

ASSIGNMENT NO.2

**REPLY TO “REDESIGNING EMPLOYMENT EQUITY IN CANADA:
THE NEED TO INCLUDE MEN”**

Echevarria and Huq (2001) argue in “Redesigning Employment Equity in Canada: The Need to Include Men” that there should be a change in the current interpretation of the Employment Equity Act (EEA), according to which all federal agencies and departments, as well as larger federally regulated organisations, are obliged to strive for more proportional representation of four under-represented groups among their employees. They suggest that since the Act in its current state makes women a designated group, whilst neglecting the problems faced by men entering female-dominated occupations, it is inefficient in attaining an integrated workplace. In addition, they argue that since the current implementation of the Act often involves attaching a short paragraph encouraging applications from designated groups (including women) to job advertisements, the policy could have perverse effects in female-dominated workplaces. Given the declining state of some male-dominated industries, Echevarria and Huq assert that extending employment equity to include men will not only be crucial for achieving an integrated workplace, but also necessary to maintain the relative welfare of male workers. Finally, they illustrate their claims with a case study of the University of Saskatchewan, suggesting that whilst the EEA was efficient in promoting the interests of women into male-dominated workplaces, the situation of men in female-dominated environments has remained stagnant. The aim of this paper is twofold: first, to explore the theoretical justification for using employment equity legislation to promote entry of men into female-dominated occupations, and second, to assess whether the observations of Echevarria and Huq at the

University of Saskatchewan are significant enough for guiding federal policy. It will be argued that neither the theoretical rationale nor the empirical observations provided by Echevarria and Huq (2001) are strong enough to justify a policy change, and that substantial studies must be undertaken before expanding employment equity legislation to explicitly encompass men could be justified on economic grounds.

Like argued by Echevarria and Huq (2001), substantial occupational gender segregation characterises the Canadian economy. Following a strict definition of occupational segregation, in which an occupation is deemed to be dominated by either sex if its share exceeds .55 of the workforce,¹ 49% of the Canadian labour force was employed in male-dominated occupations and 36% in female-dominated occupations according to 2001 Census data. Only 15% were employed in occupations which could be considered gender-neutral. There were more women in male-dominated occupations (25%) than there were men female-dominated occupations (17%), and men were more likely to work in a male-dominated occupation (71%) than women were to work in female-dominated occupations (57%). Echevarria and Huq (2001) find it particularly troubling that many of the male-dominated professions are in primary industry and manufacturing, given the steady change of the Canadian economy from industry-based to service-oriented (p.57).

It should be noted, however, that the mere observation of gender segregation across occupations does not justify employment equity legislation like that of the EEA *per se*.

¹ It should be noted that deciding on the cut-off for domination by either sex is in many ways an arbitrary process, and depends to a large extent how broadly an occupation is defined. Here, Census data (specifying 47 different occupations) were used. Beller (1982) adjusts the cut-offs for relative male-female representation in the labour force when studying data in the 1960s and 1970s, but this need is arguably less urgent when studying modern data given the increase of labour force participation among women.

Beller (1982) notes that there are at least two theoretical explanations for the crowding of women into a few occupations: the woman's preferences and the employer's preferences (the latter effectively altering the woman's constraint) (p.372). She maintains that occupational segregation is not a major problem if women face real choice and enter female-dominated occupations voluntarily, but that it is of great social concern if women crowd into small number of (lower-paying) occupations because they face effective barriers to entry into male-dominated occupations (i.e., they do not enjoy real choice) (p.372). The explanatory rationale for why women would prefer female-dominated occupations by choice although they are generally paid worse than male-dominated occupations (requiring the same skills-level) is manifold, including but not limited to socialisation into gender-traditional roles, human capital explanations² or higher valuing of non-wage characteristics³. It should be noted that employment equity legislation cannot promote gender integration across occupations by affecting the preferences of potential employees, but only by altering the employer-side constraint. Consequently, employment equity legislation can only be justified on efficiency grounds when there is evidence for barriers to entry into non-traditional occupations (i.e., gender discrimination) on the employer-side. Beller (1982) claims that the fall in occupational segregation observed during the 1970s in the United States, following the implementation of equal employment opportunity legislation, "suggests that discrimination was a determinant of occupational segregation originally" (p.391). Gunderson (1985), on the other hand, persuasively argues that employment equity legislation targeting particular groups would

² A modern human capital model, such as that proposed by Polachek (1981), suggests that a woman who expects to be the main caregiver in the home is more likely to invest in human capital which sees little human capital depreciation when taking time out of the labour force, such as nursing or education.

³ For instance, job security: e.g., Jacobs (1989, p.179).

increase the representation of these groups even if there was no discrimination in the first place, since employers would expand recruitment within the designated groups to decrease the probability of incurring mistaken penalties (p.29). Since excessive “padding” of target groups could reduce cost efficiency, implementing employment equity legislation when there is uncertainty about actual barriers to entry into the occupation can be justified only if one attaches an intrinsic value to an integrated workplace (which could compensate for potential efficiency losses).

Echevarria and Huq (2001) point to the fact a large number of professions are female-dominated, argue that it is equally likely that men face barriers to entering into these as that women face barriers entering into male-dominated occupations, and suggest that this justifies the reformulation of the EEA to explicitly include men (p.54). They purport that since anecdotal evidence is usually sufficient to conclude that discrimination is a problem, the factual existence of such cases justifies the suggested policy change (p.54). Empirical research on discrimination against women in the workplace is extensive: before the implementation of the EEA in 1986, Gunderson (1985) asserted that empirical evidence showing that discrimination against women in the Canadian labour market “unequivocally exists”, referring to 13 particular empirical studies (p.19). However, similar studies on discrimination against men are rare and largely inconclusive, and the few that exist are usually carried out from a sociological rather than an economic perspective. Williams (1992) interviewed 76 men and 23 women in four female-dominated professions (nursing, elementary teaching, library services and social work) from four urban areas across the United States, finding that men in female-dominated

occupations, “in contrast to the experience of women who enter male-dominated professions, (...) generally encounter structural advantages in these occupations which tend to enhance their careers” (p.253). Her data suggests that although men in female-dominated occupations face “cultural stigma” outside their respective field, they do not face discriminations *within* their professions (in fact, many felt that they received preferential treatment) (p.264). This suggests that prejudice and discrimination against men in female-dominated occupations takes place on the social rather than the organisational level. Williams concludes that “[b]ecause different mechanisms maintain segregation in male- and female-dominated occupations, different approaches are needed to promote their integration”, and that “[p]olicies intended to alter the sex-composition of male-dominated professions – such as affirmative action – make little sense when applied to the ‘female professions’” (p.264). Thus, whilst Echevarria and Huq’s (2001) proposition to explicitly include men in female-dominated occupations as a designated group in the EEA seems ‘fair’ or ‘commonsensical’, the potential benefits from such a policy change are unclear. If men in fact are not being discriminated against by employers, such a policy change could reduce social welfare by creating distortions and inefficiencies, and would be justified only if one attaches an intrinsic, non-economic value to a gender-integrated workplace.

Fortin and Huberman (2002) analyse occupational segregation and the development of women’s wages in Canada between 1960 and 1998, concluding that the main occupational shift of women has been into managerial and professional professions (p.S22). Echevarria and Huq (2001) observe an increase in the proportion of women in

administrative, supervisory and faculty positions at the University of Saskatchewan between 1992 and 1999 (pp.57-58), without mentioning the general trend of women shifting into these occupations. Instead, they argue that this change must result from the university's "current [recruitment] policy" (p.58). Although the timing of the move of women into managerial and professional occupations could be explained by changing attitudes regarding the division of household labour (as the human capital model would imply) or a reduction in discrimination by employers, it is arguable that the *impetus* for such a shift in the first place are the career opportunities in these professions: for instance, a job in management usually offers higher lifetime earnings and greater opportunities for promotion than a job in elementary school teaching or social work. On the contrary, it is difficult to see why there (under the prevailing division of labour in the household) would be an incentive for men to move into relatively lower-paying fields such as clerical work or library services, as suggested by Echevarria and Huq (2001). Although the economy might undergo a long-term structural change from manufacturing (male-dominated) to services (female-dominated), it is unlikely that this should have caused urgent occupational restructuring of men during the 1990s, especially given that the Canadian economy was doing reasonably well during this period after the initial downturn of the early 1990s.

Echevarria and Huq (2001) observe some changes in the proportion of female faculty in different colleges at the University of Saskatchewan between 1992 and 1999 (Table 3, p.60). They propose that women have benefited from the current implementation of the EEA, and that it might have caused the library, which was designated a neutral workplace

in 1992 (47% women) to turn female dominated (67%) (p.60). Given that employing new workers is a partly random process⁴, it is arguable that any policy recommendation based on changes in female representation would have to be statistically significant (i.e., that it could not be attributed to random factors). Under the fairly unrealistic assumption that the University of Saskatchewan constitutes a random sample of those workplaces which implemented the EEA between 1992 and 1999, and taking the faculty number in each college into consideration, the statistical significance of the changes in female representation can be calculated (Appendix 1). The null hypothesis that there was no change in female representation can be rejected in a one-sided test (i.e., against the alternative hypothesis that there was an increase in female representation) only in Medicine and Arts and Science at 5% significance level. At 10% significance level, it can be rejected also in the library.⁵ In other words, there was arguably a non-random increase in female representation in Medicine and Arts and Science, and possibly in the library. However, such a non-random increase could have been caused by a range of factors, and not only the implementation of the EEA. For instance, the occupational shift of women observed by Fortin and Huberman (2002) seems particularly relevant for the medical sector, given the increased representation of women in medical schools (and hence, in the supply of medical professionals): Cole (1986) found that the proportion of women among the students admitted to medical school in the US increased from .11 to .33 between 1970 and 1984, and at the University of Toronto (University of Toronto, 2007), this figure had

⁴ For instance, the composition of the applicant pool as a particular position is advertised at a particular time would be expected to have a random element.

⁵ If there were some other structural factors *reducing* female representation at the same time as the EEA was enacted, it could be argued that the EEA was efficient without causing a statistically significant increase in female representation. Nonetheless, this seems implausible, especially given the strong trend of increasing labour market attachment among women during the latter half of the twentieth century.

increased to .46 by 2000. Arguably, this must have led to a higher proportion of women in the applicant pool than among the incumbent faculty, which would explain at least some of the non-random increase in female representation in the medical school. A similar argument could be applied to the Library and the School of Arts and Science to explain at least part of the increase in female representation.

Echevarria and Huq (2001) also depict changes in female representation by employee group, concluding that there has been an increase in female representation in each group where women were initially under-represented, and in some which they were not (Table 2, p.58). They claim that “the current policy is working mainly towards increasing the proportion of female employees in all groups, regardless of whether they were initially under-represented or not” (p.58). However, just like argued above, recruiting from a partly randomly composed applicant pool is a partly random process: carrying out a simple statistical test,⁶ it was found that the increase in female representation was significant at 5% level only among faculty (USFA, group B) and at the university as a whole (see Appendix 2). Again, these changes could have been caused by an increase of women in the applicant pool or other structural changes, and need not necessarily be the result of implementing employment equity legislation. In particular, there is little evidence that the EEA has been to the disadvantage of men. Hence, whilst the figures presented by Echevarria and Huq (2001) do not disprove their claims about the

⁶ Due to limitations in data availability, it was assumed that the number of employed in each group was the same in 1992 (n_1) and 1999 (n_2). Then, $n_1=n_2$ which would render the change statistically significant at the 5% level was solved for, and compared to the actual n as reported in December 1998. For details, refer to Appendix 2.

undesirable affects of the EEA as it is currently implemented, they fail to offer any substantial support.

This paper has examined Echevarria and Huq's (2001) proposition to alter the Employment Equity Act (EEA) to include men in female-dominated occupations as a designated group. Following Williams (1992), it has been argued that gender segregation arises for different reasons in female-dominated and male-dominated occupations. This implies that policy to promote gender integration might have to take different forms depending on the current male-female ratio in the sector, contrary to the suggestion of Echevarria and Huq (2001). It has also been shown that the evidence provided by Echevarria and Huq (2001) for the University of Saskatchewan (1992-1999) to illustrate the undesired results of the EEA in its current state is not sufficient to justify a policy change. Arguably, the existence of such adverse effects could only be evaluated using a larger sample covering a longer time period, and which is analysed to control for structural changes. Since misguided public policy (e.g., implementing anti-discrimination laws when there is no discrimination) is likely to cause distortions and efficiency losses, it has been argued that the proposition to make the EEA more gender-neutral in its formulation – despite its intuitive appeal – cannot presently be justified on economic grounds.

APPENDIX 1

Testing the hypothesis that there was no change in female representation between 1992 and 1999 against the alternative hypothesis that there was an increase in female representation:

$$H_o : p_1 = p_2$$

$$H_1 : p_1 < p_2$$

z_t was calculated as
$$z_t = \frac{p_2 - p_1}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n_1} + \frac{\hat{p}(1-\hat{p})}{n_2}}} \quad \text{where} \quad \hat{p} = \frac{n_1 p_1 + n_2 p_2}{n_1 + n_2}$$

Table 1: Significance of Changes in Faculty Composition* Observed by Echevarria and Huq (2001)

College	October 1992		March 1999		z_t	Reject H_o ?	
	Female Faculty (proportion, p_1)	Number of Faculty (n_1)**	Female Faculty (proportion, p_2)	Number of Faculty (n_2)		Significance Level	
						5%	10%
Agriculture	0.08	53	0.13	62	0.865	NO	NO
Arts & Science	0.15	332	0.21	316	1.990	YES	YES
Commerce	0.17	50	0.16	52	-0.136	NO	NO
Education	0.24	65	0.26	59	0.257	NO	NO
Engineering	0.01	73	0.03	73	0.863	NO	NO
Medicine	0.11	219	0.18	220	2.082	YES	YES
Veterinary Medicine	0.19	75	0.19	66	0.000	NO	NO
Library	0.47	33 [†]	0.63	33 [†]	1.306	NO	YES

Sources: Female representation as stated in Echevarria and Huq (2001, p.60).
Number of Faculty as reported by the UofS section for Institutional Analysis.

* The test was not carried out in Pharmacy & Nutrition, Nursing, Kinesiology, Law and Dentistry, which all employed less than 30 faculty both in 1992 and 1990.

** Data for 1996 were used as a proxy for 1992 (only post-1996 data available from the U. of S. section for Institutional Analysis).

† The number of faculty in the library was not reported with other colleges. The library at the University of Saskatchewan (2006) states the number of "professional librarians" as 33, which was used as a proxy here.

APPENDIX 2

Testing the hypothesis that there was no change in female representation between 1992 and 1999, against the alternative hypothesis that there was an increase in female representation:

$$H_o : p_1 = p_2$$

$$H_1 : p_1 < p_2$$

Due to limited data availability, it was assumed that there was no change in the number of employees in each group between 1992 and 1997.

$$n_1 = n_2 \quad (= n)$$

Solving for n which would be required to render this change statistically significant (i.e., being able to reject H_o) at the 5% significance level,

$$\text{Using } z_t = \frac{p_2 - p_1}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n_1} + \frac{\hat{p}(1-\hat{p})}{n_2}}} \quad \text{where } \hat{p} = \frac{n_1 p_1 + n_2 p_2}{n_1 + n_2}$$

$$\Rightarrow n_{req} = \frac{2 z_t^2 \hat{p}(1-\hat{p})}{(p_2 - p_1)^2} \quad \text{where } \hat{p} = \frac{p_1 + p_2}{2} \quad \text{when } n_1 = n_2 = n$$

Table 2: Significance of Changes in Faculty Composition* Observed by Echevarria and Huq (2001)

Employee Group	October 1992 Female Faculty (proportion, p_1)	March 1999 Female Faculty (proportion, p_1)	n_{req}	n_{1998}	$n_{req} > n_{1998n}$?
A: ASPA	0.4563	0.5052	565	477	NO
B: USFA	0.1872	0.2268	567	895	YES
C: CUPE-clerical	0.9510	0.9438	5203	658	NO
D: CUPE-technical	0.3019	0.3379	909	586	NO
E: CUPE-trades	0.0000	0.0270	99	74	NO
H: OOS-faculty	0.2446	0.2981	374	161	NO
L: Sessional Lecturers	0.4979	0.4511	616	235	NO
All Employment Groups	0.4393	0.4609	2871	3372	YES

Sources: Female representation as stated in Echevarria and Huq (2001, p.58).
Number on each employee group as reported in by University of Saskatchewan (1999, Appendix E, pp.1-2).

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