

Chance of Reaching Chair Professor Level in Trinity

An Analysis of Gender Trends 2007-2014

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This report compares female and male academics' chances of reaching the Chair Professor¹ Level in Trinity, with a view to identifying any possible areas of concern for the university with regard to gender equality in career progression.

The “chance of reaching Chair Professor level” is worked out by comparing the number of staff at each level of the Trinity academic career ladder (Assistant Professor (above the bar) > Associate Professor > Professor > Chair Professor) who were eligible for promotion, the number of staff who applied for promotion, and the number of staff who were promoted, for each year that promotions occurred between 2007 and 2014 (inclusive) – both for female and male staff.²

Assumptions and caveats

- It is assumed for the purposes of this report that academic staff move up the career ladder one level at a time, though all academic staff above the bar are theoretically eligible to apply for promotion to the Chair Professor level. Therefore the “number of staff who were eligible for promotion” to any level is calculated as the number of staff employed at the level below.

¹ Since academic titles were internationalized in 2011, there are two salary grades for full professor in Trinity College Dublin; viz Professor of... and Professor in.... To be clear in this document we will refer to the former as “Chair Professors” and the latter as “Professors”.

² Further detail on data and calculations is provided in the Appendix

- The “number of staff who were eligible for promotion” may include small numbers of staff who were not eligible for promotion because they were on probation.
- Medical academic staff (e.g. Professor Consultants, Clinical Professors) are not included in this analysis as they follow the clinical track rather than the academic career track.
- Adjunct academic staff and part-time lecturers are not included in this analysis as they are not included in the overall staff population figures for this exercise.
- There are three possible routes for academic staff to reach the Chair Professor level:
 - (i) the annual Senior Promotions process, as outlined in the main body of this report
 - (ii) Recruitment to an advertised vacancy for a Chair Professor post; this data is provided on page 6.
 - (iii) Staff who achieve promotion through the Retention Policy, which is a separate process to the annual Senior Promotions process. Data on retention is presented on page 7.
- The data on internal recruitment and retention is available from 2010 (not 2007). It must also be noted that the numbers involved in both processes are very small, and so any gender trends observed therein are of limited statistical significance.

Key conclusions based on a statistical analysis of the data

- 1) There are fewer female than male staff at all academic grades to begin with; this means that if female and male academic staff apply for promotion and are promoted at equal **rates**, a greater **number** of male than female staff will be promoted.
- 2) There is evidence that female Assistant Professors (above the bar) do not apply for promotion to the grade of Associate Professor at the same rate as their male equivalents. In 2008, 2012 and 2014, there was a statistically significant difference in application rates for promotion to Associate Professor, with an average (across those three years) of 17% of eligible female staff applying, as compared with 34% of eligible male staff.
- 3) There is no evidence that the chance of a promotion application being successful is different between female and male academic staff in Trinity.

Promotions data summaries

The vertical bars in the graphs below are error bars on the estimates of the probabilities (a 95% confidence interval range). Those error bars coloured red are where this difference is statistically significant. This means that it is very unlikely to observe the proportions applying or promoted, were the probability to be the same for both genders. Black error bars indicate that there is no significant difference, i.e. what we observe is still consistent with the probabilities being the same for both genders.

Assistant Professor (above the bar) > Associate Professor

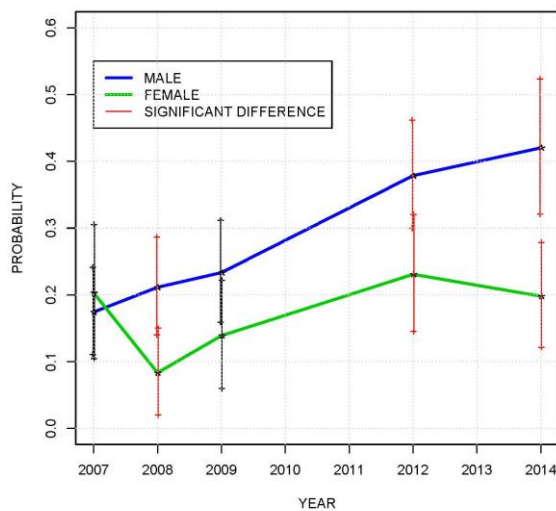


Figure 1: Data show that in 3 of the promotion years since 2007, female Assistant Professors have been less likely than male Assistant Professors to apply for promotion to Associate Professor

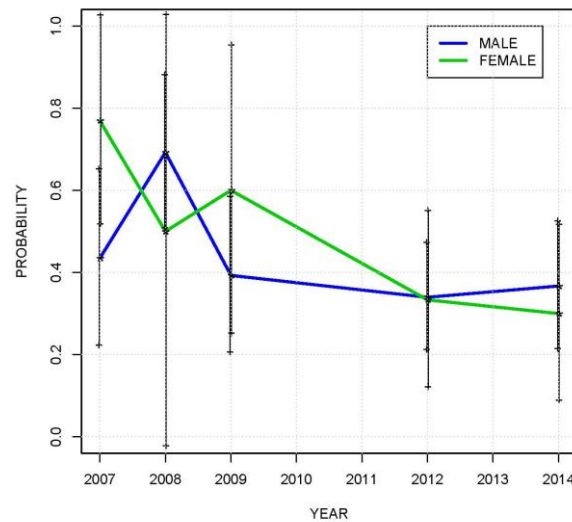


Figure 2: Data show no evidence of a gender difference in the probability that an applicant for promotion from Assistant Professor (above the bar) to Associate Professor will be successful

Conclusions

- Female Assistant Professors (above the bar) are significantly less likely to apply for promotion, with a statistically significant result in 3 of the 5 years for which we have data: 2008, 2012 and 2014 (Figure 1).

- For all of the years for which we have sufficient data to tell, there is no significant difference between female and male Assistant Professors (above the bar) in the probability of being promoted having applied (Figure 2).

Associate Professor > Professor

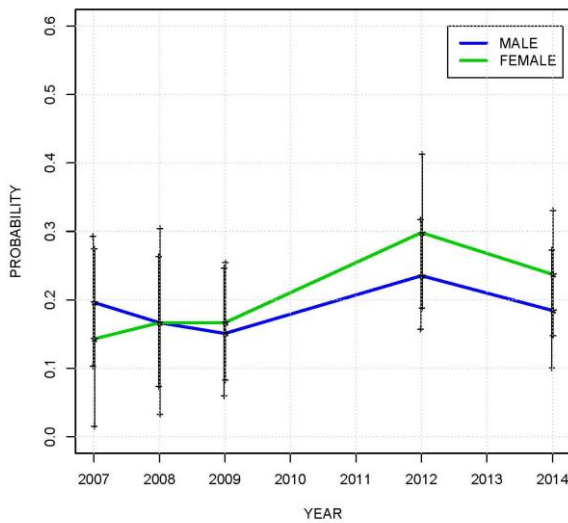


Figure 3: Data show no evidence of a gender difference in the probability that an Associate Professor applies for promotion to Professor

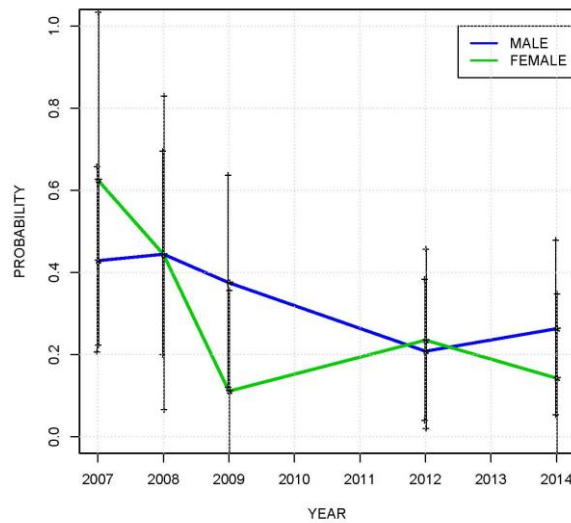


Figure 4: Data show no evidence of a gender difference in the probability that an applicant for promotion from Associate Professor to Professor will be successful

Conclusions

- For all of the years for which we have sufficient data to tell, there is no significant difference between female and male Associate Professors with respect to the probability of applying for promotion to Professor (Figure 3) or the probability of being promoted having applied (Figure 4).

Professor > Chair Professor

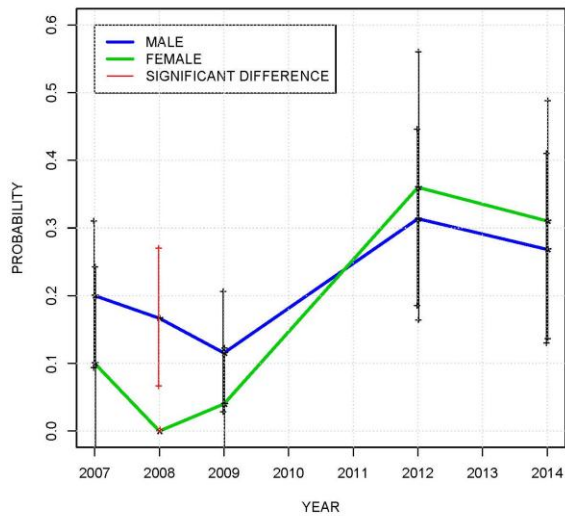


Figure 5: Data show that in 2008, female Professors were less likely than male Professors to apply for promotion to Chair Professor

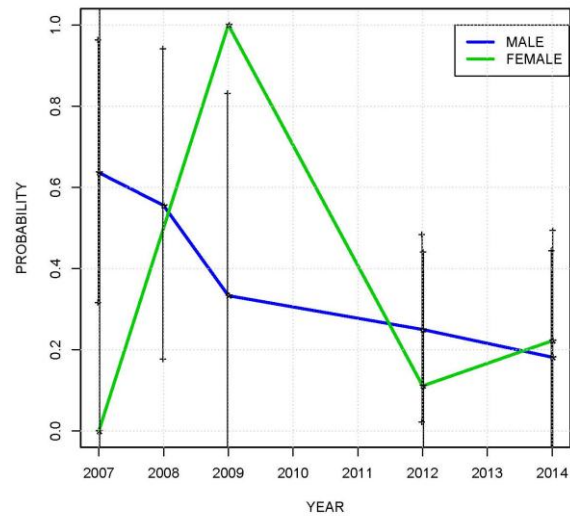


Figure 6: Data show no evidence of a gender difference in the probability that an applicant for promotion from Professor to Chair Professor will be successful

Conclusions

- There is one year (2008) where no female Professor applied for promotion, and in that year there were significantly more male Professors applying. Otherwise there is no statistically significant difference in rates of applying for promotion (Figure 5).
- For all of the years for which we have sufficient data to tell, there is no significant difference between female and male Professors with respect to the probability of being promoted to Chair Professor, having applied (Figure 6). Success rates vary greatly at this level due to the small numbers of staff involved.

Internal Appointment to Chair Professor

Between October 2010 and September 2015, there were 24 Chair Professor recruitment competitions, of which 7 (29%) were filled by current Trinity staff members. Five (71%) of these seven successful internal applicants were male.

The seven successful internal applications can be broken down into the following:

- those who did not accept the post (1 male)³
- those who were simultaneously successful in the Senior Academic Promotions process (1 male)
- those who were casual staff in the School of Medicine and are therefore not counted in the overall population figures used in this report (2 female, 1 male)
- the remaining internal applicants who achieved progression to Professor (Chair) by recruitment competition (2 males)

This data (except the individual who was simultaneously successful in the Senior Academic Promotions process) is not included in the main promotions data above.

Conclusions

- The small numbers applying for appointment to an advertised vacancy at Chair Professor level make it difficult to detect any differences between the genders of the probability of making a successful application.
- The available data indicates that more male (5) than female (2) internal applicants are appointed to Chair Professor roles. This roughly reflects the gender composition at Professor level (59% of Professors eligible for promotion to Chair Professor in 2014 were male).

³ This applicant accepted a post of equivalent seniority in another country, with the decision based on personal considerations.

Retention

13 academic staff have applied for retention by promotion since 2010. The majority of these (10/13 or 77%) have been successful. All those who were successful in the retention process were promoted to the next higher grade: none were promoted by more than one grade. Those who were unsuccessful were not invited to present their application; all those who were invited to present their application were successful. Of the 3 unsuccessful applications, one was subsequently successful in being promoted in the annual Senior Academic Promotions process, and is therefore included in the main data above.

	Applicants		Successful		Unsuccessful		Success Rate	
	Female	Male	Female	Male	Female	Male	Female	Male
2010	0	1	0	1	0	0	N/A	100%
2011	1	2	1	2	0	0	100%	100%
2012	0	1	0	1	0	0	N/A	100%
2013	2	3	2	1	0	2	100%	33%
2014	1	2	0	2	1	0	50%	100%
Overall	4	9	3	7	1	2		
Overall (%)	31%	69%	30%	70%	33%	67%	75%	78%

Table 1: Numbers of applicants, successful applicants and unsuccessful applicants for retention by promotion, 2010-2014, by gender

The table above shows that more male (9) than female (4) academic staff applied for retention by promotion in 2010-2014. The gender gap in applicants for retention, 31% female to 69% male, is similar to the gender gap amongst the senior academic staff population (which varied between 27% and 33% female in 2010-2014). This indicates that female and male senior academics may be equally likely to apply for retention by promotion. There also appear to be similar success rates for female (75%) and male (78%) applicants for retention by promotion.

Grade reached on promotion	Women	Female (%)	% Female in that grade	Men	Male (%)	% Male in that grade
Chair Professor	0	0%	14%	5	100%	86%
Professor	2	100%	35%	0	0%	65%
Associate Professor	1	33%	36%	2	67%	64%

Table 2: Numbers of successful applicants for retention by promotion, by grade reached and by gender; compared with average gender percentages of staff at that grade, 2010-2014

The table above shows the grade reached on promotion by all 10 of the successful applicants for retention by promotion, 2010-2014. 100% of those successfully promoted to Chair Professor were male, and 100% of those successfully promoted to Professor were female. Of those promoted to Associate Professor, 33% were female and 67% were male.

Given the small numbers involved, it is not surprising that these percentages do not consistently align with the gender percentages of staff populations at every grade (average over the years 2010-2014). However, the percentages of female and male staff promoted to Chair Professor level and to Associate Professor level are similar to the percentages of female and male staff at those grades. This suggests that Trinity’s retention process neither increases nor decreases a female academic’s chance of reaching Chair Professor level.

Conclusions

- The small numbers applying for retention by promotion make it difficult to detect any differences between the genders of the probability of making a successful application.
- The available data seems to indicate that a gender difference does not exist – however this should be monitored on an ongoing basis in order to be sure.

Appendix: Data and Calculations

Data was analysed for the years 2007, 2008, 2009, 2012 and 2014. Senior Academic Promotions were not held in 2010, 2011 or 2013.

“Eligible to apply”

An **estimate** was made of the numbers of female and male staff each year who were eligible to apply for each grade in the Senior Academic Promotions process. This was done by taking the population of staff⁴ at the grade directly below minus staff at that lower grade who left Trinity that year⁵, separately for female and male staff.

This example gives the estimated number of female staff eligible to apply for promotion to Professor in 2007:

(Number of female Associate Professors in 2007) – (Number of female Associate Professors who left in 2007)

⁴ Population data taken from Equality Data Monitoring Reports

⁵ Data provided by HR

Population

The table below shows the number of staff who were employed at each grade from Assistant Professor (above bar) to Professor in the years in which promotions were held, by gender. As no Equality Data Monitoring Report was published in 2009, population data from the 2008 report was re-used as an estimate for the 2009 population.

Job Grade Category	Years	Population		
		Male	Female	Total
Professor	2007	57	20	77
	2008	56	25	81
	2009	56	25	81
	2012	54	25	79
	2014	43	29	72
Associate Professor	2007	107	56	163
	2008	110	54	164
	2009	110	54	164
	2012	104	57	161
	2014	103	63	166
Assistant Professor > bar	2007	136	66	202
	2008	125	72	197
	2009	125	72	197
	2012	144	93	237
	2014	96	103	199

Table 3: Population per year by Grade and Gender, 2007-2014

Leavers

The table below shows the total number of senior academic staff who left Trinity and the grade they were employed at when they left, for the years in which promotions were held. These figures may include people who later returned to work in Trinity in another capacity, or who left for a higher-grade position in another university.

Job Grade Category	Years	Leavers		
		Male	Female	Total
Chair Professor	2007	2		2
	2008	3		3
	2009	2		2
	2012	2		2
	2014			
Professor	2007	1		1
	2008	1		1
	2009	1		1
	2012			
	2014	1		1
Associate Professor	2007			
	2008	1		1
	2009	2		2
	2012	1		1
	2014		2	2
Assistant Professor > bar	2007	2	1	3
	2008	1		1
	2009	3		3
	2012	2	1	3
	2014	1	1	2

Table 4: Leavers per year by Grade and Gender, 2006-2015

Probabilities of Applying and Succeeding

Promotions data

The data below shows how many female and male staff applied, and how many were successful, in Senior Academic Promotions each year. The “success rate” is calculated by dividing the number of successful applicants by the number of applicants.

Associate Professor

	Male Applicant	Female Applicant	Male Successful	Female Successful	Male % Success rate	Female % Success rate
2007	26	16	13	13	50%	81%
2008	31	7	23	4	74%	57%
2009	31	11	13	7	42%	64%
2012	53	21	18	7	34%	33%
2014	39.5	20	14.5	6	37%	30%
Total	246.5	107	113.5	61	46%	57%

Table 5: Applicants and successful applicants to Associate Professor grade, 2007-2014, by gender

Professor

	Male Applicant	Female Applicant	Male Successful	Female Successful	Male % Success rate	Female % Success rate
2007	21	8	9	5	43%	63%
2008	18	9	8	4	44%	44%
2009	16	9	6	1	38%	11%
2012	24	17	5	4	21%	24%
2014	19	14	5	2	26%	14%
Total	133	69	51	23	38%	33%

Table 6: Applicants and successful applicants to Professor grade, 2007-2014, by gender

Chair Professor

	Male Applicant	Female Applicant	Male Successful	Female Successful	Male % Success rate	Female % Success rate
2007	12	3	8	0	67%	0%
2008	11	1	7	1	64%	100%
2009	11	1	5	1	45%	100%
2012	16	9	4	1	25%	11%
2014	11	9	2	2	18%	22%
Total	86	31	39	7	45%	23%

Table 7: Applicants and successful applicants to Chair Professor grade, 2007-2014, by gender

Calculation of Probabilities

The tables below show how the probability of an eligible academic applying for promotion each year was calculated by dividing the number of applications to each grade by the estimated number of staff who were “eligible to apply” for that grade – separately for female and male staff.

The probability of being promoted having applied was calculated by dividing the number of staff who were successfully promoted by the number of staff who had applied – again, the probabilities for female and male staff were calculated separately. Statistically significant gender differences are highlighted orange.

Promotion to Associate Professor

Year	Male				
	Number			Probability	
	Eligible to apply	Applied	Promoted	Apply given Eligible	Promoted given Applied
2007	132	23	10	0.17	0.43
2008	123	26	18	0.21	0.69
2009	120	28	11	0.23	0.39
2010	143			0.00	NA
2011	137			0.00	NA
2012	140	53	18	0.38	0.34
2013	132			0.00	NA
2014	94	39.5	14.5	0.42	0.37

Table 8: Probability of eligible male staff applying for promotion to Associate Professor, and of being promoted having applied, 2007-2014

Year	Female				
	Number			Probability	
	Eligible to apply	Applied	Promoted	Apply given Eligible	Promoted given Applied
2007	64	13	10	0.20	0.77
2008	72	6	3	0.08	0.50
2009	72	10	6	0.14	0.60
2010	79			0.00	NA
2011	81			0.00	NA
2012	91	21	7	0.23	0.33
2013	96			0.00	NA
2014	101	20	6	0.20	0.30

Table 9: Probability of eligible female staff applying for promotion to Associate Professor, and of being promoted having applied, 2007-2014

Promotion to Professor

Year	Male				
	Number			Probability	
	Eligible to apply	Applied	Promoted	Apply given Eligible	Promoted given Applied
2007	107	21	9	0.20	0.43
2008	108	18	8	0.17	0.44
2009	106	16	6	0.15	0.38
2010	106			0.00	NA
2011	102			0.00	NA
2012	102	24	5	0.23	0.21
2013	107			0.00	NA
2014	103	19	5	0.18	0.26

Table 10: Probability of eligible male staff applying for promotion to Professor, and of being promoted having applied, 2007-2014

Year	Female				
	Number			Probability	
	Eligible to apply	Applied	Promoted	Apply given Eligible	Promoted given Applied
2007	56	8	5	0.14	0.63
2008	54	9	4	0.17	0.44
2009	54	9	1	0.17	0.11
2010	53			0.00	NA
2011	56			0.00	NA
2012	57	17	4	0.30	0.24
2013	63			0.00	NA
2014	59	14	2	0.24	0.14

Table 11: Probability of eligible female staff applying for promotion to Professor, and of being promoted having applied, 2007-2014

Promotion to Chair Professor

Year	Male				
	Number			Probability	
	Eligible to apply	Applied	Promoted	Apply given Eligible	Promoted given Applied
2007	55	11	7	0.20	0.64
2008	54	9	5	0.17	0.56
2009	52	6	2	0.11	0.33
2010	54			0.00	NA
2011	56			0.00	NA
2012	51	16	4	0.31	0.25
2013	50			0.00	NA
2014	41	11	2	0.27	0.18

Table 12: Probability of eligible male staff applying for promotion to Chair Professor, and of being promoted having applied, 2007-2014

Year	Female				
	Number			Probability	
	Eligible to apply	Applied	Promoted	Apply given Eligible	Promoted given Applied
2007	20	2	0	0.10	0.00
2008	25	0	0	0.00	NA
2009	25	1	1	0.04	1.00
2010	25			0.00	NA
2011	24			0.00	NA
2012	25	9	1	0.36	0.11
2013	27			0.00	NA
2014	29	9	2	0.31	0.22

Table 13: Probability of eligible female staff applying for promotion to Chair Professor, and of being promoted having applied, 2007-2014