

Gender Inequity in Business Academia: Past and Present

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Abstract

This paper investigates gender inequality issues in worldwide business academia over the academic years 2001-02 to 2009-10. Doctoral participation and completion rates for business school doctoral programs are evaluated. The study shows that less women graduate from doctoral programs compared to the percentage of women who are enrolled suggesting that women either take longer to graduate or women drop out at higher rates than men.

In addition to doctoral programs, we also investigate the gender differences of salaries for women who choose to enter academia in the US. The results show that gender inequality is still pervasive in almost all areas of business even though women now make up a larger percentage of faculty in the highest three levels of rank.

Introduction

In 1972 the Congress of the United States passed Title IX which prohibited sexual discrimination in education. Since that time, researchers have been evaluating the progress made to date in the effort to eliminate gender differences in the academic environment. Some progress has been made on this front; however, gender inequity continues to plague the university setting today with inequities ranging over schools, programs, and departments. In an effort to shed new light on current issues and see how issues have changed over time, this paper will do a longitudinal study of gender issues in the domestic and international university settings. An analysis will be done both at the Ph.D. program level looking at gender differences in degree participation and completion and in the university academic environment to investigate gender faculty salary differences by school type, rank, academic qualification, hiring situation, and teaching area over the 2001 to 2010 time period. The data for this study will pull from universities around the world using information from The Association to Advance Collegiate Schools in Business International (AACSB). AACSB International was founded in 1916 and is the longest serving global accrediting body for business schools that offer undergraduate, master's, and doctoral degrees in business and accounting.

According to the AACSB website, the AACSB schools as of the year 2010 numbered 579 separate institutions that were represented in 35 different countries around the world. Of these 579 schools, seven percent were undergraduate institutions only, 8 percent were graduate only programs, and 85 percent of the universities conferred degrees at both the undergraduate and graduate level. The data in this sample is derived from two surveys submitted by AACSB members. Survey one is the AACSB International Business School Questionnaire (BSQ) and the second is the AACSB International Salary Survey (SS).

Prior Research

For much of the past four decades, researchers have looked at the gender equity issues in the college and university setting raising many different questions. Over this time equity issues at both the Ph.D. program level and the academic university/college settings have been identified.

According to data from the Ph.D. Completion Project (2008), which was the largest analysis to date of data on doctoral students put out by the Council of Graduate Schools (CGS), degree completion rates vary substantially by gender, race/ethnicity, and citizenship. The project evaluated the data submitted by 24 universities in the U.S. and Canada on 19,000 students who entered Ph.D. programs in 1992-93 through 1997-98. The report showed that, after 10 years, the cumulative completion rates for men, whites, and international students are higher than those for women, other U.S. racial/ethnic groups, and domestic students, respectively.

While women have worked to become a larger part of the university setting, the 2008 AACSB Business school faculty trends showed that overall women as of the end of year 2006-2007 made up approximately 27% of all full-time faculty in US based business institutions. When broken out by rank the 2007-2008 results showed the instructors with the highest percentage at 41.8% followed by assistant professor 36.4%, associate professor 26.7%, and full professor 15.1%. Females as a percentage of full-professors have generally stayed stagnant at the 15% level while looking at the same data from the 2004-2005 years. This research shows that while women have become a larger part of the university setting they appear to be so at the lower ranks.

West and Curtis (2006) evaluate data primarily from the American Association of University Professors (AAUP)'s annual Faculty Compensation Survey (FCS) for the 2005 – 2006 academic year. Their research provided data on faculty gender equity that were specific and comparable for a wide range of college and university campuses, with the goal of invigorating collaborative discussions at the local level. The AAUP report looked at four gender equity indicators including employment status, tenure status, full professor rank, and average salary. The AAUP study data includes all types of programs in individual colleges and universities in addition to just business fields. The authors found that women faculty would be less likely than men to hold full-time positions. West and Curtis also find that women in full time faculty positions are underrepresented in tenure-track positions and have not attained senior faculty rank at the same rates as men. Looking at the breakdown of full-time faculty positions by tenure status and type of institution they demonstrated that while women occupy the majority of non-tenure track positions, they are still underrepresented among the ranks of tenured faculty. Non tenure track positions tend to pay the least, have the highest teaching loads, and have the least amount of job security available as compared to that of tenure track positions. Regarding women in the rank of full professor, they found that women held only 24 percent of the positions as compared to men with 76 percent. The largest disparity in rates came at universities that were doctoral degree granting institutions (19 percent for women and 81 percent for men).

West and Curtis (2006) also evaluated the gender salary differences. They showed that the average salary of women in academia across all ranks was only 81 percent of that of men. They argue that this ratio has been stagnant since data on salary disparity started being collected in the late 1970's. Even when data was compared at the appropriate rank the differences although slightly lower do not disappear.

Williams (2004) looked at current research on women's progress in academia along with the AAUP's 1999-2000 report on gender. She argued that despite its high aspirations and ivory towers, academe is just another workplace. She argued that academic administrators need to reexamine hiring and promotion decisions for the tell-tale signs of workplace discrimination exposed by the current studies.

Ginther and Hayes (2003) studied data from the Survey of Doctorate Recipients to evaluate gender differences in salaries and promotion for academics in the humanities. Using the 1977 to 1995 time period the authors argued that gender salary differences can largely be explained by academic rank. They concluded that the gender discrimination for academics in the humanities tends to operate through differences in promotion, which in turn affects wages.

However other studies have pointed to some possible bright spots in business academia. For example, Jordan, Pate, and Clark (2006) evaluate a sample of doctoral granting and non-doctoral granting institutions to examine changes in gender issues in the accounting academic field during the period 1994 to 2004. Their results showed that relative to non-doctoral granting institutions, those accounting educators that were terminally qualified were no longer under represented at doctoral granting institutions. They also reported that the proportion of women in senior faculty positions, while not gender balanced, was improved from previous research studies using earlier time periods.

While the majority of the studies mentioned above show that, while women may be increasing in number in academia, it may not be at the most beneficial positions or salaries. Other studies have looked at factors which effect tenure and promotion for women faculty. In addition, some studies point to the choice of academic employment as affecting a women's likelihood of having a successful marriage, children, and a family.

In their data set of tenure achievement rates from selected Association of American University Schools for 1997- 1998 tenure track entrants who achieved tenure by 2004-2005, Dooris and Guidos (2006) showed females trailed males and minorities trailed non-minorities in achieving tenure. Females were shown to achieve tenure 48% of the time while males received tenure 56% of the time. The authors also looked at exist survey information and found that women who left the institution were younger than male counterparts and were also more likely to leave the university because of a more attractive position. The article didn't specify if "more attractive" was a higher paying job, a job that allows more life activities, or a combination.

Perna (2005) looked at data from the 1999 National Study of Postsecondary Faculty to examine the ways in which parental status, marital status, and employment status of the spouse are related to two outcomes, tenure and promotion among college and university faculty. The analysis revealed that the contribution of family ties to tenure status and academic rank is different for women than for men.

Hewlett and Buck Luce (2005), focuses on women in the workforce, the degree to which they leave the workforce temporarily, and the extent to which they return. The authors note a “high cost of time out” of the workforce.

Jaschik (2008) discussed various studies which suggest that, possibly as the result of the difficulty of balancing parenthood and academic careers, particularly for women, many female academics may be opting not to have kids.

Manson and Goulden (2002, 2004) use the Survey of Doctorate Recipients (SDR) has longitudinal data on more than 160,000 Ph.D. recipients. Manson and Goulden found that the timing of children matters for untenured faculty members. Men who had children within five years of earning a degree were 38% more likely to receive tenure than their women counterparts. Additionally, only one in three women who takes a fast track university job before becoming a mother ever has a baby. The authors also show that women who are married when they begin their faculty career are much more likely than men in the same position to divorce or separate. While these results are not good for the tenured women, those women who for whatever reason chose to go the route of adjunct, part-time, etc are much more likely to have children and stay married. Their results are much more in line with their male counterparts who chose the fast track university job.

Gardiner, et.al. (2007) evaluates a mentoring scheme for junior female academics. The program aimed to address the under representation of women in senior positions by increasing participation in networks and improving women’s research performance. The results indicate mentoring was very beneficial, showing that mentees were more likely to stay in the university, received more grant income and higher level of promotion, and had better perceptions of themselves as academics compared with non-mentored female academics.

World Wide Higher Education Program Data

In order to analyze if there has been any progress made by women in higher education concerning increasing attendance and completion rates we will need to evaluate data from representative programs over time. First, we will evaluate the available data from the AACSB Business School Questionnaire (BSQ). The BSQ data used in this study represents all schools responding to the World Wide AACSB BSQ for any give year with individual data for each graduate program housed in the school (General MBA, Specialized MBA, EMBA, Doctoral, etc). Our data time horizon includes data from the periods 2001 to 2009 and the survey results included information on 13, 363 programs at the applicable responding schools.

To set the stage for the doctoral programs we will first evaluate female participation and graduation rates for worldwide master’s level programs from the period 2001 to 2009. As shown in Table 1, the percentage of women enrolled in full time master’s level programs has grown over the years 2001-2009 from 36.80% to 41.48%. The percentage of part-time females has declined from 39.21% in 2001 to 37.91% in 2009. Overall, the percentage of women enrolled is slightly up from 38.25% in 2001 to roughly 40% in 2009. The overall average percent of females enrolled in all masters programs is approximately the same as those who graduate at

about 38%. Roughly 37% of all students in the program graduate in any given year implying that it takes roughly 2 - 3 years to complete the degree.

Table 1: Masters Programs Female Data: Worldwide

	% Female Fulltime	% Female Part-time	% Female Enrolled	% Female Degree
2001-02	36.80%	39.21%	38.25%	37.71%
2002-03	36.47%	38.23%	37.49%	37.27%
2003-04	37.01%	38.03%	37.60%	37.59%
2004-05	38.98%	38.66%	38.81%	37.89%
2005-06	39.95%	37.99%	38.99%	38.48%
2006-07	40.04%	38.48%	39.30%	38.41%
2007-08	41.68%	37.42%	39.70%	39.08%
2008-09	41.48%	37.91%	39.82%	38.97%
Average	39.05%	38.24%	38.75%	38.18%

Looking specifically at worldwide doctoral business school programs, Table 2 shows that, in this survey, women have not increased as percentage of total enrollment in doctoral programs over the period 2001 to 2009. Women still only occupy a little over 1/3 of all enrolled participants. Also, women account for a smaller amount of degrees than they represent in percentage enrollment with the overall females enrolled at 37.27% and the overall female degrees at 34.07%. Suggesting, that women either take longer to earn the degree than men or they graduate at a lower rate due to women dropping out of the program. Comparing data for Tables 1 & 2 shows, the percentage of overall women attending master’s level programs was larger than for women who attend doctoral programs with percentages of 38.75% and 37.27%, respectively. In addition, this data showed that women attending master level programs were more likely to graduate than their doctoral counterparts.

Table 2: Ph.D. Programs Female Data: World Wide

	% Female Fulltime	% Female Part-time	% Female Enrolled	% Female Degree
2001-02	37.50%	33.94%	37.08%	33.18%
2002-03	36.67%	34.77%	36.48%	32.64%
2003-04	38.26%	32.75%	37.52%	32.55%
2004-05	38.95%	31.87%	37.33%	31.64%
2005-06	37.12%	37.17%	37.13%	34.02%
2006-07	37.73%	31.88%	36.84%	33.21%
2007-08	38.25%	37.02%	38.04%	38.79%
2008-09	38.66%	33.99%	37.77%	36.53%
Average	37.89%	34.17%	37.27%	34.07%

In an effort to determine if there are any differences in female’s success in completing the degree from a U.S. based institution or an institution worldwide we will look the data separately. Table 3, Part A and Table 3, Part B look at doctoral programs for each year for both U.S. based institutions and doctoral programs outside the U.S, respectively. From Table 3, Part A we see that women enrolled in Ph.D. programs in the US has remained about consistent at 37-38% of students over all time periods. Women in full-time programs make up about 38% of the students and women in part-time programs make up about 36%. However, only 34.89% of the women earn degrees each year, implying, that almost 3% of overall students either drop out of the program prior to graduation or take longer to finish than their male counterparts. From a longitudinal perspective the percent of women earning degrees has increased slightly from 33.05% in 2001-02 to 36.61% in academic year 2008-09, showing that it appears that women earning doctoral degrees at U.S. based institutions are becoming more successful at earning the degrees.

Table 3, Part A: Ph. D. Programs Female Data: US Only

	% Female Fulltime	% Female Part-time	% Female Enrolled	% Female Degree
2001-02	37.46%	34.21%	37.06%	33.05%
2002-03	36.65%	33.85%	36.37%	32.82%
2003-04	38.26%	32.75%	37.52%	32.55%
2004-05	39.07%	33.74%	38.29%	31.80%
2005-06	37.91%	44.67%	38.29%	36.15%
2006-07	37.63%	38.78%	37.74%	36.06%
2007-08	37.49%	37.01%	37.44%	40.09%
2008-09	38.32%	34.12%	37.87%	36.61%
Average	37.85%	36.14%	37.57%	34.89%

Table 3, Part B: Ph. D. Programs Female Data: Outside US

	% Female Fulltime	% Female Part-time	% Female Enrolled	% Female Degree
2001-02	37.99%	27.59%	37.30%	35.42%
2002-03	36.88%	43.08%	37.56%	28.95%
2004-05	38.62%	30.54%	35.52%	31.36%
2005-06	35.23%	32.87%	34.77%	29.34%
2006-07	37.94%	27.68%	35.32%	27.84%
2007-08	39.37%	37.02%	38.77%	36.62%
2008-09	39.13%	33.94%	37.66%	36.43%
Average	37.88%	33.24%	36.70%	32.28%

When looking at women in full-time doctoral programs in foreign countries, using our data set, we see approximately the same percent of women enrolled (37.88%) as women in the

U.S. based programs (37.85%). However, women in international part-time doctorate programs only account for 33.24% of all part-time doctoral students as compared to 36.14% for their U.S. part-time counterparts. Also of interest, is that women in international doctoral programs, similar to women in U.S. programs, finished the program at a lower rate (32.8%) than their representation as an enrolled student (36.07%), implying that about a little over 4% of the women students drop out prior to graduation or take longer than average to graduate. Data for 2002-2003 was not available.

With the difference between results in the U.S and abroad explaining little regarding gender differences in doctoral programs, we now look at gender differences in the public versus private intuitions for all data dates associated with U.S. doctoral programs. As Table 4, Part A shows, the mean percentage of women who attend private full-time doctoral programs is 37.49%. Part-time females account for 34.69% of all students who attend private institutions. Overall, 36.47% of all private institution doctoral students are women. However, overall only 32.53% of women earning doctoral degrees at private institutions are women. The difference between the percent of women earning degrees on average over the eight years is approximately 4% difference between women who attend the program and those who actually graduate. The percentage of women enrolled in private Ph.D. programs over the 2001 to 2009 time period has changed very little. However, the percent of females earning degrees over this time period has increased at private institutions from 29.17 percent in 2001 to 37.86% in 2009. The annual difference in enrollment ranges between 8.74% in 2001-02 to a low of .27% in 2008-09 with the average difference at 4%. The decrease of over 8% in the difference between females enrolled and females with degrees over time hints at a possible success of women either completing the degree at a higher percentage or taking less time to graduate.

Table 4, Part A: Ph.D. Programs Private Universities Female Data: US only

Private	% Female Fulltime	% Female Part-time	% Female Enrolled	% Female Degree	% Difference Female Enrolled to Degree	Number Observations per Year
2001-02	38.15%	37.22%	37.91%	29.17%	8.74%	112
2002-03	34.84%	36.20%	35.09%	31.43%	3.67%	90
2003-04	37.23%	32.38%	35.27%	33.33%	1.93%	94
3004-05	40.42%	31.91%	36.07%	30.84%	5.23%	70
2005-06	35.66%	34.62%	35.59%	29.91%	5.68%	40
2006-07	36.36%	37.40%	36.55%	33.33%	3.22%	37
2007-08	38.31%	32.81%	37.17%	34.34%	2.83%	42
2008-09	38.92%	35.00%	38.13%	37.86%	0.27%	51
Average	37.49%	34.69%	36.47%	32.53%	3.95%	N =536

Table 4, Part B: Ph.D. Programs Public Universities Female Data: US only

Public	% Female Fulltime	% Female Part-time	% Female Enrolled	% Female Degree	% Difference Female	Number Observations
2001-02	37.30%	31.62%	36.83%	34.03%	2.80%	411
2002-03	36.59%	33.85%	36.31%	32.78%	3.53%	406
2003-04	38.44%	33.56%	38.18%	32.40%	5.78%	450
3004-05	38.90%	38.19%	38.86%	32.13%	6.73%	436
2005-06	38.28%	46.86%	38.74%	37.16%	1.58%	316
2006-07	37.82%	39.31%	37.93%	36.39%	1.54%	283
2007-08	37.32%	39.45%	37.50%	41.42%	-3.91%	314
2008-09	38.17%	33.50%	37.79%	36.24%	1.55%	307
Average	37.85%	37.04%	37.77%	35.32%	2.45%	N= 2923

Looking at Table 4, Part B we can analyze the profile of women attending public doctorate programs. As shown in Table 4 Part B, the mean percentage of women who attend public full-time programs is 37.85%. Part-time females account for 37.04% of all students who attend public institutions. Overall 37.77% of all public institution doctoral students are women. Overall, only 35.32% of graduates earning doctoral degrees at public institutions were women. The difference between the percent of women earning degrees on average over the eight years is approximately 2.5% difference between women who attend the program and those who actually graduate. The percentage of women enrolled in Public Ph.D. programs over the 2001 to 2009 time period has increased by about 1%, while the percent of females earning degrees has grown about 2%. Looking at the overall graduation rate between private and public institutions suggests that women who attend private Ph.D. programs are less likely to graduate than those who attend public programs.

Analysis of Faculty Salary Breakout 2001 02 to 2009 2010

The data for the faculty salary breakout by gender comes from the AACSB's Salary Survey. The survey results included in this paper collected individual faculty's salary and rank data for the academic years 2001-02 to 2009-10 and cover 222,217 observations. Data was extracted only for US based institutions so we did not have to deal with exchange rate issues. As shown in Table 5, women have gone from representing 11.90% of faculty at the rank of full professors in 2001 to 16.86% in 2010. Women at the associate level increased from 22.91% in 2001 to 28.11% in 2010. Women at the assistant level increased from 31.69% in 2001 to 36.78% in 2010. The current level of women at the level of assistant professor in 2008-09 is approximately the same percentage as those who graduated from doctoral programs as shown in Table 2. Women at the lecturer level decreased from 43.12% in 2001 down to 41.32% in 2010.

Table 5 Gender breakout for Full Professors 2001 to 2010

Academic Year	% Women Full	% Women Associate	% Women Assistant	% Women Lecturer
2001-02	11.90%	22.91%	31.69%	43.12%
2002-03	12.99%	23.52%	31.86	40.35%
2003-04	13.86%	24.30%	33.49%	40.77%
2004-05	14.44%	24.65%	33.71%	40.49%
2005-06	14.96%	25.47%	34.31%	41.79
2006-07	15.08%	26.14%	35.60%	41.66%
2007-08	15.42%	26.93%	37.02%	40.93%
2008-09	16.12%	27.40%	36.85%	41.55%
2009-10	16.86%	28.11%	36.78%	41.32%

As shown in Table 6, Part A, the difference for full professor and associate professor is fairly constant over time. The difference in salary between women and men at the full level in 2001 was approximately -10.48% with significance at the 1% level. Very little has changed at the full professor rank by 2010 with the mean difference in salary between women and men still showing as -10.14%. This percentage difference translates today to roughly \$12, 800 dollars in salary between men and women during the 2009-10 year. This difference has persisted even though the percentage of women at the full professor level over time, as shown in Table 6, Part A, has increased from 11.90% in 2001 to 16.86% in 2010. While women at the associate level suffer a smaller percentage difference than those at the full professor level they still have a significantly smaller salary. Women at the associate level in 2001 showed a difference of -2.27% to men while the 2010 difference for women increased to a -2.42% difference. The -2.42% difference in 2010 amounted to a \$2,599 dollar difference in salary. This salary difference persisted regardless of the increase in female faculty at the associate level from 22.91% in 2001 to 28.11% in 2010.

The number of women in this sample leaving the ranks of associate professor and moving up to full professor over 2001 to 2010 time period was 738 women which is approximately a 93% increase over time. One assumption that could be made about the women moving up to full is that they are the most productive and highest valued at the associate level and as a result the highest paid women in that rank. Given these assumptions, it is interesting to see that this increase lead to less than a .5% increase in the percentage difference in gender salary at the full level.

Table 6, Part A: Difference in Salary by Rank and Year for Full and Associates

Rank	Academic Year	Female	Male	Difference	T Stat	PerDiff
Full	2001-02	87,249	96,390	-9,141	-9.75***	-10.48%
Full	2002-03	89,871	101,648	-11,777	-12.04***	-13.10%
Full	2003-04	98,382	108,064	-9,682	-9.83***	-9.84%
Full	2004-05	101,755	112,202	-10,447	-10.22***	-10.27%
Full	2005-06	108,099	119,747	-11,648	-9.83***	-10.78%
Full	2006-07	114,533	125,613	-11,081	-8.83***	-9.67%
Full	2007-08	119,736	130,477	-10,742	-8.32***	-8.97%
Full	2008-09	123,660	135,311	-11,651	-9.21***	-9.42%
Full	2009-10	125,588	138,328	-12,740	-9.76***	-10.14%
Full	ALL	109,749	119,357	-9,608	-22.95***	-8.75%
Associate	2001-02	74,801	76,501	-1,700	-3.32***	-2.27%
Associate	2002-03	78,426	80,395	-1,970	-3.83***	-2.51%
Associate	2003-04	84,156	85,704	-1,548	-2.75***	-1.84%
Associate	2004-05	87,912	89,105	-1,193	-2.02**	-1.36%
Associate	2005-06	91,979	94,517	-2,537	-3.93***	-2.76%
Associate	2006-07	96,580	99,440	-2,860	-4.17***	-2.96%
Associate	2007-08	101,265	103,980	-2,716	-3.87***	-2.68%
Associate	2008-09	106,176	108,566	-2,391	-3.19***	-2.25%
Associate	2009-10	107,613	110,212	-2,599	-3.53***	-2.42%
Associate	ALL	93,584	94,812	-1,229	-5.09***	-1.31%

***, **, * denote 1%, 5% and 10% significance respectively

Turning our attention to the assistant level shows the same type of pattern that was seen in the associate level. As shown in Table 6, Part B, women earned on average \$3,532 dollars less than men at the same level during the 2009-2010 academic year. This translates to a -3.39% difference in the 2010 as compared to a -3.68% difference in 2001. These values are all significant at the 1% level. While associate and assistant ranks showed the smallest negative difference between women and men, the position of lecturer, the lowest level position, shows a much larger salary differential. As of the 2009-2010 academic year, the salary differential at lecturer level is -6,356 dollars which relates to an -11.92% difference. This percentage difference relates to a -12.90% difference in 2001.

Historically women make up a much higher percentage of the faculty at the lecturer level than at any other level in the university. In fact, as seen in Table 6, Part B, our sample shows that during the 2009-2010 academic year women made up over 41% of all faculty at the lecturer level, which compared to 36.78% of assistant, 28.11% of associate, and 16.86% of full level, respectively. Thus, women are represented the most at the lowest paid salaries and represented the least at the highest paid salaries. This is consistent with prior research and has changed little over the years.

Table 6, Part B: Differences by year and Rank for Assistants and Lecturers

Rank	Academic Year	Female	Male	Difference	T Stat	PerDiff
Assistant	2001-02	70,006	72,581	-2,576	-4.69***	-3.68%
Assistant	2002-03	75,284	78,315	-3,032	-5.44***	-4.03%
Assistant	2003-04	80,969	84,266	-3,298	-5.67***	-4.07%
Assistant	2004-05	84,397	87,813	-3,416	-5.58***	-4.05%
Assistant	2005-06	89,663	92,130	-2,467	-3.76***	-2.75%
Assistant	2006-07	94,323	96,716	-2,392	-3.49***	-2.54%
Assistant	2007-08	98,479	100,602	-2,123	-2.99***	-2.16%
Assistant	2008-09	102,812	105,794	-2,982	-4.16***	-2.90%
Assistant	2009-10	104,217	107,749	-3,532	-4.82***	-3.39%
Assistant	ALL	90,739	92,711	-1,972	-8.09***	-2.17%
Lecturer	2001-02	42,295	47,750	-5,455	-8.64***	-12.90%
Lecturer	2002-03	46,248	52,344	-6,096	-9.32***	-13.18%
Lecturer	2003-04	47,705	52,987	-5,282	-8.60***	-11.07%
Lecturer	2004-05	50,165	55,380	-5,215	-8.30***	-10.40%
Lecturer	2005-06	51,234	57,942	-6,709	-10.51***	-13.09%
Lecturer	2006-07	54,577	61,090	-6,513	-9.79***	-11.93%
Lecturer	2007-08	57,052	64,084	-7,032	-10.23***	-12.33%
Lecturer	2008-09	59,338	66,223	-6,885	-10.33***	-11.60%
Lecturer	2009-10	60,663	67,594	-6,931	-9.77***	-11.43%
Lecturer	ALL	53,311	59,667	-6,356	-26.85***	-11.92%

***, **, * denote 1%, 5% and 10% significance respectively

Another way of looking at the gender difference would be to control for the type of school. Is it possible that there are gender differences between public and private institutions as

was shown in the Ph.D. program graduation rates? As shown in Table 7, there does appear to be a difference in gender between public and private institutions. Private schools on average appear over time to pay more regardless of gender with public schools paying less. Overall, the gender salary difference between private schools is larger than for public. However, regardless of whether the school is public or private both discount women’s salary by about 14 -15%. These results are all significant at the 1% level.

Table 7: Public Schools v. Private Schools

School Type	Academic Year	Female	Male	Difference	T Stat	PerDiff
Private	2001-02	75,142	88,745	-13,603	-15.23***	-18.10%
Private	2002-03	78,891	92,158	-13,267	-16.09***	-16.82%
Private	2003-04	86,221	100,519	-14,298	-16.20***	-16.58%
Private	2004-05	89,493	103,068	-13,575	-14.88***	-15.17%
Private	2005-06	95,723	110,708	-14,986	-14.87***	-15.66%
Private	2006-07	100,401	116,271	-15,871	-14.89***	-15.81%
Private	2007-08	103,464	119,607	-16,143	-14.87***	-15.60%
Private	2008-09	108,248	123,705	-15,457	-14.20***	-14.28%
Private	2009-10	111,617	127,756	-16,139	-14.62***	-14.46%
Private	ALL	96,513	110,384	13,871	38.73***	14.37%
Public	2001-02	67,127	78,836	-11,709	-26.09***	-17.44%
Public	2002-03	71,508	83,360	-11,853	-26.24***	-16.58%
Public	2003-04	76,355	87,652	-11,296	-24.39***	-14.79%
Public	2004-05	79,333	91,260	-11,927	-24.47***	-15.03%
Public	2005-06	82,594	95,743	-13,149	-25.07***	-15.92%
Public	2006-07	86,679	99,884	-13,205	-24.24***	-15.23%
Public	2007-08	91,066	104,145	-13,079	-22.94***	-14.36%
Public	2008-09	94,457	108,729	-14,273	-24.61***	-15.11%
Public	2009-10	95,796	109,927	-14,130	-24.23***	-14.75%
Public	ALL	84,232	96,156	11,924	63.96***	14.16%

***, **, * denote 1%, 5% and 10% significance respectively

As shown in the rank salary data, inequity is pervasive irrespective of academic rank. However, perhaps the data results are more equal if we look at new hires. Is it possible that women are hired at an equal salary but due to changes in productivity and overall regard their salaries over time become less than men’s? Table 8 shows data for new hires. As shown in Table 8, women possessing new doctorates go into their new position with the same qualification of terminal degree but with an average of -\$2,943 dollars less in their pocket. This relates to a percentage difference of -3.13% and is significant at the one percent level.

With salary compression a common phenomena at many universities, the best way to get a raise is to move to another school. However as shown in Table 8, this move is not as lucrative for the women as it is for men. Women, who switch positions regardless of rank, earn approximately -\$12, 000 dollars less than men translating to a -14.39% smaller salary. This difference is only

about \$1,300 dollars larger than the average salaries of women who don't change positions. Suggesting, that moves, at least for women, don't tend to earn them much in additional salary. Of interest in this table are the results for new faculty that are "All but Dissertation" (ABD) which show that if the new hire is not yet finished with their degree then women's and men's salaries are not significantly different from one another.

Table 8: New Hires

New Hire	Academic Year	Female	Male	Difference	T Stat	PerDiff
No	ALL	88,233	101,100	-12,867	-71.66***	-14.58%
Yes	ALL	80,392	91,964	-11,572	-17.18***	-14.39%
Yes-ABD	ALL	79,316	78,371	944	0.59	1.19%
Yes-New Doctorate	ALL	93,948	96,891	-2,943	-3.24***	-3.13%

***, **, * denote 1%, 5% and 10% significance respectively

Another way of justifying salary differentials is to look at the qualifications of the individuals in question. Since 2003, the AACSB accreditation standards define two categories of faculty qualifications which try to identify those that are academically qualified (AQ) or professionally qualified (PQ). There is no specific definition that fits AQ and PQ faculty for all schools. AACSB does require a combination of academic preparation and activities but each school has the ability to determine their own criteria and the process with which it is monitored. For example, a university could deem a faculty AQ if they have a terminal degree and have 2 publications in peer reviewed journals and 3 academic presentations at academic conferences over a five year period.

Given the AACSB definition of qualifications, institutions will classify their faculty with "academically", "professionally", "neither", or "unknown" qualifications. A status of "academically qualified" means that you have fulfilled the appropriate components of research and conference presentations that your school requires. While academic status doesn't measure productivity directly it does elude to it. Looking at Table 9, we see that women who were academically qualified regardless of academic year earned an average of -\$12,509 less than their male counterparts. In fact, regardless of qualification status women earned anywhere from a little over -\$9,000 dollars less to -\$13,633 dollars less than men. All values were significant at the one percent level.

Table 9: Qualifications

Qualification	Academic Year	Female	Male	Difference	T Stat	PerDiff
	ALL	78,927	91,364	-12,437	-61.63***	-15.76%
A	ALL	104,923	117,432	-12,509	-43.98***	-11.92%
N	ALL	71,321	84,954	-13,633	-14.78***	-19.11%
P	ALL	60,290	72,178	-11,888	-28.14***	-19.72%
U	ALL	90,085	99,446	-9,360	-8.62***	-10.39%

***, **, * denote 1%, 5% and 10% significance respectively

Up to this point we have looked at faculty regardless of discipline. Average salaries vary among disciplines and some disciplines attract more men than women. Table 10 breaks out the teaching area and shows inequality between genders for all business school areas included in our sample data. Looking at all years together from 2001 to 2010 shows women in all areas make less than men. The discrepancies range from a difference of only -\$1,021 dollars in the field of real estate to a maximum of -\$24,300 dollars for the area called other. Of interest are large differentials for quantitative areas historically known to have fewer women such as: accounting (-\$13,057), cis/mis (-\$10,271), finance (-\$11,506), operations research (-\$18,446), quantitative methods (-\$17,462), and statistics (-\$21,332). All areas show significant differences in gender salaries except for real estate and supply chain.

Table 10: Teaching Area All Years

Area	Academic Year	Female	Male	Difference	T Stat	PerDiff
Accounting	ALL	90,369	103,426	-13,057	-32.26***	-14.45%
Behavioral Science/ Org Behavior	ALL	102,017	114,552	-12,535	-12.52***	-12.29%
Bus Communication	ALL	59,660	72,414	-12,754	-13.67***	-21.38%
Bus Education	ALL	62,191	68,704	-6,513	-5.23***	-10.47%
Bus Ethics - incl Corp Soc Resp	ALL	98,233	104,842	-6,609	-2.10**	-6.73%
Bus Law/ Legal Environment	ALL	74,808	80,282	-5,474	-7.50***	-7.32%
CIS/ MIS	ALL	84,193	94,464	-10,271	-21.49***	-12.20%
E-Bus - incl E- commerce	ALL	87,512	102,043	-14,531	-3.78***	-16.60%
Econ/ Managerial Economics	ALL	76,159	89,956	-13,796	-27.48***	-18.11%
Entrepreneurship/ Small Bus Admin	ALL	91,169	104,131	-12,962	-8.50***	-14.22%
Finance - incl Banking	ALL	105,369	116,875	-11,506	-17.37***	-10.92%
General Bus	ALL	52,628	71,248	-18,620	-11.03***	-35.38%
HR Mgt - incl Persnl & Ind/Labor Rel	ALL	86,316	97,428	-11,112	-13.28***	-12.87%
Health Services/ Hospital Admin	ALL	87,437	101,578	-14,141	-4.35***	-16.17%
Hotel/ Restaurant/ Tourism	ALL	72,722	81,177	-8,455	-6.95***	-11.63%
Insurance	ALL	100,417	107,812	-7,395	-3.34***	-7.36%
International Bus	ALL	91,438	96,105	-4,667	-4.05***	-5.10%
Management	ALL	84,048	91,571	-7,523	-15.56***	-8.95%
Marketing	ALL	91,046	101,350	-10,304	-23.14***	-11.32%
Operations Research	ALL	92,244	110,690	-18,446	-7.94***	-20.00%
Other	ALL	66,492	90,791	-24,300	-11.23***	-36.55%
Production/ Operations Mgt	ALL	94,927	103,634	-8,707	-9.04***	-9.17%
Public Administration	ALL	84,647	89,247	-4,600	-1.76*	-5.43%
Quantitative Methods	ALL	76,718	94,180	-17,462	-13.38***	-22.76%
Real Estate	ALL	114,782	115,803	-1,021	-0.25	-0.89%
Statistics	ALL	73,258	94,590	-21,332	-17.33***	-29.12%
Strategic Management	ALL	102,413	106,419	-4,006	-4.10***	-3.91%
Supply Chain/ Transport/ Logistics	ALL	105,325	107,058	-1,733	-0.89	-1.65%
Taxation	ALL	95,876	98,735	-2,859	-1.86*	-2.98%

***, **, * denote 1%, 5% and 10% significance respectively

While Table 10 shows overall significant inequality among almost all disciplines in business during our sample, it would be more informative to look at the data from a longitudinal perspective to see how much has changed in the area over time. Table 11 shows some of the teaching areas broken out for all years of data. During the 2001-2010 time periods our sample data shows the dollar difference in salary for all areas except management are increasing over time. Also shown, are improvements in gender inequality as a percentage difference in salary in accounting, finance, management, and marketing. Even with the percentage decrease in the areas previously mentioned, all areas, except marketing, continue to run a double digit difference in salary. A worsening of gender equality shown by the percentage difference in salary is seen in our data for areas in behavior science/behavior org, general business, and statistics. Other areas not shown had similar data results.

These results suggest that while the dollar difference in gender salary continues to increase there are some areas which do show a decreasing percentage of difference in the salary. However, the decrease in the percentage over time is very small compared to the increase in the percentage of women in each rank as shown in Table 5. This suggests that salaries for women are not keeping pace with the increase in women in the field.

Even the areas that are showing a decrease in the percentage difference in gender salary would take decades to eliminate the difference at the rate they are currently changing. For example, accounting started with an -18.51% difference in 2001 and ended with a -15.19% difference in 2010 the decrease in difference was -4.32%. Given this percentage decrease over the nine year period it would take over 30 years to bring the two to equality. Of course for areas like behavioral science, general business, and statistics there is no end in sight for slowing down the inequities in gender salary.

Table 11: Teaching Area by Year for Selected Teaching Areas

Area	Academic Year	Female	Male	Difference	T Stat	PerDiff
Accounting	2001-02	71,026	84,169	-13,144	-14.15***	-18.51%
Accounting	2002-03	75,343	88,572	-13,229	-14.67***	-17.56%
Accounting	2003-04	81,083	93,835	-12,752	-12.97***	-15.73%
Accounting	2004-05	84,390	97,721	-13,331	-12.79***	-15.80%
Accounting	2005-06	88,712	103,318	-14,606	-12.78***	-16.46%
Accounting	2006-07	92,817	108,196	-15,379	-12.89***	-16.57%
Accounting	2007-08	98,446	112,304	-13,858	-11.02***	-14.08%
Accounting	2008-09	101,957	117,568	-15,611	-12.27***	-15.31%
Accounting	2009-10	104,335	120,183	-15,848	-12.29***	-15.19%
Accounting	ALL	90,369	103,426	13,057	32.26***	14.45%
Behavioral Science/ Behavior Org	2001-02	79,123	89,187	-10,063	-4.43***	-12.72%
Behavioral Science/ Behavior Org	2002-03	83,461	94,745	-11,284	-5.46***	-13.52%
Behavioral Science/ Behavior Org	2003-04	92,057	101,669	-9,612	-3.99***	-10.44%
Behavioral Science/ Behavior Org	2004-05	93,924	105,054	-11,129	-4.37***	-11.85%
Behavioral Science/ Behavior Org	2005-06	102,154	116,682	-14,528	-4.95***	-14.22%
Behavioral Science/ Behavior Org	2006-07	107,554	122,874	-15,320	-5.15***	-14.24%
Behavioral Science/ Behavior Org	2007-08	109,450	124,950	-15,500	-5.28***	-14.16%
Behavioral Science/ Behavior Org	2008-09	114,099	129,724	-15,625	-5.04***	-13.69%
Behavioral Science/ Behavior Org	2009-10	115,062	131,718	-16,655	-5.58***	-14.47%
Behavioral Science/ Behavior Org	ALL	102,017	114,552	12,535	12.52***	12.29%
Finance - incl Banking	2001-02	80,773	92,655	-11,882	-6.70***	-14.71%
Finance - incl Banking	2002-03	84,973	98,140	-13,167	-7.94***	-15.50%
Finance - incl Banking	2003-04	95,439	105,144	-9,704	-5.54***	-10.17%
Finance - incl Banking	2004-05	97,331	109,177	-11,846	-6.74***	-12.17%

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Finance - incl Banking	2005-06	103,712	116,286	-12,574	-6.67***	-12.12%
Finance - incl Banking	2006-07	107,881	122,093	-14,212	-7.53***	-13.17%
Finance - incl Banking	2007-08	112,300	126,869	-14,569	-7.70***	-12.97%
Finance - incl Banking	2008-09	117,177	132,829	-15,651	-8.11***	-13.36%
Finance - incl Banking	2009-10	120,484	136,095	-15,611	-8.09***	-12.96%
Finance incl Banking	ALL	105,369	116,875	11,506	17.37***	10.92%
General Bus	2001-02	46,030	56,906	-10,876	-1.80*	23.63%-
General Bus	2002-03	44,173	54,197	-10,024	-2.74***	-22.69%
General Bus	2003-04	47,649	61,235	-13,587	-3.17***	-28.51%
General Bus	2004-05	47,049	65,007	-17,958	-4.25***	-38.17%
General Bus	2005-06	51,400	70,857	-19,457	-3.77***	-37.85%
General Bus	2006-07	53,984	74,100	-20,116	-4.67***	-37.26%
General Bus	2007-08	55,388	75,332	-19,943	-4.49***	-36.01%
General Bus	2008-09	60,956	76,799	-15,843	-3.09***	-25.99%
General Bus	2009-10	59,177	78,496	-19,319	-3.86***	-32.65%
General Bus	ALL	52,628	71,248	18,620	11.03***	35.38%
Management	2001-02	66,410	78,247	-11,837	-9.43***	-17.82%
Management	2002-03	73,347	80,769	-7,422	-6.24***	-10.12%
Management	2003-04	75,704	84,829	-9,124	-7.49***	-12.05%
Management	2004-05	78,708	86,528	-7,820	-5.91***	-9.94%
Management	2005-06	81,665	90,642	-8,977	-6.62***	-10.99%
Management	2006-07	85,424	94,349	-8,925	-6.31***	-10.45%
Management	2007-08	89,955	98,775	-8,820	-5.92***	-9.80%
Management	2008-09	93,273	101,497	-8,224	-5.75***	-8.82%
Management	2009-10	94,773	102,360	-7,587	-5.20***	-8.01%
Management	ALL	84,048	91,571	7,523	15.56***	8.95%
Marketing	2001-02	72,260	82,210	-9,950	-9.58***	-13.77%
Marketing	2002-03	76,593	87,149	-10,556	-10.27***	-13.78%
Marketing	2003-04	81,317	92,774	-11,457	-10.63***	-14.09%

Marketing	2004-05	84,935	96,010	-11,075	-9.58***	-13.04%
Marketing	2005-06	90,133	100,752	-10,619	-8.41***	-11.78%
Marketing	2006-07	94,276	105,691	-11,415	-8.59***	-12.11%
Marketing	2007-08	98,082	109,671	-11,588	-8.54***	-11.81%
Marketing	2008-09	101,228	113,489	-12,261	-9.15***	-12.11%
Marketing	2009-10	104,220	116,029	-11,809	-8.49***	-11.33%
Marketing	ALL	91,046	101,350	10,304	23.14***	11.32%
Statistics	2001-02	65,076	79,617	-14,540	-4.92***	-22.34%
Statistics	2002-03	61,138	81,618	-20,481	-7.24***	-33.50%
Statistics	2003-04	70,712	85,410	-14,697	-5.13***	-20.78%
Statistics	2004-05	73,250	91,286	-18,036	-5.29***	-24.62%
Statistics	2005-06	72,126	95,531	-23,405	-6.72***	-32.45%
Statistics	2006-07	74,794	100,505	-25,712	-7.06***	-34.38%
Statistics	2007-08	78,522	103,007	-24,484	-6.21***	-31.18%
Statistics	2008-09	82,879	107,766	-24,887	-5.45***	-30.03%
Statistics	2009-10	80,484	108,799	-28,315	-7.05***	-35.18%
Statistics	ALL	73,258	94,590	21,332	17.33***	29.12%

***, **, * denote 1%, 5% and 10% significance respectively

This paper looked at the gender inequities in business faculty over the academic years 2001-02 to 2009-10 using the AACSB International Business School Questionnaire and the AACSB International Salary Survey. Our results show that women account for a smaller amount of doctoral degrees than they represent in percentage enrollment. Suggesting, that women either take longer to earn the doctoral degree than men or they graduate at a lower rate due to women dropping out of the program. Women attending master level programs were more likely to graduate than their doctoral counterparts. Looking at the overall graduation rate between private and public institutions suggests that women who attend private Ph.D. programs are less likely to graduate than those who attend public programs.

The data for the faculty salary breakout by gender showed that women as of 2010 represented 16.86% of the faculty at the full level, 28.11% at the associate level, 36.78% at the assistant level, and 41.32% at the lecturer level. While the percentage of women in each of the three highest ranks has increased over time their salary difference at these ranks has changed very little. Regardless of whether the school is public or private both discount women's salary by about 14 -15%. Women possessing new doctorates go into their new position with an average

of -\$2,943 dollars less in their pocket. Women who switch positions, regardless of rank, earn approximately -\$12,000 dollars less than men. Looking at all years together from 2001 to 2010 shows women in all areas make less than men. The discrepancies range from a low of only -\$1,021 dollars in the field of real estate to a maximum of -\$24,300 dollars for the area called other. Similar data was shown for longitudinal breakout of the area data.

While the data does show that women have become a larger proportion of academia, unfortunately the inequities in salary remain and have changed very little over the past nine years. The largest differentials in salary still come from the highest and lowest rank data.

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