

'Not Rewarding', 'Not Relevant', 'Not Interesting': Career Choices of Female Economics Students

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Abstract

Increasing female participation rates in undergraduate economics programs are not reflected in increasing female representation in the ranks of academic economists. Approximately 42 per cent of undergraduate students are women but the percentage of women participating declines in postgraduate programs and in academic positions in economics departments, where approximately 26 per cent of academics are women. Female representation in the academic labour market has an importance beyond its numbers. A lack of female role models and mentors among academics is one factor that may affect students' motivation and career aspirations. We use the results of a national survey of Australian economics students to assess the relative importance of a number of factors in the career choices for postgraduate and undergraduate students in economics. We assess the factors that make academia an unattractive career choice for females.

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Introduction

The proportions of women students in university economics programs in Australia has increased considerably over the last thirty years, yet this increase has not been reflected in the proportion of women in academic positions in economics departments of Australian universities. Female under representation is evidenced by the fact that women constitute approximately 40 per cent of undergraduate economics students yet women hold only 26 per cent of academic positions.¹ If academic positions below lecturer are removed from the total, then women hold 10 per cent of academic positions in economics (Table 2). Women hold 5.4 per cent of all senior positions in economics (senior lecturer and above).

Table 1 Percentage of female staff in all academic disciplines, Australia

| | Above Senior | | | | Total |
|------|--------------|-----------------|----------|----------------|-------|
| | Lecturer | Senior Lecturer | Lecturer | Below Lecturer | |
| 1985 | 6.0 | 10.8 | 28.2 | 45.2 | 21.6 |
| 1996 | 11.9 | 23.2 | 40.4 | 54.0 | 27.7 |

Source: Department of Employment, Education and Training (1993), (1997).

Table 2 Percentage of female staff in academic disciplines (tenurable positions) 1996, Australia

| | Above Senior | | | | Total |
|---------------------|--------------|-----------------|----------|----------------|-------|
| | Lecturer | Senior Lecturer | Lecturer | Below Lecturer | |
| Agriculture | 5.1 | 10.7 | 17.9 | 26.7 | 11.9 |
| Arts/Social Science | 17.8 | 31.3 | 44.6 | 53.9 | 34.5 |
| Economics | 4.0 | 6.7 | 27.8 | 50.0 | 26.2 |
| Business & Law | 12.3 | 20.4 | 35.5 | 60.1 | 26.2 |
| Education | 25.8 | 32.6 | 49.6 | 76.7 | 40.2 |
| Engineering | 2.1 | 2.4 | 8.0 | 20.9 | 4.3 |
| Health | 19.3 | 49.9 | 75.0 | 83.1 | 53.4 |
| Maths & Computing | 6.4 | 9.4 | 22.7 | 38.4 | 15.1 |
| Science | 5.6 | 15.1 | 25.2 | 59.2 | 15.2 |
| All Disciplines | 11.9 | 23.2 | 40.4 | 54.0 | 27.7 |

Notes: Business and Law includes economics.

Source: Department of Employment, Education and Training unpublished data (1997).

In this paper, we explore the reasons for the low participation of women in academic positions in economics departments. We use the results of a national survey of Australian economics students to assess the relative importance of a number of factors in the career choices of postgraduate and undergraduate students in economics. We assess the factors that make

academia an unattractive career choice for both female and male economics students and compare the relative benefits for both sexes of a career in academia, the public sector and the private sector. Generally across all disciplines, the positions held by women are concentrated at the lower end of the pay scale and women tend to be over represented amongst assistant lecturers and casual tutors (Tables 1 and 2).

While the opportunities for women academics appear to be improving, some of the changes that have occurred reflect the impact of incorporation of the previous colleges of advanced education and institutes of technology, where the traditional women's fields such as education and nursing were previously taught, into the university system.

Table 3 Percentage of female students in commencing enrolments, Australia

| | Higher Degree (Research) | Post-Graduate | Bachelor |
|------|-----------------------------|---------------|----------|
| 1981 | 28.8 | 47.5 | 43.4 |
| 1991 | 41.1 | 56.2 | 52.2 |
| 1995 | 43.5 | 53.9 | 56.9 |

Source: Department of Employment, Education and Training (1991); Birrell (1995).

Table 4 Percentage of female students in commencing enrolments by field of study 1995, Australia

| | Higher Degree (Research) | Post- Graduate | Bachelor | Total |
|---------------------|-----------------------------|-------------------|----------|-------|
| Agriculture | 34.7 | 33.0 | 38.9 | 37.5 |
| Arts/Social Science | 56.5 | 68.5 | 69.2 | 68.1 |
| Economics | 36.9 | 40.5 | 42.5 | 41.9 |
| Business* | 32.5 | 37.1 | 48.5 | 45.3 |
| Education | 56.1 | 68.8 | 76.7 | 72.7 |
| Engineering | 16.7 | 13.2 | 13.6 | 13.7 |
| Health | 54.4 | 77.4 | 77.9 | 76.7 |
| Law | 43.4 | 38.9 | 52.6 | 48.4 |
| Science | 35.6 | 34.0 | 44.5 | 42.3 |

Notes: * Business includes Economics

Source: Department of Employment, Education and Training (1995) and unpublished Department of Employment, Education and Training data.

The relatively poor result in staffing in all departments exists despite the fact that the proportion of females in undergraduate and postgraduate courses is much higher and has been rising markedly over the last decade (Table 3). The position of female student participation in economics com-

pared with other disciplines is varied (Table 4). In 1995, 41.9 per cent of commencing students in economics were women. The share is less than in the arts, education and health areas, but is comparable to science and law.

A similar trend in staffing and student numbers is evident in economics departments in the United States. In 1990, less than one-quarter of doctoral graduates and junior level staff at universities were women, with the share even lower in tenured ranks (Dyner and Rouse 1995). In the United States, women comprised only 31 per cent of undergraduate economic graduates in 1990. The proportion of women in both staff and student populations in economics was well below those in other social science areas, the humanities and life sciences and in line with the physical sciences. In the United Kingdom women accounted for around 11 per cent of full time university academic staff in 1986 (Orser 1993). Women constituted 3 per cent of those at professorial rank, 6 per cent of senior lecturers and 15 per cent of lecturers. Canadian data similarly shows women as significantly underrepresented in senior academic positions despite holding 50 per cent of undergraduate degrees.

The fact that women have an improved profile in undergraduate economics yet there has not been any flow-on to numbers of women seeking academic careers, is a matter of some discussion, debate and concern. The increasing proportion of women in undergraduate economics programs indicates that women have neither significantly different tastes nor different perceptions regarding the discipline before entering university. What is of interest is why this shift is not being reflected in postgraduate study and academic staffing. The first question that arises is whether this should indeed be a matter of concern at all. It may be that women are less interested in economics or choose to pursue other careers based on a rational evaluation of costs and benefits. In either case, there would seem little argument for active efforts to increase the proportion of women in the field unless it was shown that the relative imbalance was a cause of some negative externality, which requires addressing.

Theoretical Explanations for the Gender Differences in Academic Employment

There are two theoretical arguments that may be used to explain why women may be underrepresented in university economics departments. The first argument is based on utility maximising behaviour under the standard neoclassical human capital theory. It posits that gender based occupational segregation might arise because women and men, when faced with the same

options and opportunities, make different voluntary choices or investments regarding their careers. This argument assumes that there are no inherent barriers or deterrents to women, which will distort their choices. The American Economic Association (1992) reports that the percentage of female economists employed in business in the United States has been rising faster than that for men over the period 1973-1989. At the same time the proportion of women employed in higher education fell. There is some anecdotal evidence which suggests that career rewards for economic graduates outside of the universities, particularly in the private sector, are positively skewed to attract and fast-track women.

An alternative explanation under the standard neoclassical human capital theory is based on a search theory approach. If costs to women from pursuing an academic career are greater than for men, then relatively fewer women will be encouraged to apply for academic positions. Given that inter-university mobility is a good strategy for establishing initial academic positions and the building of a career in academia, then this may discourage women from seeking such careers and may provide some explanation for a bunching of women in more junior, contracted positions. This is linked to the proposition that women are less likely to be the major income source in a household.

The second argument is based on institutional barriers to women's participation. Top (1991) has identified two types of discrimination, which may affect labour market segregation. One is access discrimination that occurs prior to employment and can lead to failure to gain appointment or an offer of a junior position (relative to experience or qualification). The second is treatment discrimination that occurs in the workplace and is often ongoing. It can affect career advancement as well as duration of stay in a particular job or organisation.

Drawing conclusions on the significance of discrimination is difficult given the mixed results of studies undertaken in this area. For example Broder (1993) and Kahn (1995) find support for the hypothesis of gender discrimination adversely affecting the professional achievement and remuneration of female academics as does Weiler (1990) and Raymond *et al* (1993) who find evidence of sex discrimination in the promotion process. In contrast, Formby, Gunther and Sakano (1993) find that gender has no significant effect on commencing salaries.

Institutional explanations based on structural features of the labour market and aspects related to the real or perceived nature of the discipline and the way it is taught have also been put forward. It has been argued that given the preponderance of women in junior, contracted positions, the

existence of a greater share of tenured positions at senior levels works to ensure that any changes to the gender balance in senior academic positions will occur slowly. The position presented in a Department of Employment, Education and Training discussion paper (1995) was that increasing numbers of women passing through the undergraduate higher education system would not be reflected in academic staff profiles of universities. Rosewarne and Meagher (1994) note that changes to the gender mix in academia have not resulted in the past even during periods of expanding employment. The lack of a clear career path under the previous academic award system in Australia has also been viewed as impeding women who dominated lower level and contract positions. Prior to award restructuring in higher education institutions in Australia in 1993, there was no guaranteed progression from a tutoring position (lecturer A) to a lectureship (lecturer B). Award restructuring is considered to have created a career structure for academics at all levels and will be of benefit to women (Currie 1995). In the United States, women are also disproportionately represented in non-tenure track jobs (Kahn 1995). This begs the question of why women are concentrated at these levels.

The presence or absence of female role models has also been viewed as one factor inhibiting female students' choices of career or field of study (Blau and Ferber 1992). In a US study, Canes and Rosen (1993) looking at all disciplines conclude that the proportion of females who are department faculty does not influence the gender mix of students. Dynan and Rouse (1995) find further support for this view in a study of the economics area. Ferber (1995) and Nelson (1995) argue that biased subject matter and the narrow approach of traditional neoclassical economics, particularly in introductory courses, deters women from pursuing studies in economics. Kahn (1995) also observed that women drop out of doctoral programs at a much greater rate than men do. There is the suggestion that the quantitative methodological orientation in economics is a factor influencing continuance in the discipline, but this is not supported in studies by Dynan and Rouse (1995) and Ferber (1995). In fact, according to Kahn (1995) mathematics attracts higher proportions of women than economics in the United States.

In a more general sense there is a popular view that women tend to move in and out of the labour market more than men in the non-academic general labour market and that this has been a source of gender differences in careers (Schwartz 1989). The implication here is that women themselves are responsible for their own lack of mobility. Snyder (1993) notes that although women managers are more likely than men to leave an organisation,

lack of career advancement is the major influence, with women usually moving to other jobs. It has also been observed that men are just as likely to make career decisions for family reasons although this is not always apparent or openly stated. In a study of whether gender affects the likelihood of attaining tenure among economists in the United States, Kahn (1993) finds no significant difference in the movement of women and men in and out of the academic labour market over the period 1973-1989. She concludes that this is not a source of influence in determining the speed of promotion among men and women although women were found to take much longer to achieve tenure in the United States.

Survey Results and Discussion

We surveyed Australian economic students to assess the relative importance of a number of factors in economics students' career choices.² Of the 597 respondents, 40 per cent are women, 69 per cent are undergraduate students and 12 per cent are PhD students. Thirty eight per cent of the undergraduate students are women. Of the postgraduate students, 37 per cent of the PhD students, 53 per cent of the Masters students and 41 per cent of the other postgraduate students were women. The higher percentage of women respondents possibly reflects the identification that the female respondents had with the survey objectives rather than the actual numbers of women students in the postgraduate population. Twelve per cent of all respondents indicated that their main source of income is from an academic economics position. The majority of these respondents, 55 per cent, were PhD students and 42 per cent were women.

We consider the reasons for women's low participation in economics academia with reference to the theoretical explanations of the low representation of women in labour market segments. Neoclassical explanations of career choice are based on utility maximising decision making in response to a number of constraints. When asked for reasons why they were considering a career in academia, 21 per cent of women and 39 per cent of men agreed that financial remuneration is a factor in their choice (Table 5). Respondents of both sexes put more emphasis on the non-cash benefits of academia such as study leave and flexibility in working hours than on financial remuneration. The differences in the responses between men and women reported in Table 5 were significant in the case of academia and the private sector. The significance test in this case is a Chi-squared goodness-of-fit test for independence of categorical data (Lyman Ott 1993).³

What conclusions may be made from these responses? One is that apart from the choice of a public sector career, the male respondents place more emphasis on financial remuneration in their career choice. This may be interpreted as men being more conscious either of income for status reasons or their role as the main income earner in the family. Both men and women place more emphasis on the fringe benefits of academia, such as study leave and flexibility of working hours. The results indicate that both men and women are less likely to enter academia because the returns to human capital are insufficient relative to the alternative of a private sector career.

Table 5 Financial Remuneration as a benefit of a given career

| | disagree (%) | | agree (%) | |
|----------------------------|--------------|------|-----------|--------|
| | female | male | female | male |
| Academia | 30.1 | 33.0 | 20.8** | 38.9** |
| Private sector | 4.9 | 2.9 | 74.5* | 80.9* |
| Public sector | 29.7 | 35.7 | 23.3 | 20.8 |
| Academia – fringe benefits | 7.1 | 9.4 | 64.9 | 61.2 |

Notes: an asterisk indicates that there is a significant difference between the female and male responses at the 5% level of confidence. A double asterisk indicates significance at the 10% level of confidence.

Career decisions may also be related to institutional factors which impact on employment conditions and affect income, albeit indirectly. Factors such as the promotional opportunities, the career structure, the organisational structure of the workforce and the security of the position may all be influential in broader career decisions. One feature of the academic labour market is its duality. Tenured and tenurable academic positions which are clearly part of a career structure, such as assistant lecturer and above, are obviously more attractive than positions where such conditions are not extended. Junior academic positions tend to be both part-time and casual. They are often held by graduate students and persons for whom part-time work is essentially a means of earning some extra income either because they hold another paid position or have commitments to a young family.

On the issue of promotional opportunities, academia does badly (Table 6). The private sector was considered to have the best promotional opportunities, followed by the public sector and finally academia. Whether the low rating given to academia in Table 6 reflects the bunching of some of the respondents in junior academic and/or nontenured positions or whether

Table 6 Promotional opportunities as a benefit of a given career

| | disagree (%) | | agree (%) | |
|----------------|--------------|------|-----------|------|
| | female | male | female | male |
| Academia | 42.0 | 46.3 | 20.4 | 22.8 |
| Private sector | 5.4 | 7.2 | 72.3 | 72.3 |
| Public sector | 20.4 | 22.1 | 39.8 | 34.5 |

it reflects a view that promotional opportunities are limited throughout the academic career structure is unknown. If the responses reflect limited promotional opportunities throughout the career structure then the evaluation not to enter academia is based on low returns to human capital rather than institutional factors.

Table 7 shows the female and male responses to the question of career paths as a benefit to a particular career. Of the three career choices, academia is perceived poorly in terms of providing a well-defined career path. The same pattern of responses of the perception of academia versus the private and the public sectors is apparent as in addressing the issue of promotional opportunities (Table 6). This is not surprising as the career path of a given position and the promotional opportunities of that position are clearly linked. The fact that academia is perceived poorly in this regard is evidence of the importance of institutional characteristics in career choice. The duality of the labour market in academia may be an important factor in the poor assessment. There is no significant difference between the responses of females and males to the issue of a career path in academia.

Table 7 Well defined Career Path as a benefit of a given career

| | disagree (%) | | agree (%) | |
|----------------|--------------|------|-----------|------|
| | female | male | female | male |
| Academia | 38.5 | 35.7 | 34.6 | 32.8 |
| Private sector | 19.0 | 20.9 | 51.7 | 48.3 |
| Public sector | 10.4 | 16.3 | 50.0 | 50.0 |

Finally, we compare the compatibility of a given career with family commitments (Table 8). Both females and males rate academia highly for compatibility with family commitments. This rating is compatible with the high rating given to the other benefits of academia, including flexibility in working hours reported in Table 5. On the other hand, neither the public nor the private sector rates well for compatibility with family commitments.

Table 8 Compatibility with family commitments as a benefit of a given career

| | disagree (%) | | agree (%) | |
|----------------|--------------|------|-----------|------|
| | female | male | female | male |
| Academia | 14.9 | 10.2 | 63.6 | 60.1 |
| Private sector | 40.9 | 36.1 | 16.4 | 19.7 |
| Public sector | 17.5 | 16.8 | 39.5 | 35.3 |

What factors clearly distinguish the benefits of a career in academia for both women and men? The responses recorded in Tables 5 to 8 indicate that academia does not rate well compared with alternative careers in terms of financial remuneration and a well-defined career path. Academia does rate well in terms of benefits such as study leave and flexibility in working hours and compatibility with family commitments.

The analysis presented above does not provide compelling reasons why women are less likely than men to pursue an academic career. In Tables 9 and 10, we present reasons given by female and male students why they would or would not consider a career in economics. There are two factors that stand out strongly in these tables. The first is the respondents' perception of their ability in economics (Table 9). Of the women and men who are considering a career in academia, 14.5 per cent of the females and 6 per cent of the males disagree that they have an above average ability in economics. Thus, women rate their ability in economics more negatively than men do. Rather than indicating their actual ability, this negative response is more likely to reflect a lack of confidence in their ability. Powles and Patrick (1988) surveyed third and fourth year economics students and similarly found that male students were more confident about their ability than the female students. Hirschfield, Moore and Brown (1995) speculate that women's lower scores in multiple choice exams are a result of a lack of confidence and competitiveness rather than their abilities in economic. On the other hand, a study of Harvard students by Dynan and Rose (1995) shows that women do less well in economics relative to other courses. It is suggested that women 'to some extent' may have a comparative disadvantage in economics, as their grades are relatively worse than in other areas of study. This analysis does seek to control for other influences including mathematics background, role models and classroom environment. Kahn (1995) indicates that differences in grades between males and females are not significant.

The lack of confidence in their ability by the female respondents, however appears not to be related to the encouragement (or lack thereof)

by academic staff. The responses by females and males to encouragement by academic staff are similar (Table 9).

Table 9 Reasons for considering a career in economics

| | disagree (%) | | agree (%) | |
|------------------------------------|--------------|-------|-----------|------|
| | female | male | female | male |
| above average ability in economics | 19.0** | 5.8** | 55.2 | 57.0 |
| interest in economics | 3.4 | 2.2 | 83.1 | 87.3 |
| encouraged by academic staff | 40.8 | 33.8 | 37.0 | 34.9 |
| independent working environment | 3.6 | 9.4 | 69.1 | 70.5 |

Notes: a double asterisk indicates that there is a significant difference between the female and male responses at the 10% level of confidence.

The second issue that separates the female and male responses is that of role models. Forty per cent of women agree that a lack of role models in academia is a reason why they would not consider a career in academia (Table 10). The comparative percentage for men is 28. Moreover, of those women who cite this as a factor, 18 per cent 'strongly agree', as opposed to 'agree', that it is an important consideration. Seven per cent of men strongly agree that a lack of role models is important in their decision not to pursue an academic career. The sample means for the male and female responses are significantly different. Furthermore, we find that as the average number of women academics within an economics department decreases, there is an increase in the number of female respondents who cite lack of role models as a prohibiting factor in becoming an academic. We also find that the converse is true: the greater the number of women academics, the less important is the lack of role models. The correlation coefficient between the percentage of women in a department and the number of female respondents who strongly disagree that lack of role models is an important factor in career choice is 0.34.

Table 10 Reasons for not considering a career in economics

| | disagree (%) | | agree (%) | |
|---------------------------------|--------------|------|-----------|-------|
| | female | male | female | male |
| not interested in further study | 45.1 | 49.6 | 35.8 | 32.5 |
| not interested in economics | 65.0 | 66.0 | 20.0 | 15.5 |
| not interested in teaching | 31.0 | 28.2 | 52.2 | 50.8 |
| lack of role models | 30.7 | 38.1 | 39.7* | 27.6* |

Notes: an asterisk indicates that there is a significance difference between the female and male responses at the 5% level of confidence.

General comments made in responses to this particular question also supported the perception that the environment is unsupportive or unresponsive to women. Examples of such comments are: 'it still seems to be a boys' club which I couldn't be bothered entering into' and 'I have never met a female economics lecturer, if I really wanted to be an academic this wouldn't stop me but it would make things a lot harder'. There were also three issues of general and widespread comment in response to the survey: these are 'not rewarding', 'not relevant' and 'not interesting'.

Conclusions

It is apparent that, when compared with men with the same educational qualifications, women who work or study in the same academic disciplines face the likelihood of quite different outcomes. They are unlikely to progress in their careers as rapidly, are likely to drop out of graduate school at a higher rate and, indeed, tend to be concentrated in particular professions. This study focuses on the economics profession and seeks to assess the factors that are influencing the career choices of female students. It also endeavours to compare the relative benefits for both sexes of a career in academia, the public sector and the private sector.

A comparison between female and male survey responses indicates that there are two factors that may be contributing to the low representation of woman as academic economists. These are the female perceptions of a lack of role models and a lack of confidence in their ability in economics.

What policy responses are appropriate to address these issues? We do not agree with the view presented by the Department of Employment, Education and Training (1995) that affirmative action is appropriate. Snyder (1993), for example, finds that affirmation action may benefit a few individuals but the overall impact of such policies is marginal at best. In fact, women may find themselves under increased pressure and criticism as a result. At best such an approach may serve to increase awareness of problems facing female staff (Orser 1992). In the same way, gender balance requirements in university decision making places a heavy administrative burden on women which may harm their long term career. Role models are obviously important but again a few women in a male dominated environment may have undue pressure placed on them from a number of directions.

The current situation, however which can only seem to rely on some sort of trickle-up strategy is obviously ineffective. One possibility might be to encourage women with proven track-records or identified potential to participate in a structured mentoring scheme. Kahn (1995) identifies the

need for more research on this question of mentoring. Several studies have discussed the importance of informal networks and information flows in academia and how women tend often to be excluded from accessing these (Handley 1994 and the American Economic Association 1992, 1993). In the United States, the Committee on the Status of Women in the Economics Profession monitors the position of women in the profession and actively undertakes activities aimed at improving the situation. In particular they support particular sessions on gender related topics at major economic conferences and facilitate networking among women in a number of ways. These include a newsletter, which provides assistance, and information directed towards young women economists, informal receptions and a detailed roster of all women in the profession with information for and about potential employees. The solutions are not obvious. However as a profession it is imperative that we face these issues, not only to improve the gender balance amongst the staff of universities but also to foster the enrolment of women as economics students. There is a need for a systematic attack on identified potential sources of gender segmentation in the profession.

Of broader interest, both men and women rate academia poorly compared with a private and public sector career in terms of financial remuneration, promotional opportunities and a well defined career structure. These responses are based on the respondents' perceptions of different working environments. Questions on the risk of redundancy or the stress of different working environments may have balanced the benefits and costs of the three sectors.

Finally, we report some comments on the wider perception of academic economists and the overall direction of the discipline. These comments, although admittedly not general, are disconcerting. One view of the profession gleaned from the survey responses is that it is out of touch – not relevant and not interesting. If this is a realistic perception of the profession then we may need to act for the sake of the long term viability of economics departments. Should the subject matter be more applied, and is there too much emphasis on non-contextual theoretical rigour and analytical technique for its own sake?

It has been argued, for example, that the paucity of women among academic staff in economics leads to problems within the discipline in the way economics is 'done'. This includes the methodology, subject matter and pedagogical approaches (Nelson 1995). As a result, women may be discouraged from pursuing teaching and research careers. Furthermore, research output is likely to be skewed as inherent gender differences mean

that the prioritisation of current research formulation and policy are affected.

If more women than men hold the view that the subject matter is irrelevant and uninteresting, do we need to consider seriously the feminist critique that the overall orientation of the discipline is too masculine? The issues raised here should be considered in the light of the international dimension of the problems faced by women in economics and the (possibly related) question of the serious decline in numbers generally, who are entering the profession.

Notes

- 1 Underrepresentation (overrepresentation) in this paper refers to a situation where the proportion of women in academic positions is considerably less (more) than the proportion of women graduating in the same discipline.
- 2 Questionnaires were forwarded to all universities in Australia. For confidentiality reasons, institutions were requested to forward them on to a random sample of both undergraduate single and double economics majors and postgraduate students. We are unable to verify whether the sample is random or not.
- 3 The null hypothesis is that there is no difference between the female and male responses. Rejection of the null hypothesis indicates that at least one of the cell probabilities of the male response differs from the corresponding cell probability of the female response. The position of the asterisk in either the agree or disagree column of Tables 4 to 9 shows to which responses the differences in probabilities relate.

References

- American Economic Association (1992) Committee on the Status of Women in the Economics Profession, *American Economic Review*, 82, May: 610-614.
- American Economic Association (1993) Committee on the Status of Women in the Economics Profession, *American Economic Review*, 83, May: 508-511.
- Birrell, B. (1995) Women Storm into the Professions, *The Australian*, March 29: 27-28.
- Blau, F.D. and M.A. Ferber (1992) *The Economics of Women, Men and Work*. 2nd edition, Englewood Cliff, N.J.: Prentice-Hall.
- Broder, I.E. (1993) Professional Achievement and Gender Differences Among Academic Economists, *Economic Inquiry*, January: 116-127.
- Canes, B. and H. Rosen. (1993) Following Her Footsteps? Women's College Majors and Faculty Gender Composition, *Industrial and Labor Relations Review* 48, April: 486-504.
- Currie, J. (1995) Destructuring Employment: The Case of Female Academics, *Australian Universities Review*, 2: 49-54.
- Department of Employment, Education and Training (1991) Selected Higher Education Statistics.

- Department of Employment, Education and Training (1993) Female Academics, *Higher Education Series*, Report No. 18, August.
- Department of Employment, Education and Training (1995) Selected Higher Education Statistics.
- Dynan, K.E. and C.E. Rouse (1995) The Under representation of Women in Economics: A Study of Undergraduate Economics Students. NBER Working Paper Series, No. 5299, NBER Cambridge MA.
- Ferber, M.A. (1995) The Study of Economics: A Feminist Critique, *American Economic Review*, May: 357-362.
- Formby, J.P., W.B. Gunther and R. Sakano (1993) Entry Level Salaries of Academic Economists: Does Gender or Age Matter?, *Economic Inquiry*, January: 128-138.
- Handley J. (1994) Women, Decision Making and Academia, *Women in Management Review*, 9: 11-16.
- Hirschfield, M., R.L. Moore and E. Brown (1995) Exploring the Gender Gap on the GRE Subject Test in Economics, *Journal of Economic Education*, 26 (1): 3-15.
- Kahn, S. (1993) Gender Differences in Academic Career Paths in Economics, *American Economic Review*, May: 52-56.
- Kahn, S. (1995) Women in the Economics Profession, *Journal of Economic Perspectives*, 9 (4): 193-205.
- Lyman Ott, R. (1993) *An Introduction to Statistical Methods and Data Analysis*. 4th edition, Belmont, CA: Duxbury.
- Nelson, J.A. (1995) Feminism and Economics, *Journal of Economic Perspectives*, 9 (2): 131-148.
- Orser, B. (1993) Academic Attainment, Assimilation and Feminism in Canadian School of Business, *Women in Management Review*, 7: 5-16.
- Powles, Margaret and Kate Patrick (1988) Towards increased participation in Economics Honours – 1988 Survey of Honours and Third Year Students. University of Melbourne, November.
- Raymond, R.D., M.L. Sesnowitz and D.R. William (1993) Further Evidence on Gender and Academic Rank, *The Quarterly Review of Economics and Finance*, Summer: 197-215.
- Rosewarne, Stuart and Gabrielle Meagher (1994) *Homo economicus: the gendering of economics*, Paper presented at the Conference of Economic Society of Australia, Surfers Paradise, September, 1994.
- Schwartz, F.N. (1989) Management Women and the New Facts of Life, *Harvard Business Review*, January – February: 65-76.
- Snyder, R.A. (1993) The Glass Ceiling for Women: Things that Don't Cause It and Things that Don't Break It, *Human Resource Development Quarterly*, Spring: 97-106.
- Top, T. (1991) Sex Bias in the Evaluation of Performance in the Scientific, Artistic and Literary Professions: A Review, *Sex Roles*, 24.
- Weiler, W.C. (1990) Integrating Rank Differences into a Model of Male – Female Faculty Salary Discrimination, *Quarterly Review of Economics and Business*, Spring: 3-15.