The 2013 Report of the Committee on the Status of Women in the Economics Profession

By Marjorie B. McElroy

The American Economic Association (AEA) created the Committee on the Status of Women in the Economics Profession (CSWEP) and charged it to monitor the status of women in the profession and to undertake professional activities to improve this status. In addition to surveying all U.S. economics departments for its annual statistical report, CSWEP sponsors six competitive-entry paper sessions at the annual AEA Meeting, publishes a thrice-yearly newsletter (chock full of articles and information for those at the beginning of their career), and celebrates the research accomplishments of young female economists by awarding the Elaine Bennett Research Prize, as well as the exceptional mentoring and promotion of women's careers by conferring the Carolyn Shaw Bell Award. CSWEP also conducts a variety of formal and informal mentoring activities, most notably the oversubscribed Mentoring Breakfasts during the AEA Meeting and the CeMENT National and Regional Mentoring Workshops.

The first part of this report covers new developments and CSWEP's ongoing activities. The second part updates the annual statistical report on the status of women in the economics profession. The third contains well-deserved acknowledgements.

Before recounting CSWEP activities, it is worth noting that there are likely many spillovers from CSWEP activities that are impossible to list or quantify. CSWEP activities raise awareness among men and women of the challenges that are unique to women's careers and that can be addressed with many types of actions – from inclusive searches to informal mentoring activities. In addition, much of the information and advice freely disseminated by CSWEP can be of great value not only to female economists but to all economists, and especially to any junior economist, whether male or female and whether minority or not.

CSWEP Board members individually and collectively do the work of the Board. In gratitude, this report highlights their work by bolding their names as well as bolding

the names of past board members. Also bolded are the names of the many others who have advanced CSWEP's work, both male and female and from new acquaintances to long-time stalwart supporters.

CSWEP Activities in 2013

Mentoring Programs

As success breeds success, the effective mentoring of young women economists has become ever more central to CSWEP's mission. While mentoring and creating professional networks is an ongoing informal aspect of most every CSWEP activity, the CeMENT Mentoring Workshops hold center stage, and the new CSWEP Mentoring Breakfasts have already proved their worth.

Held biennially up to this point, the internationally recognized[1] CeMENT (previously CCOFFE) Mentoring Workshops target either the women in departments where research accomplishments determine promotion (the *National* Workshops) or women at schools where teaching receives more weight (the *Regional* Workshops). The success of these workshops has been rigorously documented[2] and they are now funded by the AEA on an ongoing basis.

This section reports on plans to expand the National Mentoring Workshops, on the Regional Mentoring Workshops, and on the new Mentoring Breakfasts.

CeMENT National Mentoring Workshops: From Biennial to Annual

Funded by the AEA and internationally known for providing young women economists with know-how and networks that boost their careers, CSWEP's biennial National Mentoring Workshops target junior women facing research expectations commensurate with U.S. departments with Ph.D. programs in economics. Going back to the first CCOFFE workshop in 1998 and morphing into the CeMENT National Mentoring Workshops (in 2004, 06, 08, 10 and 12, with the next one January 5-7, 2014) these national workshops have been consistently

[1] Using CeMENT as a model, the American Philosophical Association and the Royal Economic Society's Women's Committee have both run successful mentoring workshops; WiNE (the European Economic Association's women's group) and economists in China, Japan and South Korea are working on similar workshops.

[2] Based on random assignment to participation and tracking the subsequent careers of both participants and those who were randomized out of participation, a rigorous evaluation showed that "CeMENT increased top-tier publications, the total number of publications, and the total number of successful federal grants in treated women relative to controls." Blau et al., "Can Mentoring Help Female Assistant Professors? Interim Results from a Randomized Trial" (*American Economic Review*, May 2010: 352).

oversubscribed.[3] Moreover, at the January 2013 meeting of the Executive Committee of the AEA there was considerable sentiment to expand the capacity of the national mentoring program.

Hence, pending the approval of funding by the AEA Executive Committee (in January 2014), CSWEP will move from biennial to annual national mentoring workshops, thus doubling their capacity. While a CSWEP committee considered other ways to expand capacity, moving to annual workshops seemed the only practical way to preserve the current format that lies at the heart of their success and feasibility. The main alternative was to double the size (mentors and mentees) of each workshop and keep the biennial schedule. However, those who have recruited mentors strongly felt that recruiting 32 at one time biennially would be a far more difficult task than recruiting 16 annually. Even more importantly, moving from a biennial to an annual frequency better enables junior women to time their workshop participation in the context of pressing tenure clocks.

Past workshop participants have received binders of professional development materials relating to publishing, teaching, grants and other relevant topics. Starting last year, **Terra McKinnish**, Director of the 2012 and 2014 National Mentoring Workshops, took the initiative to make these materials publicly available on CSWEP's webpage.[4]

CeMENT Regional Mentoring Workshop, November 2013, Tampa, Florida

Ann Owen of Hamilton College organized the Regional CeMENT Workshop immediately preceding the 2013 annual Southern Economic Association Meeting. Seven senior and 31 junior women economists gathered for this two-day event.[5] Participants received advice about publishing, teaching, networking and the tenure process as well as on juggling work and family. They also worked together in small groups on goal setting and provided feedback on research papers to other group members. Overall, the workshop was rated as extremely helpful, with participants commenting on the quality of the tips they received and the usefulness of the network that they started at the workshop. Many of the participants left the workshop with important career goals and the plans to achieve them.

[3] With only 40 spots in each, both the 2012 and 2014 workshops received over 100 applicants (with justified disappointment on the part of qualified applicants who were randomized out).
[4] http://www.aeaweb.org/committees/CSWEP/mentoring/reading.php.
[5] We are grateful to the mentors who volunteered their time for this workshop: **Susan Averett** (Lafayette College), **Lisa Daniels** (Washington College), **Betsy Jensen** (Hamilton College), **Nicole Simpson** (Colgate University), **Sarah Stafford** (College of William and Mary) and **Tara Watson** (Williams College). **Jenny Minier** (University of Kentucky and co-editor of the *Southern Economic Journal*) participated in a session providing tips from an editor's perspective.

Mentoring Breakfasts: From Experiment to Expansion

In January 2013 at the AEA Meeting, CSWEP held its inaugural Mentoring Breakfast. The brainchild of Board members **Terra McKinnish** and **Linda Goldberg**, this event was originally conceived as a stand-in for the biennial CeMENT National Mentoring Workshop during its off years. It is fair to say no one had imagined just how successful this event would be. The first 120 junior applicants to apply were admitted and gathered with about forty senior mentors (mostly women, some men) for a modest breakfast and a rich networking experience. Participants could pick a table with a topic (such as research, handling referee reports, teaching, grants, work-life balance, and so forth) or an open-ended dialogue. Discussions continued long after the breakfast had officially ended. Echoing the National Mentoring Workshops, this Mentoring Breakfast was oversubscribed, as evidenced by a telltale waiting list and still others who had to be turned away at the door. Clearly, this mentoring and networking experience served a need that went well beyond the original conception.

In response, CSWEP is experimenting with expansion here as well. Under the leadership of Board members **Linda Goldberg** and **Bevin Ashenmiller**, the 2014 AEA Meeting will see two Mentoring Breakfasts (January 3 and 4). Registrants have already welcomed this expansion as they could select a morning that avoided conflicts with job interviews and other events. CSWEP has commitments from 60 senior mentors and preregistration stands at 147 and counting. If these Mentoring Breakfasts go as expected, going forward CSWEP will sponsor two Mentoring Breakfasts annually at the AEA meetings.

Bennett Prize and Bell Award

The January 3, 2014, annual CSWEP Business Meeting will see the presentation of both the Bennett Prize and the Bell Award to their most recent recipients.

Awarded biennially since 1998, the **Elaine Bennett Research Prize** recognizes and honors outstanding research in any field of economics by a woman at the beginning of her career. The 2012 prize went to **Anna Mikusheva** for her work on econometric inference. Mikusheva is the Castle-Krob Associate Professor of Economics at the Massachusetts Institute of Technology. The press release is available on line, as is the insightful interview of Mikusheva by **Nancy Rose** in the Fall 2013 *CSWEP News*.[6]

Given annually, and also since 1998, the **Carolyn Shaw Bell Award** recognizes an individual for outstanding work that has furthered the status of women in the economics profession. The 2013 award went to **Rachel McCulloch,** Rosen Family

[6] http://www.aeaweb.org/committees/cswep/PDFs/2012Bennett_Mikusheva.pdf; http://www.aeaweb.org/committees/cswep/newsletters/CSWEP_nsltr_Fall_2013.pdf.

Professor Emerita of International Finance at Brandeis University and a leader in the field of international trade. An inspiring role model for many women, McCulloch folded mentoring into all aspects of her of scholarship, teaching and service and has motivated innumerable individuals, both male and female, to pursue careers in the discipline. The press release is available on line[7]. **Kathryn Graddy** will interview McCulloch for the Spring/Summer 2014 *CSWEP News*.

Sincere thanks are due to those who nominated and wrote letters in support of all of the highly competitive candidates for these awards as well as to the hard-working selection committees.[8]

AEA Summer Economics Fellows Program

Begun in 2006 with seed monies from the National Science Foundation (NSF) and designed and administered by a joint AEA-CSMGEP-CSWEP committee, the AEA Summer Economics Fellows Program aims to enhance the careers of underrepresented minorities and women during their years as senior graduate students or junior faculty members. Fellowships vary from one institution to the next, but experienced economists mentor the fellows who, in turn, work on their own research and have a valuable opportunity to present it. Selected from forty-six applicants, Summer 2013 saw 11 summer fellows immersed in research environments at the Federal Reserve Banks in Atlanta, Chicago, Cleveland, Dallas, Kansas City, New York and Richmond. Valued by the sponsors as well as Fellows, we owe thanks to these sponsors for their active support of this program. Evaluations from 2013 Fellows heaped praise on the program. In the works are efforts to increase the number of successful minority applicants and to smooth out the number of applicants each year.[9]

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[7] http://www.aeaweb.org/committees/cswep/PDFs/2013Bell_McCulloch-Rachel.pdf.

[8] Many thanks to the 2013 Bell committee: Board member **Linda Goldberg** (Chair) and previous Bell recipients **Elizabeth Hoffman** (2010) and **Sharon Oster** (2011); and also to the 2012 Bennett committee: former Board member **Nancy Rose** (Chair), Board member **Petra Todd** and former Bennett winner **Monika Piazzesi** (2006). **Susan Athey**, the 2000 Bennett winner, graciously pinch hit for Nancy Rose when she recused herself from the final decision. For holding to high standards and spotlighting the extraordinary accomplishments of women in economics, we owe an enormous debt to the each committee member on both of these committees. Finally, while they must remain anonymous, this debt extends with equal weight to all those who did the hard work of nominating the highly competitive field of candidates for each award as well as to all those who wrote the thoughtful, detailed letters in support of each candidacy.

[9] Many thanks to the 2013 committee for screening and matching: **Daniel Newlon** from the AEA (Chair) whose efforts have undergirded this program from the get go in 2006, CSWEP Board member **Cecilia Conrad**, CSMGEP Board member **Gustavo Suarez** and **Lucia Foster** of the Center for Economic Studies at the U.S. Bureau of the Census. More information on the AEA Fellows Program is available at http://www.aeaweb.org/committees/cswep/summerfellows/history.php.

CSWEP at the 2013 Annual American Economics Association Meeting

Critical to CSWEP's mission, CSWEP sponsors six highly competitive paper sessions at the annual AEA meeting. The year 2013 saw three gender sessions, organized by **Kevin Lang** and **Susan Averett**, as well as three health and development economics sessions, organized by **Frank Sloan** (Duke University) and **Shelley White-Means**. These committees then selected eight papers for two pseudo-sessions that were published in the *May 2013 Papers & Proceedings* issue of the *American Economic Review*.

The highly competitive submissions process encourages quality research, particularly in the area of gender-related topics. More generally, women consistently report these sessions get their research before a profession-wide audience and are instrumental in their success as economists.

CSWEP at the 2013 Regional Economics Association Meetings

At the Eastern Economic Association Meetings (May in NY, NY) **Susan Averett** (former CSWEP Board Eastern Representative) organized a grand total of eight high-quality paper sessions. For the remaining Regional Meetings, the focus of CSWEP has shifted from paper sessions to panel discussions. The year 2013 saw four such panels.

For the Southern Economic Meeting (November in Tampa, FL), **Shelly White-Means** (outgoing CSWEP Board Southern Representative) organized a panel discussion, "Securing External Funding for Your Research: the Roles of Gender, Race and Ethnicity," with panelists **Donna Ginther** (University of Kansas), **Laura Razzolini** (Virginia Commonwealth University and editor of the *Southern Economic Journal*) and **Catherine Eckel** (Texas A&M University and 2012 winner of the Carolyn Shaw Bell Award).

For the Western Economic Association Meetings, **Jennifer Imazeki** (outgoing CSWEP Board Western Representative and inveterate evangelist for updating our uses of the internet) put together a highly successful panel on "Flipping, Clicking and Other Contortions to Make Your Class Interactive"; this despite the difficulties getting panelists to travel to Seattle for these June 28 – July 2 meetings.

Finally, for the Midwest Economics Association Meeting (March in Columbus, OH), **Anne Winkler** (CSWEP Board Midwestern Representative) put together two panels, "Academic Careers: A CSWEP Panel on Opportunities and Challenges" and "Jobs for Economists: A CSWEP Panel on the Employee-Employer Match."

As is the tradition, CSWEP hosted a reception at each regional meeting. In line with expanding career development opportunities for young women economists, these CSWEP receptions at the Regional Meetings are being transformed into mentoring

and networking opportunities. **Anne Winkler** created a model that was quite effective. At the Midwestern Meeting, she nestled a CSWEP Networking Lunch (similar in form and enthusiastic reception to the Mentoring Breakfast at the 2013 AEA Meeting) in between the two panel discussions. The eight panelists plus Winkler herself were there to mentor and network with the other participants, many of whom lingered after the first panel or arrived early for the second.

All of these panels, receptions and paper sessions drew appreciative audiences and well served the missions of CSWEP and the AEA more generally. More details can be found in the last three issues of *CSWEP News*.[10]

Haworth Mentoring Fund

CSWEP continues to administer the fund given by the late **Joan Haworth**, a stalwart CSWEP supporter. Upon satisfactory application, the Haworth Committee recommends small grants for recipients to piggy back mentoring activities onto campus visits of external seminar speakers and the like. This year the fund supported extended visits of **Marcelle Chauvet** (UC Riverside) and **Anne Stevens** (UC Davis) to George Washington University and Georgia Tech, respectively, for the purpose of mentoring. The fund also defrayed the travel expenses of multiple mentors to a pre-conference junior mentoring workshop at the 2013 Meeting of the Midwest Econometrics Group, held at Indiana University.

CSWEP News in 2013

Under the able direction of oversight editor, **Madeline Zavodny**[11], CSWEP published three issues in 2013.[12] With the intent of streamlining and modernizing our publication, the newsletter underwent both a design change (now in two colors, no less) and a name change. The Fall 2013 issue was the first to sport the new design and the new name, *CSWEP News*. For this transformation, credit goes to the newsletter's long-standing graphic designer, **Leda Black**; to Madeline Zavodny, now

[10] http://www.aeaweb.org/committees/cswep/newsletters.php

[11] The contributions of **Madeline Zavodny** cannot be overstated. Organizer *par excellence*, she helps guest editors match with a topic and generally facilitates their work, she makes sure that each issue covers the appropriate materials, writes up missing pieces, makes continued improvements, oversees all of those boxes of announcements, coordinates with the Chair's administrative assistant and drags the column "From the Chair" from its author. She is also a selfless, lightning-quick copy editor and we are all in her debt. Last but not least among her endless list of tasks, **Jennifer Socey,** CSWEP administrative assistant, formats the Newsletter, makes innovative suggestions and does substantive editing. She also puts up with the flow of last-minute changes from the Chair, coordinates with the printer and sees to distribution.

[12] Current and past issues of the *CSWEP News* are archived at http://www.aeaweb.org/committees/cswep/newsletters.php. For a free digital email subscription, visit http://cswep.org and click "Subscribe."

in her fourth year as our oversight editor; and to **Jennifer Socey**, this Chair's overqualified administrative assistant.

In a long-standing tradition, each issue has featured a theme chosen and introduced by a guest editor who, in turn, enlists several authors to write the featured articles. The quality of these articles is consistently high, and many go on to be long-lived career resources for junior economists[13]. On behalf of the CSWEP Board, the Chair, (who is the official editor but does almost none of the work), extends a warm thanks to all these contributors.

Petra Todd guest edited the Winter 2013 issue featuring articles on "Navigating the Tenure Process." Todd also contributed the article, *The Tenure Process at Research Universities*; this ran paired with **Cecilia Conrad**'s article, *The Tenure Process at Liberal Arts Colleges*. Also included was (former Board member) **Rachel Croson**'s advice, *Tenure Letters*, and (former board member) **Donna Ginther**'s, *Should I Stay or Should I Go Now?* Feedback on this issue was very positive, with **John Solow**, Professor and Departmental Executive Officer in the Department of Economics at the University of Iowa, writing in to say it "will be assigned reading for junior faculty."

The Spring/Summer 2013 issue was born of a happy coincidence as Guest Editor **Cecilia Conrad** chose the topic "Where are the Women Economics Majors?" and learned that, quite independently, **Claudia Goldin** was working on *Notes on Women and the Economics Undergraduate Major*, an effort to document the gender gap and delve into causal factors as preliminary work to figuring out what can be done. The authors spanned the discipline's career phases. **Maria Boya Zhu**, winner of a NSF Graduate Fellowship who took her Pomona B.A. to Duke's Ph.D. program, wrote *An Undergraduate Major's Perspective*. **Amanda Griffith**, Assistant Professor at Wake Forest University, shared her research on *The Importance of Role Models*. **Susan Feigenbaum**, Professor at the University of Missouri–St. Louis, contributed her experience on *Attracting More Women and Minorities into Economics*, and **Lisa Saunders**, Professor at the University of Massachusetts Amherst, wrote *On Being the Other in the Classroom*. The authors asked difficult questions and provided insights on a topic of great, even grave import to the future of women in the economics profession.

Newly formatted and renamed, the Fall 2013 *CSWEP News* broke with tradition by publishing the content of the April 2013 NBER-sponsored NYC memorial service for the late monetarist Anna J. Schwartz. Highlighting her life and accomplishments, NBER President **James Poterba** opened and eight distinguished speakers (**Michael Bordo**, **Martin Feldstein**, **Alan Greenspan**, **Allan Meltzer**, **Edward Nelson**, **William Poole**, **Eloise Pasachoff** and **Christina Romer**) described her life and

[13] The feature articles have provided the bulk of professional development materials for the binder for CeMENT workshop participants, now online at: http://www.aeaweb.org/committees/CSWEP/mentoring/reading.php.

remarkable contributions to economics. With the encouragement and support of NBER President James Poterba, The *CSWEP News* was able to preserve these tributes and thus the memory of an economist who was ahead of her time and under recognized.

CSWEP Communications and Social Media

To study CSWEP's presence on the web via social media and our communications more generally, **Anne Winkler** (chair), **Jennifer Imazeki** and **Shelly White-Means** comprised the ad hoc Committee on Communications and Contacts. This year the Committee was instrumental in revising and streamlining the content on CSWEP's AEA web site[14]. The work on the web site could not have been done without the excellent assistance of **Susan Houston** and **Michael Albert**. In addition to making CSWEP's activities more accessible to younger economists, an anticipated side effect is the expansion of circulation of the *CSWEP News*.

CSWEP is most interested in learning more about the AEA's plans to move forward with a new online subscription service where members can sign-up for email subscriptions to a variety of AEA committees and opportunities. We find that with CSWEP no longer requiring membership dues, our "subscriber" database does not stay as current as in the past. We believe an overall AEA subscription service would help us to better communicate with CSWEP's audience for event notification and *CSWEP News* dissemination.

CSWEP Subchapters?

Under the leadership of former CSWEP Chair **Barbara Fraumeni**, CSWEP began an informal association with economists in the Washington, D.C., area. The group came to be called CSWEP-DC. While a very good relationship between CSWEP-DC and CSWEP was established, in 2013 CSWEP constituted an ad hoc Subchapters Committee to think about how subchapters or local groups might be formed, guidelines created and so on. Chaired by **Linda Goldberg** and working with **Kevin Lang** and **Anne Winkler**, the Committee asked, "Why is this needed and, if needed, what is an appropriate structure?"

In response to the first question, the Committee noted that while CSWEP has done a great job serving academic women in liberal arts schools and research universities, CSWEP has not been able to serve non-academic women who work in the public or private sectors nearly as well. Thus, for the well served, there is no need for subchapters, but subchapters may well be an appropriate means to serve others.

[14] http://cswep.org

Given that a need is determined, the Committee recommended two types of outreach efforts: (1) Unaffiliated Groups, and (2) Affiliated Groups to be called Subchapters. In the first instance, CSWEP does not have to take responsibility for the group, but could, upon appropriate application, provide minor funding for one-off events consistent with CSWEP's mission. In the second instance, CSWEP needs to articulate rules for operation, including a mission statement consistent with CSWEP's, and then work with the Subchapter on sponsoring and possibly funding events.

The committee report will be discussed at the January 2014 CSWEP Board Meeting and the expectation is that a more formal proposal to the AEA Executive Committee will follow.

In the meantime, in 2013 CSWEP experimented with providing minor funding to encourage two such outreach efforts. In both cases the returns seemed large relative to the costs and informed the work of the Subchapters Committee.

First, CSWEP provided supplemental funds (paired with a grant from the Haworth Fund and also with direct support of the host institution, Indiana University) to defray the travel expenses of multiple mentors to a pre-conference junior mentoring workshop at the 2013 Meeting of the Midwest Econometrics Group.

Second, CSWEP contributed to a Speed Mentoring[15] event held in May 2013 and organized by CSWEP-DC under the leadership of **Susan Fleck** (Bureau of Labor Statistics (BLS)), and event committee members **Maureen Doherty** (BLS), **Judy Yang** (World Bank) and **Xiaotong Niu** (Congressional Budget Office). The participants came from government, academia and international and non-profit organizations and praised the new format. In total, 27 graduate students and young professionals met with 16 mid-career and senior economist mentors. The event was very well received and afterwards participants continued conversations at a more leisurely pace over lunch.

The Status of Women in the Economics Profession

Introduction, the Survey and Summary

In 1971 the AEA established CSWEP as a standing committee to monitor the status and promote the advancement of women in the economics profession. In 1972 CSWEP undertook a broad survey of economics department and found that women

[15] Speed mentoring is a variation on speed dating. It is a face-to-face venue of quick introductions to connect people who share similar interests. Mentees came prepared to share a two-three minute introduction with mentors and were provided with guidelines on how to follow-up with the mentor who most closely matched their interests.

represented 7.6% of new Ph.D.s, 8.8% of assistant, 3.7% of associate and 2.4% of full professors. Much has changed. This year marks the 40th survey year. At doctoral institutions, women have more than quadrupled their representation amongst new Ph.D.s to 35%, more than tripled their representation amongst assistant professors to 27.8%, increased their representation at the associate level more than six fold to 24.5% and increased their representation at the full professor level five-fold to 12.0%. This report presents the results of our 2013 survey, with emphasis on changes over the last 17 years as well as the progress of cohorts of new Ph.D.s as they progressed through the academic ranks.

The remainder of this section describes a change in the survey, summarizes the main results, and concludes. Subsequent section provide more detailed results.

The CSWEP Annual Surveys, 1972-2013

In fall 2013 CSWEP surveyed 124 doctoral departments and 146 non-doctoral departments. The non-doctoral sample is based on the listing of "Baccalaureate Colleges – Liberal Arts" from the *Carnegie Classification of Institutions of Higher Learning* (2000 Edition). Starting in 2006 the survey was augmented to include six departments in research universities that offer a Master's degree but not a Ph.D. degree program in economics. This report uses the terms "non-doctoral and "liberal arts" interchangeably.

This year a new question was added to the non-doctoral survey and it revealed that 18 hitherto would-be economics departments were in reality departments of business administration and the like, departments in which economists comprise a small minority of the faculty. Phone calls to non-responding departments revealed another three. All 21 of these will be expunged from future surveys, and the remainder of this report treats the 2013 non-doctoral base as if these business departments had never been included. After expunging these, of the 125 economics departments remaining in the survey, 72% responded [(108-18)/(146-21)]. This is the relevant response rate for the analysis that follows. It is a bit lower than the naïve rate in the previous paragraph because the 21 business departments actually had a better response rate than the economics departments.[16]

Summary of Results

This overview begins with an oft-neglected group, **teaching faculty outside of the tenure track.** These faculty typically hold multiyear rolling contracts and carry titles such as adjunct, instructor, lecturer, visitor or professor of the practice. In doctoral departments, the representation of women in these positions runs high, currently standing at 36.1%, exceeding that not just of assistant professors but even that of new Ph.D.s. In 2013 the share of women in these positions was nearly double

[16] All non-doctoral response rates recorded in earlier *CSWEP Reports* are analogous to the naïve rate above.

their share of all tenure track positions combined (19.4%), and this disparity is greater still in the top 20 departments.

With regard to doctoral departments, with one exception, broadly speaking the last 17 years show some growth in the representation of women at each level of the academic hierarchy. The exception is the representation of women amongst first year Ph.D. students. For nearly two decades this has hovered around 33%. As noted in the *2006 Report* and reinforced by Goldin (*CSWEP Newsletter,* Spring/Summer 2013), since the share of baccalaureates going to women is rising, this constant 33% means the fraction of women baccalaureates pursing a Ph.D. in economics is actually shrinking. Two proverbial truths continue to hold: (i) At every level of the academic hierarchy, from entering Ph.D. student to full professor, women have been and remain a minority. (ii) Moreover, within the tenure track, from new Ph.D. to full professor, the higher the rank, the lower the representation of women. In 2013 new doctorates were 35% female, falling to 27.8% for assistant professors, to 24.5% for tenured associate professors and to 12% for full professors. This pattern has been characterized as the "leaky pipeline."

Because the growth in women's representation has differed across ranks, the gaps in representation between adjacent ranks have changed. Thus, following some earlier convergence between women's representation at the associate level to that at the assistant level, convergence seems to have ceased some 14 years ago and a 6.2 percentage point difference has stubbornly persisted to the present. Thus the gap between women's representation at the full and associate levels has increased considerably over the last 17 years. It is worth noting that the latter is not necessarily an unwanted development. It is the result of relatively good growth in women's representation at the associate level as compared to the full level combined with the stock of full professors reflecting something like a 25-year history of promotions from associate to full.

Comparing non-doctoral with doctoral departments, at every level in the tenure track women's representation in liberal arts departments runs higher – roughly 10 percentage points higher – than in doctoral departments (see Figures 1 and 2). Similar to the trend in doctoral departments, women's representation at the assistant professor level has mildly trended up and at the full level somewhat more so. However, the liberal arts departments do not share the strong upward trend at the associate level exhibited by doctoral departments. For liberal arts departments for the past 11 years the trend for women's representation at the associate level is, if anything, down.

A consequence of this last fact is that **for the liberal arts departments**, during the last 11 years, while the leak in the pipeline between associate and full professor has shown some tendency to lessen, that between assistant and associate seems to have grown.

A further comparison of liberal arts to a trifurcation of doctoral programs by rank

shows that for all tenure track ranks combined, the representation of women declines as the emphasis on research increases, averaging 30.8% for non-doctoral departments, 18.6% for all doctoral departments, 12.9% for the top-20 departments and 12.2% for the top 10 departments.

With regard to the advance of cohorts of academics through the ranks, we use a simple lock-step model of these advances. With a maximum of 40 years of data on each rank we can track the gender composition of some relatively young cohorts from entering graduate school though the Ph.D. and of other older cohorts from receipt of the degree though the assistant and associate professor ranks. Unfortunately, these data do not suffice to analyze the advance of cohorts from associate to full professor. The analysis indicates that if recent trends continue, then 2001 marks the advent of policies in Ph.D. programs that maintain women's representation from matriculation through graduation. In addition, the cohort analysis indicates little in the way of a serious loss of women relative to men as cohorts advanced from earning the degree to becoming assistant professors.

In contrast and as found in earlier studies, the data show a significant and persistent loss of women relative to men in the transition from assistant to tenured associate professor. Of 26 cohorts of new Ph.D.s (1974 – 1999), fully 23 saw a drop in the representation of women.[17] The drop was usually greater than 5 percentage points and shows no obvious improvement over time.[18]

Conclusion

Past intakes and subsequent advancements of women and men determine the contemporaneous distribution of men and women on the academic economists' ladder. *This report points to two critical junctures: the failure to grow of the representation of women at the intake; and, relative to men, the subsequent poorer chance of advancing from untenured assistant to tenured associate professor*. With regard to the first, in the face of the growing representation of women at the baccalaureate level, the stagnation of the share of women in entering Ph.D. classes means that entering Ph.D. students represent a declining fraction of new baccalaureate women. This latter decline is no doubt rooted in the analogous decline in the fraction of women undergraduates who major in economics and may in part stem from the way we teach economics at the undergraduate level, as stressed by Goldin (*CSWEP Newsletter*, Spring/Summer, 2013). *This is an issue for both doctoral and non-doctoral departments.*

[17] Under our lock-step assumptions, the 1999 Ph.D. cohort became seventh-year associate professors in 2013 (= 1999 + 14).

[18] While a proper adjustment for a presumed overrepresentation of older men with extended years in rank as associate professor would reduce the size of the drop, this adjustment would grow smaller over time. Thus, it seems unlikely to account for the persistence of this gap.

With regard to the second juncture, the advancement of women from untenured assistant to tenured associate professor is no doubt intertwined and jointly determined with family-related decisions. Moreover, with rational expectations these decisions, in turn, feed back to the decision to major in economics and to enter a Ph.D. program in the first place. Here, the institutional setting and expected institutional setting (length of the tenure clock, gender-neutral family leave, on site child care and so forth) can play significant roles.

Finally, it is worth *recognizing the high representation of women in non-tenure-track teaching jobs* and that the CSWEP data do not cover placement into these jobs, contracts, durations in such jobs or exits therefrom. The data also do not cover non-academic jobs.

In another vein, the 42 years of CSWEP data on the evolution of faculty composition at the department level are unique in the social sciences and beyond*. It is time to document and maintain these data in a way that meets professional standards, to put in place a system for maintenance for future years and to make the descriptive statistics at group levels (e.g., doctoral, non-doctoral and others) available on line.* This would be a major undertaking and this comment is offered by way of getting a discussion going on how to do this. It is important to start now, before too many more of the early creators of the database pass from the profession.

Women's Representation on the Rungs of the Academic Ladder

Doctoral Departments, 1997–2013

Before analyzing the women's representation at various ranks in the tenure track, it is worth noting their representation outside of these ranks, that is, amongst *non-tenure track faculty*. These are typically teaching faculty who hold multiyear rolling contracts and carry titles such as adjunct, instructor, lecturer, visitor or professor of the practice. As show in Table 1, for the universe of doctoral departments in 2013, *women's representation amongst non-tenure track faculty averaged almost twice that in the tenure track. As of Fall 2013, women constituted 36.1% of non-tenure track teaching faculty but only 18.6% of tenure track faculty.*

Turning to the tenure track, for the universe of doctoral departments, Table 1 and Figure 1 summarize women's representation for years at each level of the academic hierarchy, from first year Ph.D. students to new Ph.D. and then the assistant, associate and full professor. *With the exception of entering Ph.D. students, broadly speaking the last 17 years show some growth in the representation of women at each level of the hierarchy.* Focusing on the gaps between levels this so-called "pipeline" representation of women in the stock of economists at each rank (from first-year Ph.D. students to tenured full professor) emphasizes the decline or "leaks" in the representation of women with increased in rank. Table 1 and Figure 1 document

two well-known relationships: *(i)* at *every level in the academic hierarchy, women have been and remain a minority,* and *(ii) the higher the rank, the lower is the representation of women.*[19] This latter fact has been described as the "leaky" pipeline. After first examining the trends in representation at the various ranks, we will see how the size of these leaks has changed over time.

Table 1 and Figure 1 show varied levels of growth in women's representation across the different ranks. For example, the first row of Table 1, as well as the blue line with squares in Figure 1, trace the share of first-year Ph.D. students who are women over the most recent 17 years. As can be seen, *over the last 17 years, the representation of women grew at different rates for different ranks.* Despite two notable peaks (38.8% in 2000 and 35% in 2008) and one notable trough last year (29.3% in 2012), *(a) the share of first-year Ph.D. students who are women hovered around 33% with no obvious trend.* As President Goldin would likely note, since the share of baccalaureates going to women is rising, *this constant 33% means the fraction of women baccalaureates pursing a Ph.D. in economics is actually shrinking* (CSWEP *Newsletter*, Spring/Summer 2013). *Within the tenure ranks, growth in the share of women has been (b) lowest at the assistant professor rank, (c) highest at the new Ph.D. and associate professor levels and (d) in between at full rank.*[20]

Turning from trends in the various levels to trends in the differences in the levels (the size of the "leaks"), we first compare the representation of women in the untenured assistant and tenured associate ranks. Earlier Reports[21] showed a drop hovering close to 11 percentage points in the five years preceding 1997, the earliest year shown in Table 1 and Figure 1. Hence, we can compare the differences between the assistant and associate levels in the eight years preceding 2000 to the 14 years beginning with 2000 and ending with 2013. The earlier differences (1992–1999) hovered around 11.6 percentage points whereas the drop in the representation of women from the assistant to the associate levels in the 14 later years averaged 6.3 percentage points with no trend. Thus, *while there was a definite drop in the difference around the turn of the century, for the last 14 years there has been no further convergence in women's representation at the associate level to women's representation at the assistant professor level; an average difference of 6.3 percentage points stubbornly persisted through 2013.*[22]

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[19] At every stage subsequent to attaining the Ph.D., the percentage of women declines: roughly over the last six years, over 5.5 percentage points between new Ph.D.s and assistant professors, about 6.5 percentage points between assistant professors and tenured associates, and over 11 percentage points between tenured associates and full. The sizes of these declines have been remarkably stable over time.

[20] Simple comparisons of 2013 to 1997 show that over these 17 years, women's share of first-year Ph.D. students, new Ph.D.s, assistant professors, tenured associates and full professors grew 1.4, 10.0, 1.8, 11.1 and 5.5 percentage points, respectively.

[21] E.g., Joan Haworth, "2002 Report on the Status of Women in the Economics Profession."

[22] In 2013, due to a sizable uptick (2.9 percentage points) in representation at the associate level and a downtick at the assistant level, this 2013 gap was only 3.3 percentage points (= 2.9 – (-0.4)). Only future years can reveal if 2013 reversed a persistent gap or recorded a transient narrowing.

Moving up one rung, we access the trend in the drop in women's representation between the associate and full levels. As a result of the considerably slower gain in women's representation at the full as compared to the associate level noted above, *the gap in women's representation between the associate and full levels has increased. In percentage points it went from 6.9 in 1997 to 12.5 in 2013, averaging 10.6 percentage points over the most recent 17 years*.[23] This divergence could go on for a number of years as women become better represented in younger cohorts and thus in the associate professor rank, but when promoted have a small impact on the share of women at the full professor rank, a rank which contains disproportionately older, more male cohorts.

Liberal Arts Departments, 2003–2013

As noted above, in Fall 2013, CSWEP surveyed 125 non-doctoral economics departments (not counting the 21 business departments). Some of these may not fit well under the liberal arts terminology. Nonetheless, for the sake of continuity with earlier reports, the remainder of this report refers to all of these non-doctoral departments as the "liberal arts" departments in the "liberal arts" survey.

With that caveat, Figure 2 shows the representation of women amongst seniors in the major and amongst faculty in tenure track ranks for the liberal arts departments over the last 11 years. Over the first six years, representations at the assistant and associate levels track each other closely, but a noticeable gap characterizes the last five. In contrast, the gap in representation between the associate and full levels began at over 20 percentage points, declined fairly steadily to about 7 percentage points in 2011, but has since widened to about 14.

Table 6 details the responses for 2013 showing that for the tenure track faculty as a whole 30.8% were women. A comparison of Figures 1 and 2 with Tables 1 and 6 shows that representation of women amongst seniors in the major ran about three percentage points higher in liberal arts departments than in doctoral departments. Conversely, the representation amongst faculty in the tenure ranks is more than ten percentage points higher in liberal arts as compared to doctoral departments.

In sum, over the 11 years for which we have data, *for liberal arts departments, while the leak in the pipeline between associate and full professor has shown some tendency to lessen, that between assistant and associate seems to have grown.*

[23] However tempting, the futility of focusing on short-term trends is illustrated by the six years preceding 2013. In that interval the percent of associate professors who are women was flat while the corresponding percent of full professors was rising. Consequently the gap narrowed from the all-time recorded high of 15.8 percentage points in 2006 to 10.0 in 2012. As of 2012, one might have thought the gap was closing.

Cohorts of academics and their advances up the ranks

The above picture of the general fall in women's representation with increase in rank (the leaky pipeline) tells us where we have been and where we are now – it does not tell us how we got here or where improvement is most critical.[24] Past studies have found that, conditioning on years since degree and other observables, women have a lower probability of attaining tenure, take longer to attain tenure and have a lower probability of being promoted to full.[25] To see how the annual CSWEP survey results fit with these past results, we turn to tracking the progress of academic cohorts over time.

Up the Academic Ladder: A Lock-Step Model

In order to track the progress of academic cohorts over time we employ a bare-bones model of lock-step progression through the ranks. At each step some men and some women are lost. The focus is on whether a disproportionate share of women is lost. Assume that movements through the ranks for those who survived occurred as follows: five years elapsed from matriculation through earning the Ph.D., assistant professors were in rank for seven years and then were either promoted to associate or left the tenure track (within the universe of doctoral departments) and associate professors were in rank for seven years and then were either promoted to full or left the tenure track (within the universe of doctoral departments). In addition, assume that relative to men, women in later cohorts had at least as good a chance at advancement as women in earlier cohorts. Under these assumptions we can track the representation of women in a cohort that entered a Ph.D. program in year t by looking at degree recipients in t+5, assistant professors in t+5+7 (by which time no assistant professors remain from cohorts older than the t^{th}) and associate professors in t+5+7+7 (by which time no associate professors remain from cohorts older than the t^{th}).

Turning to deviations of the model from reality, some assistant professors get promoted in years four through six while others extend their tenure clocks by taking leaves or making lateral moves from one doctoral department to another. As we exclude tenured assistant professors, the seven-year approximation for assistant professors is likely reasonable. More troublesome is the assumption of seven years

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[24] One could isolate earlier sentences and mistakenly interpret some as showing our profession is doing well and others as it is doing poorly with regard to advancing the representation of women. This highlights the difficulty of assigning meaningful interpretations to differences in a characteristic (percent female) of two stocks (associate and full professors) when the two stocks are comprised of individuals from different cohorts.

[25] Donna Ginther and Shulamit Kahn, "Women in Economics: Moving Up or Falling Off the Academic Career Ladder?" *Journal of Economic Perspectives*, Summer 2004; and Donna Ginther and Shulamit Kahn, "Women's Careers in Academic Social Science: Progress, Pitfalls, and Plateaus" in *The Economics of Economists*, Alessandro Lanteri and Jack Vromen, eds. Cambridge: Cambridge University Press, forthcoming.

in rank for associate professors. While some get promoted earlier and others somewhat later, the real issue is small numbers of tenured associate professors in rank essentially until retirement. An overrepresentation of men in this anomalous group would drag down the percentage of female associate professors, a caveat to bear in mind.[26] However, because the size of this anomalous group changes very slowly over time, an overrepresentation of men would have little impact on serial changes in the percentage of females at the associate level.

Using this lock-step model, we create synthetic cohorts and graph their progress from newly matriculated, new Ph.D. students, to obtaining the degree, to becoming seventh-year assistant professors and then to becoming seventh-year associate professors. In every graph we use all of the available data, which necessarily means that we observe fewer transitions for younger cohorts. The extreme case is the transition to full professor. Unfortunately, even CSWEP's 40-year time series of departmental data is insufficient to present a meaningful number of cohort transitions to full professor.

The Ph.D. Program: From Matriculation to Graduation

Figure 3 plots the percentage of women in cohorts of first year Ph.D. classes (blue with squares) and in their graduating class five years later (red with circles).[27] If these plots were coterminous, for each cohort of entering graduate students, the representation of women relative to men would not then have changed between matriculation and graduation. Observe that the four oldest cohorts (matriculated 1997–2000) experienced a drop in the representation of women between entry and graduation from their Ph.D. programs (red line below blue). In contrast, the younger cohorts (matriculated 2001–2008) experienced no such decline. *If this result continues to hold for the 2009 and subsequent cohorts, then 2001 marks the advent of policies in Ph.D. programs that maintain women's representation from matriculation through graduation.*

The Tenure Track: From the Ph.D. to Assistant and to Associate

Figure 4 graphs the representation of women in 40 cohorts of new Ph.D.s at graduation (red with circles), when cohort survivors became seventh-year assistant professors (green with diamonds) and when continuing survivors became seventh-

[26] This problem cannot be solved except with more information on the distribution of time in rank or micro data. Arbitrarily increasing the assumed time in rank of associate professors to, say, 10 years would not work because something like 30-year lags would be required. For this we do not have the data.

[27] CSWEP first collected data on entering Ph.D. classes in 1997. In the model graduate students who enrolled in 2008 graduated in 2013 and so 2008 is the last cohort we can observe.

year associate professors (purple with triangles).[28] Hence, for example, the dot, diamond and triangle above 1999 depict the fall in the percentage of women in the 1999 cohort of Ph.D.s as survivors advanced from obtaining the Ph.D. (circle) to seventh-year assistant professors (diamond) and then to seventh-year associate professors (triangle). If these three points were coincident, there would have been no drop in women's representation as this 1999 cohort advanced through the ranks.

As manifested in the truncations in the graphs, cohorts who received their Ph.D. in 2007 or later are too young to have been seventh-year assistant professors by 2013. Hence, Figure 4 depicts the representation of women in 33 cohorts as they progressed from new Ph.D.s to seventh-year assistant professors. For the oldest cohorts (Ph.D.s dated 1974–1992), women's representation most often rose between Ph.D. receipt and the last year as assistant professor. Among the 14 more recent cohorts (1993–2006), several experienced noticeable drops. But overall these two lines track each other reasonably well. *For the observable 33 cohorts, these data reveal no worrisome drop in the representation of women in their transition from new Ph.D. to assistant professor.*

Turning to the transition from assistant to tenured associate professor, the picture is less rosy. Cohorts that received their Ph.D.s in 2000 or later are still too young to have been seventh-year associate professors by 2013. Thus, Figure 4 depicts this transition for 26 cohorts of new Ph.D.s, 1974 – 1999. Fully 23 of these cohorts saw a drop in the representation of women.[29] The drop was most often greater than 5 percentage points and shows no obvious improvement over time.[30] This cohort analysis likely provides the best available evidence on the extent to which women fall off of the academic ladder at the point where they would become tenured associates. As found in other studies*, the evidence shows a sizable and persistent fall in women's representation in the transition from assistant to tenured associate professor.*

Turning from the advance of cohorts through the ranks, we return to the analysis of stocks of academic economists, this time breaking out the data on top departments and also recording the job placements of new Ph.D.s in the job market last year.

The Top 10 and Top 20 Departments

Tables 2 and 3 break out survey results for the top 10 and the top 20 ranked

[28] Because these data go back to the first CSWEP survey in 1974, Figure 3 permits a considerably longer look back than was the case in Figure 2.
[29] Under our lock-step assumptions, the 1999 Ph.D. cohort became seventh-year associate professors in 2013 (= 1999 + 14).
[30] While a proper adjustment for a presumed overrepresentation of older men with extended years in rank as associate professor would reduce the size of the drop, this adjustment would grow smaller over time. Thus, if anything, over time this effect would reduce the size of these drops in representation.

doctoral departments.[31] As seen by comparing Tables 1 and 2, at each rank in the tenure track and at each stage in the Ph.D. program, the average representation of women in top-20 departments is lower than for all doctoral departments. Note that *for all tenure track ranks combined, the representation of women declines as the emphasis on research increases, averaging 30.8% for non-doctoral departments, 18.6% for all doctoral departments, 12.9% for the top-20 departments and 12.2% for the top 10 departments.*

Of special note are the data for non-tenure track (rolling contract) teaching positions. *For the top-20 departments, women's representation in non-tenure track jobs was over three times as high as their representation in tenure track jobs* (Table 2 shows 42.9/12.9 = 3.32 > 3). This ratio is substantially higher than for all doctoral departments (Table 1 shows 36.1/18.6 = 1.94, or about 2).

Going back to 1997, Table 3 gives placements of Ph.D. students from the top 10 and the top 11-20 departments. The number of women in any category tends to be small. With this warning, the reader is invited to assess these data.

Placements of New Ph.D.s

Table 4 shows the types of jobs obtained by new Ph.D.s in the 2012-13-job market. The first column shows that of the 58 women in the job market from top-10 departments, 77.6% took a job in the U.S. Of those who took a job in the U.S., 48.9% landed jobs in doctoral departments and 8.9% in non-doctoral departments. The remaining 8.9%, 21.1% and 17.8% went to non-faculty jobs and the public and private sectors, respectively. As shown in the second to last line, virtually all graduates of top-20 departments found a job. Success in the market was also high for other doctoral departments, with no job found for women at 7.6% and no job found for men at 5.8%.

Focusing on U.S.-based jobs, as line 2 shows, on average, and for women and men, the higher the rank of the department granting the Ph.D., the more likely the first job was in a doctoral department. With regard to gender disparities in placements in doctoral departments, a single year of data provides no reliable evidence. Indeed, looking over these same gender comparisons in this and in the previous three

[31] The motive for using the top 20 rather than those ranked 11-20 is to have more individuals in the cells. The rankings are the 2013 rankings from *US News and World Report.* Due to a three-way tie for 19th, for the purposes of this report, there are 21 departments in the "top 20." The top 10 are Harvard University, Massachusetts Institute of Technology, Princeton University, University of Chicago, Stanford University, University of California-Berkeley, Northwestern University, Yale University, University of Pennsylvania and Columbia University. The next 11 are New York University, University of Minnesota-Twin Cities, University of Michigan-Ann Arbor, University of Wisconsin-Madison, California Institute of Technology, University of California-Los Angeles, University of California-San Diego and Cornell University at 18th with Brown University, Carnegie Mellon University (Tepper) and Duke University all tied for 19th.

CSWEP Reports, for departments ranked 21 and below male new Ph.D.s were slightly more likely to place into doctoral departments than their female counterparts. However, in the analogous comparisons for both top-10 and 11-20 ranked departments, about half comparisons show a male bias and the other half show a female bias. The only caveat here is that the CSWEP data on placements of new Ph.D.s into doctoral departments likely includes placements into non-tenure track teaching positions.

Turning to other types of placements, as lines four and five show, the representation of women among new Ph.D.s landing in the public as opposed to the private sector varies with departmental rank. With regard to foreign placements, overall, those who take jobs outside the U.S. tend to take academic jobs. In previous years, regardless of the rank of her graduate school, a woman was more likely to take a job in the U.S. than her male counterpart. Table 4, lines 1 and 7 show an exception in 2013 – women graduates from departments ranked 11-20 were four percentage points more likely than their male counterparts to take jobs outside of the U.S. This pattern, as well as others exhibited by the data on foreign placements, is difficult to interpret. As incomes and the quality of economics departments in foreign countries improve, so too may the representation of women both amongst foreign students in U.S. graduate schools and amongst new doctorates obtaining jobs in foreign countries. However, with no data on the prevalence of foreign students in the CSWEP survey, meaningful interpretations of gender differences in foreign placements are simply not possible.

On the whole the evidence from the 2013 Survey indicates that our profession is doing well, finding jobs for nearly 96% of its new Ph.D.s and with men and women having an equal chance at a first job in a doctoral department.

2013 Survey Details

Tables 5 and 6 contain more details from the 2013 surveys of doctoral and non-doctoral departments, respectively. This is the fifth year that CSWEP has asked departments to report their numbers of male and female senior economics majors. Here we simply note that the combined total of seniors in the major for all departments responding to the 2013 CSWEP survey was 17,748, of which 32% were women.

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and conceiving (jointly with **Linda Goldberg**) the highly successful mentoring breakfasts at the AEA Meetings.

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Table 1: The Pipeline for Departments with Doctoral Programs: Percent of Doctoral Students and Faculty who are Women

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1st yr students	31.3%	32.2%	35.6%	38.8%	31.9%	33.9%	34.0%	33.9%	31.9%	31.0%	32.7%	35.0%	33.5%	32.1%	32.4%	29.3%	32.7%
ABD	26.8%	28.2%	33.0%	32.3%	30.2%	30.6%	32.7%	33.1%	33.9%	33.6%	32.7%	33.7%	33.5%	34.2%	34.3%	32.5%	31.9%
New Ph.D.	25.0%	29.9%	34.2%	28.0%	29.4%	27.2%	29.8%	27.9%	31.1%	32.7%	34.5%	34.8%	32.9%	33.3%	34.7%	32.5%	35.0%
Asst Prof (U)	26.0%	25.9%	27.8%	21.4%	22.5%	23.2%	26.1%	26.3%	29.4%	28.6%	27.5%	28.8%	28.4%	27.8%	28.7%	28.2%	27.8%
Assoc Prof (U)	11.1%	15.9%	27.3%	17.2%	10.0%	17.2%	24.0%	11.6%	31.2%	24.6%	20.0%	29.2%	25.0%	34.1%	30.8%	40.0%	25.9%
Assoc Prof (T)	13.4%	14.0%	15.1%	16.2%	15.3%	17.0%	19.9%	21.2%	19.2%	24.1%	21.0%	21.5%	21.8%	21.8%	21.9%	21.6%	24.5%
Full Prof (T)	6.5%	6.1%	6.5%	7.4%	5.8%	8.9%	9.4%	8.4%	7.7%	8.3%	7.9%	8.8%	9.7%	10.7%	12.8%	11.6%	12.0%
All Tenured/ Tenure Track	13.4%	11.9%	missing	missing	15.2%	15.2%	15.5%	15.0%	16.1%	16.3%	15.5%	16.9%	16.9%	17.5%	19.0%	18.9%	18.6%
Other (Non-tenure Track)	50.8%	31.8%	missing	missing	32.3%	38.4%	32.7%	32.3%	39.6%	34.4%	40.5%	33.5%	36.1%	33.0%	34.1%	39.5%	36.1%
N departments	120	118	120	120	120	120	128	122	122	124	124	123	119	121	122	122	124

Note: T and U indicate tenured and untenured, respectively

Table 2: The Pipeline for the Top-10 and Top-20 Departments: Percent and Number of Faculty and Students Who are Women

	Top 10					Top 20				
Doctoral Departments	**1997-2001**	**2002-2006**	**2007-2011**	**2012**	**2013**	**1997-2001**	**2002-2006**	**2007-2011**	**2012**	**2013**
Faculty (Fall of year listed)										
Assistant Professor										
Percent	20.4%	22.0%	24.5%	20.6%	17.0%	18.8%	25.0%	23.4%	20.5%	18.7%
Number	21	23	23.7	22	15	32.5	44.9	48.3	44	37
Associate Professor										
Percent	13.2%	16.0%	18.8%	23.3%	23.3%	14.6%	18.1%	22.4%	22.4%	19.1%
Number	4.5	4.2	5.7	7	7	11	9.4	17.3	17	17
Full Professor										
Percent	5.9%	7.0%	8.7%	9.5%	9.6%	6.2%	7.6%	9.6%	8.7%	9.6%
Number	12	17	22	28	28	26	32.1	43.5	41	49
Subtotal										
Percent	11.0%	12.0%	13.5%	13.2%	12.2%	10.4%	13.2%	14.7%	13.4%	12.9%
Number	37.5	44.2	51.3	57	50	69.5	86.4	109.2	102	103
Other (Non-tenure Track)										
Percent	34.8%	45.0%	31.6%	42.9%	43.4%	38.8%	42.3%	32.6%	39.4%	42.9%
Number	4	13	19.8	21	23	9.5	23.4	40	50	48
All Faculty										
Percent	18.2%	25.0%	18.2%	16.3%	15.7%	17.5%	27.6%	19.2%	17.1%	16.6%
Number	63	101.4	80.5	78	73	119.5	196.2	166	152	151
Ph.D. Students										
First Year (Fall of year listed)										
Percent	26.7%	25.0%	25.9%	22.3%	27.9%	30.3%	29.3%	27.3%	27.0%	28.4%
Number	61.5	65.6	61.7	66	65	147	125.5	124.7	126	121
ABD (Fall of year listed)										
Percent	12.2%	27.0%	25.9%	24.8%	30.4%	14.3%	28.0%	28.0%	28.3%	30.3%
Number	165.5	216.8	206	246	255	269	380.8	393.5	430	444
Ph.D. Granted (AY ending in year listed)										
Percent	24.5%	28.0%	26.4%	27.9%	31.3%	24.7%	24.7%	28.4%	27.2%	33.2%
Number	49.5	54.4	49.2	60	67	85	94	97.5	97	124
Undergraduate Senior Majors (AY ending in year listed)										
Percent	missing	missing	38.0%	37.7%	31.7%	missing	missing	35.5%	35.9%	38.6%
Number	missing	missing	898.5	1123	1505	missing	missing	2019	2223	2000

Notes: For each category, the table gives women as a percentage of women plus men. For the five-year intervals, simple averages are reported. Due to missing data, the columns for the 1997-2001 interval report averages over 1997, 1998 and 2001. The assistant, associate and full ranks all include both tenured and untenured faculty.

Table 3: Placements of Women from the Top 10 and Top 20 Economics Departments in the New Ph.D. Job Market

	Top 10					Top 20				
Doctoral Departments	**1997-2001**	**2002-2006**	**2007-2011**	**2012**	**2013**	**1997-2001**	**2002-2006**	**2007-2011**	**2012**	**2013**
U.S. Based Job Obtained										
Percent	25.6%	24.8%	25.2%	28.5%	30.8%	25.9%	21.9%	32.7%	27.6%	26.6%
Number	22	37	32.3	41	41	41	59	59.8	59	68
Doctoral Departments										
Percent	15.9%	30.3%	25.3%	26.4%	24.4%	17.6%	25.6%	27.2%	28.2%	28.5%
Number	14.5	27	19	23	22	22	38	32.5	35	35
Academic Other										
Percent	38.9%	42.1%	41.9%	50.0%	66.7%	44.4%	30.7%	26.0%	25.0%	50.0%
Number	3.5	3	2.2	3	4	8	7	5.5	3	8
Non Faculty, Any Academic Department										
Percent					66.7%					35.3%
Number					4					6
Public Sector										
Percent	22.9%	26.2%	28.1%	36.8%	30.4%	30.1%	27.3%	30.5%	24.4%	28.0%
Number	4	2	7.2	7	7	11	14	12.7	10	14
Private Sector										
Percent	40.3%	20.4%	26.4%	25.0%	26.7%	37.9%	31.3%	30.1%	24.4%	32.0%
Number	9.5	5.8	8.2	8	8	12.5	12.8	13.5	11	16
Foreign Based Job Obtained										
Percent	15.9%	26.1%	21.3%	22.0%	34.0%	17.9%	17.2%	24.0%	21.4%	33.3%
Number	3.5	9	9.5	9	16	7	17	23.7	18	37
Academic										
Percent	60.0%	27.0%	20.4%	19.4%	25.8%	20.0%	18.2%	23.0%	13.3%	32.1%
Number	1.5	7	6.7	6	8	3.5	12	15.8	8	25
Nonacademic										
Percent	5.9%	16.0%	26.9%	30.0%	25.8%	6.3%	11.5%	28.8%	41.7%	36.4%
Number	1.5	2	2.8	3	8	2.5	4	7.8	10	12
No Job Obtained										
Percent	29.2%	22.6%	33.3%	0%	0%	32.3%	33.3%	21.9%	16.7%	0%
Number	7	1	0.2	0	0	10.5	4	1.2	1	0
Total On the Job Market										
Percent	20.6%	31.1%	26.3%	26.6%	27.9%	21.9%	31.7%	28.8%	25.7%	28.6%
Number	32.5	59	46.2	50	57	69	100	90.3	78	105

Notes: The (2,4) cell shows that among Ph.D.'s from top-10 schools in the 2011-12 job market, 23 women placed in U.S.-based doctoral departments and these women accounted for 26.4% of such placements. For five-year intervals, simple averages are reported.

Table 4: Employment Shares for New Ph.D.s in the 2012-2013 Job Market

	Top 10		Top 11-20		All Others	
	Women	**Men**	**Women**	**Men**	**Women**	**Men**
U.S. based job (Share of all individuals by gender)	**77.6%**	**75.3%**	**58.6%**	**62.6%**	**67.8%**	**61.4%**
Doctoral Departments	48.9%	61.8%	38.2%	29.9%	22.4%	23.6%
Academic, Other	8.9%	1.8%	11.8%	9.0%	25.2%	31.6%
Non Faculty Job	8.9%	1.8%	5.9%	13.4%	7.7%	12.7%
Public Sector	15.6%	14.5%	20.6%	29.9%	14.7%	13.7%
Private Sector	17.8%	20.0%	23.5%	17.9%	30.1%	18.4%
Foreign job obtained (Share of all individuals by gender)	**22.4%**	**23.3%**	**41.4%**	**37.4%**	**24.6%**	**32.8%**
Academic	61.5%	67.6%	70.8%	75.0%	75.0%	72.6%
Nonacademic	38.5%	32.4%	29.2%	25.0%	25.0%	27.4%
No job found (Share of all individuals by gender)	**0.0%**	**1.4%**	**0.0%**	**0.0%**	**7.6%**	**5.8%**
Total Number of individuals	**58**	**146**	**58**	**107**	**211**	**345**

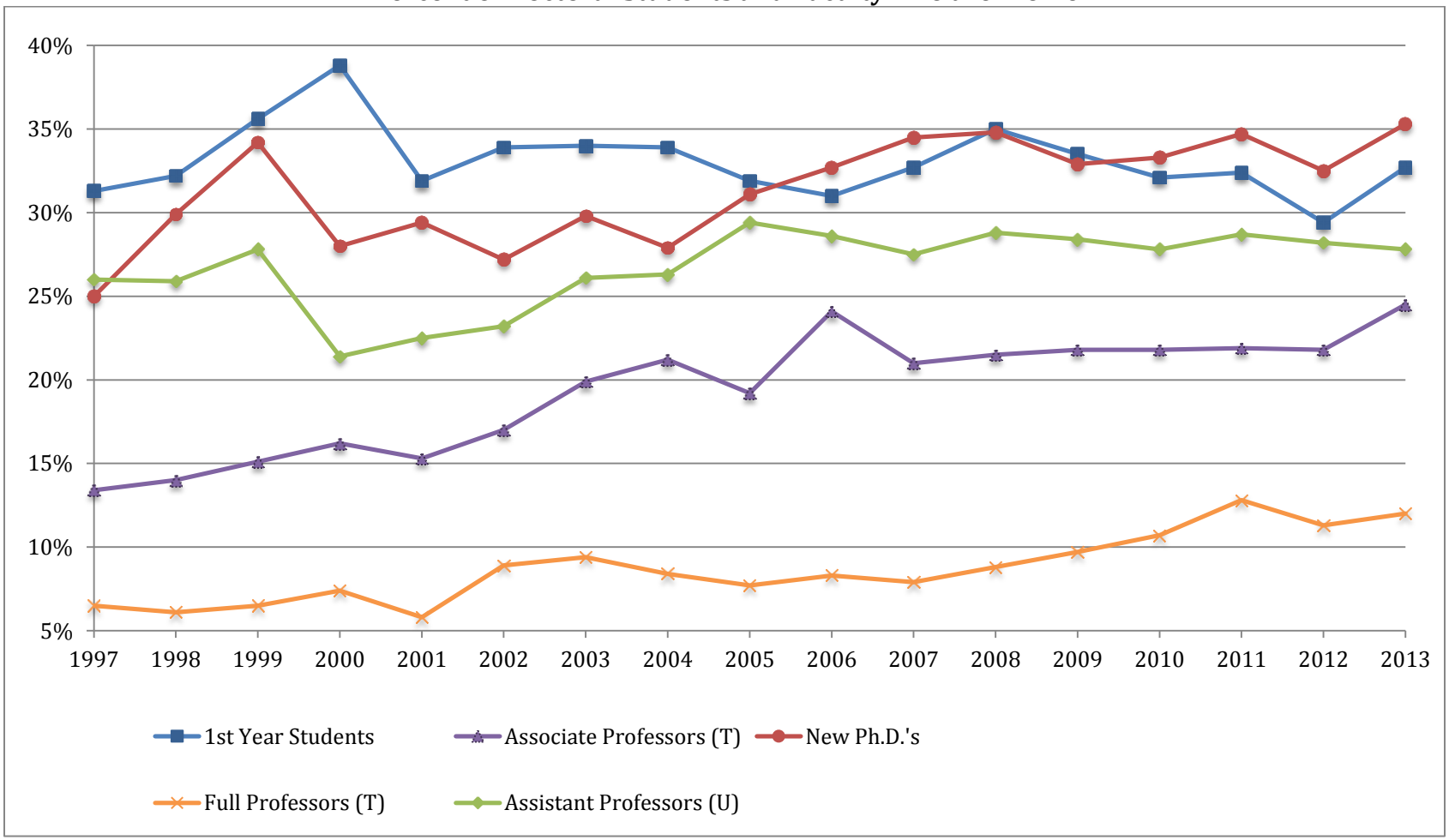
Table 5: Gender Composition of Faculty and Students: Economics Departments with Doctoral Programs

	Women	Men	Percent Female
Faculty Composition (Fall 2013)			
Assistant Professor	**196**	**515**	**27.6%**
Untenured	185	481	27.8%
Tenured	11	34	24.4%
Associate Professor	**142**	**436**	**24.6%**
Untenured	7	20	25.9%
Tenured	135	416	24.5%
Full Professor	**175**	**1288**	**12.0%**
Untenured	1	14	6.7%
Tenured	174	1274	12.0%
All tenured/tenure track	**513**	**2239**	**18.6%**
Other (non-tenure track)	**125**	**228**	**35.4%**
All Other Full Time	**52**	**85**	**38.0%**
All faculty	**690**	**2552**	**21.3%**
Students and Job Market			
Students			
Undergraduate senior majors (Fall 2013)	4175	9234	31.1%
First-year Ph.D. students (Fall 2013)	468	963	32.7%
ABD students (Fall 2013)	1179	2514	31.9%
Ph.D. granted (2012-2013 Academic Year)	370	687	35.0%
Job Market (2012-2013 Academic Year)			
U.S. based job	**222**	**389**	**36.3%**
Doctoral Departments	67	138	32.7%
Academic, Other	44	75	37.0%
Non Faculty	17	38	30.9%
Public Sector	35	65	35.0%
Private Sector	59	73	44.7%
Foreign job obtained	**89**	**187**	**32.2%**
Academic	64	135	32.2%
Nonacademic	25	52	32.5%
No job Found	**16**	**22**	**42.1%**
Number on job market	**327**	**598**	**35.4%**

Table 6: Gender Composition of Faculty and Students: Economics Departments without Doctoral Programs

	Women	Men	% Female
Faculty Composition			
Assistant Professor	**97**	**145**	**40.1%**
Untenured	89	129	40.8%
Tenured	8	16	33.3%
Associate Professor	**87**	**152**	**36.4%**
Untenured	3	6	33.3%
Tenured	84	146	36.5%
Full Professor	**92**	**322**	**22.2%**
Untenured	5	13	27.8%
Tenured	87	309	22.0%
All tenured/tenure track	**276**	**619**	**30.8%**
Other (non-tenure track)	**54**	**86**	**38.6%**
All faculty	**330**	**705**	**31.9%**
Student Information (2012-2013 Academic Year)			
Senior Majors	1504	2835	34.7%
Completed Masters	60	98	38.0%
N Departments		108	

Figure 1: The Pipeline for Departments with Doctoral Programs: Percent of Doctoral Students and Faculty who are Women



Note: T and U indicate tenured and untenured, respectively.

Figure 2: The Pipeline for Departments without Doctoral Programs:
Percent of Students and Faculty who are Women (n = 108 Responding Departments)

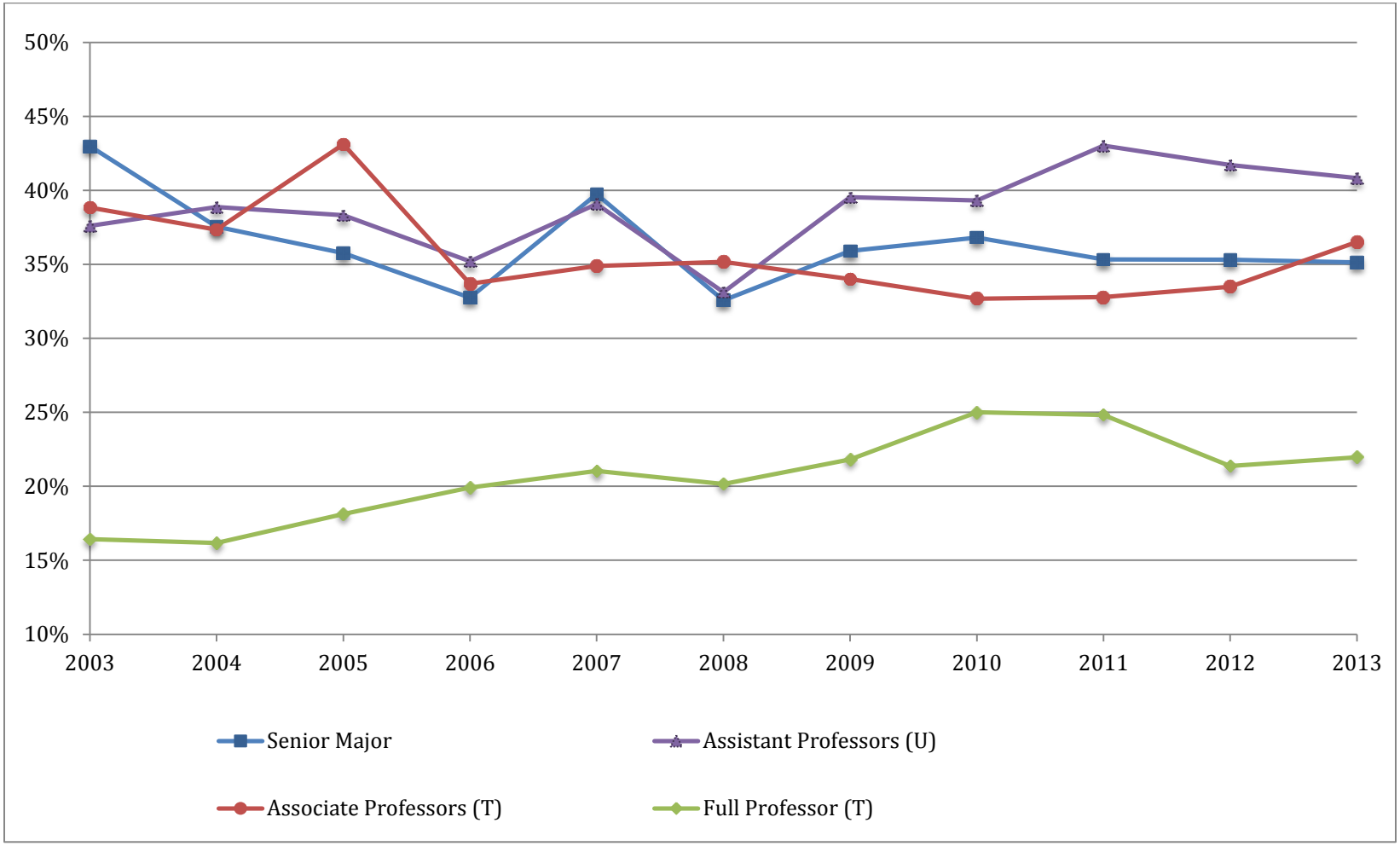


Figure 3: The Percentage of Women in the t^{th} Cohort of First-year Ph.D. Students When They Matriculated in t, When Cohort Survivors Graduated with Ph.D.s in t+5, and When Continuing Survivors Became Last-Year-in-Rank Assistant Professors in t+5+7, t = 1997 - 2013

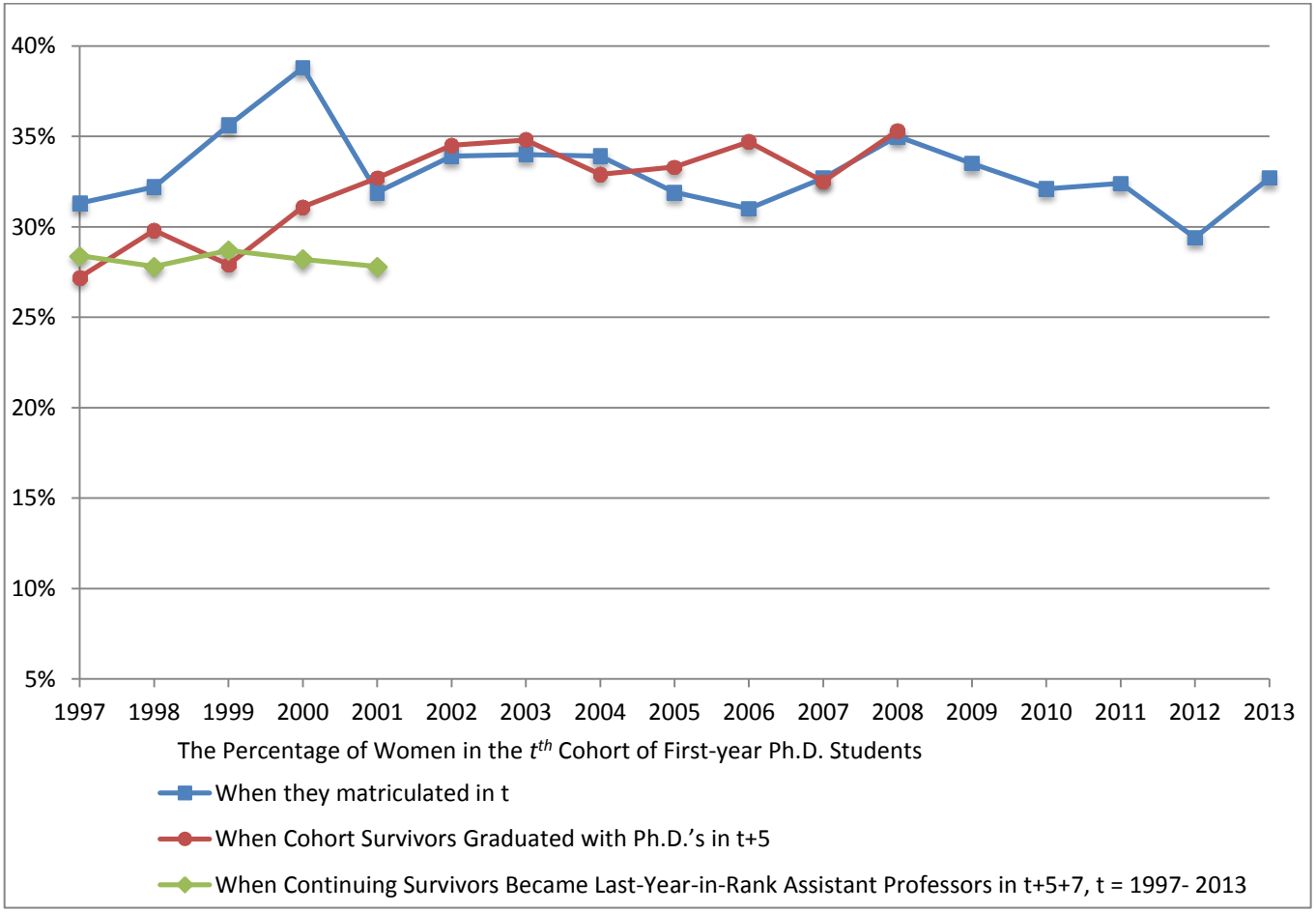


Figure 4: The Percentage of Women in the t^{th} Cohort of New Ph.D.s When They Received Their Degrees in t, When Cohort Survivors Became Last-Year-in-Rank Assistant Professors in t+7, and When Continuing Survivors Became Last-Year-in-Rank Associate Professors in t+7+7, t = 1997 - 2013