

Department of Economics

Academic Program Review

2016

Table of Contents

Part A – Required Background Information.....	1
Section I: Overview of Organization.....	1
<i>Mission & Organizational Structure.....</i>	<i>1</i>
<i>Undergraduate and graduate degrees offered.....</i>	<i>1</i>
<i>Organizational chart and shared governance.....</i>	<i>2</i>
<i>Budget & resources.....</i>	<i>3</i>
<i>Academic unit diversity.....</i>	<i>4</i>
Section II: Teaching and Learning.....	7
<i>Student Learning Goals and Outcomes.....</i>	<i>7</i>
<i>The undergraduate program.....</i>	<i>7</i>
<i>The graduate program.....</i>	<i>8</i>
<i>Instructional Effectiveness.....</i>	<i>9</i>
<i>Mentoring and success in the program.....</i>	<i>10</i>
Section III: Scholarly Impact.....	12
<i>Faculty Research.....</i>	<i>12</i>
<i>Achievements by students and alums.....</i>	<i>15</i>
<i>Collaborative and/or interdisciplinary efforts.....</i>	<i>16</i>
<i>How does the unit work with junior faculty to maximize their success?.....</i>	<i>16</i>
Part B – Unit-Defined Questions (incl. Section IV: Future Directions).....	17
<i>How to build upon the strong start in the re-building process of the Department with a view to a vision of a sustainable and strong future?.....</i>	<i>17</i>
<i>How should the graduate program respond to and take advantage of the evolving strengths in the department and the opportunities in the vibrant local economy?.....</i>	<i>19</i>
<i>How to address needs in a time of dwindling State support: how to manage the Economics Visiting Committee, relationships with prominent local companies, and to explore the feasibility of a fee-based masters or certificate programs?.....</i>	<i>21</i>
<i>How to continue to provide a quality undergraduate education given the challenges posed by a strong demand for the economics major and the changing composition of the students wishing to major in economics?.....</i>	<i>22</i>
Part C – Appendices	
A – Enrollment and Degrees Awarded	
B – Staff Organization Chart	
C – Economics GOF Budget	
D – Academic Staff	
E – Faculty Supervision	
F – Committee Assignments	
G – Guide for Graduate Student in Economics	

- H – Undergraduate Student Awards
- I – Selected Publications by Recent PhDs
- J – Graduate Placements
- K – Social Media Presence
- L – Distinguished Economics Alumni

PART A

REQUIRED BACKGROUND INFORMATION FOR REVIEW COMMITTEE

Section I: Overview of Organization

Mission & Organizational Structure

Our primary missions are to conduct research to extend the frontiers of our understanding of the national and world economy, and to transmit knowledge of those frontiers to future generations through education at both graduate and undergraduate levels.

In the undergraduate program, we aim to help our students to develop a conceptual framework for thinking about and analyzing economic problems of choice and scarcity. This is what our late colleague, Paul Heyne, called "an economic way of thinking". We believe that this approach has applications that go beyond our courses, and helps students understand the problems and challenges faced by all individuals and organizations, from families to governments, within our society. More specifically, we want our students to think analytically, to develop a variety of problem-solving skills, to learn to access key economic data sources, to acquire the statistical and quantitative knowledge needed to undertake and understand empirical research, and to learn how to use the appropriate tools of information technology in this pursuit. Finally we want our students to learn to express their ideas, methods, and results clearly and precisely, both orally and in writing.

The ultimate goal of the PhD program is to develop professional economists for a variety of careers by equipping them to do original research using advanced learning methodologies. The objectives and the broad curriculum structure of our doctoral program are the same as those in the vast majority of economics doctoral programs, and especially those of our peers. The doctoral program prepares students to undertake original research, advanced study, and instructional responsibilities as academic economists at universities and colleges, or to undertake original and applied research as economists in organizations like the Federal Reserve System, international organizations such as the World Bank and IMF, government agencies in the US and abroad, and financial firms or other firms that have an economics research division.

Undergraduate and graduate degrees offered

The Department of Economics offers two undergraduate degrees, a Bachelor of Arts and a Bachelor of Science as well as a Departmental Honors Program. The BA provides an excellent preparation for a wide array of jobs, in the private and public sectors, and for graduate study in a variety of fields, such as law, business administration and public policy. It offers flexibility to students who take related and complementary courses in other Social Sciences. The BS prepares students for employment in technical and scientific areas, and is most suitable for graduate studies in economics and related fields such as finance, operation research, and statistics or computer science. The Departmental Honors Program allows our gifted students to carry out more advanced research under a faculty adviser preparing them well for research oriented jobs or for graduate school.

The number of undergraduate majors increased significantly from 461 majors in Spring 2000 to 967 majors in Spring 2009. Since that was too high a number of students for us to handle given the size of the faculty, we became a competitive major, which allowed us to control the number of students admitted each quarter. More details about this is provided later in section IV. The first set of students admitted under a competitive major was Autumn 2010, and by 2012-2013, we were able to reach a

steady-state at between 700-750 majors (during our enrollment peak at spring quarter). The pattern of our graduation rates mirror our enrollment rates.

The enrollment and graduation data is in Appendix A.

The PhD degree requires a minimum of 90 credits, including at least 18 of which are numerically graded and 18 of which are at the 500-level or above. Students must successfully complete a general and final exam, and submit an approved dissertation. Additionally, the Economics Department requires students to pass core exams in micro- and macroeconomics after the first year, and at least one field exam in a chosen field after the second year.

The department does not admit students to an MA degree (with rare exceptions for students pursuing a concurrent UW degree), but there are two tracks for MA completion: (a) Sequential – students continuing in the PhD program can receive an MA by completing all core and field requirements (the first two years of the PhD program). (b) Terminal – students who are unable to complete core or field requirements, or who choose to leave the program without earning a PhD, can receive an MA by completing the first two years of coursework (but not the core or field exams) and a 6 credit internship.

Graduate program enrollment is relatively stable, generally within the range of 90-110, and the department typically targets an incoming class of around 18-20 students. Enrollment and graduation data are shown in Appendix A.

Organizational chart and shared governance.

The organizational chart for the non-academic staff is provided in Appendix B

The various committees in the Department are presented in Appendix F.

The Department Executive Committee advises the Chair, but major personnel decisions are taken by vote in faculty meetings. In recent years, the Executive committee has consisted of elected and ex officio members representing the key administrative committees. For this academic year, the Program Evaluation Committee has replaced the Executive Committee. In addition to the ex officio members, the committee has been expanded to include representation by senior faculty from the major fields in the Department. The Department Administrator plays a critical role in running the department and is a key source of advice for the Chair.

The Graduate Program Committee, appointed by the Chair, consists of four faculty members, a professional staff member, who is the Academic Counselor, and two graduate student representatives. The placement officer helps with PhD candidates on the job market. The Counselor plays a critical role in all aspects of the program.

The Undergraduate Program Committee, appointed by the Chair, consists of four faculty members and two professional staff members. The Counselors play a critical role in advising students and managing one of the largest majors in the University.

The Outreach Committee, appointed by the Chair, consists of two faculty members, and two professional staff members (the Administrator and an Outreach Officer/Coordinator). The Outreach Director, who is also the de facto Associate Chair of the Department, runs the committee with the advice of the members. The Outreach Coordinator plays a critical role in managing our very successful outreach efforts with a large alumni and the highly effective Department Visiting Committee.

The Committee on Access for Under-represented Students in Economics, appointed by the Chair, consists of two faculty members and a professional staff member, who is also one of the two undergraduate Academic Counselors. The focus of this committee is to address the low enrollment of

under-represented students in the major, the weakest link for their low representation in all layers of the discipline.

In addition, several other committees are also appointed by the Chair. The Technology Committee consists of two faculty, and two professional staff. Seminars in various fields are run by Seminar Coordinators. There is also a Research Director. Various ad hoc committees are appointed during the year. For example, this year there was the empirical micro recruiting committee consisting of four senior faculty members, and there was also a three-member committee to study the feasibility of a fee-based master program.

Budget & Resources

A summary of the budget allocations is reported in Appendix C.

The Department is facing a crisis with its budget due to recent raises in TA salaries. If not for unplanned budget cuts, the GOF allocation to Departments largely tracks employee salaries. There is little discretion in spending the GOF allocation, which is mainly managed and monitored by the Administrator. However, TA salaries have increased rapidly in recent years, while the GOF allocation has not been increased sufficiently to cover the increases. This shortfall will significantly affect our graduate program and several other services covered by the GOF allocation. But, the most serious implication is on our ability to provide adequate undergraduate classes, especially at the introductory level if this budget situation is not addressed.

In the last ten years, the Economics Department has employed a very consistent number of TAs each year, from a low of 147 in the 2012-13 year to a high of 155 in 2009-10. Each year, these TAs are responsible for teaching more than 6000 undergraduate students through quiz section and independent classes, with 80% at the introductory level, and the rest at the intermediate level. During the salary freeze, which lasted until July 1, 2013, the starting salary for TAs was \$1525/month. The TA Union negotiated a much needed increase in TA salaries, such that the starting salary is now \$2060/month, an increase of 35%. While this increase has been immensely valuable to the TAs themselves and have made it much easier for us to recruit strong PhD students, there has not been a corresponding increase in the funds given to the department to pay TA salaries leaving a 10-15% shortfall in each of the previous three years. Assuming this was a temporary setback for the College, while it adjusted to higher TA salaries, the Department largely relied on faculty leave-recapture funds to make up for the shortfall in each previous year. This year, 2015-16, with very little leave recapture funds, coupled with a further increase in TA salaries and a cut back on College support to departments, we are facing a 24% shortfall. Next academic year, the prospect is even worse. Unless addressed, it will severely affect our graduate students, and the quality of instruction will be significantly affected for up to 6000 undergraduate students across many disciplines who need to take economics classes with TAs.

As a general point of concern, we are at risk of losing some important and highly experienced staff. Since there is little scope for career advancement within a unit, valuable staff need to switch units in order to get promotions and significant raises. While this policy makes sense to some extent, there is loss of precious unit-specific knowledge, and it is particularly frustrating when incoming staff are recruited at higher salaries than the ones who left. We hope Departments will be given a favorable hearing when requesting salary increases for internal staff retentions.

The UW Office of Annual Giving mails donor and alumni solicitations on behalf of the department twice per year. The UW Student Calling program makes renewal request calls to all donors to. Performance of this unit regularly results in approximately \$8-10,000 in gifts to department funds. The College of Arts & Sciences has dedicated fundraisers who work on behalf of the Social Sciences.

The Department has been somewhat of a pioneer in the College with its outreach efforts. The Economics Visiting Committee (VC) plays a critical role and more details about this energetic and effective group is presented in Section IV. The department has also been successful in raising support for faculty through endowed Professorships and Chairs, and for students through endowed student scholarships and fellowships. In the last 10 years, seven professorships have been endowed and have invested or are in the process of investing: Cressey, Glaser, Nelson, Richards, Corkery, Brimmer and Milliman. Of these, two have living donors that may choose to continue supporting their named endowments. Seven student support endowments have also been created and funded in the past decade: Bogdan, Corkery, Wallin, Yang, Wesley, Dvorak, and Kahl. Two of these seven scholarships have living donors who continue to fund their scholarship endowments and play an active role in alumni outreach efforts.

Social media is also instrumental in outreach and annual giving efforts, providing followers with timely and compelling updates about the people and programs in the department (see Appendix K).

Academic Unit Diversity

Economics studies how societies work, grow, and thrive. As such, the questions of diversity - of how we might increase political representation and economic power for women, ethnic minorities, the poor, and the disabled; of how these groups contribute to, and benefit from, economic growth – are essentially economic questions. These questions, however, can only be answered well if this Department places a consistent emphasis upon access to economic education for all members of society. We do, and should, place value on increasing opportunities for scholars who are women, members of under-represented ethnic groups, and among the economically disadvantaged to contribute to the conversation.

Faculty and Staff Diversity: The department's greatest success in diversity is the representation of women in the department. Eleven out of our twenty eight full time faculty are women (39%): four of them are of the assistant professor rank (67%), two are associates (50%), and two are full professors (13%). We also have two female principal lecturers and one lecturer (60% of full time non-tenure track faculty). Female faculty members play leadership roles in the Department. The Graduate Program Director and the Undergraduate Program Co-Directors are all women. Faculty recruiting committees are chaired by female faculty, and the Department also recently made an unsuccessful full professor offer to a female economist. According to the committee on the status of women in the economics profession (CSWEP), in PhD granting institutions in 2013, women made up 36.1% of non-tenure track teaching faculty, 27.8% of new assistant professors, 24.5% of tenured associate professors and 12% of full professors. At the same time, only 35% of new PhDs in the discipline were women¹.

Our faculty are from all over the world, but only one full time (non-tenure track) faculty member identifies as a member of an under-represented ethnic minority group. The problem of under-representation of minorities in all areas of economics is a wide spread one and not easily overcome by one department. In 2014, the Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) reported that 5.5% of full time faculty at PhD granting economics departments identified as members of minority groups. Of these, 8.7% were at the assistant rank, 7.3% at the associate rank, and 3.2% at the rank of full professor². As will be discussed more fully in the section below, these numbers are a reflection of the fact that very few Bachelors and PhDs in economics are granted to members of

¹ https://www.aeaweb.org/committees/cswep/annual_reports/2014_CSWEPA_nual_Report.pdf. Numbers at top 20 departments are slightly lower: 21.3% Assistants, 20.4% Associates, and 10% Full.

² The percentages reported reflect percent of faculty who U.S. citizens or permanent residents only.

minority groups, and this is an area where both nation-wide and departmental efforts at increasing access and representation are being placed.

The Department also employs ten full time staff members to perform support duties for students and faculty. Of these, four are women, and one is a member of an under-represented minority group.

Student Diversity: The students of the Economics Department are a varied and diverse group. As of Spring 2015, 54% of our undergraduate majors were international students (a majority of international students are from China). Of the remaining students, 23% were Caucasian, and 18% identified as Asian, while only 3% identified as a member of an under-represented group³. Since only US citizens and permanent residents can be counted as members of an under-represented group, many organizations report minority enrollments as percent of eligible (i.e., non-international) students. By this criterion, 6.1% of eligible students in the Department are members of a minority group. Compared to Sociology and Political Science, where international students make up 8.4% and 6.4%, respectively, Economics appears to be unique among the social sciences in this area. Representation of women in the department continues to be strong – one half of our undergraduates are women.

In 2007, students from under-represented groups were 4.8% of the UW student body, with enrollments dropping to 3% in 2015. However, if we only look at under-represented enrollments in economics as a percent of eligible students, we have improved from 4.8% out of 92% eligible non-international students (5.2%) to 3% out of 46% eligible (6.1%).

While the international flavor of our undergraduate classes cannot be denied, and certainly adds to the classroom experience of all students, we must question whether students from minority groups are adequately represented in our classrooms. Nationwide, 14% of eligible bachelor's degrees granted in economics went to members of minority groups, but there is a great amount of regional variation in this rate. In the entire U.S., minority students make up about 21.5% of all students⁴, but are only 13.2% of eligible enrollments at the University of Washington⁵. If we expect to have the same proportion of minority enrollments in Economics relative to the rest of the University at the UW as in the rest of the U.S., we would work toward a student composition of 8.6% of eligible students from minority groups.

Increasing the diversity of our undergraduate class is the primary focus of the department's newly formed diversity committee, discussed in section three below. Recent trends in department admissions are promising. In Autumn 2015, 4.7% of all students admitted to the program were from under-represented groups. In Winter 2016, 7.1% of admission offers were made to under-represented students.

At the doctoral level, the Department continues to do well in its representation of women: 37% of our current students are women. Nationwide, 35% of all new PhDs in economics in 2015 were women, but only 29% of PhDs from top 20 departments⁶. Much like the rest of the discipline, the Department has struggled to attract PhD students from minority groups. In 2015, 3 of 106 PhD students identified as either African-American, Latino, Native American or Pacific Islander (3%). However, only 34 out of 106 students are US citizens or residents and therefore 8.8% of eligible students are members of under-represented groups. According to the 2013 CSMGEP survey of all U.S. doctoral degree recipients in Economics, 9.6% of the 468 U.S. citizen or permanent resident graduates identified as American Indian

³ 1 American Indian, 4 Hawaiian/Pacific Islanders, 2 African Americans, and 8 Latinos out of 535 enrolled students at the start of Spring 2015, as reported by UW registrar.

⁴ https://www.aeaweb.org/committees/CSMGEP/reports/csmgep_annual_report15_final.pdf

⁵ http://www.washington.edu/omad/files/2015/10/2015_omad-factsheet_final_print_10-16.pdf

⁶ https://www.aeaweb.org/committees/cswep/annual_reports/2014_CSWEPA_Annual_Report.pdf

(0%), African American (3.2%), or Latino (6.4%)⁷. Despite consistent and continued effort during admissions, the Department suffers from a low supply of applicants from under-represented groups. For example, in 2012 and 2013 combined, only 16 applications were received and 2 admissions offers were made. This is out of 602 total applications and 70 total admission offers (and 46 non-international students). Minority students are being accepted at a rate that is slightly higher than the average student, but the Department is limited in its ability to admit more under-represented students due to low levels of PhD applications.

Departmental Diversity Efforts: The Department's committee dealing with issues of diversity is its Committee on Access for Under-Represented Students. The members are two lecturers and one academic counselor. The committee was formed in June 2015, with the explicit mandate of increasing diversity in the undergraduate student population. The immediate goal of this new committee is to have a plan for increasing undergraduate student diversity by the end of the academic year. Currently, the committee is working with the university's office of minority affairs and diversity (OMAD) to increase knowledge of the Department, the success rates for our recent graduates, and interest in our socially and politically relevant research among new and incoming students at our university. One possible way of disseminating this information is through public lectures by economics faculty and graduates students and sponsored by OMAD. The committee is also working to identify why minority enrollment in our undergraduate major is so low. If the committee discovers that minority students are interested in our major, but choose not to apply or are unable to gain admission after taking the introductory sequence, then OMAD will suggest additional interventions. These would likely include adding information and tutoring sessions for potential applicants to the major in order to improve information about the requirements for a successful application.

Free walk-in tutoring for introductory classes is offered through the Economics Undergraduate Board. A monthly information session providing guidance for students considering the major is now being offered by one of the Department's academic counselors as well. Once students are admitted to the department, they have access to several scholarships based on financial need. These include the J. Parker J. and Evelyn Cruz Sroufe Scholarship, the Alberta Corkery Scholarship, the Yanlan and Robert Yang Scholarship, and the Friends of Economics Scholarship. Students from under-represented minority groups are encouraged to apply to these scholarships, which serve the purpose of increasing access to talented students from any background who may be struggling to afford their education. For graduate students, the Department regularly applies for funding from GO-MAP's Graduate Diversity Fellowship, which guarantee five years of total funding to recipients. Two of these fellowships have been awarded in the last seven years.

Research by CSWEP has shown mentoring to be especially helpful for women and students from non-traditional academic backgrounds⁸. Undergraduates are mentored by economists in the alumni community, while graduate students are mentored by faculty members. The Department formed Women in Economics to expand both business and academic opportunities for women, and it counts undergraduates, alumni and faculty among its members. It holds seminars and networking-focused social hours.⁹

⁷ https://www.aeaweb.org/committees/CSMGEP/reports/csmgep_annual_report15_final.pdf

⁸ Blau, Francine D., Janet M. Currie, Rachel T. A. Croson, and Donna K. Ginther. 2010. "Can Mentoring Help Female Assistant Professors? Interim Results from a Randomized Trial." *American Economic Review*, 100(2): 348-52.

⁹ In a recent event, the president of CSWEP, Professor Marjorie McElroy spoke about CSWEP's programs for promoting the advancement of women in the Economics profession.

In addition to the resources of the University of Washington, the American Economic Association (through CSWEP and CSMGEP) offers many opportunities for women and students from under-represented minority groups to succeed in the economics profession. Information about these opportunities is disseminated widely throughout the department, and several of our junior faculty have taken advantage of these programs. University of Washington faculty were in attendance at the 2016 CSWEP mentoring breakfast, and presented at the CSWEP sponsored sessions at the 2015 Southern Economics Association meetings.

Section II: Teaching & Learning

Student Learning Goals and Outcomes

The Undergraduate Program. Some of the key learning goals are:

- Be able to use basic economics terminology
- Analyze how market structures, institutions, and government policies influence the allocation of resources in a market economy
- Explain decisions and the strategic choices of individuals or organizations
- Explain basic models of the economy and the macroeconomic interactions
- Use computer software, economic data, graphs, and charts to analyze and forecast economic activity
- Evaluate economic policy proposals
- Develop awareness of diversity issues in the world through looking at poverty, inequality, and economic development
- Be able to express ideas visually, verbally, and in writing

To evaluate students, we mainly use classroom assessment: graded assignments, exams, research papers. External assessments also exist, such as student papers sent to the Undergraduate Research Symposium as well as student research work submitted to peer reviewed professional journals. Our students also take external professional exams like the Actuarial exam sponsored by the Society of Actuaries (SOA), Certified Public Accountant (CPA) exam, and the Graduate Record Examination (GRE) for students bound for graduate school.

Student satisfaction is assessed by various surveys: a survey of undergraduate experience in the major carried out by their peers from the Economics Undergraduate Board (EUB survey). The EUB is a group of accomplished undergraduate students who provide free economics tutoring and act as liaisons between students, faculty, staff, and alumni in the department. There is also an exit survey of the graduating students administered by the advisers (Senior exit survey). In addition, when students fill their graduation paperwork, the advisers carry a survey to seek information about students plans after graduation. The mentorship program run by our alumni is also a good source of information.

The undergraduate committee analyses the information gathered in the surveys. It is also summarized in the undergraduate report and presented to the alumni at a yearly meeting as they can help if it is an issue involving resources.¹⁰ According to the Spring 2015 senior exit survey, between 90 and 100% of the students answered that their courses in economics had prepared them well or very well for defining and solving problems, understanding and applying economic principles, relating economics to other social sciences, and learning independently. When asked how well the degree had prepared them to

¹⁰ The undergraduate report is available upon request.

pursue their career or educational goals, 71 percent had a positive answer. When asked how well they feel that their studies in economics have prepared them for everyday choices and decision, the positive replies surge to 95%. They also advise students to do a double major and to talk to their professors - according to the EUB survey, a majority of the students are satisfied with accessibility to their professor (they appreciate the class web-pages) and with the services of advising.

The findings in the 2015 report by the Office of Educational Assessment, from their Academic Challenge and Engagement Study (ACES) of Economics, is consistent with our goals and expectations for students' experience in the Economics major.¹¹ In the conclusion, they say that the responses to interview questions suggest that students felt that the Economics major is challenging but rewarding. The concepts, topics and methods of economics are new for most students. Many students, especially students earning BA degrees, find the math/statistics aspects of the discipline challenging. Students are required to think analytically, critically, and quantitatively, which posed as challenges for both BA and BS degree seeking students, and that they had to figure things out on their own. Students report that they learned specific content knowledge and new ways of learning and studying, and that they had learned to apply economics to problems and issues in reality.

Thanks to the EUB survey we have information about students' interest in specific economics areas and courses, we try to adjust our course offerings to match student demands. Recent faculty recruiting has also helped immensely in this regards we have been able to offer more international, financial, theory and econometrics courses. Given the large size of our undergraduate body and our small faculty, it is not always possible to meet specific wishes like the perennial demand for smaller classes (our classes size hovers around 35 to 40 students). As is discussed later, we have had a large turnover in the faculty, and we have had to manage our course offerings to cater to student demands. This is both a challenge and an opportunity. For example, a new faculty member joining in Autumn 2016, will offer applied econometrics courses, which is being offered directly in response to students request for the opportunity to do more applied work in their econometric classes. However, our effort will be significantly handicapped by the absence of a classroom equipped with computers.

We offer two services courses (the introductory micro and macroeconomics courses) that are requirements in other schools/departments (SIS, Business school etc.). Our two intermediate courses are also open to non-majors and one or the other is often listed as required in other programs. These four courses are central in our major and the learning goals listed above are indeed critical. Our 400-level courses are not open to non-majors with the exception of students taking the Mathematical Economics option within the ACMS major. We do not have the faculty resources necessary to offer 200-level or 300-level courses to non-majors; the few courses offered are cross-listed with another department and taught by their faculty thus applying their department's learning goals.

The Graduate Program. The ultimate goal of the PhD program is to develop professional economists for a variety of careers by equipping them to do original research using advanced learning methodologies. Students acquire a general and functional knowledge of the structure of economics models of optimizing behavior and equilibrium, a broad knowledge of the contemporary literature in particular fields and detailed models specific to those fields, and an advanced working knowledge of the quantitative techniques needed to apply these models to economic questions and problems. The curriculum details are found in the attached (Appendix G) "Guide for Graduate Students in Economics."

The department explicitly states expectations for students' progress in the *Graduate Student Guide*, which is available on the department website. In part, funding is dependent upon students maintaining

¹¹ The ACES report is available upon request.

satisfactory progress as noted in the Student Guide. The major milestones are completion of coursework, passing core and field exams, forming a supervisory committee, passing the general exam, and passing the final exam. Each quarter, the Graduate Program Counselor records and monitors students' grades in a database that is also made available to the Graduate Program Director. Concerns, such as failed courses or a cumulative GPA lower than 3.0, are addressed on a quarterly basis.

Students are encouraged to present their research to faculty and their peers on a regular basis in brown bag workshops. These provide valuable feedback for them, and allow their committee members to monitor their research progress.

The Graduate Program Director meets at least once per year with each cohort to talk with them about how they are doing. This is a chance for them to learn information that is relevant to their cohort, and to share any complaints, concerns, or issues that have arisen. Based in part on feedback from these meetings, the Director and Counselor regularly update the *Guide for Graduate Students*, the handbook for the PhD program. The goal is to address anything that is going wrong in a timely manner, and adjust and modify the rules and requirements as needed. One example of this would be a modification of requirements for the finance field (a field comprises second year elective courses in a specific research area). Based on student feedback and faculty input, the courses that could be taken for the field, and the procedure for approval, were modified.

The Graduate Program Counselor meets frequently with students individually to discuss issues that have arisen. Students have generally felt comfortable to approach him with concerns or problems.

Two students volunteer each year to serve as graduate student representatives. As well as attending faculty meetings and helping with curriculum coordination, their main role is to serve as liaisons between the department and students, so that students feel their voices are heard.

Instructional Effectiveness

PhD students are responsible for a significant proportion of the teaching duties within the department. Given this, the department goes to great efforts to ensure that students are well prepared for their teaching duties. In the first quarter of the PhD program, all new students are required to take and pass ECON 602, a 1-credit class co-taught by a faculty TA trainer and a graduate student Lead TA. This class provides hands-on training in teaching economics. Students are videotaped while teaching and given feedback. Students in their first quarter as teaching assistants have their classes visited by the Lead TA, who then provides additional advice and feedback.

All graduate students who are either teaching assistants or independent instructors are required to have their teaching evaluated every quarter through the IAS system. These evaluation results are provided to the Graduate Program Director and Counselor and recorded in a database. Students are expected to score at least 3.0 on the adjusted median of the first four items on the evaluation, and those who don't are given notification and additional training if needed. Continued poor teaching performance may jeopardize the student's chance of future funding. Students who perform well as quiz section TAs for at least two quarters are able to teach 200-level classes independently, and continued strong teaching opens up opportunities for students to teach 300- and sometimes even 400-level classes independently, as well as to TA for core economics graduate classes.

We have two systems of class evaluation: in addition to the standard IAS evaluations from UW, we have also started an on-line departmental assessment system for feedback to the faculty. This was done to allow faculty the option of a personal and internal evaluation system even when they do not sign up for the IAS system. The information from the IAS class evaluations and peer reviews is channeled to the

Chair. The Chair can then advise the faculty about their teaching and suggest a session with an experienced instructor or help from the Center of Teaching and Learning.

In terms of teaching innovations, faculty have adopted a variety of online and in-class venues for student learning and engagement. This is especially true in the large introductory courses. Faculty have adopted in-class exercises and group discussions in large lecture courses in principles of microeconomics. Device-independent in-class response systems are used to engage students. Audience response system (clickers) as well as automated video recording of lectures and online homework are used in large principles classes. In our intermediate and upper division undergraduate courses, faculty also adopt a variety of methods to engage their students. A faculty member uses partially completed lecture slides that students contribute to and complete during each lecture, helping them to learn a step-by-step reasoning process in an analytical economic model. Classroom experiments are used in a natural resource economics course where students play a “fishery game” through which they thoroughly understand the nature of the “tragedy of commons”. A finance course (Econ 423) is taught by a group of alumni who are active in the profession. The facilitators in this course are well situated to provide career mentoring for the students enrolled in the course. A similar course on Law and Economics was also started this year.

We have added a global dimension to our program by developing six study-abroad exchanges with various foreign universities, the latest one with Hitotsubashi in Tokyo, Japan. These exchanges are very popular and provide our students with a great opportunity – we also appreciate the contribution of the students sent by our exchange partners.

Since fall 2014, a number of our faculty have been involved in teaching courses in the newly devised and fully online Integrated Social Science (ISS) degree program. Greg Ellis teaches Econ 282, “Using Econometrics: A Practical Approach”, and Haideh Salehi-Esfahani and Dennis O’Dea teach the principles of micro and macroeconomics in the ISS program. The purpose of this program is to provide access to higher education in social sciences for qualified students who seek to complete their college degree and who reside in various locations around the world. The fully online courses combine recorded lectures, online homework, tests, and assignments, and also student engagement via posted discussion forums as well as threaded discussions and projects.

Mentoring and success in the program: We mentor undergraduates as tutors for their fellow majors through the Economics Undergraduate Board and through CLUE. Students are involved in research under the supervision of the faculty in our various research seminars. Students doing internships are sponsored by faculty and required to write a research paper related to their internship under the supervision of their faculty sponsor. Honors students must take 3 research courses in 3 consecutive quarters: the first one where they are exposed every week to a faculty seminar presentation and have to write a creative reflection paper each week. Then they put together a proposal in the next quarter and finally write their Honors thesis under the supervision of a specific faculty.

Students facing difficulties for a reason or another can talk to their professors during office hours or set special meetings. The advisers have an important role helping students choose their courses, their course load etc. given their specific ability. Students facing difficulties can get advice on how to drop courses in a timely manner or get special hardship withdrawal etc. The Department bestows special scholarship for needs. The advisers can also give special attention to underrepresented minority students if they identify themselves as such.

The Economics Undergraduate Board is a group of accomplished undergraduate students who provide free economics tutoring and act as liaisons between students, faculty, staff, and alumni in the department. Each quarter the students organize a career seminar with department alumni, a Paul Heyne

Memorial Lecture on a topic of current interest in economics education, a math skills seminar, and a graduate school seminar. Each spring the group gives a “state of the students” presentation to the economics Visiting Committee to advocate on behalf of all department undergraduates.

The Undergraduate Mentorship Program links undergraduate economics students during their junior and senior years with alumni mentors in order to help them develop life and career skills through the guidance of seasoned professionals. Now in its fifth year, the program is hugely successful both in terms of student support and alumni engagement. An offshoot of this is the Regional Alumni Representatives program. Alumni in this role support fellow alumni and current economics students by acting as professional and social contacts for their city or region, resulting in successful engagement of out-of-area alumni.

The Economics Outreach Network (EcON) provides a framework for Economics alumni to keep in touch, build their personal and professional networks, and to make a difference in the lives of current students. The young alumni subset of this group, EcON GOLD (Graduates of the Last Decade) holds career networking nights and social events such as football watch parties, as well as an event for new grads following graduation in June. Undergraduate and graduate students are generally invited to participate in these events.

The Women in Economics group, established fall 2013, seeks to expand networking and educational opportunities for women who work in economics, or are studying in or have general interest in the field. The group hosts quarterly networking and professional development events of interest to women economists, including both alumni and current students.

The transition to the PhD program can be difficult for some students, especially depending on their prior exposure to graduate-level education or to the US educational system. Given this, all first year PhD students are placed in mentor groups. A typical mentor group could consist of two first year students, one faculty member, and one more senior graduate student. These groups meet once a quarter, with the goals of helping to ease the transition to the program, and increasing communication between first years, senior grad students, and faculty members.

For the first two years of the program, while students are completing coursework, the Director serves as the de facto faculty adviser for the students. She meets with these cohorts at least once per year (see Section II). However, once students finish taking courses and start on their dissertation research, faculty advising transitions to individual faculty members. Since there is a gap in the third year between completing coursework and being ready to form an official doctoral supervisory committee, students are required to choose an interim adviser during that gap. The interim adviser provides basic research guidance, including suggestions for other faculty members to work with. The student is required to submit a report to the interim adviser once per quarter outlining research progress. This report, once approved by the interim adviser, is then filed with the Counselor.

A crucial role of our faculty is serving on doctoral supervisory committees. All tenured and tenure-track faculty within the department are designated as graduate faculty with endorsements to chair, meaning that they can serve as supervisory committee chairs or as GSRs for students in other departments. Faculty take their advising roles seriously, providing valuable assistance to students and helping to prepare them for future roles as professional economists who can conduct original research.

We take great pains in the admission process to only admit students who we think have a good chance of success in the program. The PhD program handbook, the *Guide for Graduate Students*, clearly lays out a satisfactory progress timeline for the program. Frequent reminders of various requirements are emailed to students by the Director and Counselor. In addition to the satisfactory progress guidelines, the *Guide* includes minimally acceptable progress deadlines. These allow extra time, but are the points

at which the department may choose to place a student on academic probation for lack of progress. Recently, the Director has increased efforts to ensure that students finish in a timely manner.

As students progress in their research, the department encourages them to seek out opportunities to present at conferences. Since 2012, the department has offered matching funds when a faculty member chooses to use research funds to support conference travel for a student. This gives an additional conference travel funding option besides GSFEI and GPSS.

A faculty member is designated as Placement Officer, who provides advice to candidates as well as promoting them to potential employers. Economics has a highly structured job market for academic and many non-academic positions. In addition to continued academic advising and research assistance from the student's supervisory committee, the department offers mock interviews, workshops, presentation opportunities, travel funding to the annual conference where first interviews are conducted, an online profile for each job market candidate, and the sending of recommendation letters for applications.

Section III: Scholarly Impact

Faculty research

The University of Washington Economics Department has a long tradition of excellence in economics research and instruction. The Nobel laureate Douglass North did his path-breaking work on the role of institutions in US economic development here in the 1970s, and the Department enjoyed a reputation for research on the role of property rights and institutions, led by scholars like Yoram Barzel. Being among the first Economist Departments to recognize the importance of economic analysis of environmental quality and natural resources, Gardner Brown and others made pioneering contributions in the field. From the late 1970s, Charles Nelson established national recognition in the application of time series econometrics to macroeconomic phenomena. In the 1980s, with the arrival of Stephen Turnovsky, international economics and macroeconomics was established as new area of prominence for the Department. These latter two areas continue to thrive to this day, but we have lost our strength in the economics of environment and natural resources. Shelly Lundberg led the applied micro group until her departure in 2010.

In this academic year 2015-16, the Economics Department has 28 permanent faculty members.¹² Twenty-three of our regular faculty members are tenure track, of which 13 are tenured Full Professors, 4 are tenured Associate Professors, and 6 are Assistant Professors. The Department also has 3 Principal Lecturers, and 2 Senior Lecturers, who serve on renewable contracts. A list of Academic Staff is provided in Appendix D.

The Department suffered significant losses starting from the late 1990s through the first decade of the new millennium. The year 2010-11 was a watershed for the Department with the number tenure-track faculty falling to 19 because of sudden departures and retirements (details in Section IV). Since then, thanks to the strong support from the College, we have made a number of new hires and the Department is getting back to stronger footing. Currently, we enjoy strength and some stability in three areas, macro-international, econometrics, microeconomic theory, and our relatively new colleague, Pat Bajari, is the cornerstone of our recruiting strategy focusing in empirical micro. These four areas are described in more details next.

¹² One member will leave at the end of the year, one is at 50% and one at 75%, and a new colleague has agreed to join as an Assistant Professor in Autumn 2016.

The Department of Economics has a well-established group of scholars in the macro-international area, led by Stephen Turnovsky, a Fellow of the Econometric Society. The senior members currently serve or have served on several editorial boards of major journals, both general and leading field journals and have a strong mentoring record. A rough measure of the collective visibility is reflected in the fact that their total google scholar citations are approaching 25,000. The arrival of Fabio Ghironi in 2013 was a significant addition to an already strong group, that include senior faculty, Theo Eicher, Kar-yiu Wong, Philip Brock, Yu-chin Chen, and Assistant Professors Oksana Leukhina and Mu-Jeung Yang. In addition, Eric Zivot and Chang-Jin Kim from the econometrics group have overlapping interests and have collaborated with some members of this group. Collectively, the group spans much of this broad area of the discipline. Eicher's interests span the areas of international trade, growth, and development. Shortly after arriving here, he and Turnovsky conducted a successful research agenda dealing with the issue of "non-scale growth" as a plausible alternative to the endogenous growth models, which were being emphasized at the time. More recently his research has become more empirical and in this regard he has written a number of papers focusing on Bayesian Model Averaging methods. Fabio Ghironi is a major figure in international trade and its interface with macroeconomic dynamics. He has also written extensively on monetary policy in an international context, particularly the European Monetary Union. He has written a number of widely cited papers on market deregulation and market reforms. Stephen Turnovsky has made a number of pioneering contributions in the general area of macroeconomic dynamics, with interests in both closed economies and international economies. His more recent work has focused more on longer-run issues related to economic growth and its relationship to the evolution of wealth and income inequality. Yu-chin Chen's work with Rogoff on commodities currencies (*Journal of International Economics* (2003), *Quarterly Journal of Economics* (2010)) is being very widely cited.

The Department has enjoyed prominence in econometrics. It received a big boost with the arrival of Yanqin Fan in 2013, and John Geweke, a Fellow of the Econometric Society, has just joined the Department as an Affiliate Professor along with Assistant Professor Jing Tao. Together with existing senior faculty, Chang-Jin Kim and Eric Zivot, this is a very high profile group. The senior members currently serve or have served on several editorial boards of major journals and have a strong mentoring record. Eric Zivot is a time series and financial econometrician. His *Journal of Business Economics and Statistics* (1992) paper with Donald Andrews has been highly influential and was recognized as one of the "20 best papers" published in the Journal. He has also made significant contributions in econometrics in the areas of weak instruments, state space modeling, and structural change modeling. Chang-Jin Kim is also a time series econometrician with interest in macro applications as well. His work, providing a general framework for dealing with regime switches, has been extensively cited not only in economics journals but also in engineering journals. He has also made significant contributions in solving the problem of 'endogeneity' that may exist in times-series regression models with dynamic coefficients. His on-going research focuses on developing non-Markovian regime switching models. Yanqin Fan has worked and contributed to several areas in econometrics including nonparametric econometrics, dependence modeling, and identification of distributional treatment effects. Her early work on developing simple consistent tests for correct specification of commonly used semiparametric models has been very influential. She was among the first few econometricians introducing the copula approach to econometrics modeling. Her recent research has focused mainly on partial identification of distributional treatment effects beyond the average treatment effects.

With the addition of Quan Wen and Assistant Professor Xu Tan to existing senior faculty Fahad Khalil and Jacques Lawarree, we have a solid group of theorists researching and applying game theory. Wen's theoretical research focuses on and bridges two popular classes of dynamic games; repeated games and bargaining games. He has made fundamental contributions in each of the topics and continues to develop new solution concepts and analytical methods for these game models. His negotiation model

has been widely studied and applied not only in economics but also in other disciplines, such as political science. In addition to these and other game-theoretical research, Wen has also applied game theory to anti-trust enforcement and empirical auctions. Khalil and Lawarree are both contract theorists and have been successful as co-authors and mentors. Currently, they have been studying procurement contracts, bureaucracies, corruption and optimal incentive schemes in general. Khalil's early work has been very influential in providing a framework to study endogenous information in the early literature on incentives focused primarily on implications of asymmetric information, and his current interests also include financial contracts and auctions. Lawarree made pioneering contributions in using contract theory to understand corruption, and he has also made key contributions in developing strategic models of the electricity market as a part of NSF funded inter-disciplinary teams.

The empirical micro field is anchored by Pat Bajari, an acknowledged leader in the field of empirical industrial organization (IO). He was recently selected as Fellow of the Econometric Society, the most prestigious society in the discipline. Bajari has made a number of highly influential contributions, and his mentoring record for PhD students is among the most impressive in the discipline. His research has a serious focus towards empirical work and there is a unifying theme of developing econometric methodologies for investigating the role of information and dynamics in empirical IO models spans a wide range of topics. His *Econometrica* (2007) paper, with Benkard and Levin, is a path breaking contribution in the literature of empirical models of dynamic strategic interactions, and has inspired research in many areas of applied economic research. Aiming to build in the area, we have just hired an Assistant Professor from MIT, Dong Jae Eun. Despite a strong and consolidated effort, we were unsuccessful in recruiting another well-established empirical IO economist, Panle Jia Barwick, from Cornell. We plan to continue our recruiting effort in this area.

A significant development worth reporting is the collaboration amongst our newest colleagues with recent PhDs showing the current importance of empirical micro in the discipline. Xu Tan, whose papers are mostly theoretical, has been working with more applied colleagues like Rachel Heath in the Department, and Josh Blumenstock, Information School, on empirical micro topics. The Blumenstock-Tan project involves 'big data', which has also featured prominently in recent PhD dissertations of our students being supervised by Pat Bajari. Mu-Jeung Yang and Jing Tao share common interests in empirical IO, even though their primary fields are International Trade and Econometrics, respectively.

To conclude, the sub-field of empirical IO has strong strategic value to the Department. It emphasizes applied research requiring strong empirics, econometrics and applied theory. Given our existing strength in micro theory and econometrics, we hope to be able to provide excellent training to students specializing in empirical IO. Furthermore, both Amazon and Microsoft has been hiring strong empirical IO researchers, with some of them affiliated with the Department. Thus, empirical IO has the potential to become the standard bearer for the Department in the near future.

Faculty Supervision data in Appendix E.

Faculty CVs available at <https://econ.washington.edu/faculty-curriculum-vita>

Achievements by students and alums

In the past 10 years, 13 of our undergraduate students won University-wide awards including 4 Dean's medals and 3 President's medals (Luce Bonderman, Timeless Award...). In addition, around 229 students were inducted in the Phi Beta Kappa Society with increasing yearly induction. Last year one of our undergraduates presented a joint paper at the AEA Meetings in Boston. The detailed list is in Appendix H.

A list of selected publications of our PhDs since 2006 is provided in Appendix I. It is worth noting here that a few students have managed to achieve publication in well-respected journals even before graduation. Specific recent examples include Laine Rutledge in *Journal of Political Economy*, Jennifer Meredith in *Journal of Development Economics*; and Ruixuan Liu in *Econometric Reviews*.

Our graduates go on to careers in a wide variety of industries, equipped with both the subject-specific and transferrable skills so highly sought after by employers. In the Puget Sound region we have a large number of alumni at the following companies: Amazon, Zillow, Microsoft, Redfin, Boeing, and Starbucks. Many of these graduates work in the fields of data science and machine learning. A number of graduates also go into careers in the financial services industry. Still others head to the public sector and government jobs.

We also have a long tradition of producing students who are successful in academia, in government or business careers. A more extensive list of distinguished alumni is in Appendix L, but some of our well-known undergraduate and graduate alumni include:

Jay Inslee, Governor, State of Washington, BA '73, Robert McKenna, former Washington State Attorney General, BA '85, Helen Sommers, WA State Representative (retired), BA '69, MA '70, Linda Strout, Deputy CEO, Port of Seattle, BA '69, Charles Johnson, Justice, Supreme Court, State of Washington, BA '73, Karen Overstreet, Chief Judge, United States Bankruptcy Court, BA '77, Kelli Trosvig, VP and Chief Information Office, IT, University of Washington, BA '88, MHA '94, Michael Egeck, Chief Executive Officer and President at Eddie Bauer, Jeffrey Roe, President & CEO, Premera Blue Cross, BA '88, MBA '97, Bruce Nordstrom, Chairman, Nordstrom Inc., BA '55, Charles Cox, Acting Chairman of the SEC, BA '67.

A detailed list of our PhD placements since 2006 is provided in Appendix J and includes placements in:

Research universities: University of Chicago (Booth), University of North Carolina, University of California – Riverside, Emory University, Virginia Tech, University of Washington, University of Kansas, Louisiana State University, University of Oklahoma, University of Alabama, University of Alberta, Peking University, Bogazici University, Uppsala University, Lund University, University of Queensland.

Liberal Arts Colleges: Carleton, Wesleyan, Dickinson, Hamilton, Oberlin.

Government and International Organizations: International Monetary Fund, World Bank, Census Bureau, Congressional Budget Office, Chinese Academy of Sciences, Bank of Japan, Korea Institute of Public Finance, Institute of Development Economics, Japan.

Private research organizations: Recourses for the Future, Mathematica Policy Research.

Private industry: Amazon, Microsoft, Goldman Sachs, Russell Investments, Ernst & Young, Zillow, Bloomberg LP.

Collaborative and/or interdisciplinary efforts

A number of faculty members collaborate and interact with other departments and units in a variety of ways. Three faculty members (Fan, Rose and Zivot) currently have adjunct status in other departments, and ten faculty members from other units (Anderson, Basu, Bond, Dillon, Goldhaber, Layton, Long, Plotnick, Richardson, and Yoganarasimhan) had adjunct status in Economics in 2015-16. A number of Economics faculty members (Brock, Heath, Khalil, Kochin, Salehi-Esfahani, Rose, Thornton, M. Turnovsky, and Wong) are affiliated with programs in the Jackson School. Roles of Economics faculty members include teaching cross-listed courses, serving on dissertation and fellowship committees.

Many of our graduate students teach courses and do research with faculty in other units as well. The department is affiliated with the CSDE and CSSS.

Rachel Heath co-organizes a very active Joint Seminar on Development Economics with faculty members in the Evans School and Information School. Heath is also the Department's point person for the UW Forum for Political Economy and Economics, a graduate seminar with the Political Science Department. Khalil is affiliated with a health economics seminar series organized by colleagues in Health Services. Eric Zivot is Co-Director Professional Master Program in Computational Finance and Risk Management, Department of Applied Mathematics, and Hendrik Wolff is associated with the Program on the Environment. Examples of research collaborations include Yanqin Fan with Bio Statistics, Jacques Lawarree with Electrical Engineering, Eicher with Statistics, and Tan with the Information School.

Economic faculty members also serve on numerous standing and ad hoc College and university-wide committees. For example, Phil Brock (on two FCAS sub-committees), Haideh Salehi-Esfahani (Integrated Social Sciences degree, Technology Oversight Working Group as part of the Provost's Teaching and Learning in the 21st Century Initiative, Faculty Fellows Program for new faculty), and Quan Wen (RRF review committee).

How does the unit work with junior faculty to maximize their success

The junior faculty is mentored by the senior faculty, usually by those in the same or a related field. Although no official mentors or formal mentoring committees are appointed, the Chair ensures that senior faculty members meet regularly with junior faculty members. Junior faculty members are encouraged to circulate their research papers to senior faculty, particularly those in their field, and to seek input and advice on publishing. Different fields have active brown bag series, where junior faculty are encouraged to present their preliminary work in an informal and supportive setting. Indeed, our mentoring effort seems to have been more effective in areas where we have a group of research active senior faculty, and we aim to keep this in mind when recruiting in the future. The Chair conferences individually with junior faculty members once a year, as required by the faculty code, to assess each member's progress in teaching and research, and to recommend remedial action if any is needed.

Although junior faculty members are expected to participate in departmental governance and planning, typically their service responsibilities are in the research area. Junior faculty members are put in charge of arranging the visiting speakers for the department seminar series. Efforts are made to minimize new course preparations by junior faculty members, and they are encouraged to develop their instructional skills in upper division undergraduate and graduate courses in the core and their research fields.

Junior faculty members also receive precedence in the allocation of department conference travel funds. In recent junior recruitment, the department has used discretionary gift funds to offer competitive start-up research funds.

Section IV+ PART B

Future Directions + Unit-Defined Questions

How to build upon the strong start in the re-building process of the Department with a view to a vision of a sustainable and strong future?

In 2011, the department presented a bold strategic plan to deal with a decline in the department's excellence in economics research and instruction. From Autumn 2000 to Autumn 2011, the department had lost sixteen tenure-track faculty members¹³ and hired eight,¹⁴ for a net loss of eight. In 2011, the age profile of the department also presented great challenges. The decreasing number and increasing age of our tenured faculty negatively affected our ability as a department to be research productive and to supervise as many PhD students as we have in the past.

The 2011 strategic plan focused on three areas of strength: applied micro-economic theory, econometrics and macro/international economics. The plan also mentioned opportunities in applied microeconomics as Pat Bajari had just joined Amazon, and Rachel Heath, also an applied micro economist, had recently joined the department. The plan also discussed the future of the natural resource field and also highlighted opportunities to collaborate with other units in the University.

The plan also stressed the importance of a critical size with at least 25 tenure-track faculty (we noted that peer departments had an average size of 33), the role of lecturers in handling our large undergraduate program and the necessity of having market salaries. The plan was bold and ambitious and set a goal of hiring at least twelve FTE tenure-track faculty and three senior lecturers over a five year period.

It is fair to say that the department has made significant progress in fulfilling its strategic plan. But the progress needs to be sustained or all benefits from the last 4 years will soon be lost.

Ten new faculty joined the department in the last 4 years:

Dennis O'Dea (public finance from Illinois) as a lecturer

Rachel Heath (empirical micro/development from Yale), Jihyung Lee (econometrics from Yale), Mu-Jeung Yang (macro/international from UC Berkeley), Xu Tan (applied micro-theory from Stanford) and Jing Tao (econometrics from Wisconsin) as assistant professors.

Pat Bajari (empirical microeconomics/IO from Minnesota), Yanqin Fan (econometrics from Vanderbilt), Fabio Ghironi (macro/international economics from Boston College) and Quan Wen (applied micro-theory from Vanderbilt) as full professors (Bajari at 50%).

We will lose one assistant professor this year (did not get tenure), and another assistant professor left last year. Three tenured professors retired (Associate Professor Michael Hadjimichalakis, and Professors Yoram Barzel and Neil Bruce). Associate Professor Rose also went to a 75% appointment. The net gain in faculty is therefore $9.5 - 5.25 = 4.25$ since 2011.

We should also note that Yu-chin Chen was promoted to associate professor with tenure in 2012, strengthening further the field of macro/international economics.

¹³Brown, Deolalikar, Hartman, Liu, Parks, Thomas, Silberberg, Engel, Martin, Leffler, Lundberg, Nelson, Startz, Portner, Shi, Sirakya: 5 Assistant Professors, 2 Associate Professors, 9 Full Professors

¹⁴Chen, Portner, Shi, Sirakya, Leukhina, C-J Kim, S. Kim and Wolff: 7 Assistant Professors and 1 Full Professor.

While the new faculty are productive, with only four extra faculty, we are still a long way from revamping the entire department. With respect to the strategic plan, we would still need to hire in all three main target fields, econometrics, macro/international, and applied micro theory. Still good progress has been made and we can say that the three main target fields are now on much stronger footing with a good mix of junior and senior faculty.

Our next priority is to strengthen the empirical microeconomics field. One of one of our most productive senior colleagues (Pat Bajari) specializes in empirical IO, and we chose to focus our junior recruiting in this field. At the senior level, we opened the position to all subfields of empirical microeconomics. Under the leadership of Pat Bajari and Yanqin Fan, we hired Assistant Professor DongJae Eun from MIT and made a full professor offer to Panle Barwick from Cornell which was unfortunately rejected. Both scholars specialize in empirical IO.

Even though Professor Barwick did not accept our offer, we must note that the department was able to make a very competitive offer to her and all the previous candidates. The financial support of the university has been critical in this hiring. Note that our offers are strong but not out-of-line with the rest of the market and, indeed, we also lost some good candidates to competitors such as Dennis Nekipelov (who moved from Berkeley to Cornell), Greg Lewis (who moved from Harvard to Microsoft Research), and Taisuke Otsu (who moved from Yale to LSE).¹⁵

Another reason to focus on empirical IO is the presence of large companies with an interest in big data in the region. We mentioned that Pat Bajari has a 50% appointment with Amazon. Amazon has been recruiting a large number of our PhD students and PhDs around the country. More than 50 PhDs in economics are currently working at Amazon. Amazon has also recruited well-known scholars who have moved permanently to Amazon (such as Philip Leslie from UCLA), or are regular visitors (such as Guido Imbens from Stanford and Victor Chernozhukov from MIT). A couple of years ago, Microsoft hired a chief Economist (Preston McAfee, previously at Cal Tech) who has also been building a strong group of empirical IO economists with young (such as Justin Rao PhD from UCSD) and established scholars (such as Simon Wilkie from USC). Other companies such as real estate newcomer Zillow are also interested in this field and eager to hire more empirical IO economists. Therefore, the abundance of IO economists in the region and the strong demand for our students made empirical IO a logical field to expand in empirical microeconomics. This focus is also in line with the profession. In the last 15 years, all the Clark Medalists have been associated with a subfield of empirical microeconomics.

As mentioned elsewhere in this study, both our undergraduate and graduate students benefit directly from the presence of those IO economists in Seattle. Affiliate Professor Greg Duncan (now at Amazon and formerly professor of economics at Washington State) has been teaching the first course on big data and econometrics in the country to our undergraduate students for three years now. This year, Affiliate Professor John Geweke (now at Amazon and formerly Professor of economics at Minnesota and Duke) is teaching a special graduate course in econometrics, Justin Rao (Microsoft) and Jacob LaRiviere (Microsoft) are teaching an undergraduate class in IO. Our graduate students also benefit from informal advising in their PhD dissertation research and from better quality speakers in our seminar series thanks to the connection with economists from those companies.

In the past 4 years, we have also strengthened our ties with other units on campus, who have also recruited in applied micro fields. In particular, we made several new adjunct appointments such as Chris

¹⁵ Mainly thanks to the new hires, the mean and median salaries of full professors have slightly improved in the recent survey by Professor Hamermesh (UT-Austin) from the very last position in 2012-13 to number 10 out of 14 in 2014-15. The 14 schools are: Washington, UC Berkeley, UC San Diego, Texas-Austin, Minnesota, Iowa, Illinois, Michigan, Michigan State, Ohio State, Florida, North Carolina, Virginia and Maryland.

Anderson (Fisheries School/empirical microeconomics) who has a PhD in economics from Cal Tech, Anirban Basu (Health Services/health economics) who has a PhD in economics from Chicago, Brian Dillon (Public Policy School/development who has a PhD from Cornell, Philip Bond (Business School/applied micro-theory and finance) who has a PhD from Chicago or Hema Yoganarasimhan (Business School/empirical microeconomics and marketing) who has a PhD from Yale.

To summarize, given our current strength in applied micro theory, econometrics and macro/international economics, we believe that developing a strength in empirical IO is a credible way to take advantage of the opportunities in the vibrant local economy and build upon the strong start in the re-building process of the Department with a view to a sustainable and strong future.

A realistic goal. At the request of the outside members of the review committee, we have computed a weighted score based on publications in the top 25 journals since 2010 and compared UW with 12 peers.¹⁶ We rank only 9th. However, all those departments have more faculty than UW. If we compute the per capita score, we rank 5th, with a score close to the 3rd (UT Austin) and 4th ranked department (Ohio State). Our absolute ranking can therefore only improve with additional productive faculty. In the last 5 years, the department has done a remarkable job in its hiring. The hires we made since 2011 have given the department a remarkable boost in the ranking. Without them, we would be dead-last of the 12 peers. If we could replicate the hiring from 2011-2015, we would be ranked 2nd both in absolute and per capita score, right behind UCSD. It appears that a realistic goal would be to reach the upper tier of our peers. The resource needed to achieve this goal would be similar to the commitment the department received five years ago.

How should the graduate program respond to and take advantage of the evolving strengths in the department and the opportunities in the vibrant local economy?

Our large graduate program is very well run and we have been producing a steady stream of well-trained professional economists. A hallmark of the program is the strong faculty mentoring and research collaborations with graduate students as is evident from the list of publications in Appendix I. Both the Department and its associated local community have undergone significant transformations since the last review. The above section described at length how these developments are reshaping the Department's hiring strategy and future directions. This section discusses some of their implications for our PhD program.

The Department's own areas of expertise have undergone significant shifts as its faculty composition has evolved; in addition, a number of other units on campus have hired strong economists, several of whom have become adjuncts professors in Economics. The Department has in addition been attracting distinguished economists from local companies such as Microsoft and Amazon to join as affiliate professors, with a number of them offering Departmental courses. These developments have offered our students rich opportunities to take advantage of synergies in applied research within the broader community. However, these new opportunities also pose some new challenges that require careful navigation. Specifically, we discuss below two main areas: 1) the challenge of maintaining effective PhD research supervision, and 2) the opportunities and challenges posed by outside employment as a source of PhD student funding.

PhD Advising. Currently, sixteen out of the thirty-six PhD dissertation committees in the Department include members who are either outside of the Department or in other University or research

¹⁶ Indiana, Maryland, Michigan State, UC Davis, UCSB, UCSD, UIUC, UNC, UT Austin, UVA, Ohio State and Penn State.

institutions, such as the Brookings Institution, NOAA, Vanderbilt, and RAND. Overall, we view these arrangements as extremely valuable opportunities for our students to gain broader exposure and receive guidance from the larger research community. Discussions and collaborations with faculty members in other units on campus also allow our students to apply their analytical and empirical training in Economics to more applied topics in, for example, resource management, industrial/market analysis, and health economics. The challenge, however, is to balance these benefits with clear and effective advising from within the Department in order to ensure timely completion of high-quality dissertation research. Expectations for research output and focus do vary across disciplines and institutions; this at times requires elevated levels of communication and awareness among both students and committee members to achieve consensus.

The need for more collaborative planning with outside units beyond the Department's traditional study plans also applies to students in the earlier stages of their study. Some second-year students, and even a few occasional first-years, may benefit from courses outside the Department. As such, the Department should continue its collaboration with our adjunct and affiliate faculty members to explore and extend course-advising beyond the standard fields; this would better serve the growing body of students who would likely benefit from more creative and innovative study plans.

Outside Funding and Employment Opportunities. Given the current level of University support, the Department cannot fund all of its graduate students fully; this has always been the case. The rapid emergence within Seattle of major corporations whose businesses center on statistical inference from very large data sets, and on problems in fast-paced economics sub-disciplines such as empirical IO, raises both large opportunities and significant challenges.

The benefits of having graduate students work in local industry are clearly manifold. Theoretical perspectives are enriched by real-world exposures, the advising talent of local economists is utilized, and internal student financial-support challenges are addressed. In addition, these opportunities to the world of corporate economics sometimes provide a natural lead to a student's eventual placement. Those working at Amazon, have picked up cutting-edge skills in managing large data sets. In recent years, graduate students working at Zillow, Amazon, Microsoft, and the UW Endowment have, upon graduation, landed good positions at those institutions.

But having a significant number of students working in local industries also presents challenges. Students who work as economists in local corporations sometimes end up putting too little energy into their own dissertation research. This can result in them being forced to drop out—an outcome that is clearly not in line with their original plans – or in longer completion times for their degrees. The demands of outside work can also distract students who were in the longer term probably better-suited to academic research. In short, while those who do graduate sometimes find strong, permanent jobs with their student employers, this is a process that can benefit greatly from much more awareness, on the part of students and their employers, of the potential risks as well. The Department needs to work harder to provide such guidance and communication.

To summarize, the expanding advisory and employment options in other units, both within and outside the University, have brought along exciting opportunities to our graduate program. With them, the traditional field of study, research agenda, dissertation committee, as well as funding sources are all evolving, which would require keen awareness and discussion to formulated policy to best guide our students forward.

How to address needs in a time of dwindling State support: how to manage the economics Visiting Committee, relationships with prominent local companies, and to explore the feasibility of a fee-based masters or certificate programs?

Economics Visiting Committee (VC): Founded in 1989, the department's 38-member Visiting Committee (VC) is an engaged group of diverse business leaders who volunteer their time and assets to provide leadership, funding, teaching assistance, advocacy, and community connections for the department. Recognizing the UW's vital regional role in economics education and public policy formation, members of the VC pledge their support to the Department in any number of ways, most notably by providing a stable and significant source of funding that allows the Department to maintain high-quality and relevant programs while advancing strategic initiatives.

The future financial health of the Department lies in large part on the ability of the VC to build a committed group of alumni and friends at all stages of their careers who recognize the value of an economics education and who will, in turn, foster such relationships with future alumni. The VC annually contributes anywhere from \$50,000 – 100,000 in both current use and endowment funds through direct appeals and faculty/student presentations describing current funding needs in the department. These funds are vital to the functioning of the Department and are used in many ways, including faculty research and travel, seminar expenses, faculty and student recruiting, activities of the Economics Undergraduate Board, and staff support. With routine cuts in the budget in recent years, funds from the VC and Friends of Economics have become even more significant.

In addition to volunteering their own time and assets, VC members strive to secure private contributions to enhance core support received from the state; increase the level of private giving to the department and/or the University both in terms of dollars raised and numbers of contributors; and enhance understanding among the UW's alumni and friends of the need for private philanthropy to support excellence in the department. Some VC members have established professorship themselves (like the Milliman Professorship by VC member Glenn Milliman), have helped set up new professorships (like the Glaser professorship with the help of VC member Tom Olson) or inspired professorships (like the Richards professorship established by the nephew of VC member Bob Richards).

Members are regularly presented with new and innovative research and insight into current worldwide economic conditions by economics faculty and students, and visiting economics policy makers. Members have been given the opportunity to meet informally with such guests as Dean Furbush, former Executive Vice President of NASDAQ, Robert E. Lucas, Jr., 1995 Nobel Laureate in economics, and the Honorable Ben S. Bernanke, former Chairman of the Federal Reserve Board. The opportunity to be back on campus and the camaraderie among the members is also a benefit.

One very successful outcome of these efforts has been the Economics Mentorship Program, which has proven to be an effective use of Visiting Committee resources in its ability to reach, engage, and instruct undergraduate students. Given the challenging economic climate, more than ever students moving into the workforce are faced with tough competition for satisfying careers; the mentorship program, pairing students with seasoned and successful business leaders, thus provides participating students a distinct advantage.

Additionally, working with academic leaders, College advancement staff collaborate to develop key strategies for cultivation, solicitation, and proposal development. A focus on the "top 25 potential donors" in each unit – many of whom are also VC members - offers department chairs and advancement staff an opportunity to review cultivation strategies together regularly. Their efforts are supported and facilitated by central development through events, publications, recognition programs, annual giving solicitations, regional events and cultivation activities, and other continuing stewardship efforts.

The VC also includes members from prominent local companies like Microsoft (Chris Nelson and Eileen Wang are VC members) or Zillow (Stan Humphries). We need to strive to include more members of local companies in our VC. Recently, local companies like Amazon and Microsoft have been developing a staff of PhD economists. The department has been actively engaged with such companies by placing graduate students in those groups but also by asking the economists working at such companies to teach in our program. For instance, John Geweke, now affiliated with Amazon, is teaching a graduate course in econometrics. Greg Duncan (also affiliated with Amazon) teaches an undergraduate class on big data and econometrics. Justin Rao and Jacob LaRiviere, both affiliated with Microsoft, are teaching an undergraduate class in industrial organization. For years, we have used VC members and economists working in the local economy to teach courses. Christina Tapia, the chair of the VC, is currently coordinating two classes (Topics in financial economics, and Law and Economics) where several VC members teach short modules to our undergraduate students. A tighter connection with the local business community is also one of the goals of our planned Master program.

Master Program: A committee consisting of senior faculty, Jacques Lawarree, Quan Wen and Eric Zivot, was formed to study the feasibility of starting a fee-based Master Degree Program. Currently the Department does not admit students towards a Master degree. Zivot is co-director of the Master program in Computational Finance and already has experience with starting and running a successful fee-based program.

The recent surge in undergraduate enrollments in economics, many from emerging countries, have increased the demand for an enhanced education experience beyond what a typical undergraduate program can offer. In response to this increase in demand, many leading US universities have established fee-based master programs in economics, such as Columbia University, University of Minnesota, University of Michigan, University of Wisconsin-Madison. Most of these fee-based master programs utilize the expertise of their economics faculty and strength of their local economic/business environment. In addition to more rigorous training in economic theory and methodology, a typical master program offers a number of areas of concentrations. The aim of these programs is preparing students for work places and PhD programs.

At UW, we have many advantages in offering a fee-based master program. As one of the best public universities in the world, UW is well-known in Asia. To take advantage of the local companies such as Microsoft and Amazon and our current faculty skills, our plan is to design a program that trains students in data skills along with standard economic analyses. We have a strong and expanding group of econometricians and applied economists, who can provide the technical training. We also have strong ties to local companies. Besides the VC members mentioned above, both Zivot and Lawarree have ties to the finance and tech industries, and our colleagues Pat Bajari, Greg Duncan, and John Geweke are associated with Amazon. We hope to rely upon these ties to provide training and internship opportunities for our students.

How to continue to provide a quality undergraduate education given the challenges posed by a strong demand for the economics major and the changing composition of the students wishing to major in economics?

We take great pride in our undergrad program, which has consistently performed at a very high level. Some significant changes have occurred in the last ten years, mainly driven by the increase in the size and change in the composition of our major.

As mentioned above, a rapid increase in demand for economics majors led to the creation of a competitive major in 2009 so that we could continue to provide a quality education given the size of our

faculty. Since economics is fairly technical, admission to the major relied on grades in math, statistics, and introductory micro and macroeconomics, and there was not much other data that could be readily used. As a result, the students admitted became overly quantitative at the expense of students who might not be as good at math but have stronger analytical abilities.

To remedy the problem, we introduced an additional admission requirement, hoping to correct this inherent quantitative bias. Our goal was to admit students who are analytically strong, who are better able to write and argue coherently, who will make an overall contribution to the class, and who will enrich everyone's experience in the major. Students applying to the economics major now have to take a writing test called RTW for Reading, comprehension, analytical Thinking, and Writing skills, enabling us to evaluate applicants on another dimension resulting in a more balanced student body. According to various surveys, majors as well as faculty have favored this initiative.

A second challenge was the sudden change in the composition of our majors due to the huge growth in the number of international students applying and being admitted in our department. As shown in Section I, the proportion of international majors went from 8% in Winter 2007 to 52% in 2012, to around 60% currently. Along with high interest among current students to get into the major, there seems to be strong interest even among new enrollees at UW. On average, about 550 students have been applying to the major each year. Since 2010, each year, the number of Autumn-quarter enrollees in UW who stated Economics as their top major has been: 121, 172, 173, 190, and 137, respectively, with over 50% of those being international students.

The first few years of this change presented a host of major challenges, including English language difficulties, changed classroom environment, educational background issues, and administrative problems that required a significant increase in the use of staff time. Many of the international students had difficulties in analyzing economics topics, had little training in writing essays, were not used to voicing opinion in class or joining class discussion, were not aware of rules at UW, or had visa-status related complications, etc. Among various responses, the Department offered special tutoring services for international students, with the creation of an English Language Learning tutoring and writing center, now discontinued since the current set of international students' English has improved. While international students are often technically well prepared, making our instruction more effective, classroom challenges remain, especially in terms of in-class participation, a key component of instruction in economics. Disciplines develop effective pedagogic methods over years of collective practice, and the change in the classroom environment has been a big jolt to the system. While concerns related to the international student have changed over time and are somewhat more manageable, demands on staff time continues to be high, and our students would be better served with an increase in the amount of staffing resources.

There are other noteworthy aspects to the changes in the composition of our major. The ratio of women in the major has increased to more than 50%, whereas, it was typically around 30% in earlier years. On the other hand, the proportion of Washington State residents has fallen, including a significant drop in Washington State women. From Spring 2000 to Spring 2015, the proportion in the major and the number of Washington State students fell from 75% or 347 students to 31% or 225 students. Similarly from Winter 2010 to Winter 2015, the proportion of non-international women fell from 27% to 15%. We are concerned about the implications of reduced participation of these groups in receiving an education in economics at UW.

As already mentioned, we do not have the flexibility to offer classes at the 300-level nor spots for non-majors in our 400-level classes given the on-going struggle to offer enough 400-level classes for our majors. At the introductory level, however, the Department continues to provide a tremendous service to a large number of students in the UW community: last year, we taught two basic service courses,

introductory micro and macroeconomics - ECON 200 and 201 - to respectively 2,895 and 1,750 students (a total of 4,645). Moreover, our department has developed and offers 3 courses in the new Integrated Social Science Program (ISS).

According to our surveys (senior exit survey and EUB survey) and given the sentiment of our faculty, everybody wishes for smaller classes. How can we reduce class size without reducing our overall contribution to the College and UW? One possibility would be to reduce the size of the major i.e. admit fewer undergraduates, but revive a number of 300-level courses that used to be offered in a previous era. For example, less quantitative versions of intermediate micro and macro, or a number of applied courses at the 300 level could go a long way towards addressing the lack of economics offerings to non-majors. However, given the very high demand for our major from existing students and new enrollees, a significant reduction in the size of the major is likely have serious consequences. Another idea is to offer classes varying in sizes. Most of our class limits are 35-40 students, but we could offer some larger classes in specific cases, and add some smaller seminars. This year we are introducing a new approach to teaching Intermediate Micro - ECON 300. Instead of a number of courses taught by graduate students and an occasional faculty-taught course, a faculty will teach a large class of over 100 students every quarter with a few TA's sections – the same format as ECON 200 and 201 but with fewer students in total. The quality of the teaching should be enhanced and the coursework standardized for a very important foundation course in our major. If the experiment works, we might extend this format to other courses, first to Intermediate Macro (ECON 301), but also to other popular courses that are offered multiple times in a year. This could also give us some flexibility to offer a few smaller classes. The creation of additional topic seminars could also enhance our students' opportunities for research, which is an often-expressed-but-difficult-to-meet desire given the student/faculty ratio. For instance, if we taught a 400-level class in a large section (equivalent to 2 of our older classes), we could add a small seminar on a related topic, offered by the same instructor, to our curriculum. At this point, there are only few small classes in the major, and these are mainly in the Honors program. However, our 400 level classes are already significantly larger than in the other Social Science programs, and it is not clear whether we can be effective with even larger classes, especially with the mix of students in our major.

Exploiting the quantitative strength of our current students, the rise in demand for quantitative skills by our students and in the economy, we are now offering a series of econometric courses covering topics like big data and machine learning. Affiliate professors from Amazon and Microsoft are also strengthening our program. In the exit survey, seniors advise their peers to take more econometrics, more computer programming, and more mathematics, and in the 2015 EUB survey, students indicated that they would be interested in learning to use various statistical software such as R or Stata (note that the EUB offers a quarterly Excel workshop taught by an alum). This trend is also evident from the increase in demand for such skills by local companies like Amazon and Zillow. In the past few years, the department has recruited highly skilled faculty familiar with new quantitative techniques and conversant with the latest tools of empirical research. We can further address this need from students by creating a Certificate in Quantitative Economics and Econometrics, but we will probably need to offer classes (or smaller sections) in a special computer classroom.

Overall, the proportion of economics students doing double majors/degrees/minors in the various units has been rather stable but the composition seems to have changed. Exhibiting an amazing interest in diverse fields, about 40% of our students are studying towards double major/degrees with 40 to 50 different departments. The main departments (with double digit numbers of students) are in the natural sciences: ACMS, Computer Sciences, Mathematics, Statistics, Psychology – and in the social sciences: Political Sciences, the Jackson School, and Communication. Since students' interest for the Bachelor of Science basically doubled in the past 10 years, it is not surprising that a larger proportion of

our students choose to double major with ACMS or Math while fewer students now choose a social science like international studies or political sciences. If we were to try and reverse the trend, creation of multidisciplinary Options may be a fruitful direction to pursue.

Economics is intrinsically an interdisciplinary subject – economists are concerned about a diverse set of issues appealing to social sciences broadly, and recent Nobel laureates in economics are indicative of this aspect (e.g., Elinor Ostrom, Angus Deaton). Unfortunately, the number of econ majors doing double majors with another discipline in the social sciences has dropped from 82 in Winter 2013 to 56 in Autumn 2015. We hope that the creation of Options including, for instance, JSIS or Political Science courses would address the demand from our BA students for more applied courses. They would be able to apply the economics principles they have learned in our department to issues presented in JSIS or PolS courses like: Political Economy of Development or Government and the Economy or Environmental Politics and Policy in the US. In fact, 60% of our students are working towards the BA, and these students' experience and education in our department would be enhanced with the creation of options in specific interdisciplinary areas. The structure of these options would be similar: students would take 2 core courses in our department and the rest of the courses (3 or 4 courses) would be chosen out of a list of courses in our department and in another department. Although the options are specific degrees offered by our department, we shall design them in cooperation with the other social sciences department whose courses figure in the list, which could potentially lead to more double majors as well.¹⁷

¹⁷ In the case of ACMS – a Mathematical Economics option, we have some 40 double majors every year.

Appendix A - Enrollment and degrees awarded

Economics undergraduate majors enrolled:

Academic Year	Autumn	Winter	Spring	Summer
2005-2006	730	803	838	302
2008-2009	775	890	967	339
2009-2010	859	859	867	260
2012-2013	595	687	716	200
2014-2015	615	688	713	188

Economics undergraduate degrees awarded:

Academic Year	Autumn	Winter	Spring	Summer	Yearly total
2005-2006	53	60	237	78	428
2008-2009	44	61	240	75	420
2009-2010	80	70	268	61	479
2012-2013	48	74	171	46	339
2014-2015	46	79	177	38	340

Economics graduate enrollment and degrees awarded

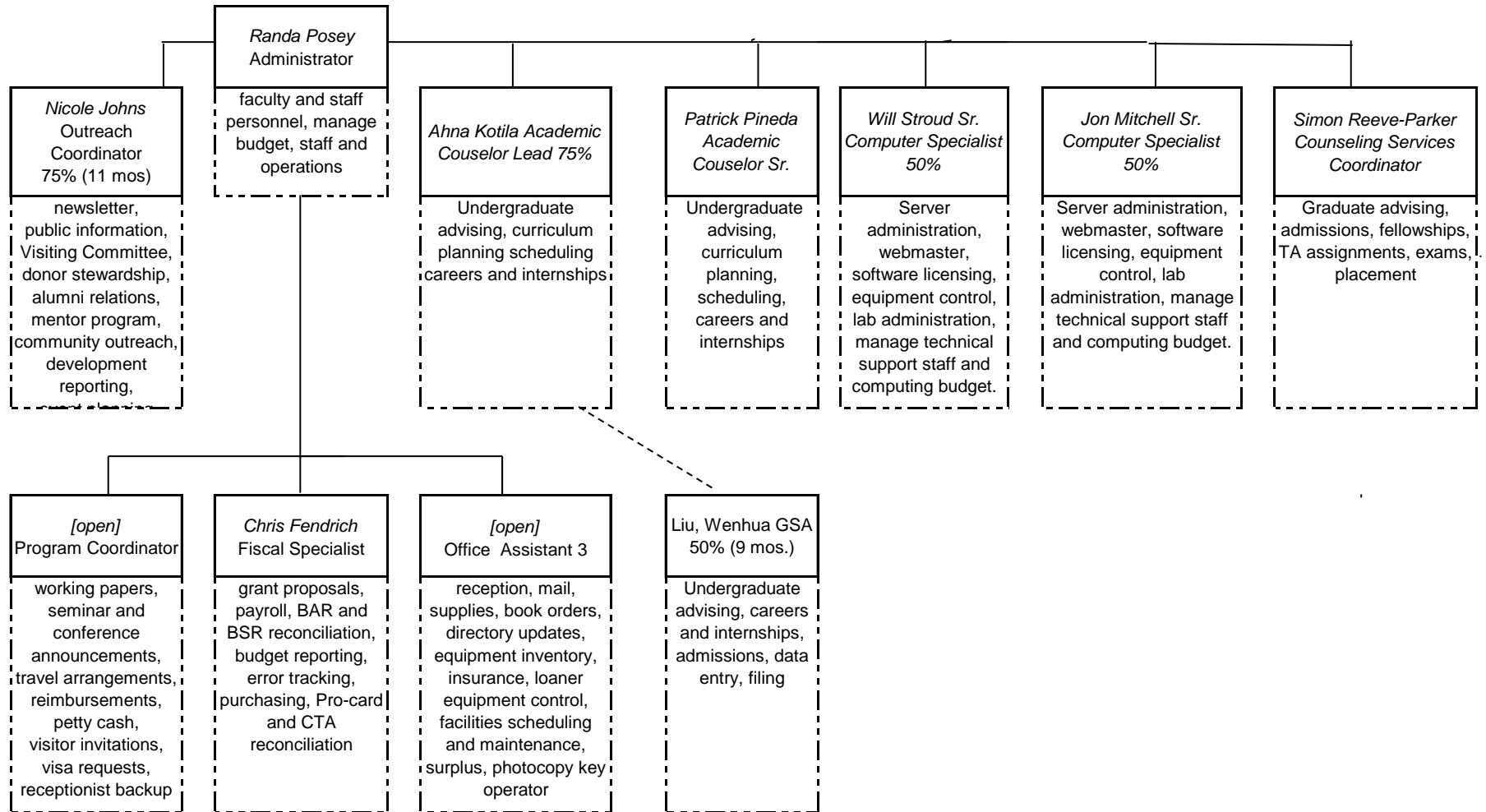
Academic Year (AUT-SUM)	Enrolled (AUT 10 th day)	PhD degrees granted	MA degrees granted
2006-07	94	11	16
2007-08	89	10	20
2008-09	89	13	10
2009-10	108	11	13
2010-11	107	9	17
2011-12	97	8	24
2012-13	99	7	17
2013-14	103	19	19
2014-15	100	16	18

Economics

C	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Autumn Quarter Enrollment										
Enrollment History										
Total	95	101	94	89	89	108	107	97	99	103
Full-Time	77	90	85	79	82	90	91	87	87	96
Part-Time	18	11	9	10	7	18	16	10	12	7
Male	63	68	64	57	54	64	64	55	60	63
Female	32	33	30	32	35	44	43	42	39	40
Ethnic Minority	6	8	11	9	9	12	9	10	13	13
International	60	56	43	41	44	56	55	50	57	65
Wash. Resident	22	35	37	35	27	25	21	19	15	15
Non-Resident	73	66	57	54	62	83	86	78	84	88
New Student Enrollment	22	22	18	13	24	35	20	16	19	23
Continuing	73	79	76	76	65	73	87	81	80	80
Annual Application (Sum-Spr)	341	359	320	267	206	228	277	291	309	
Autumn Quarter Application	341	356	318	267	204	227	275	291	309	293
Autumn Quarter Denials	249	272	244	185	108	116	143	184	224	211
Autumn Quarter Offers	62	65	73	72	96	63	63	33	31	39
Autumn Quarter Percentages										
% Denied (of Applications)	73.0%	76.4%	76.7%	69.3%	52.9%	51.1%	52.0%	63.2%	72.5%	72.0%
% Offers (of Applications)	18.2%	18.3%	23.0%	27.0%	47.1%	27.8%	22.9%	11.3%	10.0%	13.3%
% New Enrollees (of Apps)	6.5%	6.2%	5.7%	4.9%	11.8%	15.4%	7.3%	5.5%	6.1%	7.8%
% New Enrollees (of Offers)	35.5%	33.8%	24.7%	18.1%	25.0%	55.6%	31.7%	48.5%	61.3%	59.0%
Autumn Minority Admissions										
Applications	20	32	32	17	24	20	32	20	36	28
Denials	11	24	20	8	9	8	18	9	20	21
Offers	9	8	12	9	15	9	6	4	6	3
Autumn International Admissions										
Applications	254	210	186	161	118	125	159	163	187	190
Denials	188	183	173	131	83	75	88	110	141	136
Offers	36	11	13	26	35	26	28	13	19	27
Applicant Average GPA										
Denied	3.61	3.58	3.62	3.52	3.57	3.60	3.59	3.66	3.63	3.64
Accepted But Not Enrolled	3.67	3.74	3.79	3.74	3.75	3.65	3.73	3.67	3.73	3.74
Accepted and Enrolled	3.56	3.58	3.72	3.75	3.72	3.58	3.68	3.76	3.68	3.72
Applicant Average GRE Scores										
Denied										
Verbal Score	510	487	507	503	503	549	556	565	594	579
Quantitative Score	765	754	765	759	760	761	771	771	776	780
Analytical Score	684	620	691	618					430	530
Accepted But Not Enrolled										
Verbal Score	527	576	619	602	586	590	592	609	501	361
Quantitative Score	774	769	772	779	779	782	784	787	675	452
Analytical Scor	686	760	666	700						
Accepted and Enrolled										
Verbal Score	453	601	601	565	562	586	566	622	559	605
Quantitative Score	757	774	764	774	778	779	785	785	776	787
Analytical Score	634	756		710						
Annual Degrees Awarded (Sum-Spr qtrs)										
Masters:	17	23	16	20	11	13	17	22	19	
Doctoral:	9	14	13	12	8	17	8	8	7	
Ph.D. Candidates:	13	9	12	16	11	7	12	10	10	
Autumn Quarter Financial Support										
Teaching Assistants	51	53	53	53	53	54	52	55	59	63
Research Assistant	7	8	6	8	7	2	4	6	9	5
Fellowships	12	7	9	9	7	6	12	12	13	17
Traineeships	0		0	0	0	0	1	1	2	1

APPENDIX B

Department of Economics -- Staff Organization Chart (April 2016)



APPENDIX C
Economics GOF Budget

	Biennium					
	09-11		11-13		13-15	
	Budgeted	Expense	Budgeted	Expense	Budgeted	Expense
Fac Salaries	6,299,818	6,146,780	5,631,412	5,397,309	8,030,362	7,820,420
TA Salaries	1,436,579	1,400,897	1,365,988	1,380,165	1,465,867	1,614,413
RA Salaries	31,700	40,041	36,891	50,309	31,700	38,631
Staff Salaries	851,235	851,235	821,854	822,889	908,933	907,779
Hourly Salaries	28,024	78,308	44,777	29,057	72,585	45,219
Benefits	1,046,969	992,192	2,027,575	1,962,538	2,471,893	2,457,289
Svcs, supplies,travel	80,642	144,580	73,472	203,948	61,296	157,713
Totals	9,774,967	9,654,033	10,001,969	9,846,215	13,042,636	13,041,464

TA/RA salary increases : FY14 10% salary increase, we were funded at 8%; FY 15 10% salary increase we did not receive funding to cover; FY 16 11.2% increase without us being covered for it, and another expected increase in FY 17 with no promise for it being covered.

FY 16 we received a 15% cut to our TA temporary budget

Also note that in FY 09 we received a cut to our TA budget of around \$59K, for 2 years we received backfill funding from the college to cover those cuts and the 3rd year we received ½ of those funds but have not received any backfill for the past several years.

Generally we would cover some of these cuts with our leave/recapture budget, however we have few faculty going on unpaid leave and sabbaticals in the near future. Example leave plans: FY12 \$140,727; FY13 \$117,987; FY14 \$88,891; FY15 \$112,679; FY16 \$66,990; FY17 \$13,979 (projected)

We continue to have a steady need for TA's because they need to teach and/or assist in the the very popular lower level courses. So the number of TA's required has not decreased even with the shrinking budget. We also have an RA who assists our UG advising, a task which has beome even more critical with increased and diverse enrollment in the major; those funds have not increased to match the salary raises either.

Other expenses: The department has many other expenses that were at one time covered with GOF funds but are now paid from other funds that will soon run out as they are not replenished. This is due to the need to use whatever leave/recapture funds we have to cover the deficit caused by the unfunded salary increases to our graduate students. Some costs are now covered from our 09 budget which was at one time replenished as non-matriculated students signed up for our courses, which is no longer the case. We expect those funds will run out soon. Some costs are paid from our 74 budget (DOF) which is not replenished; we expect those funds will run out soon as well.

The general cost of doing business has increased where the funding for these types of expenses (general office) has been stagnant for at least the 10 years.

APPENDIX D

Academic Staff 2015-16

Tenure Track Faculty

Heath, Rachel	Assistant Professor
Leukhina, Oksana	Assistant Professor
Tan, Xu	Assistant Professor
Tao, Jing	Assistant Professor
Wolff, Hendrik	Assistant Professor
Yang, Mu-jeung	Assistant Professor
Brock, Phil	Associate Professor
Chen, Yu-chin	Associate Professor
Kochin, Levis	Associate Professor
Rose, Elaina	Associate Professor (75%)
Bajari, Patrick	Professor (50%)
Eicher, Theo	Professor
Fan, Yanqin	Professor
Ghironi, Fabio	Professor
Halvorsen, Robert	Professor
Khalil, Fahad	Professor
Kim, Chang-jin	Professor
Lawarree, Jacques	Professor
Thornton, Judy	Professor
Turnovsky, S	Professor
Wen, Quan	Professor
Wong, Kar-yiu	Professor
Zivot, Eric	Professor

Lecturers

Ellis, Greg	Principal Lecturer
Salehi-Esfahani, Haideh	Principal Lecturer
Turnovsky, M.	Principal Lecturer
Knox, Melissa	Lecturer
O'Dea, Dennis	Lecturer

Affiliate Professors

Duncan, Gregory	Amazon
Geweke, John	Amazon
LaRiviere, Jacob	Microsoft
Rao, Justin	Microsoft

Adjunct Professors

Anderson, Christopher	The School of Aquatic and Fishery Sciences, UW
Basu, Anirban	School of Pharmacy, UW
Bond, Philip	Foster School of Business, UW
Dillon, Brian	Evans School of Public Policy and Governance, UW
Goldhaber, Dan	Center for Education Data & Research, UW Bothell
Layton, David	Evans School of Public Policy and Governance, UW
Long, Mark	Evans School of Public Policy and Governance, UW
Plotnick, Robert	Evans School of Public Policy and Governance, UW
Richardson, Thomas	Statistics Department, UW
Yoganarasimhan, Hema	Foster School of Business, UW

Visiting Faculty

Christina Tapia	Northwest Economics, L.L.C.
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Appendix E
Faculty Supervision

Faculty	PhD		
	Chair	Member	GSR
Pat Bajari	4	2	0
Phil Brock	1	16	0
Yu-chin Chen	12	29	6
Theo Eicher	5	10	3
Greg Ellis	0	7	0
Yanqin Fan	4	4	0
Fabio Ghironi	3	2	0
Robert Halvorsen	11	10	2
Rachel Heath	6	9	1
Fahad Khalil	11	19	11
Chang-Jin Kim	7	15	3
Levis Kochin	2	8	0
Jacques Lawarree	8	9	3
Oksana Leukhina	0	9	0
Elaina Rose	9	11	1
Haideh Salehi-Esfahani	0	1	0
Xu Tan	0	6	0
Jing Tao	0	1	0
Judy Thornton	4	13	5
Michelle Turnovsky	0	1	0
Steve Turnovsky	16	9	0
Quan Wen	3	6	0
Hendrik Wolff	6	7	1
Kar-yiu Wong	6	2	1
Mu-jeung Yang	2	1	0
Eric Zivot	28	35	9

Undergraduate		
Thesis/ 497	Intrnshp/ 399	Research /499
3	4	3
4		6
2		3
4	6	1
2	4	2
4		1
1	3	2
2	1	2
8	7	4
4	1	
3	2	4
3	1	3
	15	7
1		
10	12	4
9	27	11
3	3	2
1	2	
10	1	19
2	3	4
	1	
4	15	10

APPENDIX F

Department of Economics Committee Assignments—2015-16

Executive Committee – Program Review Committee

<i>Chair</i>	Fahad Khalil Chang-Jin Kim Stephen Turnovsky Quan Wen Eric Zivot
<i>Outreach Director</i>	Jacques Lawarree
<i>Graduate Program Director</i>	Yu-chin Chen
<i>Undergraduate Program Co-Directors</i>	Haideh Salehi-Esfahani Michelle Turnovsky
<i>Administrator</i>	Randa Posey

Graduate Program Committee

<i>Director</i>	Yu-chin Chen
<i>Placement Officer</i>	Quan Wen
<i>Members</i>	Philip Brock Yanqin Fan
<i>Academic Counselor</i>	Simon Reeve-Parker
<i>Graduate Student Representatives</i>	Qing Zhang Luigi Briglia

Undergraduate Program Committee

<i>Co-Directors:</i>	Haideh Salehi-Esfahani Michelle Turnovsky
<i>Members:</i>	Robert Halvorsen Greg Ellis
<i>Lead Academic Counselor</i>	Ahna Kotila
<i>Academic Counselor</i>	Patrick Pineda

Outreach Committee

<i>Director</i>	Jacques Lawarree
<i>Member</i>	Fahad Khalil
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Economics 201

Economics 300

Economics 301

Haideh Salehi-Esfahani

Dennis O'Dea

Greg Ellis

Michelle Turnovsky

Seminar Coordinators

Rachel Heath

Oksana Leukhina

Xu Tan

Jing Tao

Empirical Micro Recruiting Committees

Chair

Chair

Member

Member

Yanqin Fan

Pat Bajari

Jacques Lawarree

Eric Zivot

APPENDIX G

GUIDE FOR GRADUATE STUDENTS IN ECONOMICS

This guide provides information about the requirements of the Department of Economics graduate program. You should also familiarize yourself with the requirements of the Graduate School which are described in the General Catalog and on the web at www.grad.washington.edu. You are responsible for knowing and following the requirements of both the Department and the Graduate School. This guide will be updated periodically.

I. The MA Program

A. Core Courses

The core courses required of all MA students are ECON 500, 501, and 508 (microeconomics); ECON 502 and 503 (macroeconomics); and ECON 580, 581, and 582 (econometrics). MA students must obtain a grade 2.70 or better in each of these core courses. Core courses may be repeated one time to bring up a deficient grade to the required level. The core course requirements must be satisfied within two years of entering the graduate program.

B. Electives

In addition to the core courses, MA students must take at least seven elective courses in economics at the 500 level. ECON 509 may be counted as one of the seven electives. These courses must be taken for a numeric grade, not on a credit/no credit basis. At least two must be in the same field of specialization (see Appendix). The available fields of specialization and the courses corresponding to each are listed in the Appendix. Students must earn a grade of at least 2.70 in each of the elective courses. The coursework requirements must be completed by the end of autumn quarter of the third year. Two of the seven elective courses may be chosen from graduate level courses offered by other UW departments, provided that the Graduate Program Coordinator pre-approves them as relevant to the student's program.

C. Internship

Each MA student must complete six credit hours of a supervised internship (ECON 601). The goal of this requirement is to ensure that MA students have some practical experience with empirical problems and analysis. The requirement can be satisfied by work in an approved internship program outside the University, by working as a research assistant for a faculty member, or by completing an independent research project under faculty supervision. It is the responsibility of the student to arrange an appropriate program, which must be pre-approved by the Graduate Program Coordinator. In order to receive credit, the student must obtain a letter from the internship supervisor that briefly describes the work that will be performed, and this letter must be submitted to the Graduate Program Coordinator for approval. After the internship is completed, the internship supervisor should send a second letter describing how the student performed during the internship and the quality of the work produced. This letter should be submitted to the Graduate Program Counselor by the end of the quarter in which the internship is completed. Students may register for ECON 601 credits retroactively, *e.g.*, in the autumn quarter students may register for research performed during the preceding summer.

PhD students can satisfy the requirements for the MA degree by passing the microeconomics and macroeconomics core exams and completing eight elective courses and two fields of specialization; the internship requirement is waived in this case.

D. Graduate School Requirements

All University of Washington Graduate School requirements must be satisfied. (Refer to the General Catalog or to the web site www.grad.washington.edu.) *The Graduate School requires a cumulative GPA of at least 3.00.*

E. English as a Second Language Requirements

Students who are required to take English as a Second Language (ESL) courses must take them during their first year and receive credit in each ESL course.

F. Application for Master's Degree

Students who are completing the requirements for the MA degree apply for the degree on the Graduate School web site (<http://grad.uw.edu/for-students-and-post-docs/mygrad-program/>). Check that web site *early* in the quarter the degree is expected to determine the deadline for applying. Approved applications are good for one quarter only. Students must be registered during the quarter in which the degree is expected.

G. Progress Toward the Master's Degree

Students should be able to complete the MA program in two years. In order to remain in the MA program a student must continue to make progress toward the degree. The following norms have been established as minimally acceptable progress (MAP):

Requirement	MAP Deadline
Pass course work requirements	by the end of autumn quarter of the third year.
Complete approved internship	by the end of the third year.

Most students satisfy these requirements well before the indicated deadline. If a student fails to satisfy one of the requirements for the MA by the MAP deadline, then the student may be placed on academic probation in that quarter. If the requirement is not satisfied by the following quarter, the student may be placed on final probation. Failure to satisfy the requirement within two quarters of the deadline may result in dismissal from the program.

II. The PhD Program

The graduate program in economics leading to the PhD degree consists of one year of core courses followed by core examinations in microeconomics and macroeconomics, one year of electives followed by examinations or course certification in at least two fields of specialization, and successful completion of a dissertation.

A. Core Theory and Econometrics Program

1. Core Courses

The core program is designed to provide the tools for advanced work in economics. It consists of courses in microeconomics (ECON 500, 501, and 508), macroeconomics (ECON 502, 503 and 509), and econometrics (ECON 580, 581, and 582). These courses may be repeated one time to bring a deficient grade up to the required level. Minimum required grades for microeconomics and macroeconomics core courses are 2.7. For the econometrics core courses, each grade must be at least 2.7, but an average of 3.0

is required for the sequence. Core courses may be repeated one time to bring a deficient grade up to the required level. The Graduate School requires a minimum cumulative GPA of 3.0.

2. Core Examinations

All PhD students are required to pass core examinations in microeconomics and macroeconomics before the beginning of their third year in the program. The core examinations cover basic economic theory at the level of the core courses. Students are not expected to have taken any course work in economic theory beyond the core courses, but they *are* expected to have done reading and other work to extend, integrate, and consolidate their understanding of materials presented in the core courses.

The core examinations are given twice a year, in September prior to the beginning of autumn quarter and in the spring during the week prior to the beginning of spring quarter. The exact dates of the examinations will be announced during the preceding quarter. *All PhD students are required to take both core examinations in September before the beginning of their second year in the graduate program.* The student is responsible for signing up for the examinations with the Graduate Program Counselor. Students who do not pass a core examination must retake it in the spring of their second year in the program. A student may retake each core examination one time. If a student neglects to take a core examination when required, then that automatically results in a failure and counts as one of the two permitted attempts at taking that examination.

B. Elective Courses

In addition to the core courses, PhD students must take at least eight elective courses in economics at the 500 level. These courses must be taken for a numeric grade, not on a credit/no credit basis. A grade of at least 3.0 is required in each course. At least one of the courses must be in advanced microeconomics or advanced macroeconomics. (Students may use this advanced micro or macro course to fulfill a field of specialization requirement as well; see the Appendix for details.) In choosing elective courses, students should take account of the need to satisfy the field requirements described below. Students are strongly urged to take some or all of the advanced econometrics sequence: ECON 583, 584, 585, 586, 587 and 589, because a large majority of PhD dissertations rely on econometric methods. Two of the eight elective courses may be chosen from graduate level courses offered by other UW departments, provided that the Graduate Program Coordinator pre-approves them as relevant to the student's program. The following courses cannot be used to satisfy this elective courses requirement: ECON 537 and ECON 538.

C. Fields of Specialization

PhD students must satisfy the requirements for two fields of specialization. The field requirements can be satisfied either by passing two field examinations, or by passing one field examination and receiving an average grade of at least 3.80 in the courses corresponding to a second field (if more than two courses are taken in a specific field that requires only two, the two highest grades will be used to determine if the student may grade out of the field exam; *please also note in the appendix the different requirements for completion of the finance field*). The eligible fields and the courses corresponding to each are listed in the Appendix. Note that field courses may have prerequisites. Students should consult the relevant faculty members for additional information concerning field requirements. Field exams are typically offered only in September, but they will be offered in January too if needed. Students should be aware that maintaining satisfactory progress requires passing the field exam(s) in September at the end of their second year (see p. 6 below). Students may not register for a field exam unless they have completed all of the courses required for that field of specialization by August 1 before the September exam or by December 1 before the January exam (which means that I or X grades must also be resolved by this date). Students must pass the core examinations before taking any field examinations. It is the student's responsibility to sign up for the field examinations with the Graduate Program Counselor. A student may retake a field examination or a field course one time. If a student does not pass after attempting two different fields, s/he must petition to the Graduate Committee to attempt the exam for a third field.

D. *Seminar Attendance*

Workshops and seminars are an important part of the training for a PhD. As a minimum requirement, *PhD students beyond the second year must attend at least four departmental seminar presentations and two workshops during each quarter* in which they are registered. When attending seminars, students must write their name on a sign-up sheet which is circulated at each presentation.

E. *Interim Adviser*

Students who have finished their course work but have not yet formed a Doctoral Supervisory Committee are required to have an interim adviser and to take ECON 600 on a credit/no credit basis during each quarter in which they are registered. The interim adviser is a member of the Economics faculty who provides advice on selecting a dissertation topic and conducting research. Satisfactory interim adviser reports and credit in ECON 600 are required. It is the student's responsibility to print the interim adviser form from the website, write a brief summary of their research progress during the quarter, have the form signed by their interim adviser, and submit the form to the Graduate Program Counselor by the last day of the quarter.

F. *Doctoral Supervisory Committee and the General and Final Examinations*

The final requirements for the PhD are related to the doctoral dissertation. At this stage the student establishes a Doctoral Supervisory Committee to supervise the dissertation work, takes a General Examination, completes the doctoral dissertation, and then takes a Final Examination. The Graduate School's requirements are given in the General Catalog or on the web at <http://grad.uw.edu/policies-procedures/general-graduate-student-policies/>. See the Graduate Program Counselor if you have questions about these requirements.

1. *Doctoral Supervisory Committee*

After a student has completed all required coursework, passed the core examinations, satisfied the field requirements, and has developed a dissertation topic, a Doctoral Supervisory Committee is appointed. The Supervisory Committee should consist of four to six members. The Chairperson of the Committee must be a regular faculty member of the Economics Department. At least half of the Committee must be faculty members of the Economics Department and either all or all but one of the Committee members must be active or emeritus members of the University of Washington Graduate Faculty. The Committee may include one member who is not on the Graduate Faculty but he or she may not serve as the chairperson. Exceptions to these rules must be approved by the Graduate Committee.

A student registers for ECON 800 after the Doctoral Supervisory Committee has been established. *A student must register for a minimum of 27 credits of ECON 800 over a period of at least three quarters.* No more than ten credits of ECON 800 may be taken per quarter. The student must meet with the Chairperson of his or her Committee on a regular basis.

A student must consult with the Graduate Program Counselor to make a change in the Supervisory Committee after it has been established. It will be necessary for the student to explain in writing (1) the reasons for the requested change and, if applicable, (2) the reasons why the requested change is taking place close to the general or final examination. The requested change must be approved by the Chairperson of the Supervisory Committee, the member(s) removed from the committee, the member(s) added to the committee, the Graduate Program Coordinator, and the Graduate School.

2. General Examination

The General Examination is an oral defense of the dissertation proposal. The General Exam is scheduled online through the Graduate School's website: <http://grad.uw.edu/for-students-and-post-docs/mygrad-program/>. The student must have received verbal approval of the exam date and time from the committee chair before scheduling the exam. A student must submit a draft copy of his or her General Examination paper to each member of the Supervisory Committee and one copy of the paper to the Graduate Program Counselor *at least three weeks before the examination*. After passing the General Examination the student is advanced to candidacy for the PhD. *The General Examination should be passed no later than the end of the fourth year in the program.*

3. Final Examination

The Final Examination is an oral defense of the completed dissertation. *A student cannot take the Final Examination during the same quarter that he or she passes the General Examination.* The Final Exam is scheduled online through the Graduate School's website: <http://grad.uw.edu/for-students-and-post-docs/mygrad-program/>. The student must have received verbal approval of the exam date and time from the committee chair before scheduling the exam. A student must submit a draft copy of his or her dissertation to each member of the Supervisory Committee and one copy of the dissertation to the Graduate Program Counselor *at least three weeks before the examination*. At that time, a Doctoral Reading Committee is established. The Reading Committee consists of three members of the Supervisory Committee, usually the chairperson and two other members. *Two of the three members of the Reading Committee must be faculty members of the Economics Department.* The Final Examination must be passed within two years of passing the General Examination.

G. Registration/Enrollment

To maintain graduate status, a student must be enrolled on a full-time, part-time, or on-leave basis from the time of first enrollment in the graduate program until completion of all requirements for the graduate degree. Official leave from UW is on a quarter-by-quarter basis. Typically we will require a faculty sponsor before approving additional leave after the first quarter granted.

Students with a teaching, research, or staff assistantship must be registered full-time for at least ten credits during each quarter of their appointment except for summer quarter (2 credits is considered full-time registration during summer quarter). ECON 600 (independent study) may be taken in addition to core or field courses to fulfill the ten credit minimum.

International students on a visa must be registered for ten credits every quarter except summer quarter to maintain their full-time student status and to satisfy their visa requirements. ECON 600 (independent study) may be taken in addition to core or field courses to fulfill the ten credit requirement.

Students who have finished their coursework but who have not yet formed a Supervisory Committee will register for ECON 600 (independent study). Once a student's Supervisory Committee has been formed, the student registers for ECON 800 (dissertation) instead of ECON 600.

International students taking ECON800 may be able to register for only 2 credits per quarter during the academic year and still be considered full-time for visa purposes. Please check in with the International Student Services Office for more details and to request approval. However, even if approval is given to register for fewer credits, *the requirement of at least 27 credits of ECON 800 still applies.*

U.S. citizens may register on a part-time basis (less than ten credits), unless the student is a teaching, research, or staff assistant or has a credit requirement from housing or some other financial aid award.

See the Graduate Program Counselor for entry codes for courses or for answers to questions.

H. *Graduate School Requirements*

All University of Washington Graduate School requirements must be satisfied. (Refer to the General Catalog or to the web site www.grad.washington.edu.) *The Graduate School requires a cumulative GPA of at least 3.00.*

I. *English as a Second Language Requirements*

Students who are required to take English as a Second Language (ESL) courses must take them during their first year and receive credit in each ESL course.

J. *Satisfactory Progress Toward the PhD Degree*

The PhD program is designed so that students can complete the requirements for the PhD degree in four years. Satisfactory progress in the PhD program is defined in the following table.

Satisfactory Progress Timeline

<p>First Year: Complete the core course requirement and pass the microeconomics and macroeconomics core examinations during September before the start of autumn quarter of the second year.</p> <p>Second Year: Complete the elective course requirement, and satisfy the requirements for two fields of specialization before the start of autumn quarter of the third year.</p> <p>Third Year: Attend at least four departmental seminar and two workshop presentations each quarter, obtain satisfactory interim adviser reports each quarter until the dissertation supervisory committee is formed, select a dissertation topic, and establish a doctoral supervisory committee. The requirements for satisfactory progress are determined by the chairperson of the doctoral supervisory committee once the committee has been established.</p> <p>Fourth Year: Attend at least four departmental seminar and two workshop presentations each quarter, and comply with the requirements for satisfactory progress as determined by the chairperson of the doctoral supervisory committee.</p> <p>In the case of exceptional circumstances, students may petition the Graduate Program Director to request the extension of a satisfactory progress deadline.</p>

K. *Minimally Acceptable Progress Toward the PhD Degree*

The following table gives the minimally acceptable rate of progress through the PhD program. Most students satisfy the requirements well before the indicated deadline.

Minimally Acceptable Progress Deadlines

Requirement	Deadline
Complete the core course requirement and pass the microeconomics and macroeconomics core examinations	by the end of spring quarter of the second year.
Attend four departmental seminars and two	starting in the third year and continuing until the PhD is received.

workshops each quarter	
Satisfy the requirements for two fields of specialization	by the end of spring quarter of the third year.
Complete the elective courses requirement	by the end of autumn quarter of the third year.
Submit a satisfactory interim adviser report each quarter	starting in the quarter after coursework is completed and continuing until the doctoral supervisory committee is formed.
Establish a doctoral supervisory committee	by the end of January of the fourth year.
Pass the General Examination	by the end of October of the fifth year.
Pass the Final Examination	by the end of summer quarter of the sixth year.

In the case of exceptional circumstances, the student may petition the Graduate Program Director to request the extension of a minimally acceptable progress deadline.

All students are required to satisfy both the Graduate School requirements and these minimally acceptable progress deadlines. If one of the requirements for the PhD is not satisfied by the time shown, the student may be placed on academic probation. If the requirement is not satisfied by the following quarter, the student may be placed on final probation. Failure to satisfy the requirement within two quarters of the deadline may result in dismissal from the program. Thus a student may be on probation if he or she is one quarter late in satisfying one of the requirements, may be on final probation if he or she is two quarters late, and may be dismissed from the program if he or she is more than two quarters late in satisfying one of the requirements. The Chairperson of a student's Supervisory Committee may request a waiver from these requirements on a quarter by quarter basis.

Note that the Graduate School requires a cumulative GPA of at least 3.00.

III. Financial Assistance

Students admitted to the program with departmental financial aid are guaranteed funding for their first year, provided they satisfy all of the Graduate School requirements, make satisfactory progress in the program (see Part III.J above), and receive good teaching evaluations (see Part III.A below), and will typically receive funding for the first four years of their program.

Students admitted without initial funding are not guaranteed funding, although the Department will make every effort to provide ongoing financial support. These students are also expected to satisfy the Graduate School requirements, make satisfactory progress in the program, and receive good teaching evaluations.

On-leave status automatically interrupts any funding that has been awarded, and there is no guarantee that it will be available upon return. Students who hold fellowships, grants, stipends, or other forms of funding at a monetary level comparable to the level of support provided by the Department will not generally receive teaching assistantships.

A. Teaching Assistantships

Teaching assistantships for continuing graduate students are awarded on the basis of performance in the doctoral program, teaching effectiveness as evidenced by course evaluations, and the availability of teaching positions. Completion of ECON 602 is necessary (but not sufficient) for a teaching assignment. Since ECON 602 is offered only in autumn quarter, students interested in teaching are encouraged to take the course in the autumn quarter of their first year. The Department usually has a small number of teaching assistantships for summer quarter. These assignments are highly competitive and are awarded to graduate students who have performed very well in the program and who are exceptionally capable teachers. All teaching assistants are required to administer teaching evaluations each quarter that they

teach and to specify that a copy of the results be provided to the Chair of the Department. The Department expects teaching assistants to have good teaching evaluations: the average of items 1-4 on the evaluation form should be 3.00 or better. The Department will issue a warning for one evaluation below that level, and additional evaluations below that level jeopardize any guarantee of future funding.

International Students: *Prior* to receiving a teaching assistantship, international students must demonstrate proficiency in spoken English (NOTE: International students whose native language is English and/or who received a bachelor's degree from a regionally accredited US institution are exempt from this requirement – see <http://grad.uw.edu/policies-procedures/graduate-school-memoranda/memo-15-conditions-of-appointment-for-tas-who-are-not-native-speakers-of-english/> for more information). One of the following is required: a score of at least 26 on the spoken English section of the TOEFLiBT; a score of at least 65 on the Versant English Test, a score of at least 7.0 on the speaking portion of the IELTS, or a grade of at least 3.0 in ENGL 105.

B. *Research Assistantships*

Available research assistantships within the Department are posted on the web at <https://econ.washington.edu/academic-student-employees>.

C. *Dissertation Fellowships*

The Department funds a few dissertation fellowships each year which are awarded on a competitive basis. See the Graduate Program Counselor for information on how to apply.

D. *Other Funding Sources*

Paid Internship positions with local business and government agencies are available year-round. Although the Department occasionally receives and posts information about internships, students are responsible for researching, applying for, and securing internship appointments.

Paper grading assignments are posted on the web at <https://econ.washington.edu/academic-student-employees>.

Loan support and emergency loans are available in limited amounts through the Student Financial Aid Office, 105 Schmitz Hall, (206) 543-6101. The Department of Economics does not offer loan support.

To anticipate a frequently asked question, there is no way that out-of-state tuition can be waived for first-year non-resident students who do not have an assistantship or fellowship. For information on applying for resident status, contact the Residence Classification Office, 264 Schmitz Hall, 206-543-5932.

Appendix

Course Requirements for Fields of Specialization

This list includes only the primary courses for each field. Some of these courses have prerequisites and there may be other related courses that are recommended as part of the graduate program. Before enrolling in field courses, students should consult with the faculty members responsible for the fields that they plan to pursue. Some fields may not be offered every year.

Fields	Course Requirements
advanced microeconomics	Any two of the following: ECON 511 Advanced Microeconomic Theory: Selected Topics ECON 515 Special Topics in Mathematical Economics ECON 516 Introduction to Noncooperative Game Theory ECON 518 Contract Theory ECON 520 The Economics of Property Rights
advanced macroeconomics	Any two of the following: ECON 512 Advanced Macroeconomic Theory: Selected Topics ECON 528 Microeconomic Heterogeneity in Macroeconomics ECON 594 Economic Growth ECON 595 Growth and Inequality
Econometrics	ECON 583 Econometric Theory I <u>AND</u> any one of ECON 534 Empirical Industrial Organization ECON 584 Econometric Theory II ECON 585 Econometric Theory III ECON 586 Advanced Applied Time Series Analysis ECON 587 Applied Microeconometrics ECON 589 Financial Econometrics
Comparative systems and development	Any two of the following: ECON 590 Analysis of the Transforming Socialist Economies ECON 591 Microeconomics of Development ECON 592 Development Policy ECON 593 Topics in the Microeconomics of Development
Finance †	Any two of the following: FIN 580 Financial Economic FIN 590 Capital Market Theory FIN 591 Corporate Finance FIN 592 Financial Research
International economics	Any two of the following: ECON 571 International Trade Theory ECON 572 International Financial and Monetary Economics ECON 573 International Commercial Policy ECON 574 International Macroeconomics ECON 575 International Trade and Macroeconomics

† Any student wishing to fulfill the finance field must first meet with the Finance Field Supervisor, Eric Zivot, to determine a course plan. There is no field exam for the finance field. The field requirement is fulfilled by completing at least two of the four finance courses mentioned above at an average GPA that has been predetermined in the course plan, which will be kept in the student's file.

APPENDIX H

Undergraduate Students – University-wide Awards

2015 Dean's Medal for the Social Sciences - Josh Kim

2014 Bonderman Travel Fellowship – Walker Higgins

2014 Arts and Sciences Gonfalonier Award – Anja Speckhardt

2013 President's Medal Junior Medalist – Eric Lei

2013 Luce Scholar – Genevieve Gebhart

2012 President's Medal Freshman Medalist – Eric Lei

2012 College of Arts & Sciences Future Alumnus Timeless Award – Brent Richards

2011 Dean's Medal for the Social Sciences – Garrett Shishido Strain

2010 President's Medal Freshman Medalist – Keiko Weir

2008 Dean's Medal for the Social Sciences – Graham Griffiths

2007 Bonderman Travel Fellowship – Cullen White

2007 Arts and Sciences Research Award - Robin Kearns

2006 Dean's Medal – Patrick Ringland

Phi Beta Kappa – Around 229 students inducted in the past 10 years with increasing yearly induction

APPENDIX I

Selected Publications by Recent PhDs

Md.A. Basher (World Bank) PhD '07

S.J. Turnovsky and **M.A. Basher** "Fiscal Policy and the Structure of Production in a Developing Economy," *Journal of Development Economics* 88, 2009, 205-216.

Drew Creal, Chicago (Booth), PhD '07

Creal, D. "A Class of Non-Gaussian State Space Models with Exact Likelihood Inference," *Journal of Business & Economic Statistics*, forthcoming.

Creal, D. and Tsay, R. "High-dimensional Dynamic Stochastic Copula Models," *Journal of Econometrics*, Vol. 189, No. 2, pp. 335-345, 2015

Creal, D. and Wu, J. W. "Estimation of Affine Term Structure Models with Spanned or Unspanned Stochastic Volatility", *Journal of Econometrics*, Vol. 185, No. 1, pp. 60-81, 2015

Creal, D., Schwaab, B., Koopman, S. J., and Lucas, A. "Observation-driven Mixed Measurement Dynamic Factor Models with an Application to Credit Risk", *The Review of Economics and Statistics*, Vol. 96, No. 5, pp. 898-915, 2014

Creal, D., Gramacy, R., and Tsay, R. "Market-based Credit Ratings", *Journal of Business and Economic Statistics*, Vol. 32, No. 3, pp. 430-444, 2014

Creal, D., Koopman, S. J., and Lucas, A. "Generalized Autoregressive Score Models with Applications", *Journal of Applied Econometrics*, Vol. 28, No. 5, pp. 777-795, 2013

Creal, D. "A Survey of Sequential Monte Carlo Methods for Economics and Finance", *Econometric Reviews*, Vol. 31, No. 3, pp. 245-296, 2012

Creal, D., Koopman, S. J., and Lucas, A. "A Dynamic Multivariate Heavy-Tailed Model for Time-Varying Volatilities and Correlations", *Journal of Business and Economic Statistics*, Vol. 29, No. 4, pp. 552-563, 2011

Creal, D., Koopman, S. J., and Zivot, E. "Extracting a Robust U.S. Business Cycle using a Time-Varying Multivariate Model-based Bandpass Filter", *Journal of Applied Econometrics*, Vol. 25, No. 4, pp. 695-719, 2010

Creal, D., Koopman, S. J., and Shephard, N. "Testing the Assumptions Behind Importance Sampling", *Journal of Econometrics*, Vol. 149, No. 1, pp. 2-11, 2009

Creal, D., Oh, K. H., and Zivot, E. "The Relationship Between the Beveridge-Nelson Decomposition and Other Permanent-Transitory Decompositions that are Popular in Economics", *Journal of Econometrics*, Vol. 146, No. 2, pp. 207-219, 2008

Harrison Fell (North Carolina State), PhD '07

Fell, H. and D. Kaffine. "Think locally, act locally: Can decentralized planning really achieve first-best in the presence of environmental spillovers?" *Journal of Environmental Economics and Management*, 2014, 68(1): 46-53

Fell, H. and J. Linn. Renewable Electricity Policy, Intermittency, and Cost-effectiveness. *Journal of Environmental Economics and Management*, 2013, 66(3): 688-707

Fell, H. and A. Haynie. Spatial Competition with Changing Market Institutions. *Journal of Applied Econometrics*, 2013, 28(4): 702-719

Fell, H., D. Burtraw, R.D. Morgenstern, and K.L. Palmer. Soft and Hard Price Collars in a Cap-and-Trade System: A Comparative Analysis. *Journal of Environmental Economics and Management*, 2012, 64(2):183-198

Fell, H. and A. Haynie. Estimating Time-varying Bargaining Power: A Fishery Application. *Economic Inquiry*, 2011, 49(3):685-696

Jun Ma (Alabama), PhD '07

Ma, J., Fairchild, J., and Wu, S. "Understanding Housing Market Volatility", *Journal of Money, Credit, and Banking*, forthcoming.

Ma, J., Wohar, M., and Balke, N. "A Bayesian Analysis of Weak Identification in Stock Price Decompositions," *Macroeconomic Dynamics*. June 2015

Ma, J. and Wohar, M. "An Unobserved Components Model That Yields Business and Medium-Run Cycles," *Journal of Money, Credit and Banking*. October 2013

Ma, J. and Ding, L. "Portfolio Reallocation and Exchange Change Rate Dynamics," *Journal of Banking and Finance*. August 2013

Ma, J., Balke, N., and Wohar, M. "The Contributions of Economic Fundamentals to Movements in Exchange Rates," *Journal of International Economics*. May 2013

Ma, J. "Long-Run Risk and Its Implications for the Equity Premium Puzzle: New Evidence from a Multivariate Framework," *Journal of Money, Credit and Banking*. February 2013

Ma, J. and Enders, W. "Sources of the Great Moderation: A Time-Series Analysis of GDP Subsectors," *Journal of Economic Dynamics & Control*. January 2011

Kazi Iqbal (World Bank) PhD '08

K. Iqbal and S.J. Turnovsky "Intergenerational Allocation of Government Expenditures: Externalities and Optimal Taxation," *Journal of Public Economic Theory*, 10, 2008, 27-53

Kwok Ping (Byron) Tsang (Virginia Tech), PhD '08

Sun, X. & **Tsang, K.P.** (2014): "Optimal Interest Rate Rule in a DSGE Model with Housing Market Spillovers," *Economics Letters*, 125(1), 47-51

Dave, C. & **Tsang, K.P.** (2014): "Recursive Preferences, Learning and Large Deviations," *Economics Letters*, 124 (3), 329-334

Chen, Y. & **Tsang, K.P.** (2013): "What Does the Yield Curve Tell Us About Exchange Rate Predictability?" *Review of Economics and Statistics*, 95(1), 185–205

Startz, R. & **Tsang, K.P.** (2010): "An Unobserved Components Model of the Yield Curve," *Journal of Money, Credit and Banking*, 42(8), 1613-1640.

Saraswata Chaudhuri (UNC), PhD '08

Chaudhuri, S., Jalan, J., and Somanathan, E. "Awareness and the demand for environmental quality: survey evidence on drinking water in urban India", *Environment and Development Economics*. 14: 665 – 692. (2009)

Chaudhuri, S. and Zivot, E. "A comment on weak instrument robust tests in GMM and the New Keynesian Phillips Curve", *Journal of Business and Economic Statistics*. 27: 328 – 331. (2009)

Chaudhuri, S., Richardson, T., Robins, and Zivot, E. "A new projection-type split-sample score test in linear instrumental variables regression", *Econometric Theory*. 26: 1820 – 1837. (2010)

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Juyoung Cheong (Queensland), PhD '09

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Michael Hansen (Brookings), PhD '09

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Murat Koyuncu (Bogazici), PhD '09

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Serpil Tekin-Bouza (IMF) PhD '10

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Edwin Wong (NW Center/UW Health Services), PhD '10

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Mark Anderson (Montana St.), PhD '11

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Troy Scott (Lewis & Clark/RTI), PhD '11

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Joelle Abramowitz (Census Bureau), PhD '13

Abramowitz, J. "Turning Back the Ticking Clock: The Effect of Increased Affordability of Assisted Reproductive Technology on Women's Marriage Timing," *Journal of Population Econ*, 27(2): 603-633 (2014)

Aditi Mitra PhD '13

S.J. Turnovsky and **A. Mitra**, "The Interaction between Human Capital and Physical Capital Accumulation and the Growth-Inequality Trade-off," *Journal of Human Capital* 7, 2013, 26-75

Sui Luo (Capital), PhD '13

Startz, D. and **Luo, S.**, "Is it one break or ongoing permanent shocks that explains US real GDP?" *Journal of Monetary Economics* 66 · August 2014

Shamma Alam (Dickinson), PhD '14

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Alam, S., and Wolff, H. "Do Pesticide Sellers Make Farmers Sick? Health, Information and Adoption of Technology in Bangladesh," (Forthcoming in *Journal of Agricultural and Resource Economics*)

Jaeho Kim (Oklahoma), PhD '14

Kim, J. and Kim, C. J. "Bayesian Inference of Regime-Switching ARMA Models with Absorbing States: Dynamics of Ex-Ante Real Interest Rate under Structural Breaks," Forthcoming at *Journal of Business and Economic Statistics*

David Keunzel (Wesleyan), PhD '14

Kuenzel, D. and Eicher, T. S. "The Elusive Effects of Trade on Growth: Export Diversity and Economic Take-Off," 2016. *Canadian Journal of Economics*.

Alice Su (National Taipei), PhD '14

Su, A., "Information Acquisition and the Equilibrium Incentive Problem," *Journal of Economics & Management Strategy*, forthcoming.

Daniel Brent (Louisiana St.), PhD '14

Brent, D., Cook, J., and Olsen, S. "Social Comparisons, Household Water Use and Participation in Utility Conservation Programs: Evidence from Three Randomized Trials," *Journal of the Association of Environmental and Resource Economists*, 2015.

Ruixuan Liu (Emory), PhD '15

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Laine Rutledge (current PhD student)

Rutledge, L., Wydick, B., and Glewwe, P. "Does International Child Sponsorship Work? A Six-Country Study of Impacts on Adult Life Outcomes." April 2013. *Journal of Political Economy* 121 (2): 393 - 436.

Jennifer Meredith (current PhD student)

Meredith, J., Robinson, J., Walker, S., and Wydick, B. "Keeping the doctor away: Experimental evidence on investment in preventative health products." 2013. *Journal of Development Economics* 105, 196-210.

APPENDIX J
Placements 2006-15

Year	Last Name	First Name	1st placement	2nd	3rd	Current
06-07	Basher	Md. Abul	World Bank			Asian Development Bank
06-07	Caldwell	Ronald	U Kansas (tenure-track)			U Michigan (lecturer)
06-07	Chen	Chun-hung (Frederick)	Washington Mutual			KPMG
06-07	Creal	Drew	U Chicago (Booth)-tenure-track			same - Assoc. Prof.
06-07	Fell	Harrison	Resources for the Future	Colorado School of Mines		NC St
06-07	Henn	Christian	IMF			
06-07	Ma	Jun	U Alabama - tenure-track			same - tenured
06-07	Nagakura	Daisuke	Bank of Japan	Waseda University		Keio University - tenured
06-07	Oner	Ceyda	IMF			
06-07	Wang	Bruce	Goldman Sachs			Elysia
07-08	Anderson	Robin	Census Bureau			Principal Global Investors
07-08	Chaudhuri	Saraswata	U North Carolina (tenure-track)			McGill U (tenure-track)
07-08	Sidneva	Nina	Tacoma Power	Seattle City Light		Starbucks
07-08	Kulthanavit	Pisut	Thammasat U (tenure track)			
07-08	Lee	Tae Hyun	Ministry of Finance, Seoul			
07-08	Lovasz	Anna	Hungarian Acad. of Sciences			
07-08	Payseur	Scott	UBS Global Asset Management			
07-08	Tsang	Kwok Ping (Byron)	Virginia Tech (tenure track)			(tenured)
07-08	van der Hilst	Alan	CBO			Pew Charitable Trusts

08-09	Anderson	Leif	NOAA			
08-09	Blazys	Giedrius	Uppsala U			Euromonitor International/ Vilnius U
08-09	Cheong	Juyoung	U Queensland			
08-09	Ewing	Andrew	Eckerd College			King County, WA
08-09	Hansen	Michael	Urban Institute			Brookings Institution
08-09	Iqbal	Kazi	World Bank Institute			Bangladesh Institute of Development Studies
08-09	Kim	Seongtae	Korea Development Institute			
08-09	Koyuncu	Murat	Bogazici U			
08-09	Tapia	Christina	Nickerson & Associates	KPMG	OSC Vocational Systems	Northwest Economics, LLC
08-09	Tsai	Li-Chuan	WISE, Xiamen			
08-09	Vernon	Erin	Seattle U			
08-09	Zurovac	Jelena	Mathematica Policy Research			
09-10	Berlinghieri (Middlesworth)	Laura	U Wisconsin-Eau Claire			UnitedHealth Group
09-10	Bouza	Serpil	IMF			
09-10	Chung	Jin Young	Samsung Economic Research Institute			
09-10	Fossati	Sebastian	U Alberta (tenure-track)			
09-10	Fuleky	Peter	U Hawaii Econ Research Org (post-doc)			U Hawaii Econ Research Org/Dept of Econ (tenure-track)
09-10	Hanlon	Michael	Inst. Of Health Metrics and Eval. (IHME)			
09-10	Manopimoke	Pym	U Kansas (tenure track)			Bank of Thailand

09-10	Peng	Yu-I	National Taipei U			
09-10	Varanasi	Nalina	IHME (post-grad fellow)	Zillow	Liberty Mutual	T-Mobile
09-10	Wong	Edwin	NW Center for Outcomes Research in Older Adults/Dept of Health Services, UW			
09-10	Yoo	Jin Sung	SK Research Institute			
10-11	Abdallah	Wahid	BRAC U, Bangladesh			
10-11	Anderson	D. Mark	Montana St U			
10-11	Cho	Sungjin	Korea Energy Econ Inst.			
10-11	Helfman	Lindy	Intellectual Ventures			Amazon
10-11	Kim	Cherl Hyun (Lucas)	POSCO Research Institute			
10-11	Makino	Momoe	Institute of Developing Economies			
10-11	Scott	Troy	Lewis & Clark College			Research Triangle Institute
10-11	Wang	Jianguo	Healthcare Services Corp			
11-12	Chang	Fei-Chien	Swedish Medical Group			
11-12	Donhauser	Brian	AQR Capital Management			Amazon
11-12	Gilles	Rodica	Ernst & Young			
11-12	Lee	Jee Young	Russell Investments			
11-12	Nagy	Krisztina	PLU			
11-12	Rai	Sumant	U Memphis(visiting assisting professor)			Rensselaer (lecturer)
11-12	Willard	Benjamin (Daniel)	Environmental Defense Fund			

12-13	Abramowitz	Joelle	Census Bureau			
12-13	Dieleman	Joseph	IHME			
12-13	Huang	YuFan	Capital U of Econ and Business, Beijing			
12-13	Kiya	Kohei	Japan International Cooperation Agency			
12-13	Dongwon	Daeyong	Peking U			
12-13	Lee	Dongwon	UC Riverside			
12-13	Luo	Sui	Capital U of Econ and Business, Beijing			
12-13	Wang	Dan	Chinese Academy of Sciences (post doc)			The Economist Intelligence Unit's Access China service
13-14	Alam	Shamma	Dickinson College			
13-14	Aylar	Emre	Lund U			
13-14	Cahan	Ercument	Bloomberg LP			
13-14	Gwati	Ranganai	Benedict College			
13-14	Hsu	Lin-chi	United International College, Zhuhai			
13-14	Keefer	Benjamin	Carleton College			
13-14	Kim	Jaeho	U Oklahoma			
13-14	Ko	Sang Bum	Financial Services Commission, Seoul			
13-14	Kuenzel	David	Wesleyan U			
13-14	Lundberg	Clark	San Diego St U			
13-14	Ma	Xuyang	PanAgora Asset Management			
13-14	Olsen	Skylar	Zillow			
13-14	Robertson	Justin	UW Dept of Health Services			
13-14	Saenz	Joseph	UW Investment Management			

13-14	Su	Alice	National Taipei U			
13-14	Su	Yu-hsuan	National Chengchi U			
13-14	Sun	Xiaolin (Celine)	Wealthfront			
13-14	Wong	Ho Po (Crystal)	West Virginia U (Visiting Assistant Professor)			
14-15	Bose	Bijetri	Oberlin College (visiting)			
14-15	Brent	Daniel	Monash U (postdoc)			Louisiana St U
14-15	Chen	Yi-An	Bank of Slovenia			
14-15	Chon	Sora	Korea Institute for International Economic Policy			
14-15	Deng	Kaihua	Renmin U			
14-15	Fu	Chien-Hao	National Taipei U (Public Finance)			
14-15	Hoagland	Chasya	Washington State Inst. For Public Policy			
14-15	Hong	Woo-Hyung	Korea Institute of Public Finance			
14-15	Huntington-Klein	Nicholas	CSU Fullerton			
14-15	Izumi	Atsuko	Edgeworth Economics			
14-15	Lee	Seojin	Shanghai Finance U			
14-15	Li	Zhi	WISE			
14-15	Liu	Ruixuan	Emory U			
14-15	Luna	Edgar	Universidad Autonoma de Nuevo Leon, Mexico			
14-15	Mai	Hui	Chase Bank, Dallas			
14-15	Pereira	Javier	Hamilton College			
14-15	Sultan	Syed Galib	State Street Corporation			

	Initial placement	Current placement
Academic US	29	26
Academic Intl	21	22
Private	18	22
Research US	12	10
Research Intl	15	14
Governmental	4	5
Total	99	99

APPENDIX K

Social Media Presence

Currently our social media presence includes:

Facebook: 1,600 followers including current students, alumni, parents and friends of the department. Posts are made approximately once per day on news items of interest to a general audience about the department, the University, or about general economics topics.

Twitter: 900 followers receive tweets about the department, most pulled from our Facebook content.

LinkedIn: our groups are a great way to keep track of current employment positions and potential prospects for career panels, speaking events, or visiting committee membership; also used to share department events and announcements tailored to the specific audience. Department groups are:

UW Economics Alumni: 850 members

UW Economics Mentorship Program: 60 members, current and former alumni mentors

UW Women in Economics: 78 members, interested in department events and topics specific to women in the field

UW Economics GOLD (graduates of the last decade): 50 members, recent grads interested in topics related to career exploration and growth.

APPENDIX L

Department of Economics

Key alumni working in the State of Washington

Robert McKenna, former Washington State Attorney General, BA '85
James McIntire, WA State Treasurer, PhD '93
Helen Sommers, WA State Representative (retired), BA '69, MA '70
Michelle (Shelley) Yapp, CFO, Seattle Housing Authority, BA '67
Linda Strout, Deputy CEO, Port of Seattle, BA '69
Paul Kraabel, former Seattle City Council member (1975-91) and President (80-81, 90-91), BA '55
Paul Jenny, UW Vice Provost, Planning & Budgeting, BA '92
Kerry Kahl, UW Senior Director, Enterprise Risk Management, Risk Management, BA '73, MBA '83
Laurel Andrews, Senior Economist, Seattle Public Utilities, BA '76
Philip Borst, Judge, Lincoln County Superior Court, BA '63
Richard Brosey, Judge, Lewis County Superior Court, BA '71
James Cayce, Judge, King County Superior Court, BA '77
Jay Inslee, Governor, State of Washington, BA '73
Charles Johnson, Justice, Supreme Court, State of Washington, BA '73
James Orlando, Judge, Pierce County Superior Court, BA '80
Karen Overstreet, Judge, United States Courthouse, BA '77
James Peterson, CFO/Finance Director, State of Washington, BA '75
Scott Sparks, Judge, Kittitas County Superior Court, BA '85
Erik Sund, Ways and Means Committee, Compensation/Retirement, WA State Senate Committee Services, BA '98
Stephen Warning, Judge, Cowlitz County Superior Court, BA '76
Jackson Wilson, Chief Economist, Department of Fish and Wildlife, BA '96
Thomas Wynne, Superior Court Judge, Snohomish County Superior Court, BA '65
David Schumacher, Director, Office of Financial Management, State of Washington, BA '86, MA '90
Kelli Trosvig, VP and Chief Information Office, IT, University of Washington, BA '88, MHA '94

Key alumni in leadership positions (business, government, non-profit, etc.) in the State of Washington

Ken Altena, Senior VP & Commercial Banking Manager, Umpqua Bank, BA '83
Paul Carlson, Counsel, The Boeing Company (retired), BA 68, JD '75
Phil Carter, Managing Principal, Wells Fargo Advisors FiNet, BA '88
Michael Egeck, Chief Executive Officer and President at Eddie Bauer
Stanley Freimuth, Chairman Emeritus, Ragen MacKenzie, Inc., BA '70
J. David Griswold, CCO & General Counsel, Pacific Current Group, BA '79
Mark Hamilton, President and CEO of Telecom Transport Management, BA '76
Gabriel Hanzeli, Director of Information Technology, The Boeing Company (retired), BA '76
Stephen Henderlite, Senior Analyst, Benchmark Plus, MA '93
George Holland, President of Life & Health Underwriters Inc, BA '77
Timothy Jenkins, Co-founder and Partner, Point B Solutions Group LLP, BA '86
David Miller, Senior VP & General Counsel, T-Mobile USA, BA '82
Glen Milliman, President of Aspen International Export Inc, BA '81
R. Thomas Olson, Partner, Hellsell Fetterman LLC, BA '61
Cary Oshima, Assistant Vice President, Cognizant Technology Solutions, BA '90
William Rademaker, General Counsel, William E. Boeing, Jr. (retired), BA '67
Robert Richards, Founder, President and CEO of The Commerce Bancorporation (retired), BA '61
Charles Richmond, Executive VP and Secretary, Washington Federal Savings & Loan, BA '62

Jeffrey Roe, President & CEO, Premera Blue Cross, BA '88, MBA '97
Stanley Savage, Chairman, President and CEO of The Commerce Bank of Washington, BA '67
Parker Sroufe, Chairman, WebSea Group, BA '64
Mark Torrance, Director, Mark Torrance Foundation, BA '64
Gary Waterman, President of Waterman Limited, BA '65, MA '68
David Williams, Vice Chairman of Security Pacific Bank Washington (retired), BA '64
Olga Yang, Underwriting Specialist, Philadelphia Insurance Co., BA '82
William Severson, Attorney, William C. Severson PLLC, BA '71, JD '74
Scott Easter, Attorney, Montgomery, Purdue, Blankinship & Austin, BA '71
Jay Culbert, Manager, The Boeing Company, BA '82
Jonathan Bridge, Co-CEO and Corporate Counsel, Ben Bridge Jewelers, BA '72, JD '76
John Eshelman, Professor of Economics and Provost, Emeritus, Seattle University, PhD '71
John Mangels, Chairman and CEO of Security Pacific Bank of Washington (now Bank of America) (retired), BA '50
Bruce Nordstrom, Chairman, Nordstrom Inc., BA '55
H. Jon Runstad, Chairman and CEO, Wright Runstad & Company BA '65
Stanley Barer, Chairman Emeritus of Saltchuk Resources, Inc., BA '61, JD '63
Alan Frazier, Managing Partner, Frazier Management, LLC, BA '75
Brian Langstraat, CEO of Parametric, BA '90
Pamela Charles Brown, Attorney, Davis Wright Tremaine, BA '86
Kris Sundberg, Attorney, BA '72
Robert Davis IV, VP, Office 365, Microsoft Corporation, BA '91
Jean English, English Properties (retired), BA '52
Paul Fishman, Associate Investigator, GHC Center for Health Studies, MA '90, PhD '90
Ned Lumpkin, Lumpkin, Inc., BA '66
Clark Wallin, BA '79
Peter Miller, President & CEO, Essential Baking Company, Inc., BA '78, JD '83
Michael (Tony) Richardson, CTO and Co-Founder, Xtreme Consulting Group Inc., BA '94
Ronald Moe, Senior Vice President, Ventyx, BA '80, MA '82
John Vynne, President, Thunderbird Pacific Corp., BA '66, MBA '73
Hans Aarhus, Director of Financial Planning and Investor Relations, The Boeing Company, BA '87
David Allison, Principal, Peer Consulting, LLC, BA '88
Kenneth Altena, Senior Vice President, US Bancorp, BA '83
Brett Bader, President, The Madison Group, Inc., BA '83
Timothy Baer, Senior Vice President, Corporate Banking, Banner Bank, BA '82
Gregg Barton, Partner, Perkins Coie LLP, BA '82
Jay Behar, President, Behar's Furniture and Carpet, BA '94
David Beninger, Partner, Luvera Barnett Brindley Beninger et al, BA '84
Rollie Bernth, Co-owner and Vice President, Ward Rugh Inc., BA '60
James Billingsley, CEO, Paktek Inc., BA '78
Sven Bitners, President, Pacific Strapping, BA '84
Kenneth Bittner, Owner, Kids Club Fun & Fitness, BA '82
Anthony Blome, President, Reflection Inc., BA '77
Gordon Braun, CFO, Hidden City Entertainment, BA '77
James Breitenbucher, Principal, Riddell Williams PS, BA '94
Dan Cadagan III, Owner, Cadagan Law Firm, BA '71
Cathleen Carr, President, CCA, Inc., BA '68
James Carroll, Executive Vice President, CityBank, BA '73
Michael Castle, CFO, Cold Heat, BA '83
Craig Chelius, Partner, Meridian Venture Capital, BA '84
Andy Chen, President, ASPI Group, BA '89

Randall Chenaar, President, Sound Mortgage & Escrow Inc., BA '86
Frank Christensen, Partner, John L. O'Brien & Company, BA '50
Gary Christophersen, Chairman, Photoworks, BA '71
Dominic Colasurdo, President, Colasurdo & Associates, BA '49
Colette Courtion, Founder and CEO, Calidora Skin Care and Joylux Inc., BA '94
Brian Crooks, Owner, BC Construction, BA '99
Alvin Danielson, President and CFO, Net Nanny Software, BA '70
Bruce Davis, President, Junction True Value Hardware, BA '74
Brian Donaldson, President and CEO, Sirius Interactive, BA '83
Ferris Dracobly, Senior Vice President, Metropolitan Federal Savings, BA '55
Michael Dunn, President, Dunn Lumber Co., BA '78
Michael Dwyer, President, Statewide Financial Services, BA '79
Daniel Ederer, President, Ederer Investment Co., BA '92
Gil Edwards, President, Gil D. Edwards & Associates Inc. , BA '81
Sidney Eland Jr., Owner, Simvest, Inc., BA '83
Thomas Evankovich, CFA, CEO and Founder, BondHub, BA '84
James Evans, CEO, Flying Bear Aviation, BA '67
Patrick Ferris, President, HotBands Entertainment, BA '89
Matthew Fowler, CFO, Gryphon Gold Corp, BA '05
Donald Franklin, Partner, Miller Nash, LLP, BA '67
David Fukuhara, President, AT&T Wireless Services Inc., '81
Michael Gilkey, Executive Vice President, Sales and Marketing, Avanade, Inc., BA '77
Josef Goldberg, President and CEO, HE Goldberg & Co., BA '49
Craig Goldenberger, CEO, Verb Exchange Inc., BA '85
Patrick Goodwin, CFO, Heatwave Interactive, Inc., BA '83
Frederick Grant, Owner, Southworth Grocery, BA '83
Anthony Grasst, CEO, Preferred Funding Inc., BA '88
Thomas Groth, President, Welfare & Pension Adm. Serv. Inc., BA '51
Frank Guisness, Owner, Frank Guisness Auto & Trucks, BA '52
Lawrence Hallgrimson, Owner, Heritage Square Apartments, BA '58
Colby Harper, CEO, Anavient, BA '93
Alan Harvey, Owner, Allegis Foundation, BA '95
Dennis Hayashida, Owner, City Produce, BA '84
Matthew Henn, Owner, MPH Inc., BA '87
Carol Herbert, President, EDC Inc., BA '78
James Hermsen, Partner, Dorsey & Whitney LLP, BA '67
Craig Hillis, President and CEO, First Security Properties, BA '79
Frank Hopkins, President, Seattle Boiler Works, Inc., BA '50
Andrew Hunter, Senior Vice President, Whidbey Island Bank, BA '77
Janice Jarman, Owner, JR Properties, BA '96
Christopher Jones, CEO, Agital Inc., BA '89
Christopher Judd, President, Net2Trak.com, BA '80
Scott Keeney, CEO, nLight, BA '88
Michael Kennedy III, Owner, Peter Kennedy & Assoc., BA '55
Robert Kennewick, Founder and CTO, VoiceBox Technologies, BA '78
Jerry Knipe, Owner, The Sunrise Group, BA '82
Randy Lee, CFO, Puget Consumers Co-Op, BA '82
Sun Kyoung Lee, President, Olympus Spa, BA '99
Herbert Levin, President, Levin & Associates, Inc., BA '49
Hung-Rong Liang, Founder, Sale Preview Network, BA '99
Carl Lovsted III, CEO, Lovsted-Worthington LLC, BA '81

Craig Lundgren, President, Windows Doors & More Inc., BA '82
William MacGeorge, Senior Vice President, McAdams Wright Ragen, Inc., BA '80
Robert Marcelynas, President, Washington Belt & Drive Systems, BA '76
Christy Martin, CFO, Lynx Medical Systems, Inc., BA '90
Matthew Mason, President & CEO, The Compleat Company, BA '86
Norman Matthews, President, Island Market Co. Inc., BA '51
Fred Dong, Principal Research Scientist, Battelle Centers for Public Health Research, BA '75, MBA '81
Barry McConnell, President & CEO, Make-a-Wish Foundation, BA '81
Therron McCormick, President, Trademark Transportation Services, Inc., BA '91
Malcolm McPhee, Owner, Malcolm D. McPhee & Associates, BA '62
Paul Merz, Owner, First American Title Insurance, BA '82
Brian Middendorf, President, Web Venture. BA '94
Ronald Moe, Senior Vice President, Ventyx, BA '80, MA '80
Julie Morgan, Owner, J. Morgan & Assoc., BA '80
Thomas J. McGill, Co-Founder & Managing Partner, Evergreen Pacific Partners, BA '88
Charles Morton, Founder and President, Ascend Project Management Inc. BA '93
Russell Murphy, CEO, Embedio, BA '82
George Neffner, President, Geonerco, Inc., BA '77
James Nichols, Owner, Seattle Engine Rebuilders Mfg., BA '77
James Nordstrom, CEO, Outdoor Research, BA '86
Brian Orrico, President, Overlake Golf and Country Club, BA '84
Gregg Ose, Senior Vice President, Ragen Mackenzie, BA '69
Ross Oswald, Principal, Hall and Oswald, BA '83
Dudley Panchot, Senior Partner, Wolfstone, Panchot & Bloch P.S., BA '55
David Patacsil, President, Bayani Commercial Inc., BA '93
Todd Patrick, President & CEO, C3 Jian, Inc., BA '85
Eric Pearson, President and CEO, Community First Bank, BA '93
George Pearson, Executive Vice President, Fletcher Challenge, BA '51
Gregory Piantanida, President, GP Realty Finance, BA '71
Justin Pruskowski, Founder and CEO, Swerve, BA '04
Stephen Ramsey, CFO, Coner Homes, BA '04
Ron Ranheim, Treasurer, PACCAR Inc., BA '66
Timothy Reinertsen, Senior Vice President, Reality Marketing Northwest, BA '78
Norman Roberts, Partner, Smith & Just P.S., BA '74
Russell Rosendal, Executive Vice President & CFO, Foundation Bank, BA '81
Gordon Rowand, President, Rowand Machinery Co., BA '71
Gilbert Scherer, CEO, Rally Marketing Group, BA '73
Brent Schlosstein, Principal, TRUEbenefits LLC, BA '86
Amitkumar Shah, Owner/Founder, International News, BA '78
Brent Smith, President, Highland Appraisal Group, Inc., BA '85
Robert Smith, Owner, Evergreen Financial Services, BA '55
Paul Sorensen, Principal Economist, B.S.T. Associates, BA '78, MA '80
Clive Springer, President/Founder, Tamarac Inc., BA '88
Mark Steelman, Executive Vice President and COO, EnergX LLC, BA '76
John Stephanus, President, The Amco Group, BA '80
Ronald Stewart, VP Finance/CFO, North Coast Electric Company, BA '75
Joel Stinson, Executive Vice President, Chief Admin. Officer, Nordstrom Inc., BA '74
John Stirling, President, Stirling Consulting Services LLC, BA '86
Paul Stoms, President, LSF Corp., BA '50
Daniel Sullivan Jr., President, Vetrotech Saint-Gobain NA, BA '78
Mark Swenson, Owner, CMG Partners LLC, BA '83

Craig Swanson, Founder/Owner, Redside Partners LLC, BA '89
Michael Tembreull, Vice Chairman & Principal Finance Officer, PACCAR Inc., BA '68
Mark Thomas, President, Alameda Consulting Inc., BA '86
Yichen Ting, President, Khema International, BA '09
John Ullman, CFO, Executive VP, Treasurer, Fisher Communications, BA '75
Duncan Wallace, Partner, Base Capital, BA '52
Joseph Wallin, Partner, Davis Wright Tremaine LLP, BA '90
Jay Webber, President/Owner, The Press, BA '84
Mark Westlund, President, Westlund GMC, BA '82
Robert Wilkerson, President, Terex Aerial Work Platforms, BA '71
Steven Wilkinson, Owner, Cape Cod Comfys, BA '94
Gregory Wills, Owner, G.W. Construction & Painting, BA '81
Lynn Wingard, Partner, Ward & Company, P.S., BA '82
Leonard Wiviott, Owner, Leonard Wiviott, BA '50
Wesley Wofford, Owner, Puget Construction, BA '82
Eugene Wong, Principal, Lasher Halzapfel Sperry & Ebberson, BA '90
Walter Zabriskie, Partner, NextLevel Management Consulting, BA '71

Key alumni in leadership positions nationally or internationally

Peter Weber, Owner, Weber Management Co, BA '62
Nelson Del Rio, President, Sonnenblick Del Rio Development Inc, BA '84
Charles Cox, Senior VP, Compass Lexecon, BA '67
James York, President, York & Associates Real Estate, BA '49
Michelle Dior Woodman, Financial Advisor, Morgan Stanly Smith Barney, BA '97, MBA '00
Andrew Brimmer, President, Brimmer & Company, Inc., BA '50, MA '51
Bryan Cressey, Cressey & Company LP, BA '72
Robert Joss, Professor and Dean Emeritus, Stanford University, BA '63
Thomas MaCurdy, Professor of Economics, Stanford University, BA '73
Robert Willis, Professor of Economics, University of Michigan, PhD '71
Dean Furbush, President, College Summit, BA '81
Robert Deacon, Professor of Economics at UCSB, BA '68
Heejoon Kang, Professor of Economics at Indiana University (retired), PhD '80
Curtis Taylor, Professor of Economics at Duke University, BA '86
Michael Peters, President of the St. John's College, Santa Fe, MA '74
Suzanne Scotchmer, Professor of Economics and Public Policy, UC Berleley, BA '70
Robert B. McD. Hutchinson, Justice, Supreme Court of BC/Law Court (Canada), BA '53
Arthur Gresh, UBS Global Asset Management (UK), PhD '95
Haruyuki Niimi, President and CEO of Showa Shell Sekiyu (Japan), BA '59
Jong Chang Kim, Governor of the Financial Supervisory Service (Korea), MA '85
Byung-Won Park, Senior Presidential Secretary for Economic Affairs (Korea), MA '85
George Carlson, Senior Adviser, Deloitte Tax, BA '64

Key alumni in all areas who have graduated since 2006

Josh Kim, BS '15, 2015 Dean's Medalist for Social Sciences, publication in AER P&P, graduate student at Stanford
Walker Higgins, BA '14, 2015 Bonderman Fellow
Michael Kutz, BS '14, ASUW President 2013-2014
Madeleine McKenna, BA '11, ASUW President 2012-2013

Denny Luan, BA '11, founder of experiment.com

Derek Kalles, Founder and CEO, Kalles Group; PSBJ "40 Under 40" 2015

Adley Bowden, VP Research, PitchBook Data, BA '07

Alex Feng, Manager of People Operations, Google, BS '09

Riley Newman, Head of Data Science, AirBnB (Bay Area), BA '06