

**Swedish Institute for Social Research (SOFI)**

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**Stockholm University**

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**WORKING PAPER 5/2007**

**THE FRUITS OF ECONOMICS – A TREAT FOR WOMEN?  
- on gender balance in the economics profession in Sweden**

**by**

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Christina Jonung and Ann-Charlotte Ståhlberg

Paper presented at the 25th Arne Ryde Symposium *The Economics of Higher Education and the Education of Economists*, November 2-3, 2006.

Revised version February 2007

## Abstract:

Economics in Sweden is still a male-dominated profession, despite an increasing number of women entering the profession during recent decades. About one third of the students in the higher undergraduate programs in economics are women. Women's proportion of the licentiate degrees obtained has increased from zero to 27 percent and their share of doctoral degrees from zero to 26 percent between 1970 and 2005. The proportion of women in the research and teaching staff at academic institutions in economics, 16 percent, is slightly below their proportion of the total number with a doctoral degree in economics in the country, 18 percent. Further, women's careers in academia have not kept up with those of men. Only 13 percent of those with the academic grade of associate professor or higher are women. No more than six percent of the full professors in economics at Swedish universities, i.e. five, are women.

Women in economics are underrepresented relative to women employed in the university as a whole. When comparing the career ladder for women in economics to that of other academic fields, we find economics to be more akin to mathematics than to the other social sciences. The situation for women in academic economics in Sweden is surprisingly similar to that in other countries for which we have comparable data. The paper also considers the interest and success of female economists in professional and public economic policy debate through their representation in *The Swedish Association of Economics* and their participation as authors in *Ekonomisk Debatt*, the journal of the association, inaugurated in 1973.

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## **THE FRUITS OF ECONOMICS – A TREAT FOR WOMEN? - on gender balance in the economics profession in Sweden.\***

At the beginning of the last century, the Higher University Council at the University of Lund had to deliver an utterance on a committee proposal concerning women's admittance to professorial positions. During the debate in the council, Knut Wicksell, at the time professor of economics in Lund, made the following – for him characteristic – comment.

*On the whole, all masculine reasoning around what women are capable of or not capable of accomplishing is probably quite superfluous and resembles moreover, particularly as concerns their being barred from higher office, not to a minor degree the customs of some wild tribes to make certain especially savory articles of food “taboo” for womankind.<sup>1</sup>*

Today, almost one hundred years after Wicksell's eloquent pleading for women's rights, it is high time to assess the situation with respect to women's access to those sought-after fruits – the positions at the top of the academic career ladder. In this article, we examine the participation, opportunities and success of women in economics at Swedish universities. Our observation period is not one hundred years; instead the focus of our analysis is on the past three and a half decades, the period after Sweden introduced a modern doctoral program in 1969.<sup>2</sup> Moreover, the time period before then is not very difficult to take stock of; only a handful of women obtained a higher university degree in economics during the first 70 years of the last century. Thus women were absent from university faculty as well.

In many other countries the status of women in the economics profession has attracted attention and been addressed in several studies. In some countries the economic associations have taken explicit measures with the aim of promoting the careers of female economists. In the US, the American Economic Association inaugurated CSWEP, the Committee for the Status of Women in the Economics Profession, as far back as 1972. Ever since, the committee has closely monitored the situation of women and taken a number of actions to improve it. In

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\* Anders Borglin and Bo Larsson, representatives of the Arne Ryde Foundation, have generously encouraged our work for this paper. As always, Inga Persson has contributed with constructive comments. Ulla Pettersson and Ingegerd Rosell-Persson at Statistics Sweden have supplied us with statistical data. Jaya Reddy has greatly improved our English. We thank them all.

<sup>1</sup> Knut Wicksell in 1911, as quoted in Petrini 1934, p 20.

<sup>2</sup> See Wadensjö 1992 for a description of the changes from the old to the new PhDsystem.

Great Britain a group within the Royal Economic Society has been working on similar tasks since 1996. In Canada women economists have had a network of their own since 1990. More recently, in 2002, the Economic Society of Australia established the Committee for Women in Economics in order to address women's representation in economics.<sup>3</sup>

These committees all work with different methods; building female networks; helping women early in their career to be included in conference programs; publishing newsletters, which offer professional advice, present senior successful women economists, and provide information about conferences and job-offers; supporting research on women/gender issues and organizing mentoring workshops. Above all, studies are being carried out regularly, scrutinizing women's representation in education and academic ranks in economics and mapping out the barriers for women within the profession.

No similar organization exists in Sweden.<sup>4</sup> Neither has the representation of women in economics been the subject of any systematic studies. In 2003 we published an article in Swedish in the journal of the Swedish Economic Association, *Ekonomisk Debatt*, with the aim of putting the status of women in economics on the agenda in Sweden and comparing the situation in Sweden to that in other countries. This article is basically an update and a translation into English of our earlier article (Jonung & Ståhlberg 2003).

Our interest in the issue is not based just on the opinion that women should be able to share the gourmet meal with men. It is also our conviction that economic analysis and understanding will be enriched if more economists are women, as well as public debate will be reinforced and deepened if more women are trained in economics.

In short our results are the following. Economics in Sweden is still a male-dominated profession, despite an increasing number of women entering the profession during recent decades. Today, roughly one third of the students in the higher undergraduate programs in economics are women. Women's proportion of licentiate degrees obtained has increased from zero to 27 percent and their share of doctoral degrees from zero to 26 percent between 1970 and 2005. The most radical changes in women's entry into economics have taken place during

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<sup>3</sup> See the following web pages for more information about the purpose and activities of the different committees; [www.cswep.org](http://www.cswep.org), [www.res.org.uk/society/women.asp](http://www.res.org.uk/society/women.asp), [www.yorku.ca/cwen](http://www.yorku.ca/cwen), [www.ecosoc.org.au/women](http://www.ecosoc.org.au/women). See also the Explorations section of *Feminist Economics* No 3 (Jacobsen 2006) and Bartlett et al (1998).

<sup>4</sup> Neither has the European Economic Association, as far as we know, taken any initiatives in this respect.

the last decade – the number of women graduating in this period is almost triple that during the two and a half decades before. The proportion of women in the research and teaching staff at academic institutions in economics, 16 percent, is slightly below their proportion of the total number with a doctoral degree in economics in the country, 18 percent. Further, women's careers within academia have not kept up with those of men. Only 13 percent of those with the academic grade of associate professor or higher are women. The greatest hurdle to overcome is the advancement to full professorship. No more than 6 percent of the full professors in economics at Swedish universities, i.e. five, are women. This figure corresponds to women's proportion of completed doctorates in the 1970s, three decades ago.

Women in economics are underrepresented relative to women employed in the university as a whole. When comparing the career ladder for women in economics to that of other academic fields, we find economics to be more akin to mathematics than to the other social sciences. The situation for women in academic economics in Sweden is surprisingly similar to that in other countries for which we have comparable data. The paper also considers the interest and success of female economists in professional and public economic policy debate through their representation in *The Swedish Association of Economics* and their participation as authors in *Ekonomisk Debatt*, the journal of the association, inaugurated in 1973.

## **1. Undergraduate studies**

Our original aim was to track changes in the proportion of women among undergraduate students, graduate students and finally within different categories of the academically employed. In order for women to find their way into the academic staff, a recruitment base of women students must be available. In addition, women's probability of advancing to higher studies and moving into academic positions must be equal to that of men. Can we find what has been termed "a leaky pipeline"? At what steps in educational programs or in professional academic careers do we find leakages, where women drop out?

Given all the changes within the Swedish university system, with regard to organization as well as statistics/computer registration, it is difficult to construct continuous and consistent series for the undergraduate levels for a longer period. Neither is it possible to find data for completed studies. We have thus settled on providing a picture of the situation during the 1990s and 2000s based on data on the number of *registered students* at different levels. These

are displayed in *Table 1*. Our data comes from the educational statistics of Statistics Sweden and covers the entire country.

**Table 1.** Female students registered in economics courses by level 1993-2005. Percent women

Course level	1993/94-1994/95	1995/96-1996/97	1997/98-1998/99	1999/00-2000/01	2001/02-2002/03	2003/04-2004/05
1-20 points	42	42	44	47	50	49
21-40 points	35	33	35	38	39	38
41-60 points	33	32	32	34	36	36
61-points	36	31	30	32	32	36
<b>Total</b>	<b>40</b>	<b>39</b>	<b>40</b>	<b>43</b>	<b>46</b>	<b>45</b>

*Note:* A student may appear in several places in the table if he or she studies at more than one level in a certain year. This should not systematically affect the distribution according to sex.

*Source:* Own calculations based on data compiled on our behalf by Statistics Sweden.

In Sweden students study one subject at a time and receive 20 points (credits) for one completed semester of full-time study. For example, a student registered at the level of 41-60 points has successfully finished one year of full-time study of economics and is into his/her third semester. As seen from Table 1, the student body at the lower levels of economics is fairly gender balanced. Women comprised 45 percent of the total number of undergraduate students in the years 2003/04/05. Hence, the balanced figures are due largely to the even numbers of men and women in the large group of first semester students. One semester of economics is obligatory in the business administration programs, which draw a large number of students and are popular among women as well as men.

The increase in the representation of women in undergraduate economics over the last decade is mainly attributable to their increased proportion among first semester students: the higher the level of studies, the lower the proportion of women. The largest drop occurs between the first and second semester; a step which usually requires a decision to continue either with economics or business administration. The proportion of women hovers around one-third for

the higher levels of undergraduate studies in economics and remains more or less at the same level during the period.

In 1993, Sweden introduced a Masters degree (magisterexamen) into the undergraduate educational system. This today is the standard final degree if you aim to work as an economist. The development of the gender-composition for completed Masters degrees is shown in *Table 2*. The number of women finishing a Masters degree in economics per year has been steadily rising, but women's proportion of the total output has varied due to the number of men rising rapidly in some years and falling in other years. Overall, the proportion of women among majors with a completed "magister" in economics is 34 percent.

**Table 2.** Completed Masters degrees (magisterexamina) in economics 1993-2005. Numbers and percent women

Year	M	F	%
1993/94-1994/95	108	59	35
1995/96-1996/97	195	112	36
1997/98-1998/99	323	140	30
1999/00-2000/01	413	180	30
2001/02-2002/03	399	235	37
2003/04-2004/05	471	245	34
1993/94-2004/05	1909	971	34

*Source:* Own calculations based on data compiled on our behalf by Statistics Sweden.

The representation of women in undergraduate economics is not unlike that in the US. In the 1970s women constituted about one-quarter of undergraduate economics majors. Women's proportion of economics majors peaked in the mid-eighties, then fell and stabilized around 30 percent in the early nineties, and briefly re-attained the earlier peak 35 percent in the early 2000s (Blau 2004, Siegfried 2006). For 2004-05 Sigfried (2006) reports 32 percent women among economics majors. For Great Britain in 1998, Booth et al (2000) note a proportion of 34 percent women among students enrolled for a Masters in economics, whilst the latest survey of the Royal Economic Society finds the level up to no less than 42 percent in 2004 (Burton and Humphries 2006). A Canadian study reports that women comprised 39 percent of the total Masters program participants in 1999 (CEA 2001). In Australia, in 2002, 42 percent of the total number of undergraduates and 37 percent of the honors enrollment were women

(Hopkins 2004). The British study (Burton and Humphries 2006) points to the differences between UK-citizens and students from abroad. Of the students from the UK, the proportion of women is only 26 percent, and thus it was significantly higher among foreign students.

In spite of the lack of longer continuous statistical series for Sweden, it is not difficult to conclude that the proportion of women choosing to major in economics has risen significantly during the past couple of decades. Those of us who studied economics at the end of the sixties remember a fair number of women during the first semester, obligatory for majors in business as well as public administration. The female students started disappearing in the second semester and were easily counted on the third – hardly ten percent. A recent report from the Swedish National Agency for Higher Education (Högskoleverket 2002), with the aim of evaluating the present academic education in economics in Sweden, refers to studies from the 1970s reporting around 17 percent women on the higher undergraduate levels of economics.

Thus, in Sweden the major leakage of women in economics is at the entry end of the pipeline, after the very first semester. From then on we find an under-representation of women, but the attrition rate with transition to higher levels of education is only slightly higher for women than for men. Once women have “voluntarily” chosen economics, their interest in the subject, as measured by the probability of progressing to the next level, does not seem to be all that much lower than that of men. This same pattern appears with the passage to graduate education.

## **2. Graduate studies**

Until the 1970s, with the arrival to the universities of the large birth-cohorts of the 1940s, and the establishing of the new doctoral program, only two women had graduated with a PhD in economics in Sweden. The first one, in 1924, was Margit Cassel, daughter of the world-famous Swedish economist Gustav Cassel. Five years later, Karin Kock completed her degree. She was later to become Sweden’s first female cabinet minister and was given the name of professor in economics in 1945, albeit without a chair. In addition to these two, three other women completed the licentiate-degree in economics; a somewhat lower degree, but at the time more or less equivalent to the PhD of today.<sup>5</sup>

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<sup>5</sup> The three are Ebon Andersson 1931, Torun Hedlund Nyström 1946, and Thora Nilsson 1958.

Significant changes have taken place since then.<sup>6</sup> We may follow the development for the new doctoral program in economics starting from 1973. Let us begin by looking at the number and the proportion of women registered for the program, as displayed in *Table 3*. About a third of the students registered for a doctoral program in economics are female in the period 2001-2005. There is a steady rise in the number of women registered, while the number of men has increases and falls between periods. The proportion of women is close to the proportion of women with a completed Masters degree. In order to pursue graduate studies in economics in Sweden, it is a requirement to have majored in economics as an undergraduate.

The probability of progress into a doctoral program for women, once they have finished their Masters degree, does not appear to be much lower than for men.

**Table 3.** Graduates students in economics 1973-2005. Average numbers during each period and percent women

Year	M	F	%
1973-1980	238	27	10
1981-1990	215	41	16
1991-1995	246	60	20
1996-2000	310	107	26
2001-2005	295	140	32
1973-2005	252	65	21

*Note:* Registered graduate students with an activity level of at least one percent.

*Source:* Own calculations based on data compiled on our behalf by Statistics Sweden.

*Table 4* shows the output of graduate education in terms of completed doctorates in economics and, since 1985, the reintroduced licentiate-degree.<sup>7</sup> This is a degree completed about halfway through the program. Thus, many who finally finish with a doctorate may earlier have obtained a licentiate. The table also includes the distribution across the various Swedish universities in order to see if there are any systematic differences. Some of the

<sup>6</sup> Professor Bo Södersten describes his personal experience in a chronicle in the newspaper *Sydsvenskan* (July 10, 2002) “The Lund I arrived in as a docent from the US in 1967 and the Lund I left as professor in international economics in 1996 were two different worlds. Certainly there were, early on, some capable female researchers in economics. But until the end of the 1980s the subject was male-dominated among the researchers. Then during the 1990s there came a break-through for female economists on a wide front.”

<sup>7</sup> The last PhD of the old type was granted in 1973. The first three theses in economics following the new system were presented in 1970. The old licentiate-degree was still in existence through 1974. No licentiate degrees were granted between 1975 and 1984. (Wadensjö 1992).

schools, Linköping, Luleå, Växjö, started their doctoral programs rather recently, explaining why there are no graduations there during the first years of the period.

**Table 4.** Completed doctoral and licentiate-degrees in economics 1970-2005. Numbers and percent women

University	1970-80			1981-90			1991-95			1996-2000			2001-2005			1970-2005		
	M	F	%	M	F	%	M	F	%	M	F	%	M	F	%	M	F	%
<i>Göteborg</i>																		
Doctor	17	0	0	22	3	12	21	3	13	42	3	7	27	17	39	129	26	17
Licentiate	5	1	17	3	0	0	5	0	0	12	4	25	23	11	32	48	16	25
<i>SSE</i>																		
<i>Stockholm</i>																		
Doctor	16	1	6	16	2	11	12	3	20	33	9	21	49	11	18	126	26	17
Licentiate	5	1	17	13	4	24	8	6	43	33	10	23	16	7	30	75	28	27
<i>Jönköping</i>																		
Doctor	0	0	-	0	0	-	0	0	-	2	0	0	4	0	0	6	0	0
Licentiate	0	0	-	0	0	-	0	0	-	0	0	-	1	0	0	1	0	0
<i>Linköping</i>																		
Doctor	0	0	-	0	0	-	0	0	-	1	0	0	1	0	0	2	0	0
Licentiate	0	0	-	0	0	-	0	0	-	1	0	0	4	0	0	5	0	0
<i>Luleå tech</i>																		
Doctor	0	0	-	0	0	-	0	0	-	3	0	0	4	1	20	7	1	13
Licentiate	0	0	-	0	0	-	0	0	-	7	0	0	2	3	60	9	3	25
<i>Lund</i>																		
Doctor	15	3	17	21	2	9	11	5	31	28	3	10	33	8	20	108	21	16
Licentiate	13	0	0	2	2	50	10	4	29	27	9	25	30	5	14	82	20	20
<i>Stockholm</i>																		
Doctor	21	2	9	24	2	8	14	5	26	20	5	20	30	14	32	109	28	20
Licentiate	6	0	0	3	1	25	10	2	17	17	7	29	13	4	24	49	14	22
<i>Umeå</i>																		
Doctor	5	0	0	10	0	0	7	1	13	10	5	33	12	3	20	44	9	17
Licentiate	3	0	0	1	0	0	0	0	-	5	5	50	1	0	0	10	5	33
<i>Uppsala</i>																		
Doctor	6	0	0	18	2	10	18	1	5	20	8	29	28	11	28	90	22	20
Licentiate	8	0	0	6	1	14	20	5	20	25	13	34	19	11	37	78	30	28
<i>Växjö</i>																		
Doctor	0	0	-	0	0	-	0	0	-	0	0	-	3	0	0	3	0	0
Licentiate	0	0	-	0	0	-	0	0	-	0	0	-	3	0	0	3	0	0
<i>Örebro</i>																		
Doctor	0	0	-	0	0	-	0	0	-	0	0	-	0	2	100	0	2	100
Licentiate	0	0	-	0	0	-	0	0	-	0	0	-	2	2	50	2	2	50
<i>Total</i>																		
Doctor	80	6	7	111	11	9	83	18	18	159	33	17	191	67	26	624	135	18
Licentiate	40	2	5	28	8	22	53	17	24	127	48	27	114	43	27	362	118	25

*Note:* Only new doctoral degrees included. The old licentiate-degree up to 1974, the new licentiate-degree from 1985. No licentiate degrees were granted between 1975 and 1984.

*Source:* Own calculations based on data compiled on our behalf by Statistics Sweden.

A total of 118 women had received a licentiate degree, and 135 women were awarded the title of doctor of economics between 1970 and 2005. Women's proportion was 18 percent out of the total number of doctoral degrees, and 25 percent out of the licentiate-degrees granted between 1970 and 2005. We see a steady rise in women's representation – from 7-9 percent during the 1970s and 1980s, up to around 17-18 percent in the 1990s, reaching 26 percent in the beginning of the 2000s for the PhDs. The impression is that something quite radical has happened during the last decade. While 6 women in all graduated in the 1970s, there were 11 in the 1980s, 51 in the 1990s and already no less than 67 in the first half of the 2000s. Twice

as many women graduated with a PhD during the first five years of this century as during the last five years of the last century.

It may seem as if women drop out at a greater rate than men during the program, since the proportion of women among those with completed degrees is lower than among registered students. However, the figures for completed degrees should be compared with the proportion of women among registered students a few years earlier. If we assume that the first cohorts of students for the new PhD took a little longer to finish than the later cohorts (Wadensjö 1992), we may as a rough estimate compare the proportion of females among those examined during a certain time-period in Table 4 with the proportion of females among active doctoral students during the earlier period in Table 3. These figures match fairly well, which indicates that women and men complete their studies to about the same extent.<sup>8</sup> If this pattern continues, we can expect the proportion of women among PhD graduates in economics to rise to 30-35 percent during the next five-year period.

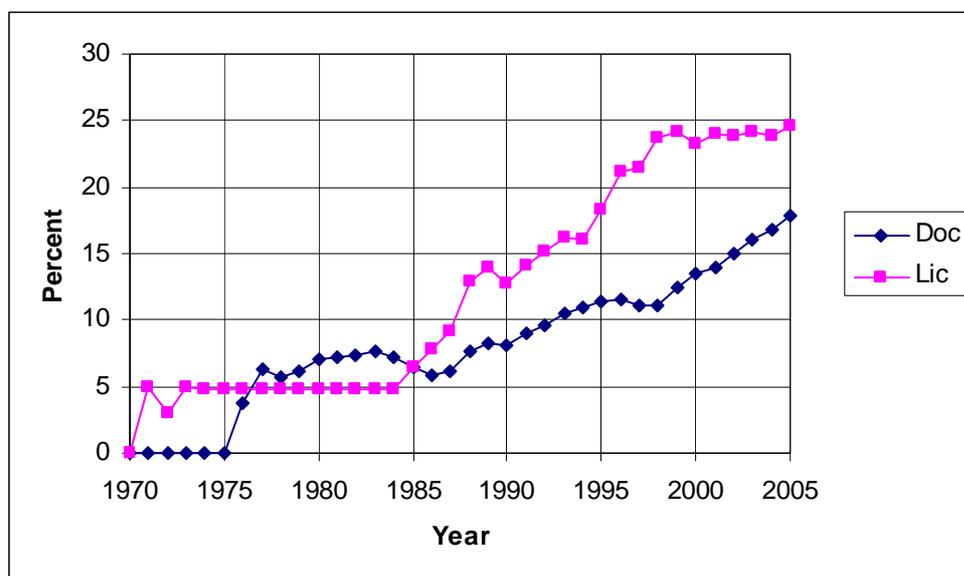
Some of the large schools, like Stockholm and Gothenburg, already had more than 30 percent of the doctoral degrees going to women in the beginning of the 2000s. Seen over the entire period there are no great differences in gender balance across schools, although the variation may be large for certain time periods. The proportion differs between 16 and 20 percent for those universities that have been in the program from the beginning. Thus one fifth to one sixth of Swedish female doctors in economics graduate from each one of the four big universities, Stockholm, Gothenburg, Uppsala, and Lund, and from the Stockholm School of Economics. Fewer than 9 percent come from other schools.

The accumulated number of women as a proportion of those with a Swedish licentiate and doctoral degree obtained after 1970 is displayed in *Figure 1*. This diagram shows the proportion of females of the total number with a research degree in economics at a certain time and is based on yearly data. Figure 1 shows clearly that women's representation within the group with a high competence in economics has steadily risen; from 0 to 25 percent of those with a licentiate degree and from 0 to 18 percent of those with a doctoral degree. It also illustrates the radical changes occurring after the 1990s with a sharply rising output of women with advanced degrees in economics.

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<sup>8</sup> This is in line with the results of surveys of PhD students in the US finding no gender differences in time-to-degree (Stock 2006).

**Figure 1.** Proportion women of total numbers of persons with a doctoral or licentiate-degree completed after 1970. The development 1970-2005. Percent



*Note:* The old licentiate-degree up to 1974, the new licentiate-degree from 1985. No licentiate degrees were granted between 1975 and 1984.

*Source:* Own calculations based on data compiled on our behalf by Statistics Sweden.

### 3. Faculty

Let us now look at how the pronounced rise in the supply of female economists has been reflected in the gender balance of the faculty at the economics departments. Have the female graduates disappeared from academia to other sections of society or have they remained in research and teaching at the universities? Using the homepages of the respective departments, we have collected information about the composition of the economics research and teaching faculty at all Swedish universities with a PhD-program in economics. The data has been complemented by personal contacts when necessary. The information was collected in the fall of 2002 and updated in the fall of 2006. Our data includes only those with a completed doctoral degree. The results are presented in *Table 5* and *Table 6*.

There were 39 women with a completed PhD (Swedish or foreign) working as academic staff in a department of economics at Swedish universities in 2006. Their proportion of the corresponding total number was 16 percent, up from 15 percent in 2002. The gender composition in the academic staff is thus close to the gender composition of the total number with a doctoral degree in economics in Sweden (18 percent). According to this rough

comparison women are slightly under-represented in the academic sphere. Women leave or remain in academic pursuits to almost the same extent as men.<sup>9</sup>

**Table 5.** Representation of women and men by academic grade within Swedish universities 2002. Numbers and percent women

University	Full professor			Associate professor			Assistant professor/lecturer			Total		
	M	F	%	M	F	%	M	F	%	M	F	%
Göteborg	7	0	0	2	0	0	25	6	19	34	6	15
SSE Stockholm	13	0	0	7	1	13	13	2	13	33	3	8
Linköping	2	0	0	0	0	0	3	0	0	5	0	0
Luleå tech	1	0	0	1	0	0	1	0	0	3	0	0
Lund	8	1	11	11	2	15	8	5	38	27	8	23
SLU	4	1	20	1	0	0	6	0	0	11	1	8
Stockholm	14	0	0	9	3	25	10	6	38	33	9	21
Umeå	4	0	0	4	1	20	9	2	18	17	3	15
Uppsala	11	1	8	7	3	30	12	2	14	30	6	17
Växjö	4	0	0	0	0	0	6	0	0	10	0	0
<b>Total</b>	<b>68</b>	<b>3</b>	<b>4</b>	<b>42</b>	<b>10</b>	<b>19</b>	<b>93</b>	<b>23</b>	<b>20</b>	<b>203</b>	<b>36</b>	<b>15</b>

*Note:* Full professors are those qualified for a professorship (professor); associate professors are qualified as docent; assistant professors are those with a completed doctoral degree. It does not necessarily imply that the employee has tenure. Employees on leave are included. Emeriti, guest or adjunct professors are not included. Stockholm University includes the Institutes for International Economic Studies (IIES) and economists at the Swedish Institute for Social Research (SOFI).

*Source:* Homepages of the respective universities, November 2002.

<sup>9</sup> Out of the five females graduating before 1970 mentioned above, two doctors and three licentiates, Karin Kock was the only one who worked as an academic teacher and researcher. See Henriksson (2000) for an overview of Karin Kock's impressive career, despite meeting indirect and direct discrimination within the strong male structures of the time (Niskanen 2005).

**Table 6.** Representation of women and men by academic category in Swedish universities 2006. Numbers and percent women

University	Full professor			Associate professor			Assistant professor/lecturer			Total		
	M	F	%	M	F	%	M	F	%	M	F	%
Göteborg	7	0	0	7	1	13	25	7	22	39	8	17
SSE, Stockholm	16	0	0	7	1	13	10	1	9	33	2	6
Linköping	2	0	0	0	0	0	5	0	0	7	0	0
Luleå tech.	0	0	0	1	0	0	3	1	25	4	1	20
Lund	10	2	17	8	2	20	6	3	33	24	7	23
SLU	5	1		1	0		7	0		13	1	
Stockholm	18	1	5	6	5	45	12	5	29	36	11	23
Umeå	4	0	0	5	1	17	8	0	0	17	1	1
Uppsala	11	1	8	8	3	27	8	4	33	27	8	23
Växjö	3	0	0	3	0	0	3	0	0	9	0	0
<b>Total</b>	<b>76</b>	<b>5</b>	<b>6</b>	<b>46</b>	<b>13</b>	<b>22</b>	<b>87</b>	<b>21</b>	<b>19</b>	<b>209</b>	<b>39</b>	<b>16</b>

*Note:* Full professors are those qualified for a professorship (professor); associate professors are qualified as docent; assistant professors are those with a completed doctoral degree. It does not necessarily imply that the employee has tenure. Employees on leave are included. Emeriti, guest or adjunct professors are not included. Stockholm University includes the Institutes for International Economic Studies (IIES) and economists at the Swedish Institute for Social Research (SOFI).

*Source:* Homepages of the respective universities, September 2006.

The big schools are, not surprisingly, those with most women. However, the Stockholm School of Economics stands out with only two women in the academic staff, despite being in the group with a large faculty and many graduates of whom a substantial number are women.

What about the distribution of women and men across the different academic grades of the university hierarchy? We have divided the employees into three groups according to the competence classification system that exists in Sweden; full professors (in Swedish “professor”), associate professors (with a “docent”-title), and assistant professors, (university lecturers/researchers with a doctoral degree). Teaching and research staff members without a doctoral degree are thus not included in the numbers in our tables. Neither do the tables say anything about the actual employment contract. Since 1999 a person who has tenure may apply for and obtain the title of professor in a way similar to the “docent”-title. Thus, many professors do not hold a specific professorial chair today. Funding from the university, as well as from the national research-funds, may finance the various positions. The obligations may be different combinations of teaching and research.

It was not until the mid 1980s that Sweden had any female associate professors. However, Table 6 shows somewhat surprisingly that the proportion of women among associate professors today is quite high, 22 percent. In fact, it is even higher than the percentage of women among assistant professors, which is 19 percent. These figures are thus above women's proportion of the doctors a few years back or women's proportion of the population of economists in general. However, it is easy to interpret this figure too optimistically. The fact is that men do not remain associate professors. Many of them move on and become full professors. The proportion of women of all those who hold a "docent" qualification (i.e. who are associate or full professors) is thus far lower, 13 percent.

The greatest hurdle to jump for female economists in Sweden is the transition to full professor. The first female professor was appointed in 1993. No more than five women were full professors of economics in 2006, up from 3 in 2002. Two of the five obtained their PhD degrees outside Sweden. Women constitute six percent of the total of 81 full professors in our data. On the other hand, 20 percent out of the professors appointed since 2002 have been women, i.e. 2 out of 10.

Expressing the statistics above in a different way, we may say that 32 percent of all the male academic employees are full professors, while this is true for only 13 percent of the women. Men are thus 2.5 times more likely than women to be full professors.

A number of economists who have qualified as professor or "docent" are active at departments other than economics or in research centers outside the university, e.g. at independent research institutes or at the Swedish central bank (the Riksbank) or other public authorities. Thus they are not represented in Table 5 and 6. For example, a quick check at two major research institutes - The Research Institute of Industrial Economics (Institutet för näringslivsforskning, formerly IUI) and The Institute for Labor Market Policy Evaluation (IFAU) - reveals 4 full professors, all men, 5 associates, all men, and seventeen doctors, five of whom are women. These are not included in our material. Others can be found elsewhere. To our knowledge there is only one woman in Sweden with a PhD in economics and the title of professor active outside the universities.

What proportion of women among the full professors would we expect if women progress through their academic careers in the same way as men? It takes many years to qualify for a

full professorship. We must then compare the proportion of women among the economics professors today with the proportion of women among the doctors in economics about 10 to 15 years back in time. In Figure 1 we see that the latter proportion was around 8-10 percent at that time. From a gender equality perspective, we should thus have about three more women full professors at our Swedish universities today.

In summary: In Sweden, the proportion of women in teaching and research positions at the economics departments at the universities is almost the same as the proportion of women of the total number of PhDs in economics in the country. Women advance to the rank of “docent” to a somewhat smaller extent than men. They comprise 13 percent of the total number with a rank of associate professor or higher. The fence to climb is the advancement to full professor. No more than six percent of the full professors in economics, i.e. those with the Swedish title “professor”, are women.

#### **4. Other disciplines**

Is the gender balance in economics better or worse than in other academic disciplines? The proper norm for comparison may of course be a subject of contention. Should it be women in education or academic positions in general at the universities, women in the other social sciences or maybe women in the natural sciences or the engineering schools? The point of view may be related to one’s outlook on the nature of economics – is the fundamental characteristic of the discipline to be found in abstract theory or in the applications and the ability to contribute to solutions to burning social problems?

The homepage of Statistics Sweden under “Education and research” displays more or less any norm of comparison one may wish to use.<sup>10</sup> We have selected data on men and women for the universities as a whole, the social science sector as a whole, political science, business administration and mathematics as a basis for comparison. This provides us with a wide spectrum of the situation for academic women. The result is displayed in *Table 7*.

The collection and presentation of data by Statistics Sweden is not the same as ours. It presents staff according to type of employment, not according to qualifications. Thus, persons with a “docent”-qualification cannot be identified. Also, for reasons we have not been able to

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<sup>10</sup> [www.scb.se](http://www.scb.se), Utbildning och forskning.

uncover, Statistics Sweden registered only one female professor in economics in 2005. Thus, in order to have more comparable data in Table 7, we rely here on the data from Statistics Sweden for economics as well.

In 2005, women constituted 29 percent of all those employed as professors, research assistants and university lecturers at Swedish universities (the employment category most comparable to our earlier group). 17 percent of the full professors in Sweden were women. Finally, women completed no less than 45 percent of all doctoral degrees. In the social sciences, women fared even better, constituting 51 percent of the doctors, 34 percent of the teaching and research staff in our categories, and 19 percent of the full professors. Social sciences with a close association to economics are business administration and political science. It is easy to conclude from the data in Table 7 that the presence of women in those disciplines is far more extensive than in economics. All of these comparisons to other university sectors point to a clear under-representation of women in economics.<sup>11</sup>

By contrast, women with completed doctoral degrees in mathematics comprised a smaller proportion of than in economics, 17 percent as compared to 26 percent. Women were also a somewhat smaller proportion of the faculty, 15 percent in mathematics, and 17 percent in economics. However, women professors in mathematics were 5 percent (a total number of 8 persons), higher than the 1 percent (1 person) in economics in the Statistics Sweden data. Thus, judging from the look of the career ladder, economics is more similar to mathematics than to the other social sciences.

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<sup>11</sup> The figures above are for a certain point in time. The Swedish National Agency for Higher Education (Högskoleverket 2006) recently presented longitudinal data for the cohorts graduating with a PhD between 1980 and 1991. Not surprisingly they find that men become full professors to a much larger extent than women, regardless of academic field. As an illustration, among those who obtained their doctorates in 1991, 8 percent of the men, but only 4 percent of the women became full professors within a twelve-year period. There is no indication of later cohorts catching up.

**Table 7.** Graduate students, teaching and research staff by subject area and sex. Percent women 2005

	Total	Full professor	Doctoral students/degrees
All	29	17	45 <sup>a</sup>
Social sciences	34	19	51 <sup>a</sup>
Political science	27	23	52 <sup>b</sup>
Business administration	20	13	58 <sup>b</sup>
Mathematics	15	5	17 <sup>a</sup>
Economics	17	1	26 <sup>a</sup>

Note: a) completed degrees b) registered doctoral students.

Source: [www.scb.se](http://www.scb.se), utbildning och forskning.

## 5. An international perspective

What is the status of women in the economics profession in other parts of the world? Is Sweden - according to some gender equality indices the most equal in the world<sup>12</sup> - more gender balanced than other countries also in economics despite a small number of full professors? What about the US to where we often look enviously and see numerous successful female economists? As mentioned above, the women committees within the national economic associations in the US, Great Britain, Canada and Australia have all monitored the situation for women in economics during different time-periods. We provide comparative data in *Table 8*.

<sup>12</sup> For such indices, see e.g. <http://hdr.undp.org>.

**Table 8.** Representation of women by academic grade in Sweden, USA, Great Britain, Canada and Australia. Percent women

Country	Sweden 2006	USA 2005	Great Britain 2004	Canada 1999	Australia 2002
Full professor	6	8	9	5	5
Associate professor, senior lecturer	22	20	16	11	13/16
Assistant professor, lecturer	19	30	30	31	31
Total	16	16	19	13	20 <sup>a</sup>
PhD-students	32	32	32	32	31
Completed PhD	26	31		27	

*Note:* For Sweden "Full professor" is "professor", "associate professor, senior lecturer" corresponds to "docent" and "assistant professor, lecturer" is researcher/teacher with a completed PhD. a) includes associate lecturers. *Sources:* USA: CSWEP's annual report 2005, Great Britain: Burton & Humphries 2006, Australia: Hopkins 2004, Canada: CEA (2001), Sweden; this article Table 3, 4 and 6.

Our overall impression is that the situation for women in academic economics is surprisingly alike across countries. The pattern of increased under-representation with seniority and status is the same everywhere. Women PhD students today comprise around one third of the enrolled in all countries studied but much less among academic staff. Most striking is the low representation of women among full professors, 5-9 percent. In several countries, like in Sweden, women economics professors are new phenomena since the 1990s. Also, they are few in absolute numbers. Australia, for example, reports four women professors in 2003. It is also the case that women in economics everywhere are under-represented relative to women employed in the university sector as a whole.<sup>13</sup>

Women have made significant gains over time among doctoral students and those employed in lower academic ranks. Unfortunately the studies for Canada, Australia and Great Britain do not allow a long time comparison. The Canadian study is only available for one year, 1999. The Australian study reports stability in the overall proportion of women faculty, but an improvement in female representation at the top end of the academic hierarchy between 1997 and 2002. PhD enrollment increased slightly during the same period. The Royal Economic Society surveys, conducted bi-annually since 1996, show a gradual increase in the proportion of women graduate students as well as faculty, with greater gains at higher academic grades. The proportion of female professors - although few in numbers - doubled over the period.

<sup>13</sup> Ginther and Kahn (2004) includes comparisons by academic field and find women in economics to be underrepresented also compared to e.g. statistics, political science and the life sciences, while they fare somewhat better than in engineering.

In the US the status of women in economics has been monitored over many years, ever since the inception of CSWEP in 1972<sup>14</sup> making it possible to follow the development over time. Since 1972, women's share of PhDs awarded has quadrupled, from 8 percent to 31 percent. In 1972 women comprised less than 5 percent of faculty members compared to 16 percent in 2005. In addition women full professors constituted 8 percent in 2005, up from only 2 percent in 1972. The development has varied from year to year. A few periods of stagnation or decrease notwithstanding, the trend has been a continual rise. Nonetheless there is some indication that the female share of new PhDs has more or less plateaued since the late 1990s, but the percentage female of assistant and associate professors has risen in the last decade as a whole. On the other hand, women's representation among full professors was at about the same level in 2005 as ten years earlier. While the flow of women into the economics profession seems to have started somewhat earlier in the US the other countries included in Table 8 appear to be catching up. Despite the US lead in the output of doctorates for a number of years, we do not see the corresponding differences at the seniority level among academic staff. The low representation of women at the academic grade of full professor in the US cannot be explained as a cohort effect.

## **6. Why so few women economics professors?**

It is tempting to once again cite Knut Wicksell – this time from the traditional poetic “Address to Woman” delivered at the Nordic student festivities at Uppsala University in 1878. This fiercely feminist poem, which immediately made him notorious all over Sweden (Gårdlund 1995 p.38), departed radically from the traditional themes of women's beauty and gracious nature and instead included verses on poverty, prostitution and women's low wages. In a sharply ironic verse, he introduced the hypothesis that because of women's diminutive appetites, men wisely arranged it all, such that the fruits of women's labor “in just proportions should be small”.

However, this proposition, which has the character of patriarchal theory, was set out many years before Wicksell started studying economics. Let us thus speculate further around reasons for the lack of gender balance in economics. There are three questions to be

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<sup>14</sup> The reports from The Committee on the Status of Women in the Economics Profession (CSWEP) can annually be found in the Proceedings section of the May-issue of the American Economic Review. The data we have used for the US are from economics departments with a PhD program.

answered: 1. Why are women underrepresented in economics? 2. What explains the rapid inflow of women during the 1990s and 2000s? 3. Why do women not advance to full professorship?

The above-mentioned study by the Swedish National Agency for Higher Education explains the low presence of women in the following way “The discipline is considered to make demands for abstract and analytical thinking as well as proficiency in mathematics, which is said to not attract female students.” (Högskoleverket 2002, p. 10). We find it difficult to believe in such a simple explanation. Besides, how then would we explain the strong flow of women into economics at the same time as the profession has moved in the direction of more abstract theory and mathematics?

In general, economists regard occupational segregation by gender in the labor market as the outcome of a complicated interplay between factors on the supply- and demand-side of the labor market (Jonung 1998). Tastes and preferences, talents and capabilities may be part of the story but economists generally stress human capital investments guided by expectations about future labor market participation. Other economic theories emphasize discrimination or structures and institutions that inhibit certain choices or make them more costly for one gender than the other.

Most likely an increased and prolonged labor force engagement – and not a changed capacity for abstract and analytical thinking of women - has contributed to their enhanced interest in economics. Goldin et.al. (2007) analyze the narrowing and reversal of the gender gap in college attendance in the US. According to their findings, increased expectations about future employment, rising age at first marriage, more effective birth control methods and postponed childbearing encouraged women’s investments in education. At the same time women took more math and science courses in high school and began catching up with boys on achievement tests in this area. The same forces should have worked to stimulate women’s entry into economics.

In addition, the more visible women economists become – as economic journalists, as spokespersons on economic issues for organizations or political parties, in the central bank or the ministry of finance, as professors and researchers – the more women will see economics

as a realistic, attractive and profitable occupational choice. This is the role-model effect discussed by Booth et.al. 2000, Hopkins 2004, and Burton & Humphries 2006.

A number of hypotheses have been put forward as to why women economists have found it difficult to advance and obtain the same economic rewards within university hierarchies as men. Studies have looked at factors such as family obligations, preferences for non-academic work, lower mobility, pressure to take on teaching and administrative work within the departments as well as external assignments (due to the relatively small number of women economists), research field, lower productivity, smaller networks and difficulties finding co-authors, discrimination, etc.<sup>15</sup> Results point in several directions and there is no consensus regarding any of the explanations. Most studies find unexplained differences between men and women.

Several studies focus on the probability of being promoted and obtaining tenure. They find a promotions gap, such that women's prospects of obtaining tenure are inferior to those of comparable male colleagues. The differences cannot be explained by observable characteristics (Kahn 1995, McDowell et. al. 1999, 2001). Moreover, women in economics are less likely and take longer to achieve tenure than women in related disciplines. Economics is found to be an outlier, the academic field with the greatest gender differences in career attainment (Ginther and Kahn 2004, 2006b).

## **7. Publications**

One commonly invoked explanation for women's slow advancement in economics is that they have fewer publications in scientific journals, the most important academic qualification today. In our article in *Ekonomisk Debatt* (2003), we tried to shed some light on this issue. Lindqvist (2003) ranked all Swedish researchers in economics on the basis of their publications in international journals from 1969 to 2002. He looked at a somewhat wider group than ours; including emeriti, external research-institutes and some who do not have a degree in economics but work in economic research institutes. There are four female professors out of 130 in his material, i.e. three percent. The corresponding number for female associate professors (docents) is 18 percent and for PhDs 20 percent. The publications are weighted according to the status of the journal in which they have been published.

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<sup>15</sup> See e.g. Boschini & Sjögren 2006, Blackaby et. al. 2005, Jacobsen (ed.) 2006, Kahn 1995, Ginther & Kahn 2004, 2006a, 2006b, McDowell et. al. 1999, 2001, Stock 2006.

Women economists publish far less than men according to this ranking. Although women in total constitute 14 percent of the researchers studied, they only gather 1.8 percent out of the total publication points. However, the situation looks quite different according to level of qualifications of the researcher. The female professors hold only 0.1 percent of the total publication points for professors, the female associates hold 5 percent, but the female PhDs hold as much as 16 percent of the total points for this group. Thus, among the younger group of PhDs, women's publication record is not that much poorer than that of men. In other words, women's average publication points in relation to those of men are 3 percent, 26 percent and 74 percent for the respective academic ranks.

Publication credits as measured by Lindqvist are very unevenly distributed. The ten most successful economists in Sweden are credited with 40 percent of the total publication points. Thus, the absence of women in the top group has a significant effect. The highest-ranking woman is found in place 79 with 32 points compared to 1300 for the highest-ranking man.

In order to make a rough check for possible cohort-effects, we counted the publications in the three highest ranked economic journals *American Economic Review*, *Econometrica* and *Journal of Political Economy* during the period 1992-2001 by Swedes attached to a Swedish research institution. The number of articles by men was 13.7 and by women 2. Women thus authored 13 percent of these articles.

Women economists tend to do more research in the areas of public economics and labor economics (Jonung & Ståhlberg 2002). High-quality international journals that might appeal to women are thus *Journal of Public Economics*, *Journal of Human Resources* and *Journal of Labor Economics*. Swedish researchers contributed in total four articles and women's contribution was six percent. In *Scandinavian Journal of Economics* during 1997-2001 men had 17.5 articles and women 3.3, corresponding to 16 percent,. These rough calculations indicate that women today publish more actively internationally and that their publications more or less correspond to their proportion of the profession.<sup>16</sup>

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<sup>16</sup> Results in Boschini et. al. are similar. According to the investigation by the Canadian Economic Association (2001) younger women publish even more than younger men, while the opposite is true for more senior researchers.

Even if a less impressive publications record might partly explain women's sluggish progress in economics, the question remains: Why do women publish less than men? Answers suggested are the same as before: family, preferences, research topics, a multiplicity of obligations to allocate among the few women, etc.

## **8. Women in professional and public economic debate**

How are the trends in doctorates received by women reflected in some other professional arenas for economists? We have considered two, women's representation in the Swedish Economic Association and women's contributions to the journal *Ekonomisk Debatt* (Economic Debate), a policy-oriented forum for the presentation of economic research to a non-academic audience.<sup>17</sup>

The Swedish Economic Association (henceforth SEA) has been around for a respectable number of years. Fifty men, all "important persons", founded the organization in 1877. It is not a professional organization for economists in the same way as the American Economic Association and the Royal Economic Society. No annual professional conferences with presentations of research papers are held. The members have a varied background in business, economics and politics, but share a common interest in political economy. Discussions are regularly organized around current issues and are generally introduced with a talk by an economist, or once a year by the Minister of Finance, who presents the annual national budget. Activities, as well as memberships, are concentrated to Stockholm.

Even today the SEA strikes one as quite a male-structured organization. *Table 9* shows the development of female membership across time using a few selected years. The first woman does not show up until 1919. In 1923 Karin Kock became a member, and was accompanied by 4 other women and 511 men. She was very actively engaged in the organization, as its secretary in 1931-36 and on the board in 1945-49. Up until the 1970s only a few dozen women were members. Thereafter, following the inroad of women into business and economics, there has been an inflow of women into the association. Women represented 16 percent of the SEA membership in 2006. It is worth noting that the increased proportion of women members during the last decade is due to a falling number of men members.

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<sup>17</sup> This is a summary of the results presented in Swedish by Jonung & Ståhlberg in *Ekonomisk Debatt* 2002.

**Table 9.** Members in the Swedish Economic Association by sex and year

Year	Men	Women	Percent women
1877	50	0	0
1919	505	1	0
1923	511	5	1
1939	638	9	1
1954	899	17	2
1977	1125	60	5
1991	1161	133	10
2001	756	135	15
2006	774	148	16

*Sources:* Proceedings of the Swedish Economic Association including membership registers, direct information from Rolf Henriksson for 1954, Herin & Werin (1977), Nationalekonomiska föreningen (1991), and own calculations based on membership rolls (individuals, companies excluded) for 2001 and 2006 received from the secretaries of the association.

The increased representation of women in the association was in no way reflected on the board. From 1973 until 2002 the chairman, members of the board and the secretary were exclusively men except for one year, 1992, when the secretary was a woman. Shortly after our article was published in *Ekonomisk Debatt* in 2002 one woman was elected to the 2003 board. The position of secretary is currently (2006) held by a woman.

What about women's contributions to the programs of the association? We have studied the activities from 1973 until today. Very few women have been invited to give the introductory lecture, to be discussants or sit on panels. Between 1991 and 1994 Sweden had a female minister of finance, which explains four out of the five introductory talks between 1988 and 1997. There was a slight improvement at the beginning of this century, but women still comprise only 10 percent of the active participants within the association. Against the background of the increase in the number of women in economics, business and politics during the last three decades, women's engagement in SEA is surprisingly low. It could be a generational effect, since the association in general has a basis of older members. As mentioned, membership has fallen during recent decades despite the rising numbers of economists.

**Table 10.** Contributions to the debates in the Swedish Economic Association by sex, Numbers and percent. (Chairman not included). 1973-2005

Year	Introductory lecture, appointed discussants, panel participants		Other participants		Total		Percent Women
	Men	Women	Men	Women	Men	Women	
1973-77	30	0	115	3	145	3	2
1978-82	46	0	119	2	165	2	1
1983-87	59	1	93	2	152	3	2
1988-92	55	2	53	1	108	3	3
1993-97	63	3	60	2	123	5	4
1998-02	64	6	86	7	150	13	8
2003-05	30	4	58	6	88	10	10

*Note:* The chairman has always been a man.

*Source:* Proceedings of Swedish Economic Association.

In 1973 the SEA inaugurated a new journal, *Ekonomisk Debatt* (henceforth ED). Ever since its start, the ED has been an important voice in the Swedish economic policy debate – a place where academic economists have been able to express thoughts and spread their research results more accessibly than in academic journals and where economists working in politics, administration and organizations have been able to argue for their standpoints in more words than in the daily press. The articles are quite often used as additional readings in undergraduate economics courses, and ideas and analyses reappear in other media or debates. In Sweden one finds a tradition within the economics profession to contribute to the public debate (Carlson & Jonung 2006). Many young economists have made their debut as public educators on the pages of ED. If women’s voices are to be heard in the public economic discussion in Sweden, we would expect to hear them on the pages of the journal ED as well.

Let us first look at women in the role of editors. In the first 14 years of the life of the journal women were not to be found as editors or on the editorial board. In 1987, the authors of this paper took over as editors for two years. Since then three more women have served as editors, sharing the editorship with a man. In all 28 men have worked as editors and women have comprised 15 percent of the editors of ED during its 34 years of existence. This proportion is somewhat below that of female doctors in economics.

To what extent do women contribute to the journal as writers? Since the number of women economists is far smaller than the number of men, we cannot expect women to appear on the pages to the same extent as men. However, we should at least expect to see women in a proportion corresponding to their representation within the faculty of the academic institutions. The universities employ 80-90 percent of those who write for the journal. In addition, the presence of women editors may serve as a source of inspiration for other women and through informal networks push for articles as well as show a greater interest in the research areas of female economists. Is such an effect present?

In order to illustrate the contribution of women to ED *Table 11* displays the proportion of the total number of pages authored by women during the period 1973-2006. In general women's contributions are quite low, only a few percentage points during the first decade. A peak for articles was reached in 1987 (21 percent) and for commentaries in 1988 (27 percent), 1997 (29 percent) and 2003 (40 percent). There is a clear trend of increased female representation, from around a mere 2 percent in the 1970s to around 7 percent in the 1980s and up to around 10-15 percent in the 1990s and 2000s. Still, some of the years in the 1990s and the 2000s saw the proportion of female contributors fall below 10 percent.<sup>18</sup>

We observed earlier that women's proportion of the doctorates in economics was below ten percent up until the 1990s. Seen in this light, women's participation in ED during its first decade in existence does not seem surprisingly low. On the other hand we should have observed a much more rapid representation of women during the last decade. However, it has occasionally been pointed out that younger generations of economists are less interested in participating in public debate and are more focused on publishing in scientific journals.<sup>19</sup> Thus one explanation for the over-representation of men in ED is that older generations of economists contribute to the journal to a larger extent than younger generations.

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<sup>18</sup> As a comparison we may cite the figures for *Canadian Public Policy*, 8 percent female authors in the 1980s, 20 percent in the 1990s, and *Canadian Journal of Economics*, 7 percent female authors in the 1980s, 13 percent in the 1990s. (CEA 2001)

<sup>19</sup> See the discussion in Boschini et al (2004).

**Table 11** Female authors in *Ekonomisk Debatt*. Percentage of text pages. 1973-2005<sup>20</sup>

Year	Total	Articles	Commentaries	Reviews
1973	3	2	8	-
1974	1	1	0	-
1975	4	6	0	-
1976	4	4	3	-
1977	2	2	4	0
1978	2	2	4	0
1979	1	0	1	2
1980	3	3	5	3
1981	3	4	0	6
1982	4	3	10	5
1983	1	0	7	0
1984	7	7	0	6
1985	3	3	0	11
1986	9	6	7	19
1987	16	21	13	14
1988	13	11	27	14
1989	13	17	6	15
1990	3	3	4	2
1991	8	8	4	10
1992	14	17	16	7
1993	11	9	10	22
1994	15	17	18	10
1995	5	4	9	6
1996	10	15	6	0
1997	18	12	29	18
1998	11	9	21	0
1999	7	9	4	8
2000	5	7	0	1
2001	12	13	0	10
2002	13	16	4	0
2003	14	13	40	5
2004	10	11	2	17
2005	12	14	9	7
2006	13	13	16	6

*Source:* Wadensjö [1993], 1993-2001 the yearly update by the editors, 2002-2006 own calculations.

The veritable “jump” in the data in the years 1987 and 1988 is worth mentioning. These were the years when the first female editors took over ED. In 1989 there were still articles in stock from prior years. We readily admit that we worked actively to attract more female authors. Many women also spontaneously submitted articles – there was no lack of interest from women contributors. In our experience informal networks are quite important in the

<sup>20</sup> Excluding editorials and the proceedings of the Swedish Economic Association.

functioning of a journal such as ED. Other years with one of the editors being a woman were 1993, 1994, 2001, 2002 and 2005.

Our study of ED from a gender perspective also included a review of the research areas in which men and women published. We found that there was such a difference; female authors specialized in labor economics and public economics and male contributors in macroeconomics.

## **9. The future**

What are the changes in gender balance that we can expect in the foreseeable future? How quickly will the current trend of a rising supply and a raised publication consciousness of women doctorates in economics be reflected in the composition of teachers, researchers and professors at the universities? In the immediate future many faculty members from the large birth cohorts of the 1940s will enter retirement. This should open for change.

In our Swedish article on the status of women in the economics profession, we used information on the distribution of the academic staff in economics across age, sex and academic rank in 2001 to estimate the number of retirees as well as the recruitment base for the positions likely to be opened for the next ten years through the process of retirement.<sup>21</sup> If women were to receive positions in direct proportion to their share of the recruitment base, we would, according to our estimates, have reached the point of about 6 percent women among full professors and 18 percent women among associates and lecturers by 2011.

The purpose of our estimates was to demonstrate how slowly the process of transformation works in a system such as a university hierarchy, where it may take up to a decade or two to achieve competence and advancement. We pointed out that the calculations assumed a static system and that the creation of new positions, the arrival of competent persons from abroad, new forms for professorships, etc. may alter the outcome. Today, in 2006, we can already observe that the expectations have been surpassed. Women's proportion of full professors is up to the level projected for 2011 and their proportion of lecturers/associates has surpassed expectations. Women have so far progressed through the system faster than anticipated.

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<sup>21</sup> The distribution table was developed by the Swedish Confederation of Professional Associations. See Jonung & Ståhlberg (2004) for references and methods.

On the other hand, we may compare with developments in the United States. Despite a strong output of women doctorates for a number of decades, the growth in the proportion of women among full professors has only been around a few percentage points per decade. During the last decade the proportion has remained around 8 percent, varying between 6 and 9 percent. An increased supply of women with research competence does not automatically lead to more women among full professors.

## **10. Reaching the fruits**

University training in economics is an excellent route by which to acquire influence within economic policy and public debate in a country. When women in the area of economics are few, it means that their influence on the economic agenda – the questions studied by economists, the methods by which they are analyzed, and the answers given – will be relatively small. Thus, there are reasons to monitor the gender balance and women's progress within economics in Sweden, in the same way as is done in many other countries.

Women in economics were rare phenomena in Sweden well into the seventies. Since then substantial changes have taken place. Nevertheless, despite an increasing number of women attaining a PhD during the past three decades, only 5 women, or six percent, are full professors of economics today, 2006. In the pipeline we find women to be about one fifth of the associate and assistant professors, about one fourth of the PhD graduates and about one third of the upper-level economics students. Women's representation in economics in Sweden seems to be similar to that in a number of other countries. Everywhere the hardest glass ceiling is found at the top, either in the promotion to full professor or in the tenure-decision. Another common experience in the various countries, including Sweden, is that economics is less gender-balanced than the universities as a whole or the social sciences in general, and in some cases less so than disciplines in the natural sciences as well.

The low representation of women in Swedish economics raises additional issues. Other studies have identified differences according to gender in research areas, wages, and access to funding, probability and speed of promotion and co-authorship – aspects of women's status in economics that we have not considered here. A further challenge is to identify the underlying causes of women's low involvement and slow progress in economics; whether it may be preferences, discrimination, family responsibilities, networks, preferences for non-academic or administrative work etc.

The much sought-after fruits are there - at the top, tempting and in principle accessible for all. However, to reach them requires climbing – ladders and branches. It is a laborious climb; it requires purposefulness, technique, cooperation, capacity to accept hard blows, and now and then a helping hand from those higher up. Neither is it evident from the bottom where the best fruits are located or where the most advantageous climbing route is to be found. Our survey shows that women are on route, have developed a taste for economics, appropriated the climbing techniques and are many enough to assist each other en route. But it has also illustrated that the climb is long and time consuming. It will take several decades before we can hope for a common, gender-balanced, feast – along the route as well as on the top. Let us hope that by that time academic careers will not have grown out of fashion and the best treats instead be found elsewhere, like in business or finance.

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