program focused on this population. This does not mean that preparation for a PhD program is unimportant, only that you might consider add-on options for this group, rather than designing the program for this group.

The thesis option may be beneficial for students who plan to continue to a PhD program as the thesis trains students in conducting original economic research. On the other hand, increased course work in theory and econometrics helps build the foundation required to pass PhD preliminary exams. For students who plan to enter the workforce, the thesis extends the amount of time to degree completion and offers fewer benefits. We, therefore, suggest eliminating the thesis option. Alternatively, it may be possible to separately market a two-year program with thesis (like the existing program) for pre-PhD students and a different one-year program (like the one described below) as a terminal program. The two programs would still share many classes, but the separate marketing and differences in coursework and thesis should provide better focus to both programs and provide clearer guidance to current and prospective students about the kind of career preparation provided by each program.

*Develop curriculum that can be completed in less than 12 months*

Undergraduate students who are deciding whether to directly seek employment or enter an MA in Economics program are very sensitive to the time to complete a degree. At public universities like CSUF, the opportunity cost of foregone salary for full-time students enrolled in a graduate program may be larger than the cost of tuition. Providing students a path to complete the graduate program in approximately one year will make the program significantly more attractive for students unsure about graduate school.

The self-study includes a description of a proposed 4+1 program that would accomplish this goal for a select group of students identified as high school seniors. We give some suggestions below

for alternatives that would offer the possibility of a one-year MA degree to a wider set of students.

(a) The Proposed 4+1 Program

The review team has concerns about the viability of recruiting seniors in high school into a five-year program for a BA and MA in economics. As we discussed with faculty during the site visit, even many college freshmen and sophomores are unsure why to choose economics over accounting or other business disciplines. It, therefore, seems unrealistic that a large number of high school students will commit to the five-year program. Further, the cost savings described in the self-study ignore costs from taking summer courses for all four years.

(b) A Blended Program

An alternative to the proposed 4+1 program is a “blended” program in which students’ senior year is a combination of coursework for both BA, and MA degrees and students are awarded both degrees at the same time at the end of (typically) 5 years. In these programs, students typically apply as juniors. From a recruitment standpoint, this is a considerable advantage over the proposed 4+1 program. Similar to the proposed 4+1 program, GRE, as well as application fees, are waived. For examples from the CSU system, we refer you to Cal Poly’s general policies (<https://academicprograms.calpoly.edu/content/academicpolicies/policies-undergrad/blended4plus1>) and a specific example from Cal Poly computer science (<https://csc.calpoly.edu/blended-bsms/>).

(c) A Stand-Alone 1 year Program

A stand-alone one year program offers the best potential to increase student enrollment by placing no restrictions on who is eligible to complete the program in one year. The existing curriculum is somewhat adaptable to a schedule that can be completed in less than 12 months. We provide an example of how this might be accomplished below. Even in the absence of a 4+1 program or blended program, CSUF undergraduate students who meet a specified GPA threshold should have the GRE requirement waived.

For examples of other one year Masters in Economics programs, we refer you to:

- Georgetown University (<https://econ.georgetown.edu/masters-in-applied-economics>)
- UC Santa Cruz (<https://economics.ucsc.edu/academics/graduate-program/masters/index.html>)
- California Lutheran (<https://www.callutheran.edu/academics/graduate/ms-quantitative-economics/>)
- San Francisco State (<https://cob.sfsu.edu/economics/graduate-programs>)
- Cal Poly San Luis Obispo (<https://gradbusiness.calpoly.edu/ms-economics/>)

One concern expressed by faculty at the site visit was that any switch to make the degree fit in one year would require summer courses that have higher tuition. However, the current plan for a 4+1 provided in the report also requires summer courses with higher tuition. More importantly, the cost of an extra year in school (including foregone salary and housing costs) is almost certainly higher than the additional cost from taking one or two courses at the higher summer tuition rate.

Below is one example of how the program could be adjusted to finish in one year. In this example, students take Econ 441 in the summer before the start of the program, and we assume that the econometrics course (Econ 440) is enforced as an admission requirement (alternatively, it could also be taught in summer and an elective removed). The project course would essentially be a research methods course in fall (similar to Econ 595 capstone) and would extend into individual research projects in spring. This project could potentially count as the culminating experience in place of the thesis or comprehensive exam, or alternatively, students could take a comprehensive exam in spring.

Summer Before	Fall	Winter Break Intersession	Spring
Math Econ (Econ 441)	Micro (Econ 502)	Elective	Macro-econometrics (Econ 505)
	Macro (Econ 503)		Elective
	Micro-econometrics (Econ 504)		Elective
	Project Course		Project Course

#### *Exposure to more statistical and econometric software*

Current MA students indicated that they used either Stata or E-Views for most of the econometric analysis in their MA courses. While Stata is widely used in an academic setting, the industry is more likely to use SAS, R, or Python for data analysis. Training in SQL to work with relational databases would also be useful. We recognize that students who have experience with computer programming in one environment will be able to learn new environments relatively quickly. Nonetheless, employers are often looking for job candidates that already have the skills necessary and will need as little on-the-job training as possible. For many jobs that require use of software packages like SAS or R, employers will not consider candidates who are not already proficient with the package listed prominently on the candidate's resume. We, therefore, suggest providing training in courses with a wider variety of computing environments. For similar reasons, we also suggest formal training in computer programming, perhaps by making the new course (Seminar in Computational Economics) a requirement.

### *Preparation for careers in “Big Data”/Data Analytics*

The field of data analytics has become one of the fastest growing sectors for job growth. Many of the skills developed in the MA Economics program are applicable to these careers although typically data analytics includes more training in computer science and statistics and less economic theory. As noted in the self-study, CSUF is considering developing an interdisciplinary program in Computational Economics between Economics and the Information and Decision Sciences Department that would prepare students for careers in this field.

For the purpose of comparison, Cal Poly San Luis Obispo recently launched an MS Business Analytics degree program (<https://gradbusiness.calpoly.edu/ms-business-analytics/>) that combines training in statistics, econometrics, computer programming and information systems. Approximately 40% of the program is taught Economics faculty with the remainder taught by faculty in Information Systems, Statistics, Management and Marketing. The program has consistently had high enrollment and students have placed well in industry. This program has created benefits for the Economics Department by increasing demand for courses that are shared between the Business Analytics and Economics graduate programs. On the other hand, the Economics department has concerns that Business Analytics cannibalizes demand from the Economics program.

### *STEM classification*

Depending on the extent to which curriculum changes move the MA program away from general economic theory and field courses and toward econometrics, statistics, and computation, CSUF should consider changing the CIP (Classification of Instructional Programs) code for appropriate graduate programs from 45.0601 (General Economics) to 45.0603 (Econometrics and Quantitative Economics). The latter CIP code offers an advantage that it carries a STEM classification that allows international students to remain in the country for an extended period after graduation.

## **Research and Faculty Development**

The Department of Economics currently includes 8 tenure-track faculty, 8 tenured Associate Professors, 7 tenured Full Professors, and 3 non-tenure track lecturers. While the number of majors is not that large, the large amount of service teaching covered by Economics faculty means that the faculty is somewhat thin. This seems particularly acute for ‘global’ courses because of their general education role. Allowing this track of courses to be dominated by part-time lectures leaves this important part of the curriculum at risk of drifting because it lacks consistent leadership. We, therefore, urge the campus make substantial efforts to add ladder faculty in this area.

Broadly speaking, this is a research productive faculty who are also committed to high-quality education at both the undergraduate and graduate levels. Balancing these objectives is key to raising the stature of the department within the profession, as well attracting undergraduate and graduate students. Building high profile departments benefits the campus. That being said, this is

a difficult pair of objectives to deliver. Time spent on teaching is generally time not spent on research, and vice versa. Making time an even scarcer resource, it appears that the service demands on tenured faculty are quite large due to departmental committee work and college service. The subsections below discuss these issues and offer some suggestions for alternatives.

### *Hiring*

After reviewing the provided curriculum vitae and talking with the faculty, it is clear that the Department of Economics has done an excellent job of hiring in recent years. They have an active and engaged junior faculty with the potential to have long and productive research careers. To be clear, by excellent, we are referring to the individuals they successfully recruited. It is also clear that they have had trouble attracting faculty due to the high teaching load. We think it would be in the best interest of the College and the Department to do a rigorous survey of starting salaries and teaching loads for both peer and aspirational institutions to ensure that recruitment offers are competitive with the departments that CSUF Economics aspires to compete with on research and teaching grounds.

### *Supporting and incentivizing research*

We applaud the efforts the College has made to incentivize research through teaching reductions tied to research productivity. However, we think there three weaknesses to the current system that should be evaluated and potentially adjusted.

- (1) The College has established a point system for course reductions and established detailed journal rankings for every field. While this concept is a good one, especially in an institution with limited options for merit increases based on research productivity, the list itself is somewhat problematic. First, journals in the A+/A/A- categories do not entirely make sense. For example, Economics Letters does not belong in the A category, none of the AEJ journals (Applied Economics, Economic Policy, Microeconomics, Macroeconomics) are listed, and the Journal of the European Economics Association is missing. Further, most economists would rank Review of Economic Studies as an A+ journal and Review of Economics and Statistics as an A journal. While all lists are to some extent arbitrary, the small number of journals in some of these categories makes them particularly arbitrary. Second, and more important, the B category range is enormous. It includes very highly ranked journals (Demography, for example) all the way down to quite low ranked journals. Some of these journals should clearly be upgraded to A-, or a new B+ category should be created. For the purpose of transparency, we also recommend linking the journal rankings to some combination of objective metrics such as impact factors or h-index. This would also facilitate a way for faculty to be rewarded for publishing in highly regarded interdisciplinary journals that are not on the journal list, such as Nature or Proceedings of the National Academy of Sciences.
- (2) New faculty receive course reductions for three years and are then subject to the point system for teaching reductions. At least for those who enter directly from a PhD program, this timeline is problematic. Publishing in economics has very long time lags. As such, the College should consider extending the initial course reductions through to tenure or at



least until year five. Removing teaching reductions early seems punitive and counter-productive since this is the exact time that junior faculty are establishing their research pipeline and ensuring publications into the future.

- (3) Coauthoring is decentivized by dividing points by coauthors. While the use of a point system necessitates some adjustment for coauthors, we encourage you to think about whether it is best to fully discount as you currently do, or whether some lower penalty would be better. Coauthoring has become the norm in economics, partly because it is a more efficient way to produce research. If the objective is to increase research productivity, then encouraging coauthorship between CSUF colleagues and between CSUF faculty and researchers at other institutions has value and might make strategic sense.

#### *Workload credit for service*

Based on interviews with faculty and a review of the committee structure, we encourage the College to consider giving more workload credit (course release) for important departmental, College, and campus service commitments. Key positions to consider include departmental leadership (Chair, Vice-Chair, and the Steering Committee), undergraduate program leadership, graduate program leadership, assessment leadership, and academic personnel leadership. This issue is common to all academic institutions. We need faculty to be engaged in leadership, but this takes time away from teaching and research. Acknowledging the important work that faculty do in the service domain by attaching workload to it both accurately reflects effort and gives credit to faculty engaged in these activities.

#### *Centers*

The department has two long-established centers: Woods Center for Economic Analysis and Forecasting and the Center for Economic Education. These centers are good vehicles to raise the community awareness about the Economics Department and provide public service. In addition, they are good potential vehicles for increased fundraising and could provide increased support for graduate students through research assistantships. Successful fundraising could, therefore, benefit the campus, faculty, and support graduate and undergraduate research experiences.