

## **Report of the Committee on the Status of Women in the Economics Profession**

Thirty five years ago at the December 1971 annual meeting of the American Economic Association in New Orleans, the Committee on the Status of Women in the Economics Profession, CSWEP, was founded to monitor the status and promote the advancement of women in the economics profession. Much has changed over the past thirty-five years as shown in Figure 1. In 1972, the first year that CSWEP administered a survey of faculty and students in economics departments, women represented 8.8 percent of assistant professors, 3.7 percent of associate professors and 2.4 percent of full professors. By 2006 women more than tripled their representation to 28.6 percent of assistant professors, increased by almost seven fold their share of untenured associate professors to 24.6 percent and represented 8.3 percent of all full professors in Ph.D. granting economics departments. Between 1972 and 2006 women's share of Ph.D.'s awarded in economics departments more than quadrupled from 7.6 to 32.7 percent. This report presents results from our annual survey of departments for 2006 with particular attention to the trends over the past decade. It will then summarize CSWEP's activities more generally over the past year.

### **Data on Women Economists**

For the 2006 CSWEP survey 124 Ph.D. economics departments were contacted. Responses were received from 96 departments yielding a high response rate of 77.4 percent. The CSWEP liberal arts survey was sent to 147 schools included in the listings of "Baccalaureate Colleges – Liberal Arts" from the Carnegie Classification of Institutions of Higher Education (2000 Edition) and augmented this year to include 6 departments in research universities that offer a Master's degree but not a Ph.D. degree

program in economics. The number of schools who responded was 87 yielding a response rate 59.2 percent, up from last year's rate of 56 percent.

Figure 2 and Table 1 summarize the trends in women's representation in Ph.D. granting departments over the past decade. We have labeled these charts as female economists "in the pipeline" to show the progression of women through the ranks of newly minted Ph.D.s to tenured full professors. A concern that has been raised in previous CSWEP annual reports and in the Fall 2006 CSWEP newsletter is that this pipeline may be "leaky". As discussed by John J. Siegfried and Judith S. Ricks (2006) in the Fall 2006 CSWEP newsletter and Siegfried (2006), thirty years ago women represented approximately a quarter of all undergraduate economics majors. That share then gradually rose to 35 percent by 1985 and then declined to near 30 percent in 1990. For the past decade, the female percentage of undergraduate economics majors has plateaued to a narrow range, between 30 and 32 percent, except briefly during 2001-2003, when it rose to its post-1990 peak of 35 percent. As detailed in John J. Siegfried and Wendy A. Stock (2006), selective liberal arts colleges and universities that offer a Ph.D. in economics provide the undergraduate training for almost three-quarters of new economics Ph.D.s. Therefore, trends in undergraduate economics majors help us predict the potential inflow into the academic pipeline. Given that the share of women of all undergraduate students has risen over this period to now 57% this means the propensity by women to become an economics major has actually fallen even as their share of majors has remained constant.

Taking two year averages to smooth the survey data, we see in Table 1 that the female share of 1<sup>st</sup> year students in economics Ph.D. programs went from 30.9 percent in

1996-7 to 31.45 percent in 2005-6, very close to the share of women undergraduate economics majors. Again looking at the 1996-7 to 2005-6 time period, the female share of new Ph.D.'s increased from 24.55 percent to 31.9 percent. This suggests that the pipeline is not very leaky through completion of the Ph.D. but further growth in the share of Ph.D.s in economics granted to women will be limited until the share of female undergraduate majors increases.

Turning to the faculty ranks there has been significant progress in women's share of assistant and associate professorships. The female share of assistant professors rose from 24.9 percent in 1996-7 to 29 percent in 2005-6. Over the same period the female share of tenured associate professors grew from 14.4 to 21.7 percent with a sharp increase in 2006 to a new high of 24.6 percent. Looking at Figure 2 there seems to have been acceleration in the share of women who are tenured associate professors since 2000. Unfortunately, there has been little growth in women's representation in the ranks of tenured full professors over the past decade. When we look at the share of tenured full professors in top ten or twenty departments<sup>1</sup> we see that there has been considerable growth, although the share (7.9 percent) is still lower than the average for all Ph.D.-granting departments (8.3 percent).

*Results for Ph.D.-Granting Departments and Liberal Arts Schools (2005-2006)*

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<sup>1</sup> These rankings are taken from *US News and World Report* 2005 Edition. The top ten departments include Massachusetts Institute of Technology; Harvard University; Princeton University; Stanford University; University of Chicago; University of California-Berkeley; Yale University; Northwestern University; University of Pennsylvania; and the University of California-San Diego. The top twenty departments additionally include, University of California-Los Angeles; University of Michigan-Ann Arbor; University of Wisconsin-Madison; University of Minnesota-Twin Cities; California Institute of Technology; Columbia University; University of Rochester; Cornell University; Carnegie Mellon; and New York University.

Tables 2 and 3 present results from the 2006 CSWEP survey for Ph.D. granting departments in greater detail, first for all departments and then for the top 10 and 20 ranked departments separately. In contrast to past reports we find in 2006 that the gap between the share of women faculty by rank for all Ph.D.-granting programs and those in the top ten or twenty has virtually disappeared for untenured assistant and associate professors and has narrowed for full professors.

However this is not true for tenured associated professors where the share of women is 24.1 percent for all faculty in Ph.D.-granting institutions and just 12.5 in the top twenty departments. In addition, there is a difference in the gender composition of graduate students. Women make up 31 percent of first year Ph.D. students in all departments but only 24.8 percent in top ten departments and 27.4 percent in top twenty. Interestingly the total number of male and female first year students in the top ten departments decreased sharply from 2005 to 2006 from 304 to 238. However, the total number of first year students in all Ph.D. programs remained roughly constant over this period. In terms of the pipeline this means that absolute number of women students completing a Ph.D. from the top departments will be smaller in the future.

Tables 2 and 3 also show how women have fared in the job market for new Ph.D.'s relative to their male counterparts. The majority of male and female graduate students in economics end up taking jobs in the United States and women are somewhat more likely to take a U.S.-based job than their male counterparts (74 vs. 69 percent). Thus while women constituted 32.7 percent of new Ph.D.'s in the 2005-2006 academic year, they comprised 33.9 percent of those obtaining U.S. based jobs and 28.5 percent of those obtaining foreign jobs. Traditionally women have been underrepresented in

academic positions in Ph.D.-granting institutions and “over-represented” (relative to their share of all graduates) in academic positions in non-PhD. granting institutions and in public sector jobs. While this was not the case in data presented in last year’s survey this pattern has returned in 2006 with women constituting 30.1 percent of new hires in U.S. Ph.D. granting departments and 43.2 percent in non Ph.D. granting academic programs. Their share of public sector employment was 35.5 percent. However, when we examine the employment patterns of those women graduating from top ten and top twenty departments we see a different pattern. Women in top twenty departments constituted 30.7 percent of newly minted Ph.D.’s from these departments in 2005-2006. They represented 30.7 percent of new hires in U.S. based Ph.D. granting departments and 23.5 percent of those in non Ph.D. degree programs.

The CSWEP survey also includes information on non-tenure track faculty. As seen in Tables 2-3, this category is disproportionately female. Among all Ph.D.-granting economics departments in the U.S., 34.4 percent of the non-tenure track faculty is female in 2006 compared to 16.3 percent of the tenured/tenured track faculty. Similarly, in the top ten(twenty) departments women comprise 37.5(32.3) percent of the non-tenured faculty versus 13.9(13.8) percent of the tenured/tenure track faculty. So women are more likely to be in non-tenured track jobs rather than tenure tracked jobs compared to men. More generally, we see an increase in the share of all faculty, male and female, in non-tenured positions from 10.8 percent in 2005 to 13 percent in 2006.

If the absolute number of women economists is small in a department it could be limiting for female students or female junior faculty who may feel that they are a token appointment. As shown in Table 4 only 3.1 percent of all departments have no women

faculty at all in 2006. This is down from 5.4 percent in 2005. Over thirty five percent of departments have 3 or more women faculty members in all Ph.D. programs and 40 percent of top twenty departments have more than 3 women faculty. However, this is down from the previous year when 50 percent of top twenty departments had 3 or more women. In addition, one in five departments have no women faculty at the rank of associate or full professor and this is up from the previous year for all Ph.D. programs (18.3 %) and for top twenty programs (15%). This is cause for concern.

As already discussed in analyzing hiring patterns, female faculty are better represented at liberal arts institutions than at Ph.D.-granting institutions (see table 5). In 2006 in liberal arts institutions and those research universities that only granted BA/MA economics degrees, women were 35 percent of untenured assistant professors, 33.7 percent of tenured professors and 19.9 percent of tenured full professors; comprising 27.6 percent of tenured or tenured track faculty versus just 16.3 percent in Ph.D.-granting programs. In terms of the pipeline of women entering doctoral programs in economics, however, we see a worrying trend in liberal arts institutions. The fraction of student undergraduate majors who were women at these institutions was 32.8 percent in 2006 down from 35.7 in 2005 and 37.6 in 2004.

### **The Committee's Recent Activities**

#### *On-going Activities*

One of CSWEP's major activities is the production of our thrice-yearly newsletter. The Winter 2006 newsletter, co-edited by Ann Owen, included information on the annual survey of departments, along with articles on teaching economics to three different types of students – graduate students, undergraduates at a small college and

MBA students. It also included interviews with the 2004 Elaine Bennett research prize recipient, Marianne Bertrand, and the 2005 Carolyn Shaw Bell Award winner, Claudia Goldin. Katharine Abraham co-edited the Spring Newsletter that included articles on research careers outside academia and biographies of board members Nancy Rose and Donna Ginther. The Fall newsletter was co-edited by Gail Hoyt and featured articles on “the pipeline” in economics and biographies of board members Dick Startz and Anna Paulson. These newsletters would not be possible without the tireless efforts of Karine Moe.

As part of its ongoing efforts to increase the participation of women on the AEA program, CSWEP organized six sessions plus a panel discussion for the January 2006 ASSA meetings in Boston. Lisa Barrow, Daniel Hamermesh and Lori Kletzer organized three sessions on gender-related issues and Sharon Oster and Judith Chevalier organized three sessions on industrial organization. Daniel Hamermesh also organized and chaired a panel discussion entitled “How to jump start your career”. Francine Blau, past CSWEP Chair, led the CSWEP business meeting discussion on results from the annual survey and other CSWEP activities with its associates and other interested AEA members. Suggestions for future activities, especially with respect to the CSWEP NSF funded CeMent mentoring program, were made.

During 2006 CSWEP sponsored two mentoring workshops for junior faculty in economics. After the January ASSA meetings in Boston we held the second national National Science Foundation funded CeMent mentoring workshop for female junior faculty in economics. This was followed by a regional mentoring workshop held in March at the Midwest Economics Association meetings in Chicago. Participants were

enthusiastic in their exit survey about the quality and usefulness of the panels and overall activities of the workshop. We thank all the mentors and organizers who participated in these workshops especially Rachel Croson, Donna Ginther and Kim Marie McGoldrick. We will conduct an additional regional workshop in February 2007 at the Eastern Economic Association meetings and hope to be able to offer more workshops in the future.

During the 2006 business meeting the Carolyn Shaw Bell Award was presented to Claudia Goldin, the Henry Lee Professor of Economics at Harvard University. The Carolyn Shaw Bell award is given annually to a woman who has furthered the status of women in the economics profession through her example, achievements, contributions to increasing our understanding of how women can advance through the economics profession, and mentoring of other women. Professor Goldin has taken the tools of quantitative economics to historical data in ways that inform us at the deepest level about a range of current economic issues. Her work on the long-term evolution of female labor force participation stands as a model in the field of economic history. Professor Goldin has been a Vice President of the AEA, a board member of CSWEP, the President of the Economic History Association, the Editor of the Journal of Economic History, and served on numerous editorial boards for both general purpose economics journals and more specialized history journals. As the first tenured woman in the economics departments at both the University of Pennsylvania and Harvard, Professor Goldin has been an inspiration to many other women, readily sharing her own experiences while simultaneously demonstrating the possibilities of success with her own stellar record.



The Chair thanks Sharon Oster, Catherine Mann and Caren Grown for their service on the Carolyn Shaw Bell Awards Committee.

*CSWEP's Regional Activities*

CSWEP's regional representatives organized sessions at each of the regional association meetings—including the Eastern, Southern, Midwest, and Western Economic Association. Our thanks go to Anna Paulson (Midwest), Ann Owen (Eastern), Gail Hoyt (Southern) and Lori Kletzer (Western), for their excellent programs and efforts to help women economists in their regions maintain and increase their professional networks. Abstracts of the papers presented at these association meetings are presented in the newsletters each year.

*Additional Words of Thanks*

The Chair would like to thank the membership chair, Joan Haworth and her staff, including Lee Fordham and Donya Samara, for their essential contribution to our outreach mission. Joan Haworth has also generously contributed to CSWEP by establishing the Joan Haworth Mentoring Fund to which women or institutions may apply for funds to support or develop mentoring activities or relationships to facilitate the professional advancement of women. See <http://www.cswep.org/mentoring/MentoringFund.htm> for further details about this program. The terms of four of our Committee members ended in December – Rachel Croson, Lori Kletzer, Sharon Oster and Ann Owen. They have all made outstanding contributions and we are enormously grateful to them for their willingness to serve. This was my first as Chair along with new Committee members Dick Startz, Donna Ginther and Anna Paulson. We are delighted to have them aboard and thank them for the very

significant contributions they have already made. The Chair also thanks the other members of the Committee for their exceptional efforts in the past year to advance the goals of CSWEP. CSWEP receives both financial and staff support from the American Economic Association. We are especially grateful for all the help we receive from John Siegfried and his staff -- Edda Leithner, Barbara Fiser and Susan Houston. The Chair also warmly thanks Anne Hurst, Diana Stockwell, Karin McMaster, and especially Kathy Spagnoli from Tufts University who have all provided excellent and indispensable administrative support for the Committee over the past year. Finally the Committee is deeply indebted to Tufts University for their administrative support of CSWEP's activities and for providing CSWEP with office space and other resources.

Lisa M. Lynch, *Chair*

### **References**

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- Siegfried, John J. and Judith S. Ricks. "The Gender Mix of Undergraduate Economics Majors," *Committee on the Status of Women in the Economics Profession Newsletter*, Fall 2006: 4-6 ([www.cswep.org](http://www.cswep.org)).
- Siegfried, John J. and Wendy A. Stock. 2006. "The Undergraduate Origins of Ph.D. Economists." Unpublished Working Paper 06-W11, Vanderbilt University (May).

**Figure 1: Percentage Female Faculty by Rank**

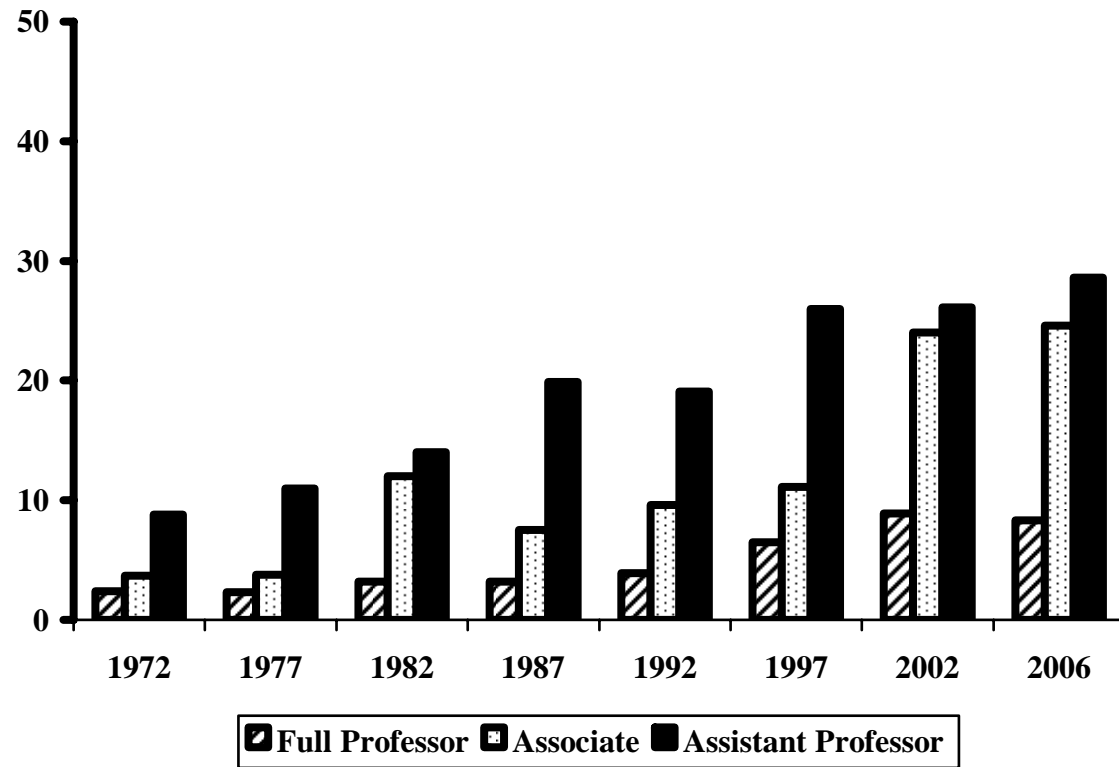
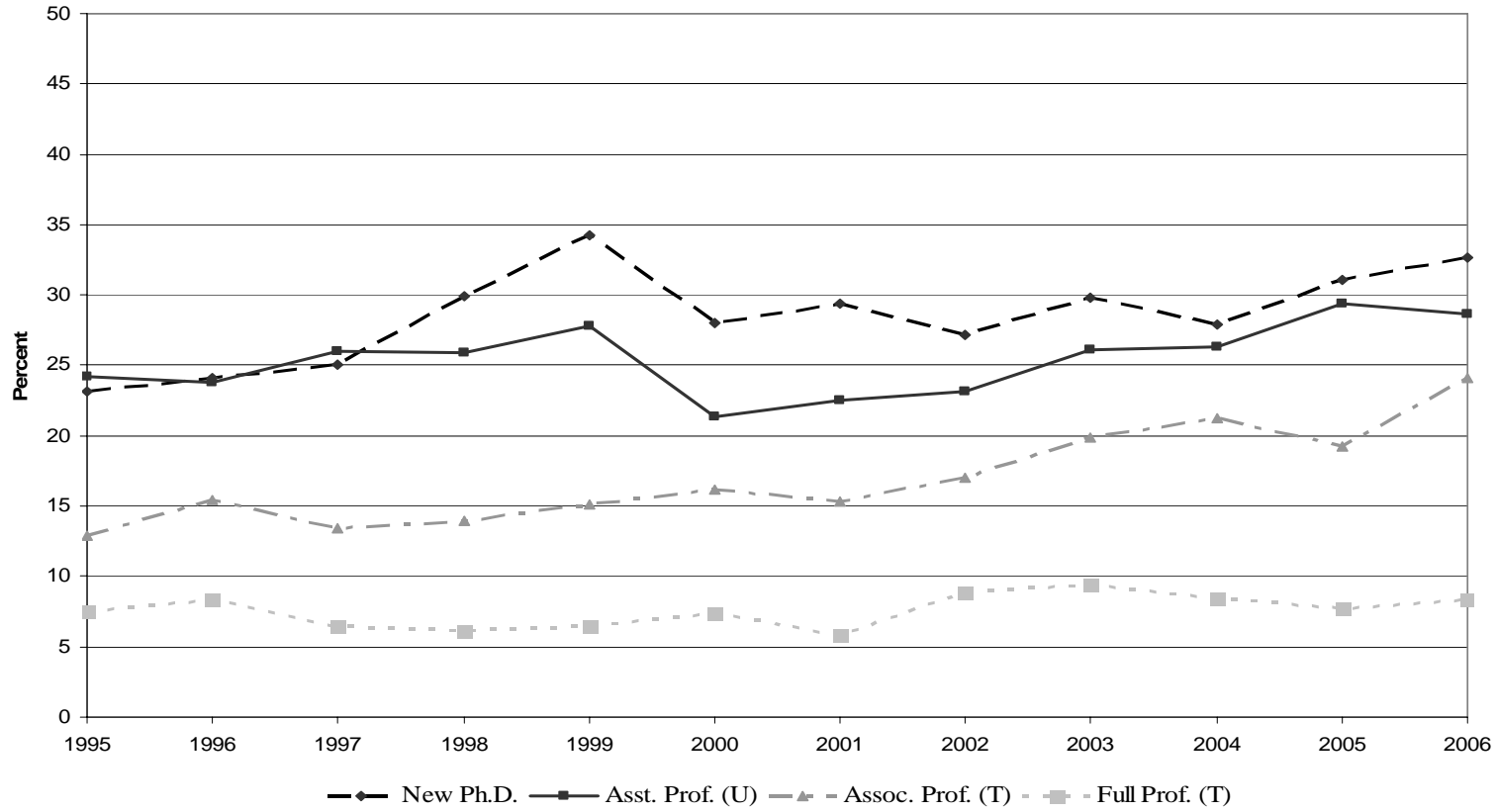


Figure 2. Percentage of Economists in the Pipeline Who Are Female--All Ph.D. Granting Departments



**Table 1 -- The Percentage of Economists in the Pipeline Who Are Female, 1995-2005**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>All Ph.D. Granting Departments</b>											
1st yr students	30.5	31.3	32.2	35.6	38.8	31.9	33.9	34.0	33.9	31.9	31.0
ABD	28.3	26.8	28.2	33.0	32.3	30.2	30.6	32.7	33.1	33.9	33.6
New Ph.D.	24.1	25.0	29.9	34.2	28.0	29.4	27.2	29.8	27.9	31.1	32.7
Assistant Professor (U)	23.8	26.0	25.9	27.8	21.4	22.5	23.2	26.1	26.3	29.4	28.6
Associate Professor (U)	9.1	11.1	15.9	27.3	17.2	10.0	17.2	24.0	11.6	31.2	24.6
Associate Professor (T)	15.4	13.4	14.0	15.1	16.2	15.3	17.0	19.9	21.2	19.2	24.1
Full Professor (T)	8.4	6.5	6.1	6.5	7.4	5.8	8.9	9.4	8.4	7.7	8.3
N departments	98	95	92	77	76	69	83	95	98	93	96
<b>Top 10 Ph.D. Granting Departments</b>											
1st yr students	26.5	20.3	27.2	29.6	29.5	26.9	28.5	21.2	26.0	26.0	24.8
ABD	23.9	25.0	22.0	25.2	25.2	26.6	27.0	26.1	26.3	26.3	27.8
New Ph.D.	18.6	16.5	25.9	24.3	23.0	30.5	25.7	26.3	25.5	31.4	30.3
Assistant Professor (U)	21.1	20.0	17.7	14.7	18.2	18.8	15.8	21.9	21.3	24.1	27.4
Associate Professor (U)	0.0	12.5	36.4	45.5	30.8	13.3	7.7	11.1	12.5	30.0	27.3
Associate Professor (T)	20.0	12.5	7.7	28.6	36.4	23.5	28.6	17.6	6.7	14.3	10.0
Full Professor (T)	5.3	5.0	3.7	3.9	7.1	6.3	5.6	7.0	8.2	7.3	8.0
N departments	9	8	7	7	7	10	9	10	10	10	10
<b>Top 20 Ph.D. Granting Departments</b>											
1st yr students	30.2	21.5	28.8	31.1	32.8	30.5	31.9	26.1	27.7	27.0	27.4
ABD	26.4	28.6	24.1	25.4	26.2	27.2	27.2	28.4	29.7	28.9	28.9
New Ph.D.	22.7	24.9	27.1	28.1	24.6	26.8	24.7	24.8	28.2	30.7	30.7
Assistant Professor (U)	18.2	17.8	16.4	21.6	17.7	18.8	21.5	25.1	24.1	27.0	26.2
Associate Professor (U)	0.0	7.7	36.4	46.2	26.7	13.3	13.3	23.1	20.7	26.7	24.4
Associate Professor (T)	16.7	16.0	8.3	16.3	12.8	19.6	22.9	18.9	12.1	14.3	12.5
Full Professor (T)	5.5	5.9	4.7	4.8	7.4	7.0	9.0	6.3	7.6	7.5	7.9
N departments	19	17	16	15	15	18	18	19	19	20	20

Notes: U refers to untenured and T refers to tenured. ABD indicates students who have completed "all but dissertation."

**Table 2 -- Percentage Female for Ph.D. granting Economics Departments (2006)**

<b>A. Faculty Composition (2006-2007 Academic Year)</b>	<b>Women</b>	<b>Men</b>	<b>% Female</b>
<b>Assistant Professor</b>	164	415	28.3
Untenured	160	400	28.6
Tenured	4	15	21.1
<b>Associate Professor</b>	100	313	24.2
Untenured	8	25	24.6
Tenured	92	288	24.1
<b>Full Professor</b>	105	1,166	8.2
Untenured	0	7	0.0
Tenured	105	1,159	8.3
All tenured/tenure track	368	1,894	16.3
Other (non-tenure track)	116	221	34.4
<b>All faculty</b>	484	2,115	18.6
<b>B. Students and Job Market</b>	<b>Women</b>	<b>Men</b>	<b>% Female</b>
<b>Students (2006-2007 Academic Year)</b>			
First-year Ph.D. students	411	914	31.0
ABD students	1,023	2,026	33.6
Ph.D. granted (2005-2006 Academic Year)	261	536	32.7
<b>Job Market (2005-2006 Academic Year)</b>			
U.S. based job	202	393	33.9
Academic, Ph.D. granting department	80	186	30.1
Academic, Other	48	63	43.2
Public sector	33	60	35.5
Private sector	41	84	32.8
Foreign Job obtained	57	143	28.5
Academic	38	79	32.5
Nonacademic	19	64	22.9
No job found	14	34	29.2

*Note:* ABD indicates students who have completed "all but dissertation."

Table 3: Percentage Female for Top 10 and Top 20 Ph.D. Granting Economics Departments (2006)

A. Faculty Composition (2006-2007 Academic Year)	Top 10			Top 20		
	Women	Men	% Female	Women	Men	% Female
<b>Assistant Professor</b>	29	77	27.4	49	138	26.2
Untenured	29	77	27.4	49	138	26.2
<b>Associate Professor</b>	5	26	16.1	10	51	16.5
Untenured	3	8	27.3	5	16	24.4
Tenured	2	18	10.0	5	35	12.5
<b>Full Professor</b>	20	231	8.0	34	391	7.9
Untenured	0	0	0.0	0	0	0.0
Tenured	20	231	8.0	34	391	7.9
All tenured/tenure track	54	334	13.9	93	579	13.8
Other (non-tenure track)	12	20	37.5	20	42	32.3
<b>All faculty</b>	66	354	15.7	112	621	15.3
<b>B. Students and Job Market</b>	<b>Women</b>	<b>Men</b>	<b>% Female</b>	<b>Women</b>	<b>Men</b>	<b>% Female</b>
<b>Students (2006-2007 Academic Year)</b>						
First-year Ph.D. students	59	179	24.8	120	318	27.4
ABD students	256	664	27.8	384	943	28.9
Ph.D. granted (2005-2006 Academic Year)	59	136	30.3	103	232	30.7
<b>Job Market (2005-2006 Academic Year)</b>						
U.S. based job	42	112	27.3	74	160	31.6
Academic, Ph.D. granting department	27	69	28.1	42	95	30.7
Academic, Other	1	6	14.3	4	13	23.5
Public sector	6	16	27.3	11	22	33.3
Private sector	8	21	27.6	17	30	36.2
Foreign Job obtained	12	25	32.4	26	57	31.3
Academic	10	15	40.0	18	32	36.0
Nonacademic	2	10	16.7	8	25	24.2
No job found	0	8	0.0	0	9	0.0

Note: ABD indicates students who have completed "all but dissertation."

**Table 4: Distribution of Departments by Number of Women on the Faculty (2006)**

Number of Women	All PhD Granting Economics Departments			Top 20 Economics Departments		
	All	Assistant	Associate or Full	All	Assistant	Associate or Full
0	3.1	19.8	20.8	0.0	10.0	20.0
1-2	27.1	57.3	43.8	20.0	45.0	40.0
3-4	38.5	17.7	24.0	35.0	35.0	25.0
5 and over	31.3	5.2	11.4	45.0	10.0	15.0

**Table 5 -- Percentage Female for Economics Departments in Liberal-Arts Institutions (2006)**

<b>A. Faculty Composition (2005-2006 Academic Year)</b>	<b>Women</b>	<b>Men</b>	<b>% Female</b>
<b>Assistant Professor</b>	67	121	35.6
Untenured	62	115	35.0
Tenured	5	6	45.5
<b>Associate Professor</b>	68	138	33.0
Untenured	6	16	27.3
Tenured	62	122	33.7
<b>Full Professor</b>	64	262	19.6
Untenured	0	5	0.0
Tenured	64	257	19.9
All tenured/tenure track	199	521	27.6
Other (non-tenure track)	62	122	33.7
<b>All faculty</b>	<b>261</b>	<b>643</b>	<b>28.9</b>
<b>B. Student Information</b>	<b>Women</b>	<b>Men</b>	<b>% Female</b>
<b>Student Majors (2004-05 Academic Year)</b>	1,209	2,482	32.8