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Can Economic Structure Explain Gender Differences in Economic Reward: A Comparison of Australia, Sweden and the United States

By

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[1]I would like to thank Lars Osberg and Peter Burton for extremely useful comments. Special thanks are also due to John Whalley for help with all the calculations.

In Australia, the average woman's wage is 71 percent of the average man's wage; in Sweden, the corresponding figure is 78 percent; in the United States, 62 percent.[2] In all three countries, the average woman earns less than the average man, but women living in Sweden are relatively much better-off than women living in the United States. Why is this so? Why do women earn less than men? Why do women in Sweden fare better than women elsewhere? Economic theory offers a number of potential explanations.

First, neo-classical theory predicts that the industrial structure of an economy should be an important determinant of the observed pattern of wages. If available capital varies across industries, we might expect worker productivity to vary. Then if, as neo-classical theory suggests, workers are paid according to their marginal products, wages should vary correspondingly. It follows that if men tend to work in capital-intensive high-productivity sectors (e.g., the resource sector) while women work in labour-intensive, low-productivity sectors (e.g., the service sector) <u>average</u> male wages should exceed <u>average</u> female wages even if, within each sector, men and women are rewarded equally. Moreover, if the resources sector of the economy is relatively larger in Australia than Sweden, then industrial structure might help explain gender differences in economic reward across the countries.

On the other hand, there is a growing literature (Krueger and Summers, 1988) which suggests that workers within industrial sectors are <u>not</u> always paid according to their marginal products; that workers in some

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[2]These numbers are calculated using the Luxembourg Income Study. See Smeeding, et. al., 1985, for a detailed description of this data source.

industries receive sizable rents. Explanations for these results vary. Some workers may be paid wages which exceed their marginal products in order to encourage work incentives (Shapiro and Stiglitz, 1984) or to minimize turnover (Krueger and Summers, 1988). However, it is also argued (following Doeringer and Piore, 1974) that not all workers are employed in such favorable circumstances; that the labour market is segmented. High wages, job security and promotion possibilities characterize 'primary' sector jobs; low wages, employment instability and no promotion opportunities characterize secondary sector employment. If more women than men work in the secondary sector of the labour market, then employment rather than industrial structure might help explain gender differences in economic reward. Moreover, if the secondary sector is larger in the United States than Sweden, cross-country differences can also be explained. Finally, the notion that both 'good' and 'bad' jobs exist in any labour market points out the inadequacy of focussing merely on gender differences in mean wages. The labour market experiences and wage-determination processes of low- and high-wage women and men might differ substantially.

An alternative explanation of gender differences in economic reward which focusses on characteristics of the worker rather than the workplace is provided by human capital theory (Becker, 1964). If, within industrial sectors, men and women are employed in occupations requiring different investments in education or different levels of skill and experience (e.g., men are surgeons while women are waitresses), human capital theory predicts that marginal products and hence wages should vary. Moreover, if different industries employ workers in different occupations (e.g., the

primary sector requires more blue-collar workers; the service sector requires more professional workers) then industry and occupation can be inter-related determinants of the observed pattern of wages in an economy. That is, suppose we are comparing two economies. Economy A has a large non-financial service sector; Economy B has a large financial service sector. Further, suppose that a majority of the women employed in the service sector of either country are highly-paid professionals while a majority of the women employed in the financial sector of either country are poorly-paid clerical workers. Then, other things equal, the economy with the larger service sector (Economy A) will have a higher gender wage ratio.

Finally, a growing body of literature (Polachek, 1975; Greenhalgh, 1980; Miller, 1987a) suggests that differences in the level of 'family responsibilities' (housework, child-care) assigned to men and women are more important than differences in their stocks of human capital in explaining observed gender wage differentials. Further, this literature argues that women's acquisition of human capital is limited by choice of occupations which accomodate family responsibilities or by periodic withdrawals from the labour market (Zabalza and Arrufat 1985; Miller, 1987b).[3] Thus, differences across countries in social policies which assist parents in the paid labour force (e.g., day-care, parental leave programmes) might also be critical determinants of cross-country differences in male/female wage gaps.

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[3]But, see also Bielby and Bielby (1988) and Corcoran and Duncan (1979) who dispute these findings.

This paper makes use of the Luxembourg Income Study, a set of internationally comparable microdata sets, to examine the possible contributions of industrial structure, occupational mix and personal/family characteristics to observed gender differences in economic reward in Australia, Sweden and the United States. Particular effort is made to sort out the possibly different implications of these factors for low-wage as opposed to simply 'average' women and men. Comparing gender differences in countries with different industrial structures, occupational mixes and social policies is a useful strategy for assessing the importance of these factors which is not typically available to researchers studying individual countries. The remainder of the paper is divided into four sections. The first examines the hypothesis that differences in industrial structure explain differences in gender reward across the three countries studied. The second section explores the possible contribution of occupational differences, controlling for industry. The third section examines the role of family and personal characteristics in explaining gender wage gaps. The final section offers conclusions and policy implications.

1. Industrial Structure

Table 1 presents distributions of employment across industrial sectors for women, for men and for all employed workers. Calculations are based on samples of men and women between the ages of 25 and 55 with positive wage rates drawn from the relevant Luxembourg Income Study data files.[4] Table 1 illustrates, first of all, that the three countries differ in terms of the relative importance of industrial sectors in generating over-all employment. In Sweden, 43 percent of all jobs are provided in the non-financial service sector while only 35 percent and 39 percent of all jobs are located in the same sector in Australia and the United States, respectively. In Australia, 12 percent of jobs are located in the utilities sector as opposed to 7 percent in Sweden and 8 percent in the United States.

Of more relevance for this paper, however, are the male/female distributions across industrial sectors. Over half of all women work in the non-financial service sector in each country. While the service sector also provides employment for a large proportion of men, manufacturing is (roughly) equally important and men are generally well-represented in all sectors. Assuming available capital varies across industrial sectors, can these differences in the sectors where men and women work help to explain differences in observed gender wage gaps across countries?

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[4]The self-employed and farmers are excluded to focus on differences in wages received by paid employees. See Appendix 1 for the industrial classifications employed throughout this analysis. See Appendix 2 for details of the data sets employed.

Table 2 presents three sets of wage ratios. In the first, the ratio of the average male wage in a particular sector to the over-all average male wage is calculated. It is clear that men are better-paid in some sectors than others. In Australia, men who work in the primary sector of the economy have, on average, the highest wages; in Sweden, men who work in the financial sector have the highest wages. Lack of consistency across countries in the sectors with the highest wage rates indicates that inherent characteristics of the industry (e.g., capital requirements) cannot, alone, explain wage differences across industries unless production processes vary enormously. This seems unlikely given the three industrialized economies in question.

The second set of wage ratios presents the average female wage rate in each industrial sector to the overall mean male wage. It is striking, first of all, that, on average, women never earn more than 84 percent of the average male wage, regardless of the sector in which they are employed. It is also clear that women earn higher wages in some sectors than others. But, the sectors with relatively high women's wages do not necessarily correspond, within a country, to the sectors in which men receive relatively high wages. In Australia, for example, men who work in the primary sector have the highest wages while women who work in construction (although very few women actually work in this sector) have the highest wages. In Sweden, women who work in the manufacturing sector receive relatively low wages while men who work in the same sector receive approximately average levels of compensation. Finally, in the United States, men who work in the financial sector receive the highest wages while women in this sector receive only average wages. Again, the fact

that there is not a consistent pattern of high or low wages for a particular industry indicates that inherent characteristics of the industry cannot alone explain wages received by those employed there. Thus, differences within a country in the industrial sectors in which men and women work cannot explain differences in the over-all average levels of compensation they receive.

Moreover, differences across countries in the distributions of men and women across industrial sectors cannot explain cross-country differences in gender wage gaps. Wage ratios were re-calculated for Australia and the United States using own-country male and female wage rates, but the Swedish distributions of men and women across industrial sectors. This procedure had very little impact on wage ratios. In Australia, the gender wage ratio increased from .71 to .72 (1.4 percent) while in the United States, the wage ratio was unchanged.

The third set of wage ratios in Table 2 presents ratios of average female to average male wage rates for each industrial sector. Not surprisingly, there is considerable heterogeneity across sectors in observed gender wage gaps. The striking thing to notice in this table is that gender wage ratios are larger in nearly every industrial sector in Sweden (the financial and construction sectors are exceptions). This is a fact which needs to be explained.

To achieve international comparability, industrial sectors are rather broadly defined. Within one sector we might expect different employees to receive rather different levels of compensation. Thus, as illustrated in Phipps (1988), focussing on <u>mean</u> wages received by men and women within and across sectors might not adequately represent the experience of gender

differences in economic reward. An alternative method of measuring these differences, which takes account of the distribution as well as the level of wages within a sector, is to calculate ratios of 'equally-distributed-equivalent' (e.d.e.) wage rates (Atkinson, 1970). An equally distributed wage rate is the wage rate which when distributed to each member of the relevant population, yields the same level of social welfare as the actual distribution of wage rates. This procedure thus involves choosing a measure of social welfare. For this analysis, following Atkinson (1970), a mean of order r social welfare function is employed:

$$SW = (1/n \sum_{i=1}^{n} w_i^r)^{1/r} \qquad \begin{matrix} r \leq 1 \\ r \neq 0 \end{matrix}$$

where r is an 'inequality-aversion' parameter. (As the value of r falls, 'inequality aversion' increases, and more weight is attached to individuals with low wage rates.) The equally-distributed wage rate, w*, will thus depend on the level of inequality aversion chosen.

Table 3 presents 'inequality-sensitive' wage ratios by industry, for four levels of inequality aversion. Heterogeneity across industrial sectors in patterns of inequality-sensitive wage ratios is apparent. Consider, first, inequality-sensitive wage ratios for the non-financial service sector, in which the largest number of women are employed. For all countries, wage ratios fall (wage gaps increase) as aversion to inequality is increased. This indicates more inequality in the distribution of women's than men's wages within the sector. Consider, on the other hand, wage ratios in the utilities sector. In Australia, wage

ratios at first decrease and then increase. In Sweden and the United States, wage ratios consistently increase. Eventually, the 'inequality-sensitive' wage ratio exceeds one; the female e.d.e. wage exceeds the male e.d.e. wage, indicating that male wages are less equally distributed than female wages in this sector. Thus, it is apparent that male and female wage distributions vary substantially across industrial sectors. An obvious explanation for this finding is that men and women do quite different jobs even when employed within the same industry.

2. Occupational Structure

Table 4 presents distributions of men and women across occupations, over-all and within each industrial sector.[5] In Australia and the United States, the largest number of women are employed in 'clerical' occupations (32 and 34 percent, respectively). In Sweden, more women work in 'professional' (38 percent) than 'clerical' (22 percent) occupations. 'Service' occupations are the other most likely type of employment for women in all three countries.

Men, on the other hand, are most likely to be found in 'blue-collar' occupations. Forty-seven percent of men in Australia, 31 percent in Sweden and 45 percent in the United States are blue-collar workers. Large numbers of men are 'professional' workers in all countries. 'Administrative' occupations are particularly important in the United States (16 percent) while 'service' occupations (27 percent) are

[5]Occupational classifications are outlined in Appendix 1.

particularly important in Sweden. Overall, it is clear that men and women do rather different jobs.

This is particularly striking when occupational distributions are examined at the industry level. Within the manufacturing sector, it is clear that men and women do different kinds of work. In Australia, 56 percent of women employed in manufacturing have blue-collar occupations while 32 percent have clerical jobs; 71 percent of men have blue-collar jobs, 19 percent have professional or administrative jobs. These patterns of employment for men and women closely resemble those found in the United States. In Sweden, patterns are similar, except that service occupations are more important, especially for men (professional and administrative occupations are correspondingly less important). (Recall, however, that the manufacturing sector employs more men than women in all countries (see Table 1).)

Similarly, within the financial services sector, men and women have quite different occupations. Of women employed in this sector in Australia, 59 percent have clerical occupations while 28 percent have service occupations. Of men employed in the financial sector in Australia, 24 percent have clerical occupations, 23 percent have blue-collar occupations, 34 percent have professional or administrative occupations. In Sweden, women who work in the financial sector are again most likely to be found in clerical (67 percent) or service occupations (17 percent). On the other hand, men who work in the financial sector in Sweden are most likely to be found in service occupations (31 percent) or professional/administrative occupations (44 percent). Finally, in the United States, women who are employed in the financial sector are again

most likely clerical workers (66 percent) but 14 percent have administrative occupations while 14 percent have sales occupations. Men who work in the financial sector in the United States are most likely employed in administrative (33 percent), sales (28 percent) or clerical (13 percent) occupations.

In Australia and the United States, clerical work is the most common occupation for a woman working in almost any sector of the economy. (Clerical work is not quite so important in Sweden.) One major exception to this pattern is the non-financial service sector, where professional occupations are the most likely for either men or women. This is significant deviation from the more usual pattern, given the importance of the non-financial service sector for women's employment.

To understand how the occupational mix within an industrial sector can contribute to the observed average wage, it is necessary to know which occupations are relatively highly-paid. Table 6 presents ratios of average male wages by occupation to the over-all average male wage. Similarly, ratios of average female wages by occupation to the over-all average male wage are calculated. In both cases, professional and administrative occupations fare relatively well in all countries; blue-collar and service occupations fare relatively poorly. Finally, it is again striking that even within occupational groups, women on average never receive more than 92 percent of the <u>average</u> male wage (Administrative workers in Sweden).

Table 6 presents female employment as a percentage of total employment in particular sectors of the economy. Table 6 tells much the same story as Table 4. Women perform at least half of all clerical work

in every sector of each country. Women also perform a significant portion of service and professional work, but for these occupations, female representation varies significantly across sectors. That is, while women do at least half of the professional jobs in the non-financial service sector, there is no other sector of the economy in which women constitute so large a fraction of professional employees.

To what extent do differences across sectors and countries in the types of work performed by men and women explain differences in observed gender wage ratios? We might hypothesize, first of all, that sectors in which a larger than average proportion of the female employees perform relatively highly-paid professional or administrative tasks will have a higher than average gender wage ratio. Or, a sector in which a larger than average proportion of men have blue-collar jobs might also be expected to have a higher than average gender wage ratio. This hypothesis is investigated by regressing the gender wage ratio for each industrial sector and country on ratios of relative occupational proportions within that sector and country. (Thus, the first independent variable is .10/.13, the ratio of the proportion of women working in the primary sector who have professional occupations to the proportion of men who have professional occupations (see Table 4).)

Regression results are reported in Table 7. When ratios of gross mean wage rates are used as dependent variables, relative occupational proportions explain none of the observed variation across sectors. On the other hand, when inequality-sensitive gender wage ratios are used as dependent variables ($R = -1.5$), 38 percent of the variation in wage ratios across sectors and countries can be explained by relative occupational

proportions. As the proportion of women employed in administrative occupations within a sector increases (or as the number of men in administrative occupations falls), the inequality-sensitive wage ratio increases; as the proportion of women employed in blue-collar occupations increases (or as the proportion of men working in blue-collar occupations falls), the inequality-sensitive wage ratio falls. This rather dramatic difference between the results obtained using ratios of mean wages and ratios of inequality-sensitive wages indicates that occupation is an important determinant of wage distributions if not of mean wages. Figure 1 provides a schematic illustration of the association between wage distribution and occupational mix for two industrial sectors in Australia. The distribution of women across occupational groups is taken from Table 4; relative occupational wage rates are taken from Table 5.

Another factor which might be viewed as an important determinant of wage variation across industrial sectors is the prevalence of part-time work. Table 8 indicates that, in all countries, women are far more likely to work part-time than men. In Australia, 43 percent of women and only 2 percent of men work part-time. In the United States, 24 percent of women and 2 percent of men work part-time. Interestingly, part-time work is much more common for <u>both</u> men and women in Sweden: 61 percent of women and 12 percent of men work part-time. Across industrial sectors there is enormous variation in the number of part-time workers. Again, we might expect gender wage ratios to be higher in sectors where there are either relatively few women or relatively many men working part-time. Thus, the second equation reported in Table 7 adds a 'part-time worker' variable to the set of occupation variables. (The part-time worker variable is

calculated as the ratio of the proportion of women within a sector working part-time to the proportion of men working part-time.) Still, none of the variance in gross mean wage ratios is explained. However, as the relative proportion of women who work part-time within a sector increases, the inequality-sensitive wage ratio falls. Within the addition of the part-time worker variable, 50 percent of the variation in inequality-sensitive wage ratios is explained. This again is in striking contrast with the results obtained using gross mean wage ratios and indicates that part-time status is a more important determinant of the wages received by low-wage workers; that characteristics of jobs are more important for explaining gender wage differences among low-wage workers.

The 'crowding hypothesis' (Bergmann, 1971) suggests that women's wages will be lower as the number of women in a sector increases. To investigate the possible contribution of this explanation for gender wage differences, the fraction of total employment within each country/industry cell is added to the regression equation (see Table 6). "Percent female" does not significantly influence either gross mean wage ratios or inequality-sensitive wage ratios.

Finally, it might be argued that the contribution of occupational mix to gender differences in wages might vary across countries, depending on wage-setting institutions or anti-discrimination practices. To investigate this possibility, tests for country-specific differences in structure were conducted.[6] The only such equation reported in Table 7

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[6]Each independent variable was multiplied by a country-specific dummy variable. These new variables were added to the regression equation. Finally, F-tests were used to determine whether sets of the new variables were significantly different from zero. Given limited degrees of freedom, tests were carried out for one country at a time. Results rejected all

adds a dummy variable for Swedish observations. Notice that the Swedish dummy significantly increases the gross mean wage ratio but does not significantly affect the ratio of inequality-sensitive wage rates. Thus, differences across countries in the average wages received by men and women can be attributed more to differences received by relatively high-wage workers. Women who work in low-wage jobs are not better-off relative to their male counterparts simply because they live in Sweden.

3. Family & Personal Characteristics

Reference has already been made to differences across sectors in relative numbers of part-time workers. Table 8 shows that there are also differences across sectors and countries in average ages, in average numbers of children and in average frequencies of marriage for men and women who work in the paid labour market. Particularly in Australia and the United States, men who are employed are more likely to be married and to have more children than women who are employed. But, these characteristics vary across industrial sectors. For example, women who work in non-financial services (where large numbers of women are employed) are less likely to be married than women who work elsewhere. This is true in all three countries.

A number of papers in the literature on labour-market discrimination stress the important consequences of family characteristics for wages (Polachek, 1975; Greenhalgh, 1980; Miller, 1987a). Given the traditionally larger share of household/child-care responsibilities

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hypotheses of country-specific differences in coefficient estimates.

assigned to women, it is argued that they are less able to devote energies to careers and hence receive smaller economic rewards. To explore this hypothesis, industry wage ratios (gross and inequality-sensitive) were regressed on the ratios of mean female to male ages (AGE), mean female to male numbers of children (KIDS) and fractions married (MARRIED). Results are reported in Table 9. Using just these three variables, 45 percent of the variance in gross mean wage ratios can be explained. As the average age of women increases relative to the average age of men, the sector wage ratio increases. This finding makes sense from the 'human capital' perspective, particularly if age is regarded as a rough proxy for experience. As the proportion of married women increases relative to the proportion of married men, the wage ratio for the sector increases. This is surprising, given traditional roles as well as a number of studies (Polachek, 1975; Greenhalgh, 1980; Miller, 1987a; Phipps, 1988) which find that being married reduces women's wages and increases men's wages. But refer again to Table 8. Notice that women who work are most likely to be married in Sweden and least likely to be married in the United States. Wage ratios are highest in Sweden and lowest in the United States. Thus, the MARRIED variable may be serving as a proxy for more general social attitudes toward women in the workplace. Notice, as rough confirmation for this interpretation, that when the Sweden dummy variable is added to the basic equation it is no longer significant (see Equation II).

If the part-time worker variable is added to the equation, explained variance increases to 51 percent. As the number of women who work part-time in a sector increases relative to the number of men who work part-time; the sector wage ratio drops. Notice, at the same time, that the

variable 'KIDS' is significant in the third specification. As the average number of children in women's families increases relative to the number of children in men's families, the gender wage ratio falls. This is reasonable if women have primary responsibility for childcare. Finally, adding all of the occupational mix variables does not improve the estimated equation.

Regression results using inequality-sensitive wage rates as dependent variables are once again dramatically different. The variables AGE, MARRIED and KIDS explain none of the observed variation in inequality-sensitive wage ratios. With the addition of the Sweden dummy variable, only 4 percent of observed variation is explained. (In contrast, the same variables explain 47 percent of the variation in gross mean wage ratios.) The part-time worker variable significantly reduces inequality-sensitive wage ratios, but explained variance is still only 17 percent. Finally, adding the occupation variables once again markedly improves the equation (although $\bar{R}^2$ is higher when the personal/family characteristics are excluded).

Thus, regression results obtained using inequality-sensitive wage ratios stand in direct contrast with results obtained using gross mean wage ratios. Family and personal characteristics offer the best explanation of variation across countries and industrial sectors in gross mean gender wage ratios. Occupational mix variables offer the best explanation of variation across countries and sectors in inequality-sensitive gender wage ratios. An interpretation of these results is that family and personal characteristics primarily affect the average level of

wages within a sector while the occupational mix primarily affects the distribution of wages.

Two distributions with rather different shapes can easily have very similar means. (See, for example, Figure 1 which schematically illustrates the women's wage distributions for the manufacturing and commercial sectors in Australia. These diagrams are based on information provided in Tables 4 and 5.) Thus, if occupational mix primarily determines the shape of the wage distribution within a sector, it is quite conceivable that two sectors with rather different occupational composition have very similar mean wage rates. It then follows that variation in gross mean wage ratios will not be explained by variation in occupational mix.

On the other hand, by affecting the shape of the wage distribution within a sector, the occupational mix can play a critical role in explaining variation in inequality-sensitive wage ratios. A sector with a large number of low-wage workers balanced by a small number of high-wage workers will have a much lower equally-distributed wage than a sector in which everyone receives (roughly) the mean wage. If relative frequences of high- and low-wage workers are determined by the occupational composition of the sector, it is reasonable that the occupational mix variables explain nearly half of the variation in inequality-sensitive wage ratios.

The sensitivity of gross mean wage ratios to, for example, relative female to male ages (AGE) indicates that some individuals within the sector receive positive returns to age (which may be viewed as a rough proxy for experience). However, since inequality-sensitive wage ratios

are unaffected by AGE, it seems clear that it is wages at the top of the distribution which are primarily affected.[7] Positive returns to age/experience are consistent with human-capital theory. Negative returns to number of children (KIDS) are similarly explainable in the human-capital framework. These results indicate that the level of skill or effort which some workers bring to the job affect the market reward obtained. This is characteristic of a primary labour market. On the other hand, the fact that inequality-sensitive wage ratios are unaffected by these variables indicates that market rewards received by those at the bottom of the wage distribution are not affected by the level of skill or effort that the worker brings to the job. This is characteristic of a secondary labour market.[8]

4. Conclusions

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[7]A numerical example might help to illustrate this point. Consider the wage distribution (5, 5, 5, 5, 100). The mean wage is 24; the e.d.e. wage (R = -5.) is 5.23. Now, add one dollar to each wage in the distribution. The mean wage will increase to 25; the e.d.e. wage will increase to 6.27. If, in the other hand, five dollars is added to the highest wage in the distribution, the mean wage will again increase to 25, but the e.d.e. wage will be unchanged at 5.23.

[8]Phipps (1988) concluded that the shapes of wage distributions are not affected by human capital or family characteristic variables. In that paper, estimated wage equations of the Blinder (1973)/Oaxacal (1973) variety were estimated for Australia and Canada. 'Returns' to human capital and family responsibilities were removed from individual wages using the estimated equations and inequality-sensitive wage ratios were re-calculated with the resulting 'net' wage distributions. Shapes of distributions were not affected by this procedure, leading to the conclusion that female wage distributions are not skewed because high-wage women have considerably more human capital or fewer family responsibilities. However, by using a single estimated wage equation, it was implicitly assumed that returns to these variables are the same in all sectors of the economy. If market segmentation exists, this assumption may not be valid.

This paper uses the Luxembourg Income Study to conduct a cross-national investigation of the importance of alternative-explanations for observed gender wage differences offered by economic theory. The procedure employed differs from the more standard approach (following Blinder (1973) and Oaxaca (1973)) of estimating separate wage equations for individual countries. (See Rosenfeld and Kahlberg, 1988, for a recent application of this approach in a cross-national context.) Data from three countries are combined to increase variation in occupational mix and demographic characteristics. In this way, it is possible to determine how differences across countries in characteristics hypothesized to influence wage rates contribute to differences across countries in observed gender wage ratios.

A first conclusion of the study is that industrial structure does not provide a reasonable explanation for observed differences in the wage rates received by men and women. While it is true that men and women are observed to work in different sectors of the economy and that mean wage rates differ across industrial sectors, women earn less than men <u>within</u> every sector in every country. However, there is considerable variation in gender wage ratios across industrial sectors within a country as well as across countries.

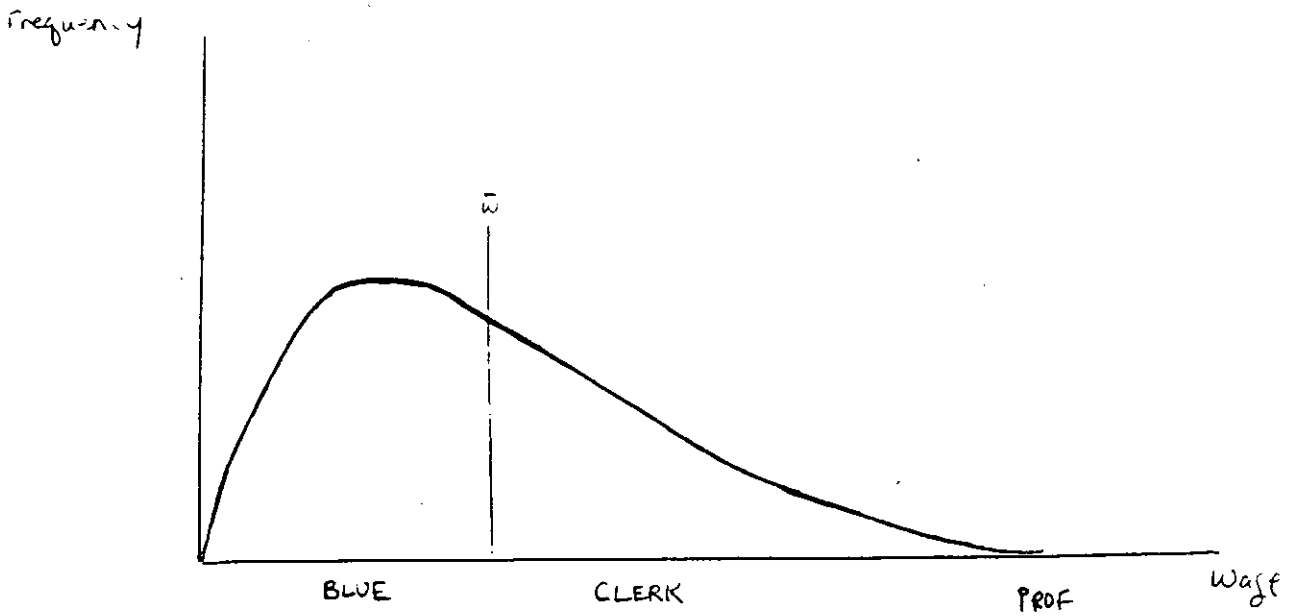
A second conclusion of the paper is that personal and family characteristics are important determinants of this variation across countries and industrial sectors in ratios of <u>averge</u> wages received by men and women; these factors are <u>not</u> significant determinants of variation in inequality-sensitive wage ratios. This indicates that rather different factors may determine the economic rewards of low- and high-wage workers;

we should not look for just one explanation of gender differences in economic rewards. Moreover, this result suggests that the 'dual-labour-market' hypothesis may be of some relevance for understanding gender differences in economic rewards (see also Hartmann, 1987). For workers in the 'primary' sector of the labour market, differences in levels and rates of return to (e.g.,) experience and family responsibilities will be critical to differences in observed male/female wages. Policies to eliminate wage differences in the primary sector should encourage (e.g.,) equal access to promotion as well as support for family responsiblities (day-care; parental leave). For workers in the secondary sector of the labour market such policies will be of less relevance.

A third major finding of the paper is that occupational-mix variables are important determinants of variation across countries and sectors in inequality-sensitive wage ratios; occupational mix does not explain variation in mean wage rates. Thus, occupation plays an important role in establishing the <u>distribution</u> rather than the level of wages within a sector. Having a 'bad job' is probably the major reason for being a low-wage worker. Relative numbers of men and women with 'bad jobs' in a sector will significantly affect observed gender differences in economic rewards. Removing gender differences among low-wage workers will thus require more substantial changes in the structure of labour markets to minimize the number of jobs in the secondary sector.

Figure 1

Schematic Women's Wage Distributions by Industrial Sector



MANUFACTURING SECTOR, AUSTRALIA

COMMERCIAL SECTOR, AUSTRALIA

TABLE 1

Proportional Distribution of Men and Women Across Industries

	AUSTRALIA	SWEDEN	USA
PRIMARY			
WOMEN	1.0%	.4%	.9%
MEN	4.5%	2.4%	2.9%
BOTH	3.0%	1.0%	2.0%
MANUFACTURING			
WOMEN	14.8%	12.7%	19.0%
MEN	24.9%	30.2%	28.7%
BOTH	21.0%	22.0%	25.0%
COMMERCIAL			
WOMEN	12.4%	11.4%	13.5%
MEN	15.3%	11.7%	13.1%
BOTH	14.0%	12.0%	13.0%
SERVICES (NF)			
WOMEN	52.9%	61.1%	52.1%
MEN	24.7%	25.9%	29.9%
BOTH	35.0%	43.0%	39.0%
FINANCIAL			
WOMEN	11.3%	8.9%	8.1%
MEN	11.0%	9.3%	4.4%
BOTH	11.0%	9.0%	6.0%
UTILITIES			
WOMEN	7.0%	4.3%	5.3%
MEN	15.3%	10.1%	10.3%
BOTH	12.0%	7.0%	8.0%
CONSTRUCTION			
WOMEN	.1%	1.3%	1.3%
MEN	4.2%	10.4%	10.6%
BOTH	3.0%	6.0%	7.0%

TABLE 2

Wage Ratios by Industry

Mean Wage Rate by Industry (Men)
Mean Wage Rate for all Men

	AUSTRALIA	SWEDEN	USA
TOTAL	1.00	1.00	1.00
PRIMARY	1.26	.77	1.04
MANUFACTURING	.95	.97	.99
COMMERCIAL	.90	1.03	.93
SERVICES (NF)	1.07	1.07	1.00
FINANCIAL	1.03	1.21	1.11
UTILITIES	1.00	.87	1.06
CONSTRUCTION	.91	.87	1.00

Mean Wage Rate by Industry (Women)
Mean Wage Rate for all Men

	AUSTRALIA	SWEDEN	USA
TOTAL	.71	.78	.62
PRIMARY	.71	.76	.64
MANUFACTURING	.62	.70	.57
COMMERCIAL	.64	.74	.54
SERVICES (NF)	.75	.80	.64
FINANCIAL	.71	.79	.61
UTILITIES	.64	.78	.75
CONSTRUCTION	.83	.70	.84

Mean Wage Rate by Industry (Women)
Mean Wage Rate by Industry (Men)

	AUSTRALIA	SWEDEN	USA
TOTAL	.71	.78	.62
PRIMARY	.56	.99	.61
MANUFACTURING	.65	.72	.57
COMMERCIAL	.71	.72	.58
SERVICES (NF)	.70	.75	.64
FINANCIAL	.70	.65	.55
UTILITIES	.65	.89	.70
CONSTRUCTION	.92	.81	.84

TABLE 3

Inequality--Sensitive Wage Ratios by Industry

(W^*_f/W^*_M)

R = 0.5	AUSTRALIA	SWEDEN	USA
TOTAL	.68	.78	.61
PRIMARY	.52	.96	.60
MANUFACTURING	.63	.71	.57
COMMERCIAL	.70	.72	.57
SERVICES (NF)	.68	.75	.63
FINANCIAL	.67	.66	.56
UTILITIES	.63	.88	.71
CONSTRUCTION	.90	.81	.81
R = -0.5	AUSTRALIA	SWEDEN	USA
TOTAL	.61	.76	.59
PRIMARY	.40	.82	.56
MANUFACTURING	.57	.65	.57
COMMERCIAL	.64	.71	.56
SERVICES (NF)	.61	.74	.61
FINANCIAL	.56	.71	.62
UTILITIES	.56	.90	.73
CONSTRUCTION	.81	.84	.80
R = -1.5	AUSTRALIA	SWEDEN	USA
TOTAL	.47	.76	.54
PRIMARY	.27	.65	.52
MANUFACTURING	.45	.50	.57
COMMERCIAL	.56	.61	.47
SERVICES (NF)	.49	.72	.48
FINANCIAL	.34	1.23	1.01
UTILITIES	.49	1.28	1.07
CONSTRUCTION	.66	1.14	1.07
R = -5.0	AUSTRALIA	SWEDEN	USA
TOTAL	.69	.93	.30
PRIMARY	***	.96	.39
MANUFACTURING	.70	.64	.59
COMMERCIAL	.85	.56	.27
SERVICES (NF)	.64	.56	.18
FINANCIAL	***	6.90	3.07
UTILITIES	.76	5.40	6.13
CONSTRUCTION	***	4.15	7.09

*** unavailable

TABLE 4

Occupational Distribution by Industrial Sector

	AUSTRALIA						SWEDEN						USA					
	PROF	ADMIN	SALES	CLERK	BLUE	SERV	PROF	ADMIN	SALES	CLERK	BLUE	SERV	PROF	ADMIN	SALES	CLERK	BLUE	SERV
TOTAL																		
WOMEN	.26	.02	.07	.32	.11	.22	.38	.03	.07	.22	.07	.23	.19	.07	.05	.34	.19	.16
MEN	.18	.11	.05	.10	.47	.09	.20	.07	.10	.05	.31	.27	.19	.16	.06	.06	.45	.08
PRIMARY																		
WOMEN	.10	.00	.00	.43	.20	.27	.09	.09	.00	.18	.55	.09	.07	.00	.00	.57	.37	.00
MEN	.13	.04	.01	.05	.74	.03	.06	.13	.00	.02	.63	.16	.13	.10	.01	.02	.70	.04
MANUFACTURING																		
WOMEN	.04	.01	.03	.32	.56	.04	.10	.01	.02	.28	.46	.13	.06	.03	.02	.25	.63	.01
MEN	.09	.10	.03	.05	.71	.02	.07	.04	.08	.03	.51	.27	.15	.11	.03	.05	.64	.02
COMMERCIAL																		
WOMEN	.01	.05	.28	.48	.11	.01	.04	.01	.56	.29	.04	.06	.03	.15	.29	.38	.13	.02
MEN	.04	.21	.19	.04	.51	.01	.04	.07	.59	.09	.16	.05	.04	.31	.23	.03	.38	.01
SERVICES (NF)																		
WOMEN	.45	.02	.01	.21	.01	.30	.58	.03	.0	.12	.0	.27	.32	.06	.0	.28	.06	.28
MEN	.43	.08	.0	.14	.14	.21	.55	.08	.01	.02	.10	.24	.40	.14	.01	.09	.16	.20
FINANCIAL																		
WOMEN	.05	.03	.03	.59	.02	.28	.10	.03	.02	.67	.01	.17	.04	.14	.14	.66	.01	.01
MEN	.19	.15	.09	.24	.23	.10	.27	.17	.08	.12	.05	.31	.10	.33	.28	.13	.07	.09
UTILITIES																		
WOMEN	.02	.06	.36	.31	.11	.14	.03	.05	.02	.34	.01	.56	.09	.08	.02	.58	.20	.03
MEN	.09	.09	.02	.08	.63	.09	.02	.06	.02	.07	.26	.57	.11	.14	.01	.10	.62	.02
CONSTRUCTION																		
WOMEN	.05	.0	.0	.86	.0	.10	.03	.0	.03	.63	.09	.22	.0	.13	.0	.48	.36	.02
MEN	.13	.05	.0	.04	.77	.01	.0	.02	.0	.01	.66	.31	.05	.12	.0	.02	.81	.0

TABLE 5

Wage Ratios by Occupation

Mean Wage Rate by Occupation (Men)
Mean Wage Rate for all Men

	AUSTRALIA	SWEDEN	USA
TOTAL	1.0	1.0	1.0
PROF	1.22	1.20	1.19
ADMIN	1.20	1.49	1.21
SALES	.90	1.11	1.10
CLERICAL	1.00	.92	.93
BLUE COLLAR	.89	.74	.88
SERVICES	.97	.99	.74

Mean Wage Rate by Occupation (Women)
Mean Wage Rate for all Men

	AUSTRALIA	SWEDEN	USA
TOTAL	.71	.78	.62
PROF	.87	.89	.81
ADMIN	.80	.92	.77
SALES	.64	.70	.56
CLERICAL	.71	.73	.60
BLUE COLLAR	.54	.60	.52
SERVICES	.60	.71	.50

Mean Wage Rate by Occupation (Women)
Mean Wage Rate by Occupation (Men)

	AUSTRALIA	SWEDEN	USA
TOTAL	.71	.78	.62
PROF	.71	.74	.68
ADMIN	.66	.61	.63
SALES	.71	.63	.50
CLERICAL	.71	.80	.64
BLUE COLLAR	.61	.81	.59
SERVICES	.63	.71	.67

TABLE 6

Female Employment as Percentage of Total Employment by Industry and Occupation

AUSTRALIA

	OVER-ALL	PRIM	MFG	COMM	SERV (NF)	FIN	UTIL	CONST.
PROF	.46	.09	.13	.11	.56	.13	.05	.03
ADMIN	.11	.00	.03	.10	.24	.11	.15	.00
SALES	.44	.00	.26	.41	.17	.17	.83	.50
CLERK	.65	.54	.74	.85	.65	.59	.50	.69
BLUE	.12	.04	.21	.09	.08	.05	.04	.00
SERV	.59	.53	.40	.76	.64	.62	.29	.50
OVER-ALL	.37	.12	.26	.32	.55	.37	.21	.09

SWEDEN

	OVER-ALL	PRIM	MFG	COMM	SERV (NF)	FIN	UTIL	CONST.
PROF	.65	.20	.37	.48	.71	.25	.38	1.0
ADMIN	.27	.11	.09	.13	.46	.15	.24	.00
SALES	.40	.50	.09	.47	.00	.17	.29	1.0
CLERK	.83	.67	.79	.75	.93	.84	.67	.87
BLUE	.18	.13	.37	.19	.00	.14	.01	.02
SERV	.45	.09	.16	.53	.72	.34	.29	.08
OVER-ALL	.49	.15	.29	.49	.70	.48	.29	.11

USA

	OVER-ALL	PRIM	MFG	COMM	SERV (NF)	FIN	UTIL	CONST.
PROF	.43	.10	.17	.36	.51	.34	.24	.00
ADMIN	.26	.00	.14	.27	.36	.37	.18	.10
SALES	.43	.00	.25	.49	.00	.41	.44	.50
CLERK	.80	.85	.72	.91	.80	.88	.69	.69
BLUE	.24	.10	.33	.21	.33	.18	.11	.39
SERV	.61	.00	.21	.63	.65	.14	.38	1.0
OVER-ALL	.43	.18	.33	.44	.57	.58	.28	.08

TABLE 7

OLS Regression Results: Industry Wage Ratios and Occupational Mix

	GROSS MEAN WAGE RATIOS				INEQUALITY-SENSITIVE WAGE RATIOS			
	I	II	III	IV	I	II	III	IV
PROF	.008	.001	.006	-.015	.0004	-.017	-.001	-.011
	(.55)	(.10)	(.47)	(-1.10)	(.017)	(-.67)	(-.06)	(-.38)
ADMIN	.051	.007	.057	-.092	.368	.250	.376	.285
	(.76)	(.10)	(.89)	(-1.28)	(3.00)***	(1.97)*	(3.06)**	(1.88)*
SALES	-.003	-.0001	.001	.007	.008	.015	.012	.012
	(-.28)	(-.02)	(.10)	(.87)	(.47)	(.93)	(.71)	(.70)
CLERK	.0001	.001	-.003	.003	.005	.007	.0002	.007
	(.03)	(.23)	(-.65)	(.76)	(.53)	(.89)	(.02)	(.77)
BLUE	.006	-.004	-.086	-.009	-.281	-.306	-.396	-.304
	(.06)	(-.04)	(-.77)	(-.12)	(-1.60)	(-1.91)*	(-1.88)*	(-1.84)*
SERV	.007	.008	.002	.012	-.003	-.0006	-.010	-.002
	(.95)	(1.08)	(.21)	(1.92)*	(-.21)	(-.05)	(.63)	(-.16)
PART		-.003		-.002		-.008		-.009
		(-1.24)		(-.82)		(-1.98)*		(-1.98)*
% FEM			-.377				-.478	
			(-1.49)				(-.99)	
SWEDEN				.22				-.079
				(2.71)**				(-.46)
CONSTANT	.65	.72	.86	.65	.58	.78	.85	.81
	(8.13)***	(7.34)***	(5.33)***	(7.69)***	(4.00)***	(4.70)***	(2.77)***	(4.47)***
R^2	-.18	-.13	-.08	.24	.38	.50	.38	.46

T-Ratio's are reported in parentheses.

*** significant at 1 percent.
** significant at 5 percent.
* significant at 10 percent.

TABLE 8

Means of Selected Demographic Characteristics by Industry

	AUSTRALIA				SWEDEN				USA			
	AGE	PART	MARRIED	NKIDS	AGE	PART	MARRIED	NKIDS	AGE	PART	MARRIED	NKIDS
TOTAL												
WOMEN	38.	.43	.77	1.1	39.	.61	.80	1.3	38.	.24	.66	1.2
MEN	38.	.02	.86	1.4	39.	.12	.88	1.3	38.	.02	.82	1.3
PRIM												
WOMEN	35.	.40	.70	.9	40.	.73	1.0	1.1	36.	.27	.73	1.2
MEN	37.	.01	.83	1.4	39.	.15	.81	1.3	38.	.01	.88	1.5
MFG												
WOMEN	39.	.23	.82	1.1	39.	.57	.82	1.2	39.	.11	.65	1.3
MEN	39.	.01	.88	1.3	39.	.07	.88	1.3	39.	.01	.84	1.4
COMM												
WOMEN	38.	.48	.80	1.1	40.	.66	.79	1.2	38.	.35	.74	1.2
MEN	37.	.01	.85	1.4	39.	.06	.90	1.2	37.	.01	.83	1.2
SERV (NF)												
WOMEN	37.	.45	.75	1.2	39.	.62	.79	1.3	38.	.28	.64	1.1
MEN	37.	.04	.83	1.4	39.	.23	.88	1.3	38.	.05	.77	1.1
FIN												
WOMEN	36.	.42	.73	.9	39.	.52	.83	1.1	37.	.17	.71	1.0
MEN	37.	.01	.86	1.4	40.	.05	.88	1.2	39.	.01	.82	1.3
UTIL												
WOMEN	37.	.59	.79	1.1	40.	.50	.81	1.1	38.	.16	.60	1.0
MEN	39.	.02	.87	1.4	39.	.10	.87	1.1	39.	.02	.85	1.3
CONST												
WOMEN	36.	.33	.81	1.0	39.	.66	.84	1.3	39.	.22	.76	1.3
MEN	37.	.01	.84	1.3	38.	.13	.91	1.4	37.	.04	.83	1.4

TABLE 9

OLS Regression Results: Industry Wage Ratios and Personal/Family Characteristics

	Gross Mean Wage Ratios				Inequality-Sensitive Wage Ratios			
	I	II	III	IV	I	II	III	IV
AGE	1.56 (1.69)	1.72 (1.87)*	1.86 (2.10)**	2.26 (1.82)	1.16 (.36)	1.81 (.58)	2.36 (.81)	2.22 (.65)
MARRIED	.67 (2.95)***	.51 (2.01)*	.55 (2.26)**	.35 (1.17)	-.11 (-.14)	-.76 (-.88)	-.60 (-.74)	-.35 (-.43)
KIDS	-.17 (-.71)	-.34 (-1.23)	-.55 (-1.86)*	-.68 (-1.80)	.69 (.82)	-.004 (-.004)	-.82 (-.85)	-1.35 (-1.34)
PART			-.003 (-1.58)	-.004 (-1.95)**			-.01 (-1.88)*	-.01 (-2.34)*
PROF				-.02 (-1.68)				-.03 (-.78)
ADMIN				-.08 (-1.31)				.30 (1.82)
SALES				.01 (1.50)				.02 (.93)
CLERK				.004 (1.18)				.01 (1.10)
BLUE				-.07 (-1.08)				-.35 (-1.93)*
SERV				.002 (.34)				-.01 (-.61)
SWEDEN		.07 (1.23)	.03 (.59)	.14 (1.64)		.29 (1.53)	.15 (.80)	.002 (.007)
CONSTANT	-1.30 (-1.77)*	-1.19 (-1.64)	-1.12 (-1.61)	-1.22 (-1.35)	-.96 (-.38)	-.52 (-.21)	-.24 (-.11)	.15 (.06)
R^2	.45	.47	.51	.50	-.04	.04	.17	.41

T-Ratios are presented in parentheses.

*** significant at 1%.
** significant at 5%.
* significant at 10%.

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Appendix 1

Detail of Occupational/Industrial Category Definitions
Australia
Occupational categories are defined as follows:
Professional Workers (PROF)

Architects, Engineers, Surveyors, Professionals
Chemists, Physicists, Geologists & other physical scientists
Medical Practitioners and Dentists
Nurses
Professional Medical Workers
Teachers
Law Professionals
Artists, Entertainers, Writers and Related Workers
Draftsmen & Technicians
Other Professional and Related Workers
Pilots, Navigators and Ships' Officers
Post Masters

Administrative Workers (ADMIN)

Administrative & Executive Officials, Government Managers
Stationmasters, Inspectors & Supervisors, Transport

Sales Workers (SALES)

Insurance & Real Estate, Sellers, Auctioneers & Valuers
Commercial Travellers and Manufacturers Agents
Salespersons, Shop Assistants, etc.

Clerical Workers (CLERK)
Bookkeepers and Cashiers
Stenographers and Typists
Other clerical workers

Blue Collar Workers (BLUE)
Miners, Mineral Prospectors, Quarrymen & Related
Railway Firemen and Drivers
Road Drivers
Spinners, Weavers, Knitters, Dyers & Related
Tailors, Cutters, Furriers & Related
Leather Cutters, Sewers & Related
Furnacemen, Rollers, Drawers & Related Metal Workers
Watchmakers, Jewelers & Related
Mechanics, Plumbers, Metal Machinists & Related
Electricians & Related Electrical & Electronics
Carpenters, Cabinet Makers & Related
Painters & Decorators
Bricklayers, Plasterers & Construction Workers
Compositors, Printing Machinists, Engravers & Related
Millers, Bakers, Butchers, Brewers & Related

Potters, Tobacco, Chemical, Sugar & Paper Production Workers
Paper Products, Rubber, Plastic & Production Workers
Packers, Wrappers, Labellers
Stationary Engineers, Excavating & Lifting Equipment Operators
Storage & Freight Handlers
Labourers

Service Occupations (SERV)

Fire Brigade, Policy & Other Protective Service Workers
Housekeepers, Cooks, Maids & Related
Waiters, Bartenders
Caretakers, Cleaners & Builders
Barbers, Hairdressers & Beauticians
Launderers, Dry Cleaners & Pressers
Athletes, Sportspersons & Undertakers
Photographers
Service, Sport, Recreation Workers
Members of Armed Services in Australia

Industrial categories are defined as follows:

Primary Sector (PRIM)

Forestry, Fishing, Hunting
Mining

Manufacturing Sector (MFG)

Manufacturing Food, Beverages, Tobacco
Textiles, Clothing, Footwear
Paper and Wood Products, Printing and Publishing
Chemical, Petroleum, Coal and Non-metallic mineral products
Metal products
Transport equipment
Other manufacturing

Commercial Sector (COMM)

Special Trade
Wholesale and Retail Trade
Retail - Motor Vehicle Dealers
Retail - Other Trading

Non-Financial Services (SERV NF)

Public Administration and Defense
Community Services, Health and Veterinary
Education, Museums, Library Services
Other Community Services
Recreation, Personnel, Other Services, Entertainment & Recreation
Services

Restaurants, Hotels, Clubs
Other Services

Financial Sector (FIN)

Finance, Property and Business Services
Finance and Investment
Insurance, Insurance Services
Property and Business

Utility Sector (UTIL)

Electricity, Gas, Water
Transport
Communication

Construction (CONST)

Construction

Sweden

Occupational Categories are defined as follows:

Professional Workers (PROF)

Technical & Scientific Work
Chemical Work & Physicists
Biological Work
Medical Work
Public Health & Sick Care Work
Pedagogical Work
Religious Work
Juridical Work
Liberary & Artistic Work
Other Technical & Scientific Work
Aircraft Pilots, Navigators & Flight Engineers

Administrative Workers (ADMIN)

Administrative work, public sector
Administrative work, private sector
Agricultural, Forestry & gardening managers
Ship's Officers

Sales Workers (SALES)

Sales Personnel
Sales, property & services
Other commercial work

Clerical Workers (CLERK)

- Bookkeeping & cashier work
- Stenographers & typists

Blue Collar Occupations (BLUE)

- Textile Work
- Sewing
- Manufacture of Footwear & Leather
- Labourers in Basic Metal Industries
- Precision-Instrument Makers
- Metal Workers
- Electrical & Telecommunication Workers
- Labourers, Wood & Wood products
- Painters
- Brick-laying & concrete work
- Graphical work
- Glass, Pottery, China, Earthenware
- Food Manufacturing
- Chemical & Cellulose Technical Work
- Tobacco Manufacturing
- Other Manufacturing
- General workers
- Control & maintenance
- Packers, Dock Workers & Freight Handlers

Industrial categories are defined as follows:

Primary Sector (PRIM)

- Forestry & Logging
- Fishing
- Metal Ore Mining
- Other Mining

Manufacturing Sector (MFG)

- Manufacture of Food, Beverages & Tobacco
- Textiles, Apparel & Leather Industries
- Manufacture of Wood & Wood products, including Furniture
- Manufacture of paper and paper products, printing & publishing
- Manufacture of Chemicals & Petroleum, Coal, Rubber & plastic products
- Manufacture of non-metallic Mineral products
- Basic metal industries
- Manufacture of Fabricated Metal products, machinery & equipment
- Other manufacturing equipment

Commercial Sector (COMM)

- Wholesale Trade
- Retail Trade

Non-Financial Service Sector (SERV-NF)

Professional & Scientific Services
Miscellaneous Services
Armed Forces
National Government Service
Local Government Service

Financial Sector (FIN)

Insurance, Banking, Finance & Business Services

Utilities (UTIL)

Gas, Electricity, Water
Rail, Transport
Other Transport and Communication, Post Office

Construction (CONST)
Construction

United States

Occupational categories are defined as follows:

Professional Workers (PROF)

Engineers
Physicians, Dentists, and Related Practitioners
Health Workers, Exc. Practitioners
Teachers, Exc. College
Engineering and Science Technicians
Other Professional

Administrative Workers (ADMIN)

Managers and Administrators, except farm

Sales Workers (SALES)

Sales workers, retail and other

Clerical Workers (CLERK)

Bookkeepers
Office Machine Operators
Stenographers, Typists, Secretaries
Other clerical

Blue-collar workers (BLUE)

Carpenters
Other construction craftsmen
Foremen
Machinists and Job Setters
Metal craftsmen, exc. mechanics, machinists and job setters
Mechanics, auto
Mechanics, except Auto
All other craftsmen
Operatives, Non-transport
Mineworkers
Motor vehicles and equipment
Other durable goods
Non-durable goods
All other
Transport Equipment operatives
Drivers and deliverers
All other
Non-farm labour
Construction
Manufacturing
All other
Private household

Service Occupations (SERV)

Cleaning service
Food service
Health service
Personal service
Protective service

Industrial categories are defined as follows:

Primary sector (PRIM)

Mining

Manufacturing Sector (MFG)

Ordnance
Lumber
Furniture
Stone, clay, glass
Primary metals
Fabricated metals
Machinery, exc. elect.
Electrical equipment
Transport equipment
- automobiles
- aircraft
- other transportation equipment
- instruments

miscellaneous
Nondurable goods
food
tobacco
apparel
paper
printing
chemicals
petroleum
rubber and plastics
leather

Commercial Sector (COMM)

Wholesale trade
Retail trade

Non-financial Services (SERV NF)

Retail, eating and drinking places
Private household service
Business service
Repair service
Personal service, exc. private household
Entertainment and recreation services
Medical, exc.hospitals
Hospitals
Welfare and religious services
Educational services
Other professional services
Forestry and Fisheries
Postal
Other Federal Services

State services
Local services

Financial Sector (FIN)

Banking and other finance
Insurance and real estate

Utilities (UTIL)

Railroad and Railway express
Other transportation
Communications
Other public utilities

Construction (CONST)

Construction

Appendix 2

LIS Datasets included in analysis.

Country	Dataset Name, Year, Total Sample Size	Size of sample selected for analysis.
Australia	Income and Housing Survey; 1981/82; 17,000 obs.	2886 Women 4989 Men
Sweden	Swedish Income Distribution Survey; 1981; 9600 obs.	2512 Women 2582 Men
U.S.A.	Current Population Survey; 1979; 65,000 obs.	3542 Women 4662 Men