

Gornick, Janet C.; Jacobs, Jerry A.

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A Cross-National Analysis of the Wages of Part-Time Workers: Evidence from the US, UK, Canada, and Australia

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Luxembourg Income Study Working Paper Series

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Janet Gornick and Jerry Jacobs

June 1994

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Luxembourg Income Study (LIS), asbl

**A Cross-National Analysis of the Wages of Part-Time Workers:
Evidence from the United States, the United Kingdom,
Canada, and Australia.**

Janet C. Gornick

Harvard University

Jerry A. Jacobs

University of Pennsylvania

June 14, 1994

Abstract.

In this paper, we analyze hourly wage differentials between part-time and full-time workers, using comparable microdata from the Luxembourg Income Study (LIS) for four industrialized countries: the United States, the United Kingdom, Canada, and Australia. Our findings indicate that women part-time workers earn significantly less per hour than do their full-time counterparts in all countries, with the greatest differential found in the U.S. The part-time wage penalty for men is greater than that for women in each country except in the U.K., where men working part-time earn more than full-time workers. We examine whether cross-national differences in the earnings of part-time workers reflect differences in overall wage inequality, and/or differences in the relative position of part-time workers in each country's earnings distributions. We discuss the institutions and policies that contribute to different outcomes for part-time workers in these four countries, and consider the implications of these findings for policy reform.

1. Introduction.

In the United States, social scientists and policy analysts have become interested in part-time employment for diverse reasons. Some see part-time work as typical of the unstable and poorly paid jobs that have heightened the economic vulnerability of U.S. workers (Levitan and Conway, 1992; Tilly, 1990). Others have emphasized the stresses faced by dual-earner families, and see part-time jobs and other non-standard forms of work as providing the flexibility needed to reduce work-family conflicts (Kahne, 1985; Negrey, 1993). Many recognize that women often seek part-time work despite the high costs associated with that decision (Beechey and Perkins, 1987; Bennett and Alexander, 1987; Blank, 1990b; Dex, 1992; Jallade, 1984; O'Donnell and Hall, 1988). In addition, the appropriateness and viability of part-time employment for single mothers has become one of the central issues in the current debate on welfare reform. For example, Skocpol and Wilson (1994) recommend that U.S. policy facilitate part-time work for AFDC recipients (see also Spalter-Roth and Hartmann, 1994).

In Europe, part-time work is also receiving much attention, but for different reasons. In a number of countries, advocates in the labor movement are calling for shorter work weeks across the entire labor force as a way of reducing high rates of unemployment. Currently, reduced-hour plans are under serious consideration in several countries in the European Community. European socialists are calling for a reduction in the standard work week from 40 to 35 hours. France's Senate recently approved an experimental cut in the usual work week from 39 to 32 hours, with reduced pay; firms will be exempt from some payroll taxes if they take on additional workers (The Economist, 1993).

While some comparative research has examined the rates of part-time work (Blossfeld, 1994; Ellingsaeter, 1992; Rosenfeld, 1993), there is virtually no research that has systematically compared the economic status of part-time workers across countries. Specifically, there have been no cross-national studies to date that decompose the wage differentials between part-time and full-time workers. Our paper -- based on comparable data from the Luxembourg Income Study (LIS) -- seeks to fill that void. We analyze wage differentials between part-time and full-time workers in four industrialized countries: the United States, the United Kingdom, Canada, and Australia.

We begin by placing our analysis of the role of part-time work in women's employment in cross-national context. We discuss the costs of part-time work in more detail, and summarize the existing literature on the effect of part-time work status on workers' wages. In the next section, we lay out our central research questions and develop three hypotheses regarding cross-national differences in the part-time/full-time wage gap. Finally, we explain our choice of four English-speaking countries. After presenting the results of our micro-level analysis, we discuss the implications of our findings for public policy.

2. Continuity and Change in Women's Employment.

During the post-war period, the industrialized countries have seen a dramatic increase in the participation of women, especially of married women, in the paid labor market. Increasing labor force participation by women has signalled at least a partial dismantling of the entrenched sexual division of labor, both paid and unpaid, that pervades all Western

economies. Rising levels of economic activity, many have argued, are increasing women's power throughout the public sphere. Women's direct involvement in the workplace, and their growing economic independence, lessens barriers and increases opportunities for political participation and for influencing public policy formation (O'Connor, 1993).

Concomitantly, working in paid employment brings rewards to women in the private sphere, i.e., in relation to home and family. The well-being of married women, and of their spouses and children as well, are positively affected by women's involvement in paid work (Okin, 1989; Reskin and Hartmann, 1986).

Despite the dramatic increase in women's employment over the last three to four decades, substantial gender gaps -- captured in a variety of indicators -- persist in all Western labor markets. During the middle to late 1980's, the time period covered in this study, in every industrialized country:

- women are still less likely to work in the paid labor market than are men;
- women who work are much more likely to work part-time than are working men;
- women and men are employed in different industries and in different occupations and, within those, in different jobs, i.e., substantial gender segregation pervades the workplace;
- women receive lower hourly wages than do men, even after a host of worker and job characteristics are controlled for; combined with women's fewer hours, the gender gap in annual earnings is even greater;
- women contribute the majority of household (i.e., unpaid) labor and maintain primary responsibility for childrearing; the sexual divisions in the paid labor market are paralleled in the household.

The last 30 years has been a time of change, but uneven change, with respect to these important indicators. Between 1960 and 1990, women's labor force participation increased in every OECD country; in some countries, women's participation rates more than doubled. Since male participation rates fell steadily throughout the same period -- though from much higher base levels -- the female share of the labor force rose even more rapidly. By 1990, the female share was over 35% in all OECD countries, except for Ireland; between 40-45% in most countries (including the four included in this study); and nearly 50% in two (Sweden and Finland) (OECD, 1992).

While the rise in women's labor force participation was seen in all OECD countries, change in the percentage of women working part-time showed more variation. OECD data reveal that, in 1990, there is virtually no relationship across countries between the female share in the labor force and the female share in part-time employment.¹ Between 1980 and 1990, the percentage of employed women working part-time increased, sometimes dramatically, in two-thirds of the OECD countries; and decreased, usually modestly, in one-third. At the same time, the percentage of employed men working part-time increased -- although from much lower base levels -- in all industrialized countries. As a result of the two trends, the female share of part-time work remained fairly stable, at a high level, in most countries, during this thirty year period. In 1990, the female share of part-time work ranged from 60% (in Italy) to just over 90% (in West Germany); the four countries in this study span nearly the full range (OECD, 1991).

¹ Blossfeld (1994) and Rosenfeld (1993) also report no relationship across countries between rates of women's employment and of part-time work.

At the same time, change with respect to occupational and industrial segregation by gender presents a mixed picture. Cross-national data are not widely available, and methodological difficulties limit comparability across countries. Nevertheless, between 1960 and the middle 1980's, occupational segregation by gender appears to be declining in most -- although not all -- countries (Jacobs and Lim, 1992; OECD, 1984). However, the general decline is very slow and levels of segregation remain high; in most countries, women remain concentrated in a limited set of occupations. Industrial segregation by gender, while less pronounced, also declined modestly during the 1960s and 1970s. There is, however, some evidence that structural shifts are working in the direction of increasing industrial segregation, offsetting the compositional trend toward less segregation (Jacobs and Lim, 1992; OECD, 1985).

Considerable empirical research in recent years has been carried out on the gender gap in wages, and a small but growing cross-national literature exists (Blau and Kahn, 1992; OECD, 1985; Rosenfeld and Kalleberg, 1990; Treiman and Roos, 1983). Again turning to OECD data, gross female-male wage differentials in the OECD countries averaged between 20 and 40% in the middle 1980's, with an overall trend in the industrialized countries toward a narrowing of the gap during the preceding decade. Single- and multi-country studies which have attempted to adjust for worker characteristics, job characteristics, or both, report smaller but always significant unexplained wage differentials. The factors that drive the gender wage gap are complex and varied. Nevertheless, a consensus has emerged that, in most countries, a primary factor underlying the persistent wage gap is the high level of

occupational segregation -- specifically, women's continued concentration in low-wage female-dominated occupations.

In summary, we see a picture in the industrialized world of a rapidly growing female labor force, but one that remains distinct, in several ways, from the male labor force. Employed women work fewer hours than do men, and constitute the great majority of the part-time work force in all OECD countries. Women are employed in different occupations and in different industries, than are men, and they earn less per hour than their male counterparts, even when worker and job characteristics are held constant. As of the late 1980's, these differences appear to be eroding at a very slow rate throughout the Western countries as a whole, and in some cases, not at all.

3. The Costs of Part-Time Work.

In the last decade, the discussion of the relative benefits and costs of part-time work has focused on how part-time work affects the economic position of women in the labor market. This emphasis is not surprising since, as noted earlier, women constitute the great majority of the part-time workforce in the OECD countries, and in many countries, the female share in part-time work is growing.

On the one hand, flexibility for workers is praised; and, indeed, cross-national data suggest that in all industrialized countries, the great majority of part-time workers are classified as "voluntary" (OECD, 1990), meaning that they report that they have sought employment that is less than full-time. This is particularly true of women part-time workers, especially working mothers. That so many women part-time workers are "voluntary" does

not imply that they do not face important constraints, such as limited wage prospects or a shortage of affordable child care; it simply indicates that, for many women, these constraints generally lower their propensity to seek full-time paid work, rather than their capacity to find it. In fact, studies conducted in all four of these countries indicate that women seek to work fewer hours than they would ideally want, due to problems associated with securing child care (Brennan, 1990; Cohen, 1993; Presser, 1980; White, 1983.)

At the same time, it is increasingly understood that part-time work may bring with it a range of associated costs. These are in addition, of course, to the direct effect of a lower level of earnings resulting from fewer hours worked. First of all, part-time workers have been found to receive lower hourly wages than do their full-time counterparts. A 1985 OECD study compiled data on the hourly earnings of part-time and full-time women workers. It reported that part-time women workers in the U.K. were paid less, relative to full-time workers, than was the case in Sweden and Australia. These OECD data are the best and most systematic published source of cross-national data on the earnings of part-time workers, but a number of important limitations should be noted. First, the data are increasingly dated, as they draw from surveys conducted during the mid-1970s and early 1980s. Second, there are many limitations on the comparability of these findings, since country-specific definitions of both employment and part-time work vary. In addition, the data pertain to different years, include different age groups, and are based on different sampling frames. Nonetheless, these data clearly suggest that (1) part-time workers are typically paid less than their full-time counterparts; and (2) that the extent of this differential varies across countries.

There is evidence from both the U.S. and Canada that part-time workers earn less per hour than their full-time counterparts (Employee Benefit Research Institute, 1993; Hay Management Consultants, 1985). Canadian studies report modest part-time wage penalties for women (Simpson, 1986; Commission of Inquiry into Part-Time Work, 1983) and larger differentials for men than for women.

Only a few studies have attempted to compare part-time and full-time earnings, controlling for differences in measurable worker and job characteristics. Using U.S. data and a single-equation design, Blank (1990b) found that, for women, the hourly wages of part-time workers were about 80% of those of full-time workers, and, among men, about 75% -- after controlling for a range of human capital variables, as well as industry and region-specific characteristics².

While analysts and advocates in several countries have written of the wage losses associated with working part-time, virtually no cross-national comparative work has been done on this question. Rosenfeld and Kalleberg (1990) report that part-time workers earn less than full-time workers, but they do not explore the details of this finding, due to data limitations on hourly wages.

We conclude -- as does Quinn (1993) -- that, overall, the limited evidence to date suggests that part-time workers are often compensated at lower hourly rates than full-time workers, even after human capital differences and a range of job characteristics are

² Blank's figures do not include controls for occupation; instead, she reports occupations separately. As we discuss later, she raises a host of methodological challenges to the single-equation method, and proposes some solutions. Following Blank, we also use an instrumental design, in addition to the single-equation method.

controlled for. The question that we address is how this differential -- gross and net -- varies across countries. We also improve on the existing aggregate comparisons among these countries, by applying uniform definitions of employment and part-time work to the LIS microdata.

In addition to lower wages, part-time workers frequently face a range of additional losses in non-wage compensation. Part-time workers in most countries face a double bind -- lower hourly earnings are severely compounded by less than pro-rata employee benefit packages. This has particularly serious implications for U.S. part-time workers, for whom health insurance benefits are primarily employment-based rather than provided through a system of universal coverage.

Part-time workers are also usually subject to additional losses in the public systems of social welfare benefits. They often lack coverage or fail to meet eligibility requirements for public benefits such as unemployment compensation, and sickness, disability, or maternity pay, and retirement and other pensions (Euzeby, 1988; Maier, 1991).

Furthermore, part-time workers lose career advancement opportunities (DuRivage, 1986). Part-time workers frequently lack promotion opportunities (Rosenfeld, 1993) and receive less on-the-job-training (Jacobs, Lukens and Useem, 1994; Tilly, 1990). Finally, part-time workers lack job security, risking both layoffs and cutbacks in hours worked -- in part because they are less likely to be unionized (Belous, 1989).

In addition to these costs accrued by individual part-time workers, women's high rates of part-time work also have collective effects. The disproportionate female share in the part-time workforce combines with the part-time wage penalty to magnify the well-known,

pervasive, gender gap in hourly wages into a much large gender gap in annual earnings. In the U.S. in 1986, for example, among full-time workers, women earned 68¢ on the male dollar, with respect to hourly earnings; however, when we include both part-time and full-time workers and consider annual earnings, working U.S. women earned 52¢ on the male dollar (own calculations, based on the LIS data.) Gender gaps in earnings increase dramatically, in all countries, when we shift to an annual framework and include part-time workers (Gornick, 1994). The high female share in part-time work raises other concerns as well -- including, among others, the strengthening of persistent patterns of occupational segregation by sex (since part-time jobs are often concentrated in female-dominated sectors), and the reinforcement of the gender division of labor in the household (Holden and Hansen, 1987).

4. Research Questions and Hypotheses.

In our empirical research, we focus on four English-speaking countries -- the U.S., the U.K., Canada, and Australia -- and ask the following questions, for both women and men:

- (1) How do employment rates, and rates of part-time work, vary across these countries?
- (2) How large are the gross part-time/full-time hourly wage differentials, and how do these vary cross-nationally?
- (3) What proportion of the gross differential is attributable to measured differences between part-time and full-time workers in age and education -- standard indicators of workers' human capital, and thus productivity -- and does this vary by country?

- (4) What proportion is attributable to differences in occupation and industry?
- (5) How large are the net (unexplained) gaps, and how do the net gaps vary cross-nationally?

We assess our results in the context of three hypotheses regarding cross-national differences in the part-time/full-time wage gap.

- (1) Gross and net part-time differentials will be greater in countries that have larger overall wage inequality.

In an important paper, Blau and Kahn (1992) found that cross-national differences in the size of the gender wage gap are largely a function of differences across countries in the overall level of dispersion of wages³; women are among the lowest earners everywhere, but the gender gap is smaller when the entire earnings distribution is compressed. We explore whether this logic contributes to explaining cross-national differences in the part-time/full-time wage gap. Since part-time workers typically earn low wages, those employed in countries with a low floor on the income distribution will likely earn a small fraction of the wages of the average full-time earner. In contrast, those employed in countries with a high floor on the distribution will earn a higher fraction of the earnings of full-time workers.

- (2) The wages of part-time workers will fall lower in the earnings distributions in countries where the part-time and full-time workforces are more segregated.

³ Rosenfeld and Kalleberg (1990) foreshadowed this finding with their results which indicate that, among nine industrialized countries, more corporatist countries have smaller gender earnings gaps.

The lower wages reported by part-time workers, relative to full-time workers, reflect both the attributes they bring with them to the labor market and the jobs in which they are employed. The more segregated part-time workers are from full-time workers in the workforce, the lower will be the earnings of part-time workers relative to full-time workers.

- (3) Part-time differentials for men will exceed those for women, partly because male part-time and full-time workers work in settings which are more dissimilar than do their female counterparts.

This hypothesis follows the same logic as the second hypothesis.

5. Four English-Speaking Countries.

We chose to study these four countries primarily because of their similarities -- in welfare state features, in elements of their "national cultures", and in a range of labor market demand-side factors. This backdrop of commonality helps to bring into relief the specific differences that do exist in labor market conditions and in employment-related policies.

In his well-known work, The Three Worlds of Welfare Capitalism, Esping-Andersen (1990) argues that policy configurations emerge at the national level, and that the welfare states of the Western industrialized countries cluster into three recognizable regime types -- the social-democratic, the conservative, and the liberal. In the liberal regime countries -- sometimes referred to as the residual or reluctant welfare states -- entitlements derive primarily from assessments of need. Benefits are generally means-tested, and public policies aimed at redistribution are limited; an overlay of more widely available benefits are closely linked to employment. Esping-Andersen identifies the U.S., Australia, and Canada as

exemplars of the liberal regime type; the U.K. is also included, although it has mixed features, for example, the presence of an essentially universal, though modest, flat-rate old-age pension. With regard to overriding state policies that shape labor markets, there is little doubt that these countries are more similar to one another than they are to other Western welfare states. Against the well-established similarities among these countries, smaller differences in policies come into sharper focus.

Two other factors, or sets of factors, supported the choice of four similar countries for a comparative study of the conditions associated with part-time work. One, it is often argued that countries have deeply entrenched "national values" that permeate society and shape institutions, as well as citizens' choices. Lipset (1989) and others have written of the similarity in values, culture, political ideas, and religion throughout the English-speaking countries. "Specifying and analyzing variations among the predominantly English-speaking countries, Australia, Canada, Great Britain, [New Zealand], and the U.S., is also useful, precisely because the differences among them generally are smaller than between each and non-Anglophonic societies" (Lipset, 1989).

Finally, available national-level aggregate data suggest that certain demand-side labor market factors were relatively constant across these countries during the time period covered in this research. Official female unemployment rates varied little across the countries (7.0% to 9.3%) during the 1986-1987 period. At the same time, the size of their service sectors -- a key indicator of labor market demand for women and for part-time workers -- were nearly identical (68% to 70%). Furthermore, the percentage of women working part-time who

were classified as "voluntary" was high (75% or more) and fairly similar across these countries (OECD, 1988). While these measures are all somewhat crude, these general labor market similarities suggest that selected variations in both policies and outcomes can be considered in a cross-national context where key demand-side factors are held constant.

6. Data and Methods.

We analyzed data drawn from the Luxembourg Income Study (LIS), an archive of micro datasets from diverse industrialized countries. The micro datasets were collected, rendered comparable, and provided for public-access use, by the LIS staff. They contain demographic, employment, and detailed income data at the household and individual level. We selected datasets for four countries from approximately the same point in time -- the U.S. (1986), the U.K. (1986), Canada (1987), and Australia (1986). These datasets are all based on household surveys. The names of the surveys, the sample size, the sample frame, and the agency that administered the survey are provided in Appendix Table 1. We selected adults aged 18-64 in order to focus on a comparable group of working-age individuals in all countries.

The dependent variable in the analysis is hourly wages. The LIS datasets provide data on annual wage and salary income; on weeks worked per year, divided into part-time weeks and full-time weeks; and on hours worked per week during the survey week. In order to arrive at the best estimate of a person's hourly wage, we carried out a simple imputation of each person's annual hours worked; this was necessary because, for those individuals who

report a mix of full-time and part-time work during the year, we only had weekly hours for a single week. In order to correct for this, we calculated the hourly wage as:

$$HW = AE/[(FTW \times HRS) + (PTW \times HRSPT)] \text{ for full-time workers}$$

$$HW = AE/[(FTW \times HRSFT) + (PTW \times HRS)] \text{ for part-time workers}$$

where: -

HW = hourly wage

AE = own annual earnings

HRS = own hours during survey week

FTW = own number of full-time weeks worked during year

PTW = own number of part-time weeks worked during year

HRSPT = average number of hours per week worked by part-time workers (same sex) in own country

HRSFT = average number of hours per week worked by full-time workers (same sex) in own country⁴

Data errors in hourly wages can occur because of misreporting of earnings, or hours worked, or both. We undertook two procedures to improve the quality of the hourly wage data. First, we adjusted the hourly wage estimates by bottom- and top-coding hourly wages at the 5th and 95th percentile, for part-time and full-time workers separately; the bottom- and top-coding was done separately by sex and country.⁵ This procedure reduces the influence

⁴ Note that data on weeks worked per year are not available in the U.K. We used 52 weeks per year for all U.K. workers.

⁵ Note that these "cleaned" estimates of hourly wages were used in the models for the estimation of part-time penalties.

of outliers in the distribution. A second step involved removing those who worked fewer than 10 hours per week. This is a small group in most countries, and it is the group for whom the hourly wage data were most suspect. Our analysis indicates that those who report that they worked fewer than 10 hours per week may be understating their hours worked. The consequence is an inflation of their estimated hourly wage.⁶ These two adjustments produced more consistent and reliable wage estimates.

The independent variable of special interest in this analysis is usual hours worked. In general, these surveys ask the question: "How many hours do you usually work per week?" and the surveys define "work" as any form of remunerated activity, including, primarily, employment and self-employment. Employed persons were coded as part-time workers if they reported usually working between 1 and 34 hours per week of paid work. Some of the LIS database surveys ask employed respondents to classify their usual work status as part-time versus full-time. We chose not to use these status variables to classify workers, since the cutoff points vary by country; some use 35 hours and others, 30. Cross-national uniformity in men's mean hours argues for the use of a single cutoff across these countries. We chose 35 hours since is the more common cutoff used in labor force surveys in the industrialized countries (de Neubourg, 1985)⁷. We conducted a series of analyses among

⁶ In Table 2, we report gross part-time/full-time differentials both with and without these short hour workers. The table reveals that the effect of removing them is limited, especially for women.

⁷ Nardone (1986) reports that 35 hours has been the official cutoff in U.S. employment statistics since 1947. While some economists have argued that the cutoff should be adjusted downward to reflect a decline in work hours, a national commission on employment statistics concluded, in 1979, that there was no significant decline in the 40-hour standard and recommended that 35 hours remain the cutoff. More recent data suggest that the 40-hours

part-time workers to see if earnings patterns differ for those who work very few hours as opposed to those who worked nearly full-time. These results indicate that the wages of part-time workers do vary systematically with hours worked, but whatever their usual hours, part-time workers earn less per hour than full-time workers.

Working-age persons (those between 18 and 64 years old) were coded as employed if they reported working at least one hour per week, during the course of the survey week.⁸ Those not employed, then, include those not in the labor force and the unemployed. While many studies of labor supply focus on labor force participation, rather than employment, our analysis focuses on employed individuals because we are primarily interested in earnings.

Coding educational levels, occupations, and industries, into cross-nationally comparable categories presents a serious challenge for researchers. In the LIS database, these three variables are available in the categories used by the individual country surveys. Education, in particular, poses a difficulty because country-specific coding approaches differ -- some are continuous, others categorical -- but even more so, because educational institutions are not easily comparable across countries (OECD, 1989). Following the consensus in cross-national empirical research, we used relatively few categories in order to maximize comparability; education was coded into three levels (low, medium, high)⁹;

standard is still in place.

⁸. These data are contained in LIS Database variables "hrshd" and "hrssp" -- hours per week of head and spouse, respectively. Continuous data (0-99 hours) are available for the U.S., the U.K., and Canada; categorical data (0, 1-9, 20-24, 25-29, 30-34, 40-44, 45-49, 50+ hours) are available for Australia.

⁹. We coded the education variables as follows: In the U.S., years of education: low = 0-11 years; medium = 12 years; high = 13+ years. In the U.K., age at completion: low = 0-14; medium = 15-16; high = 17+. In Canada, low = 0-10 years of education; medium =

occupation into six fields (professional, administrative, sales, clerical, service, blue collar), and industry into six groups (commerce, construction, utilities, financial services, other services, manufacturing). The agricultural sector was excluded. Details on country-specific occupation and industry coding are available from the authors.

In order to estimate the effects of working part-time on wages, we used standard semi-log wage equations, identically-specified across countries. We estimated the parameters of the wage equations, for women and men separately, using ordinary least squares (OLS) regression. The dependent variable is the log hourly wages (as described above). The independent variables include age and its square, and education; occupation and industry; and a dummy variable indicating part-time work. Our analysis thus includes both full-time and part-time workers, and estimates the earnings differences between these two groups. Our basic approach is to take the estimate of the coefficient on the part-time variable as the measure of the independent effect of working part-time on hourly wages.

We faced the standard estimation problem that we have observed wages only for those persons who are employed; this presents a selection problem, which can result in biased parameter estimates. We resolved this by using a two-stage estimation procedure. In the first stage, we used logistic regression to model the probability that persons are employed, using data on all working-age persons. The dependent variable was employment (as described above); following labor supply theory, the independent variables include the

11-12 years of education; high = 13 years of education, some post-secondary, certificate/diploma, university degree. In Australia, low = non-qualified, never went to school; medium = completed highest year of school, trade certificate, other certificate, other qualification; high = bachelor degree or higher.

number and age of children, marital status, own age and education, and other household income. In the second stage -- the estimation of the wage equations -- we selected only working persons and added to the list of regressors a transformation of each worker's predicted probability of being employed.

In a sophisticated treatment of part-time wage penalties in the U.S., Blank (1990b) addressed the issue of unmeasured worker characteristics: "Part-time jobs might not be bad jobs; they might simply be filled with poor workers. There may be unmeasured characteristics determining worker productivity that cannot be measured in this dataset but that employers observe, such as effort or motivation." If these more highly motivated workers earn better wages and are more likely to choose full-time work, then these OLS results will be problematic. She approaches this by using an instrumental variable design; she constructed an instrumental variable for part-time work status using a set of independent variables correlated with the choice of part-time work, but, theoretically, uncorrelated with wages, "thus purging the part-time variable of any correlations with unmeasured effects that may also be correlated to wages."

Following Blank, we estimated a second set of OLS models, by country and sex, to estimate part-time effects based on an instrument for part-time work. The instrument was constructed by estimating, with logistic regression, the probability of working part-time, among those employed; standard independent variables included the number and age of children, marital status, and other family income (Killingsworth and Heckman, 1986). We then re-estimated the wage equations, as above, using the instrument for part-time work in place of observed part-time work status.

In order to test our hypotheses about the relationship between occupational and industrial segregation and the wage effects of part-time work, we calculated indices of occupational and industrial segregation, based on the groupings described above. The index value indicates the percentage of part-time workers who would have to change occupation (or industry) to match the distribution of full-time workers. Indices were calculated for women and men, in each country, to measure the extent to which part-time and full-time workers are segregated in the workplace.

In order to test our hypothesis regarding the influence of wage dispersion on the relative earnings of part-time workers, we first analyzed the degree of wage inequality in each country. We calculated the ratio of the hourly wage of the 90th percentile earner to the 10th percentile earner, and also of the 50th percentile earner to the 10th percentile earner, for part-time and full-time workers combined. These inequality measures have the virtue of being insensitive to data errors and outliers in the extremes of the wage distribution. In addition, we identified where the median part-time earner's wages fall in the distribution of full-time earners' wages in each country. This analysis was conducted separately by sex.

7. Results.

A. Employment Rates and Rates of Part-Time Work.

Although public attention in the U.S. has focused on the rapid increase in the number of workers employed in part-time jobs, an international comparison reveals that the rate of part-time employment among women in the U.S. is the lowest among the four countries in this study. Men make up a small minority of part-time workers in most industrial countries,

including these four. In contrast to the women, men in the U.S. are the most likely to work part-time among the four countries studied.

Employment rates for each of the four countries, based on the LIS data, are presented in Table 1. The results pertain to the working age (18-64) population, and are presented separately for women and men. The results in Table 1 indicate that there is moderate variation across the four countries in the employment rates of women. The total spread is approximately 12 percentage points. During the mid-1980s, Canadian women were most likely to be employed (65.7%), followed by women in the U.S. (61.7%), the U.K. (55.9%), and Australia (53.8%). The percent of working women who are employed part-time varies much more, with the U.K. (54.5%) and Australia (41.8%) far exceeding Canada (29.7%) and the U.S. (28.2%). Clearly, the work patterns of Canadian women resemble those of U.S. women; North American women have high rates of employment and low rates of part-time work, compared with their counterparts in the U.K. and Australia. Employed women in the U.K. report exceptionally high rates part-time work.

Employment rates vary much less for men. The great majority of working age men are employed, and are employed full-time. The relatively low employment rate of men in the U.K. is almost entirely due to their higher unemployment rate (13.5%) in the survey year; i.e., male labor force participation rates are virtually identical across the countries (Luxembourg Income Study, 1992). The proportion of employed men who work part-time is low in each of the four countries. The highest rate of part-time work among employed men (9.8%, in the U.S.) is much less than the lowest rate among women (28.2%, also in the U.S.).

Table 1. Part-Time and Full-Time Employment, By Sex and Country, 1986-1987

	Percentage of Working Age Population Employed	Percentage of Workers Employed Part-Time (1-34 Hours)	Percentage of Workers Employed Part-Time (10-34 Hours)
Women			
U. S.	61.7%	28.2	26.1
1986			
U. K.	55.9	54.5	50.4
1986			
Canada	65.7	29.6	27.0
1987			
Australia	53.8	41.8	36.7
1986			
Men			
U. S.	83.5	9.8	9.0
1986			
U. K.	74.6	4.9	4.7
1986			
Canada	85.4	5.6	5.0
1987			
Australia	83.7	4.4	3.8
1986			

These results on women's employment rates from the LIS microdata parallel prior findings, from OECD data, on women's labor force participation rates. Female labor force participation rates vary only moderately across these four countries and, relative to the industrialized countries as a whole, these four fall near the middle of the range. The four countries rank in the same order with respect to both labor force participation rates (from OECD data) and employment rates (from LIS microdata). Furthermore, fairly comparable aggregate OECD indicators on part-time work rates confirm the pattern that we report among these four countries. While the U.S. and Canadian women fall in the middle of the range, women in Australia and, especially, in the U.K. show relatively high rates of part-time employment. Rates of female part-time work exceeding 50%, as reported by working women in the U.K., are rare in industrialized countries (OECD, 1990).

Table 1 also presents figures for part-time employment which exclude those working 1-9 hours per week. As mentioned above, we excluded these workers because apparent data errors in hourly wages were more common among those who reported working the fewest hours. The great majority of part-time workers are employed between 10 and 34 hours per week. Only among women in the U.K. and Australia are there sizable groups (approximately 8% of employed women) who report working fewer than 10 hours per week.

We also analyzed cross-national differences in mean hours worked per week. For women, these results (not shown) reflect the pattern revealed in Table 1. The average number of hours worked per week by employed women in the U.S. (36.9 hours) and Canada (34.5 hours) significantly exceed the average for Australian women (31.6 hours), with women in the U.K. working the fewest hours (27.7) per week. Among part-time workers,

the same patterns hold: Australian and U.K. women work fewer hours, U.S. and Canadian women work more hours per week. For the men, the correspondence between rates of part-time work and mean hours is not as straightforward. In fact, U.S. men -- who have the highest rate of part-time work -- work, on average, the longest hours; however, among the men, there is very little variation overall in hours worked.

B. Earnings Differences: Aggregate Results.

Table 2 summarizes the median hourly earnings of part-time and full-time workers for each of the four countries, by sex. We present two ratios -- one that compares all part-time workers to all full-time workers, and a second that excludes part-time workers who worked fewer than 10 hours per week. In our multivariate analysis, we rely on the latter because small errors in reported hours tended to inflate the hourly earnings of those working very few hours.

The results in the last column of Table 2 indicate that in the U.S. and the U.K. women working part-time earn approximately 80% of the hourly pay of their full-time counterparts. In Canada and Australia, in contrast, the comparable figure is approximately 90%. The gap for men is larger than for women in each of the countries examined, except in the U.K. Men working part-time in the U.S. fare particularly poorly compared to their full-time counterparts. In the U.K., men working part-time actually report earning more per hour than do men working full-time. Only a very small number of men in the U.K. work part-time. Of these, a disproportionate number are professionals who work 30-34 hours per week; most of the men in this group are teachers. Much -- but not all -- of the unexpected wage premium for U.K. part-time men is due to their unusual occupational distribution.

Table 2. Median Hourly Wages, By Hours Worked, Sex and Country, 1986-1987

	1-9 Hrs.	10-19 Hrs.	20-29 Hrs.	30-34 Hrs.	34-39 Hrs.	40-49 Hrs.	50+ Hrs.	Part Time 1-34 Hrs.	Part Time 10- 34 Hrs.	Full Time 35+ Hrs.	All	Ratio Part/ Full (1-34)	Ratio Part/ Full (10-34)
Women													
U. S. 1986	\$9.47	6.31	5.47	5.52	7.25	7.45	7.30	6.01	5.77	7.42	7.03	0.81	0.78
U. K. 1986	L2.31	2.52	2.60	2.92	3.40	3.18	2.26	2.60	2.63	3.32	2.99	0.78	0.79
Canada 1987	\$12.47	10.82	9.04	7.65	10.97	9.16	10.03	9.09	8.96	10.08	9.87	0.90	0.89
Australia 1986	\$9.61	8.92	7.61	7.16	8.93	8.24	9.07	8.17	8.01	8.74	8.57	0.94	0.92
Men													
U. S. 1986	\$11.19	9.06	6.81	9.43	11.22	11.22	9.89	8.29	7.90	10.90	10.62	0.76	0.72
U. K. 1986	L2.45	4.09	5.80	7.61	4.92	4.24	3.94	6.43	6.46	4.38	4.42	1.47	1.47
Canada 1987	\$6.01	10.37	13.63	9.23	17.16	14.35	10.53	10.53	11.49	14.00	13.85	0.75	0.82
Australia 1986	\$12.83	8.82	7.97	7.81	11.22	10.16	9.94	8.46	8.17	10.40	10.39	0.81	0.79
Ratio Women/Men													
U. S. 1986	0.85	0.70	0.80	0.59	0.65	0.66	0.74	0.73	0.73	0.68	0.66		
U. K. 1986	0.94	0.61	0.45	0.38	0.69	0.75	0.57	0.40	0.41	0.76	0.68		
Canada 1987	2.08	1.04	0.66	0.83	0.64	0.64	0.95	0.86	0.78	0.72	0.71		
Australia 1986	0.75	1.01	0.95	0.92	0.80	0.81	0.91	0.97	0.98	0.84	0.83		

The results on the wage gap between part-time and full-time workers do not follow the cross-national patterns observed for employment and hours worked. For women, the wage gap in the U.S. resembles that in the U.K., where women are much more likely to work part-time. Despite many other similarities between U.S. and Canadian workers, the relative wages of part-time workers in Canada are higher than is the case in the U.S. Australian part-time workers also fare better than their U.S. counterparts.

The results presented in Table 3 allow us to examine our first hypothesis -- that the relative earnings of part-time workers are affected primarily by the overall degree of wage dispersion in the labor market. Blau and Kahn (1992) argue that the large gender wage gap in the U.S., compared to other countries, is primarily due to the high degree of wage inequality in the U.S. For example, they report that the average earnings of both Swedish and U.S. women fall at the same percentile in the men's earnings distributions in their respective countries. Yet the ratio of women's earnings to men's earnings is much higher in Sweden than in the U.S. Thus, they maintain, the gender gap in wages is smaller in Sweden than in the U.S. because the overall earnings distribution is more equal in Sweden, not because the skills and experience of Swedish women workers are more similar to their male counterparts, or because Swedish women and men are more likely to work side-by-side. We sought to determine whether the same logic could account for the earnings ratios of part-time workers relative to full-time workers in our four countries.

The first column of Table 3 reports the 90/10 ratio -- the ratio of the earnings of the 90th percentile to the 10th percentile worker, by sex, for part-time and full-time workers combined. In the second column, we present the somewhat less conventional 50/10 ratio.

Table 3. Wage Inequality, By Sex and Country, 1986-1987

	90/10 Wage Ratio	50/10 Wage Ratio	Position of Median Part-Time Worker in the Distribution of Full-Time Wage Earners
Women	Ratio	Ratio	Percentile
U. S. 1986	4.57	2.21	31
U. K. 1986	3.26	1.60	27
Canada 1987	5.02	2.51	40
Australia 1986	3.12	1.77	47
Men			
U. S. 1986	4.47	2.24	29
U. K. 1986	3.24	1.72	79
Canada 1987	3.80	2.22	35
Australia 1986	2.48	1.61	23

This statistic is useful in that it focuses attention on the distribution of earnings in the bottom half. The third column indicates where the median wage of part-time workers falls in the earnings distribution of full-time workers.

These results indicate that the relative earnings of part-time workers are influenced by the degree of overall inequality in each country (columns 1 and 2), as well as by the position of part-time workers in the full-time distribution (column 3). Thus, our results on the part-time/full-time gap parallel the Blau and Kahn results, on the gender gap, only in part.

Consider the results for women first. Wage inequality for women is greatest in Canada, followed closely by that found in the U.S. In the U.S., a woman at the 90th percentile earns 4.57 times as much as a woman at the 10th percentile. Wage inequality is lower in the U.K., and wages are most equally distributed in Australia. (The 50/10 ratios tell largely the same story as the 90/10 ratios, except that for women the narrow difference between Australia and the U.K. is reversed.) These results suggest that, all else being equal, the part-time/full-time earnings gap should be larger in the U.S. and Canada, and somewhat smaller in the U.K. and Australia. As we have seen, however, the four countries do not line up in this order. Thus, we need to take into account the position of part-time workers in the wage distribution as well as the overall dispersion of wages in each country.

Among women, the wage of the median part-time worker is lower than the median wage of the full-time worker in each of the four countries, but the percentile position of the part-time worker varies. Part-time workers fall lower in the full-time distribution in the U.K. and the U.S., while in Australia and Canada the median part-time worker falls closer to the full-time median.

These results indicate that the low relative earnings of female part-time workers in the U.S. are due to a combination of the high earnings inequality that characterizes the U.S. labor market and the relatively low position that part-time workers hold within that highly unequal setting. The high level of inequality puts all low earners -- including part-time workers -- at a relatively greater disadvantage compared with high earners. Moreover, U.S. part-time workers also fall closer to the bottom of that highly unequal distribution, relative to the other countries. The median woman part-time worker in the U.S. earns the same as a woman in the 31st percentile of the full-time distribution. Only women part-time workers in the U.K. are closer to the bottom of their earnings distribution. These two factors -- the high inequality and the low position of part-time workers -- combine to give U.S. women in part-time jobs the lowest earnings relative to their full-time counterparts.

Part-time workers in Canada face as unequal a wage distribution as that found in the U.S., but they rank much higher in the earnings distribution of Canadian full-time workers. Canadian women who work part-time earn, on average, as much as the 40th percentile full-time earner. In other words, Canadian part-time women do better than U.S. part-time women despite the same unfavorable wage distribution, either because of differences in their individual attributes or because of policies or institutions that raise the wages of part-time workers.

Australian women part-time workers fare better than U.S. part-time workers because they face a relatively egalitarian wage distribution and because they rank higher in that distribution. The 90/10 ratio in Australia is 3.12, indicating the most equality among the four countries examined. At the same time, Australian women who work part-time fall close

to the center of this relatively equal wage distribution, falling only slightly behind full-time workers. The combination of these factors leads to the result that Australian women who work part-time earn higher wages relative to their full-time counterparts than do part-time workers in the other three countries (as indicated in the last column in Table 2).

Finally, U.K. women who work part-time earn nearly as little as U.S. women, despite the more egalitarian wage distribution in the U.K., because they fall lower in the wage distribution. The median wage of a woman working part-time in the U.K. is equal to the wage of a woman at the 27th percentile of their full-time distribution.

The situation for the men is fairly similar, although the individual countries fall in a somewhat different order. As reported in Table 2, the gross gap between part-time and full-time men in the U.S. is the largest of the four countries, because earnings inequality among men in the U.S. is the largest of the four countries, and because part-time workers fall relatively close to the bottom (3rd out of the 4 countries) in the full-time earnings distribution. The relative median earnings of Australian and Canadian men who work part-time are somewhat higher than those in the U.S., but for different reasons. Canadian male part-time workers fare better than do their U.S. counterparts because of the somewhat more equal income distribution and because they rank higher in the overall earnings distribution. Australian male part-time workers face the most equal income distribution but fall quite low in that distribution. As we have seen above, the small number of men working part-time in the U.K. constitute an exception to the rule that part-time workers are paid less per hour. These men fall above the median earnings of full-time workers, and consequently it is their

position in the income distribution rather than the shape of that distribution that is the key to understanding their high earnings.

Is there evidence supporting our second hypothesis? Are the positions of part-time workers in the distribution of full-time earnings (reported in Table 3) explained by the degree of occupational and industrial segregation of part-time workers? This question is examined in Table 4. The results suggest that the cross-national variation in the earnings gap between part-time and full-time workers is not simply due to the level of occupational and industrial segregation between part-time and full-time workers.

Again, looking first at the women, the level of occupational and industrial segregation in the U.S. is moderate in comparison with the three other countries in this analysis. Approximately one in six part-time women workers would have to change occupation and one in seven would have to change industry in order to be distributed in the same manner as full-time workers. This result may appear to be a very low level of segregation, but it should be noted that these indices are computed across highly aggregated units. A finer-grained analysis would no doubt reveal a higher degree of segregation (Jacobs & Lim 1992). The level of segregation between part-time and full-time workers is roughly the same in Canada as in the U.S. The U.K. exhibits a higher level of segregation, and in Australia, it is lower.

The segregation story is consistent with the female part-time/full-time wage gap in two of the comparisons, but fails in the third case. In the U.K., the lower position of part-time workers in the full-time earnings distribution may be due in part to the higher degree of segregation between part-time and full-time workers. The same logic would suggest that the

Table 4. Segregation of Part-Time and Full-Time Workers,
By Occupation and Industry, By Sex and Country,
1986-1987

	Index of Segregation	
	Occupation	Industry
Women		
U. S. 1986	18.6	14.6
U. K. 1986	27.0	22.4
Canada 1987	17.3	14.5
Australia 1986	13.8	8.2
Men		
U. S. 1986	14.6	13.7
U. K. 1986	30.2	41.8
Canada 1987	33.7	24.5
Australia 1986	7.0	20.0

relatively high position of women part-time workers in Australia might be due to their lower level of job segregation. However, Canadian part-time workers have the same degree of segregation as U.S. part-time workers, but are positioned more favorably in their earnings distribution.

The segregation explanation fares somewhat more poorly for the men. The earnings position of male U.S. part-time workers is lower than for their Canadian counterparts, but U.S. part-time and full-time male workers are less segregated. The segregation by occupation and industry among Australian men averages to about the same level as that found in the U.S., but the earnings position of Australian part-time men is lower. And, as we have seen, the earnings of men working part-time in the U.K. fall above the median full-time earnings; this is due primarily to the unusual occupational and industrial distribution of this group of men. The degree of segregation between men who work part-time and full-time is highest in the U.K.

Do the results for men support the third hypothesis -- that part-time differentials for men exceed those for women, partly because male part-time and full-time workers work in settings which are more dissimilar than do their female counterparts? As we've noted, the pay differentials (reported in Table 2) are larger for men than for women in three countries; the U.K. is an exception. The explanation of greater part-time/full-time segregation among men, in the other three countries, is not well supported. In the U.S., men working part-time are actually slightly less segregated than are women working part-time, but their pay gap is larger. In Canada, men working part-time are considerably more segregated from full-time workers than are women part-time workers, while in Australia men are much more

segregated by industry, but less segregated by occupation. Clearly, greater levels of workplace segregation do not consistently explain the larger pay differentials among men; other factors clearly dominate.

C. Earnings Differences: Individual-Level Analyses.

We now turn to the results of our individual-level analyses. Table 5 summarizes the results of our multivariate analysis of wages. The coefficients presented indicate the independent effect of part-time employment on the log of the hourly wage. These coefficients may be interpreted as the approximate percentage difference in hourly earnings between part-time and full-time workers. The hourly wage variable employed in this analysis is corrected for likely errors as described above in the data and methods section. Successive models add controls for age and education, occupation, and industry. Results from the full regression estimations (Model 4) are presented in Appendix Table 2. The attributes of full-time and part-time women workers are summarized in Appendix Table 3.

In the U.S., the unadjusted wage gap between part-time and full-time women workers is 24%. (Note that estimates of gaps presented in Model 1 in Table 5 differ slightly from results on gross gaps reported in Table 3, because Table 3 is based on medians.) The addition of controls for age and education reduce the differential to 21%. Occupation and industry controls narrow the gap further, to 15%. In other words, this analysis suggests that women in the U.S. who are employed part-time earn 15% less per hour than broadly similar workers who are employed full-time. In the U.S., the control variables included in the analysis explain over one-third (38%) of the wage gap between part-time and full-time

Table 5. Gross and Net Part-Time versus Full-Time Earnings Differentials,
For Women

Dependent Variable: Log of Hourly Wages (Corrected)

Independent Variables	Model 1	Model 2	Model 3	Model 4
	Part-Time	Part-Time Education Age	Part-Time Education Age Occupation	Part-Time Education Age Occupation Industry
	B (S.E.) Adj. R2	B (S.E.) Adj. R2	B (S.E.) Adj. R2	B (S.E.) Adj. R2
Women				
U. S. 1986	-.24*** (.02) .04	-.21*** (.02) .16	-.17*** (.02) .22	-.15*** (.02) .25
U. K. 1986	-.19*** (.02) .05	-.20*** (.02) .20	-.15*** (.02) .39	-.14*** (.02) .42
Canada 1987	-.10*** (.02) .01	-.08*** (.02) .12	-.05** (.02) .18	-.04* (.02) .19
Australia 1986	-.14*** (.02) .03	-.13*** (.02) .09	-.11*** (.02) .14	-.11*** (.02) .15
Men				
U. S. 1986	-.30*** (.03) 0.02	-.24*** (.03) 0.21	-.23*** (.03) 0.25	-.23*** (.03) 0.28
U. K. 1986	+.23*** (.04) 0.01	+.16*** (.04) 0.19	+.12*** (.04) 0.30	+.19*** (.04) 0.33
Canada 1987	-.31*** (.04) 0.01	-.28*** (.04) 0.12	-.25*** (.04) 0.14	-.19*** (.05) 0.14
Australia 1986	-.21*** (.03) 0.01	-.20*** (.03) 0.14	-.19*** (.03) 0.19	-.15*** (.03) 0.23

*p<.10; **p<.05; ***p<.01

women workers. Occupation and industry variables account for two-thirds of the explained portion of the gap; human capital measures account for one third.

For women in the U.K., occupation and industry controls explain essentially all of the 26% of the wage gap that is explained in the analysis. In Canada and Australia as well, occupation and industry explain more of the gap for women than do human capital variables. The addition of control variables explained the largest percentage of the gap in Canada (60%), followed by the U.S. (38%), the U.K. (26%), and Australia (21%).

The net wage gap of 15% for women in the U.S. is the largest among the four countries studied. The U.K. is second, with a net gap of 14%, followed by Australia (11%), and Canada (4%.) The ranking of the four countries in terms of the net wage gap is the same as for the gross wage gap between part-time and full-time workers.

Table 5 also presents the results of this analysis for men. The salient findings for men are that the gross gaps in the U.S. and Canada are the largest (and are virtually identical); net gaps are the largest in the U.S. Second, the included control variables generally explain less of the gap for men than for women. Third, the net wage gap between full-time and part-time workers is larger for men than for women (except in the U.K., as noted above); this is particularly evident in Canada and in the U.S.

As explained in the methods section, in order to resolve possible methodological problems, we carried out two additional sets of analyses (not shown.) First, to resolve potential bias resulting from the exclusion of non-employed persons (i.e., possible selection on the dependent variable), we did a two-stage selection correction for both women and men, including in the second stage controls for the probability of being employed. However, we

do not report these results because the correction was problematic. In the women's equations, the predicted probability of employment was often highly collinear with other variables, particularly age, education, and the part-time variable itself. For the men, in general, the correction made very little difference in the wage equation coefficients. (In their research on gender wage gaps, Rosenfeld and Kalleberg (1990) used a similar selection procedure and report a similar result.)

While we know that selection bias, for the men, is minimal, there may be some bias in our women's results, due to women's lower levels of employment. Because there is relatively little variation across countries in women's employment rates (less than 12 percentage points), we are doubtful that bias seriously affects the cross-national results, among women, on part-time penalties; we consider the fact that estimated gaps paralleled gross gaps (reported in Table 3) to be further support. The differences in results between men and women seem considerably greater -- especially in Canada and the U.S. -- than might be accounted for by possible bias in the women's results.

Second, following Blank (1990b), we estimated part-time effects using an instrumental variable design; as described in more detail in the methods section, the components of the instrument for part-time work status are, theoretically, uncorrelated with wages. Our results for U.S. women (not reported) were very similar to Blank's -- the part-time coefficient was negative, significant, and larger than in the non-instrumental equation. The estimated effects of part-time work for women in the other three countries were, likewise, significant and consistently larger. With respect to the independent effects of working part-time, the countries ranked in the same order as the results we present; part-time penalties are greater

in the U.S. and the U.K. than in the other two countries. We consider this to be further support of our findings. Our instrumented results for men are difficult to interpret, as were Blank's, largely because the instrument (based on family variables and other income) poorly predicts men's probability of working part-time.

8. Summary of Results.

We find considerable variation across these countries in rates of part-time work among employed women, with higher rates reported in Australia, and especially in the U.K., compared with the U.S. and Canada. Among men, we find much lower rates of part-time work and comparatively little variation across countries.

Findings from the LIS microdata indicate that in the U.S. and the U.K., women part-time workers earn about 80% of the hourly pay of their full-time counterparts; in Canada and Australia, the comparable figure is approximately 90%. The part-time/full-time gap for men is larger in all countries, except for the U.K., where part-time working men report higher hourly earnings than do men working full-time. Male part-time workers in the U.K. are professionals, with teachers making up a large share.

The relative earnings of part-time workers are influenced by the degree of overall inequality as well as by the position of part-time workers in the earnings distribution. U.K. women part-time workers face a gross earnings difference that is nearly the same as that reported in the U.S.; the effect on these U.K. women of a more compressed wage distribution is offset by their lower position in the distribution. Canadian women part-time workers fare better due to their higher rank in the distribution, whereas Australian part-time

workers benefit from both a more compressed distribution and their better relative position. The results for men are similar, with the exception of the U.K.

Cross-national differences in the degree of occupational and industrial segregation between part-time and full-time workers offer a partial explanation for differences in outcomes among women. Relative to the U.S., part-time women workers in the U.K. fall lower in their distribution and are more segregated, while the reverse is true in Australia; however, the better position of Canadian part-time workers is not consistent with their similar level of segregation, relative to their U.S. counterparts. The segregation explanation fares more poorly for the men.

Our individual-level analysis indicates that the wage gap, net of worker and job controls, is largest in the U.S., for both women and men. Among women, the ranking of the four countries with respect to net gaps is the same as with the gross gaps: the U.S., the U.K., Australia, and Canada. Control variables explain 60% of the gap in Canada, compared with 20-40% in the other three countries; job-related controls explain more of the gross gaps than do human capital variables in all four countries.

The net wage gaps between part-time and full-time workers are generally larger for men than for women (except in the U.K.) and control variables generally explain less of the gap for men than for women.

9. Discussion.

In research on the gender wage gap, a standard technique for estimating the impact of gender discrimination on earnings is to use multivariate techniques to control as fully as

possible for gender differences in qualifications or (potential) productivity, and to interpret the unexplained portion of the gender wage differential as an indicator of "discrimination" (Bergmann, 1986; Blau and Ferber, 1992). It is widely understood that this interpretation has limitations; the most important is the ever-present possibility that unmeasured differences in worker characteristics might explain some (or even all) of the residual gap, leading to overestimates of the effect of gender discrimination. However, feminists, in particular, note that estimated residuals may also underestimate the effects of some forms of discrimination, since some of the factors often included among those "accounting for" the gap may incorporate the effects of discrimination; differences in education and training, for example, may result from women's lack of access to certain programs, or to financing. Furthermore, the inclusion of occupational controls obscures the important reality that women are effectively excluded from certain occupations. Some gender gap studies include controls for "percent female in the occupation"; others argue that that leads to an underestimate of the discrimination component (the residual) since it is precisely the undervaluing of female-dominated occupations that leads to their low levels of remuneration.

We have used an analytically analogous method to assess the effects of part-time status on hourly wages. A key question for us, then, is: to what extent do our net part-time/full-time wage differentials -- negative and significant everywhere, with the exception of men in the U.K. -- signify the presence of labor market "discrimination" against part-time workers in the form of the undervaluation of part-time jobs?

While we consider our findings to be evidence for an earnings penalty incurred by part-time workers based on their part-time status -- arguably, a form of labor market

discrimination -- we recognize that the estimated net gaps are likely affected by several factors. First, unmeasured worker characteristics related to productivity, net of age and education, may contribute some portion of the unexplained part-time/full-time differential. If it is the case that part-time workers are less productive, our net gaps would overstate discrimination based on part-time status. On the other hand, Kahne (1985) reports that part-time workers have been found to be more productive per unit of time, all else equal, than full-time workers, in part because they take fewer breaks during shifts; to the extent that that is correct, the estimate of discrimination would be understated.

Second, unmeasured job-level segregation, net of our occupational controls, may account for some portion of the residual. Tomaskovic-Devey (1993) found that the use of occupational controls consistently underestimates the impact of sex segregation on the gender gap in earnings. He reported that, in his study, job-level measures of sex segregation accounted for fully 75% of the gender earnings gap; that is over twice as much as that usually accounted for when occupation-level measures are used (35%). If full-time and part-time workers self-select into different types of jobs, then portions of the full-time premiums that we find might actually be job-related premiums. This, too, would lead to an overestimation of the effects of part-time status per se. At the same time -- as with the gender gaps -- our net gaps would underestimate the effects of "discrimination" if part of the occupational and industrial segregation that we have controlled for results from the effective exclusion of part-time workers from some sectors. Likewise, unmeasured job-level part-time/full-time segregation could result from self-selection, but it could also result from exclusions imposed on part-time workers.

Finally, we raise the possibility that the causality may, to some extent, run in the opposite direction; there may be some degree to which lower earnings cause some workers to work part-time. While this is possibly an important factor with the women, it is unlikely that it contributes significantly to the estimated men's part-time differential; empirical research on labor supply has established that men's hours worked are generally fairly inelastic with respect to hourly wage rates (Berndt, 1991).

We interpret the residuals to be indicative of a penalty paid, across countries, by part-time workers, by virtue of their part-time status. While many underlying factors clearly contribute to these penalties, the "discrimination" component incorporates the effects of both employer discrimination -- in the form of restricting access to higher paying jobs and/or paying part-time workers less than full-time workers who perform the same work -- as well as the significantly lower levels of unionization among part-time workers. In several industrialized countries, unions have hesitated to open membership to, or to recruit, part-time workers.

10. Policy and Institutional Analysis.

A. Accounting for Cross-National Variation in the Part-Time/Full-Time Wage Gap.

We focus on two key institutional and policy variables to account for the differences in the earnings of part-time workers in the four countries studied: the extent of unionization and the orientation of unions toward part-time workers; and government policies toward wage setting, including minimum wage laws, mandatory overtime, and other wage-setting practices.

While some countries have passed general statutes prohibiting discrimination against part-time workers in conditions of work (Thurman and Trah, 1990), none of these four countries have taken that approach. Nevertheless, public policies in these countries clearly do affect the economic status of part-time workers in a myriad of ways. As legislators, governments mandate employment standards concerning work conditions, including pay. Most relevant here are two sets of public policies that affect cash compensation -- minimum wages and mandated overtime pay. For each type of policy, governments can regulate both rates of pay and rules of coverage. In addition, governments regulate industrial relations arrangements, which in turn often provide protections related to the compensation of part-time workers (Drummond, 1992).

The extent and orientation of unions also plays a significant role in explaining the position of part-time workers. The overall degree of union coverage, and of part-time workers in particular, varies, and this variation helps to explain inter-country differences in the relative earnings of part-time workers. In some countries, the degree of protection offered to part-time workers (and to all workers) depends on collective bargaining and enterprise-level practices, as much as on legislation. The two systems are often viewed as complementary, and their relative weights depend on the overall system of industrial relations.

Recall (from Table 5) that, among women, part-time workers face the largest pay gaps -- gross and net -- in the U.S., followed by the U.K., Australia, and Canada. The clearest contrast with the U.S. in wage-setting institutions is found in Australia. Our earlier analysis attributes the smaller Australian wage differentials to a more compressed wage spread and to

the higher position of Australian women who work part-time in the distribution of earnings of full-time workers. Both of these differences are affected by aspects of the Australian wage-setting system. In Australia, most work conditions are set through a heavily regulated system of legally enforceable awards, which cover over 85% of workers. This unique wage-setting structure in Australia sets it apart from our other three countries. The high proportion of the workforce that is covered clearly contributes to the higher degree of overall wage equality, compared with the U.S. distribution.

Furthermore, the conditions of pay determination for part-time workers are significantly more favorable in Australia. Australia's industrial relations system, unique in the industrialized world, is characterized by the operation of independent industrial tribunals at both the federal and state levels. Wages, occupational benefits, and working conditions are set out in awards made by these tribunals, under the active guidance of a Federal agency, the Australian Conciliation and Arbitration Commission (ILO, 1989b).

Hourly wages for Australian part-time workers are set within this centralized award system, and are usually based on hourly rates set for full-time workers. In many awards, a premium hourly rate is set for part-time workers, usually in the range of 10-15% above the full-time rate (ILO, 1989a). In addition, at least some awards provide for overtime pay for part-time workers working hours in excess of their normal schedules. These elements of the pay determination system in Australia go a long way toward explaining the smaller part-time/full-time wage differentials, compared with those found in the U.S.

Why do women part-time workers in the U.K. receive slightly higher average wages, relative to full-time workers, than do their U.S. counterparts? As noted earlier, women

part-time workers in the U.K., are actually slightly less well positioned with regard to full-time workers (at the 27th versus the 31st percentile in the U.S.) -- due at least in part to the greater level of segregation between part-time and full-time workers in the U.K. However, countervailing their low position is the fact that the entire wage distribution in the U.K. is more compressed. The greater wage equality in the U.K. is clearly affected by the higher overall levels of unionization in the U.K. -- approximately 50% in the middle 1980s, versus approximately 19% in the U.S., men and women combined (Bamber and Lansbury, 1987).

While overtime pay for part-time workers is virtually non-existent in both countries (ILO, 1989a), differences in the structure of minimum wage legislation may contribute to the slightly lower distributional position of U.K. part-time women workers. The U.S. has a unified national minimum wage law, and part-time workers are covered by the law. In the U.K., minimum wage machinery operates only in selected industries; the emphasis of minimum wage legislation has been on providing wage regulation, via a system of wage councils, where effective trade union organization is lacking (Starr, 1981). It is possible that a greater proportion of U.S. part-time working women are actually protected by minimum wage regulation.

The relatively low earnings of U.K. part-time workers appear to be influenced by additional policy and institutional factors. Briar (1992) describes a history in the U.K., since the 1940s, of state policies which have actively promoted part-time work for women; indeed, the rate of part-time work among employed women is among the highest in the industrialized world. The state, she argues, was motivated originally by its desire to meet temporary labor

shortages, and later, to increase labor market flexibility. Briar argues that, from World War II until the present, it has been consistent U.K. state policy to target women as potential part-time workers, partly to quell their entry into full-time work. The state itself recruited part-time teachers, nurses, and clerical workers, and "through a combination of propaganda and its own example, the state played a major role in persuading employers to test the advantages of part-time workers." She further argues that "there has been a policy of encouraging the recruitment of part-timers into the jobs with the least desirable working conditions". She notes that the Ministry of Labour and National Service viewed part-time workers as better able to handle onerous jobs. The existence of an active state policy, as in the U.K., which seeks to expand part-time employment by women -- especially in less desirable jobs -- is not matched in our other countries. This history may also help to explain the anomaly of the high earnings of men in the U.K. who work part-time. If the prevalence of low-wage part-time jobs for women is the result of deliberate government policy, the uniquely favorable position of the small number of part-time men in the U.K. becomes more understandable.

The relative wages -- gross and net -- of Canadian women part-time workers are the highest among these four countries. Canadian part-time employed women do not benefit from a more compressed wage distribution -- Canadian women's wages are actually more dispersed than those in the U.S. Instead, Canadian part-time working women fall higher in the wage distribution, relative to full-time workers, than do their U.S. counterparts.

Again, a comparison of patterns of unionization suggests at least a partial explanation. Overall, in the middle 1980s, approximately 38% of Canadian workers were unionized --

nearly twice the rate in the U.S. We also find that the rate of unionization among part-time workers relative to full-time workers is considerably higher (despite similar levels of segregation). In the U.S., in 1986, 8% of part-time workers were represented by unions, compared with approximately 23% of full-time workers, meaning that part-time workers are only about one third as likely to be unionized (Employee Benefit Research Institute, 1993). In contrast, in Canada, 18% of part-time workers were unionized, compared with 40% of full-time workers. Thus, Canadian part-time workers are almost half as likely to be unionized -- a notably higher ratio than in the U.S. Furthermore, the relative rate of part-time unionization in Canada is even higher for women; among women, approximately 21% of Canadian part-time workers are unionized, compared with 31% of full-time workers. Canadian part-time women workers are therefore fully two-thirds as likely to be unionized (Pupo and Duffy, 1992). The higher relative rate of union membership among Canadian part-time workers may contribute to their more favorable position in the wage distribution. This inference is strongly supported by the finding of a Canadian study that among unionized women workers in Canada, the hourly wage of part-time workers is higher than of full-time workers (Commission of Inquiry into Part-Time Work, 1983).

Canadian public policy is widely recognized to be more favorable toward unions than is U.S. policy (Bamber and Lansbury, 1987; Tilly, 1990). Although explicit laws in both countries guarantee part-time workers the same rights to union membership as granted to full-time workers (ILO, 1989a), Canadian labor relations policy appears to be more actively inclusive of part-time workers. For example, the Canada Labour Relations Board has a policy of including regular part-time workers in bargaining units (Commission, 1983). In all

likelihood, this policy contributes to the relatively higher rates of union membership among part-time workers in Canada.

B. Occupational and Public Benefits.

In addition to lower wages, part-time workers are widely reported to be subject to a range of additional penalties in non-wage compensation (Beechey and Perkins, 1987; Dex, 1992; O'Donnell and Hall, 1988; White, 1983). In most countries, lower hourly earnings by part-time workers are compounded by less than pro-rata employee benefit packages, resulting in no or limited access to benefits such as paid vacation and holidays. Part-time workers often face limited access to employer-provided health insurance -- especially in the U.S. -- as well as to a range of other occupational benefits including sickness, disability, maternity, and retirement pensions (Callaghan and Hartmann, 1991; Campling, 1987; Grant, 1991; ILO, 1989a; Reid and Swartz, 1982; Rothberg and Cook, 1987).

Furthermore, part-time workers are often subject to additional losses in the public systems of social welfare benefits. They may be excluded from receiving certain public benefits which insure against earnings losses, such as unemployment compensation, and family- and health-related paid leaves; and they often do not accrue entitlements to future benefits, such as retirement and other pensions, especially if they work very few hours per week (Euzeby, 1988; Maier, 1991).

In this section, we ask the question: to what extent do selected labor laws and social security policy in the U.S. operate to mitigate or to exacerbate the gap in cash wages that part-time workers face, and how does U.S. legislation and policy compare with that in the other three countries? Our review of: (1) paid leave and holidays, (2) unemployment

insurance, and (3) health insurance, suggests that part-time workers in the U.S. fare poorly compared to their counterparts in our other three countries. The high wage differentials that we find in the U.S., compared with other countries, are compounded further by the discrepancy in benefit provisions for part-time workers.

There are no generally applicable provisions in U.S. Federal law concerning leave and holidays for part-time workers; employers have wide discretion. Citing 1985 data from firms, Rothberg and Cook (1987) report that approximately 55-60% of U.S. employees who worked fewer than 20 hours per week had no paid holiday or vacation. In contrast, the Canada Labour Code, which regulates work conditions for Federal employees and some inter-provincial industries, grants part-time employees rights to proportional leave. However, provincial regulations, which cover the majority of the labor force, vary. At least four provinces limit paid annual leave to employees working at least 90-95% of regular working hours. Nevertheless, Canadian part-time workers seem to have considerably more access to paid leave; in 1980, nearly 70% of Canadian workers had paid holidays according to the same policy as full-time workers, and 60% received pro-rated vacation benefits (Reid and Swartz, 1982). Furthermore, an ILO (1989a) study on working conditions for part-time employees suggests that leave and holiday provisions for part-time workers are more favorable in the U.K. and Australia, relative to the U.S. and Canada. It reports that in both of these countries, in general, leave and holidays are granted to part-time workers on a proportional basis, although, in both countries, minimum numbers of hours of work -- such as 16 or 20 -- may be specified.

With respect to unemployment insurance, the U.S. again provides the least favorable conditions for part-time workers. Unemployment Insurance eligibility and benefits vary widely by state. Nearly all states, though, require minimum earnings levels during a qualifying period; these minima, in many cases, rule out all but very highly paid part-time workers. More importantly, all but six states automatically disqualify applicants who do not, or will not, state that they are available for full-time work (DuRivage, 1986). This requirement excludes most part-time workers, including many for whom contributions have been paid on their behalf during prior periods of employment.

Unemployment compensation appears to be more widely available -- though still limited -- for part-time employees in Canada and the U.K. (Luxembourg Income Study, 1992). Canada provides Unemployment Insurance to eligible workers who earn at least above a minimum level (approximately \$CN100.00 in 1987) or who work more than 15 hours per week for the same employer. In the U.K., eligibility for Unemployment Benefit is extended to part-time workers earning more than the social security contributions floor, i.e., the level of earnings above which employers and employees pay into the system. That floor was £38 per week in 1986, equivalent to about 12 hours of work at the average hourly wage for female part-time workers (own calculations, from the LIS data.) Furthermore, Unemployment Benefit in Australia is much more widely available. It is an income-tested program, with no work history or contributions requirements -- there are no employee contributions in Australia -- although there is a one-year residency requirement (Luxembourg Income Study, 1992).

Finally, part-time workers' limited access to employment-based health insurance sets U.S. part-time workers at a serious disadvantage. While the U.K., Canada, and Australia all have national health insurance systems with universal coverage, the U.S. does not. In the U.S., health insurance for the prime-age population is generally provided in the workplace. The incomplete health insurance coverage of the part-time workforce in the U.S. is well-documented; it is often cited as an explanation for the low rate of part-time work, by international standards, among U.S. women.

Rebitzer and Taylor (cited in Tilly, 1990) found that approximately 22% of U.S. part-time workers received health insurance as a workplace benefit, compared to 78% of full-time workers. A 1984 Employee Benefit Research Institute (EBRI) study found that an even lower rate -- 15.6% -- of U.S. part-time workers had direct health coverage as part of an employer plan. While another 42% had coverage through their spouses, 42% had no access to health insurance benefits (DuRivage, 1986). Other research has shown that even after controlling for worker and job characteristics, part-time workers are significantly less likely to receive health benefits than are comparable full-time workers (Tilly, 1990, Blank 1990b).

C. Future Directions for U.S. Policy.

Our results on the part-time/full-time wage differential indicate that U.S. part-time workers fare poorly in comparison to their counterparts in three other similar countries. U.S. women who work part-time earn approximately 20% less per hour than do full-time workers; controls for worker characteristics, occupation, and industry, narrow the gap to about 15%.

We conclude from our analysis of the U.S., in comparative perspective, that the relatively high part-time/full-time earnings differential in the U.S. is attributable to several inter-related factors:

- (1) the floor on the earnings distribution is low;
- (2) part-time workers fall relatively low in the U.S. earnings distribution;
- (3) part-time workers fall low in the distribution partly because they are segregated from full-time workers by occupation and industry, with part-time workers concentrated in lower-paid fields; we assume that additional unmeasured job-level segregation compounds the occupational and industrial segregation that we find;
- (4) the disproportionately low rate of unionization among U.S. part-time workers compounds their disadvantage vis-a-vis employers;
- (5) a considerable portion of the part-time penalty is unexplained, suggesting that employers are not offering "equal pay for equal work" to part-time workers.

The policy strategies we discuss parallel those currently advocated to narrow the gender gap in wages. We similarly conceptualize policy options aimed at reducing the wage gap -- here, the part-time/full-time wage gap -- as a combination of three broad strategies.

The wage gap could be attenuated by:

- (1) policies which shore up the bottom, i.e., which raise the wages of all low earners;
- (2) policies which further pay equity between part-time and full-time workers; and
- (3) policies which increase workplace integration between part-time and full-time workers.

First, Tilly (1990) and others have argued that shoring up the bottom -- in particular, by substantially raising the minimum wage -- would have a major impact on the earnings of part-time workers. He reports that, in 1984, 28% of part-time workers earned the minimum wage or less, compared with 5% of full-time workers. Other U.S. policies which raise the income of low-wage workers include the Earned Income Tax Credit (EITC), but since the EITC is tied to annual (not hourly) earnings, it has limited potential in this context. In addition, as suggested by the U.S.-Canadian comparison, substantial reform and enforcement of U.S. labor relations policies that favor the organization of low-wage workers could have a significant effect on the part-time/full-time wage gap. However, low rates of unionization in the U.S., with little prospect for change, suggest that union-oriented strategies would have a limited impact.

Second, part-time workers would benefit from a range of pay equity strategies, which include both equal pay policies (which call for equal pay for equal work) as well as comparable worth policies (aimed at establishing equal remuneration for work of comparable value). Federal law in the U.S. does not affirm the principle of equal pay for equal work, comparing part-time and full-time workers, as it does in many industrialized countries, with the growing support of several international organizations. Yet, while a comprehensive equal pay policy -- particularly one that includes non-wage compensation -- would clearly help to raise the earnings of part-time workers, it would leave substantial numbers of part-time workers unprotected since they often hold job titles different from those held by full-time workers.

The existence of segregation between part-time and full-time jobs suggests the utility of a comparable worth strategy -- raising the pay of part-time jobs to match the pay of equally valuable full-time jobs. If selected jobs are undervalued, in part because they are disproportionately filled by part-time workers, a comprehensive comparable worth policy could have a major impact on part-time workers. The overlap of female-dominated and part-time-dominated jobs suggests that a comparable worth program targeted at part-time jobs would go a long way toward closing the gender gap in wages as well.

Finally, public policies aimed at workplace integration could encourage a distribution of part-time work that is more evenly spread across occupations and industries. The envisioned result is a marked increase in the extent to which part-time and full-time workers are employed side-by-side. Public policies which support or mandate forms of job-sharing would increase the proportion of part-time positions in a broad range of settings; job-sharers, typically two professionals, share a traditionally full-time position, with pro-rated cash and benefit compensation. In the long run, this would contribute toward lowering the high female share in part-time work.

Legislation that requires employers to permit part-time employment, under certain circumstances, would clearly contribute to the same goal; and, importantly, would reduce turnover when employees seek to reduce their hours. In Sweden, for example, all parents with children under age eight are entitled to reduce their weekly hours to part-time (i.e., 30 hours); employers must accept employees' wishes and all parents have a guaranteed right to return to full-time work (Maier, 1991). Furthermore, corporate tax breaks and targeted changes in payroll tax rules which provide incentives to employers to create higher paying

part-time positions would also expand the range of part-time opportunities. Until a greater share of part-time positions are found alongside full-time positions in higher paying occupations and industries -- and within those, in higher paying jobs -- the part-time/full-time wage gap will be here to stay.

Appendix Table 1. Description of Data Survey Sources

All data are from the Luxembourg Income Study microdatabase.

The individual surveys used here are:

US86: United States, 1986
 "March Current Population Survey"
 Demographic Surveys Division
 United States Bureau of the Census
 sample: adults age 18-64
 6199 women
 5823 men

UK86: United Kingdom, 1986
 "Family Expenditure Survey"
 Social Survey Division
 United Kingdom Office of Population Censuses and Surveys
 sample: adults age 18-64
 3596 women
 3355 men

CN87: Canada, 1987
 "Survey of Consumer Finances"
 Household Surveys Division
 Income and Housing Surveys Section
 Statistics Canada
 sample: adults age 18-64
 6218 women
 6021 men

AS85: Australia, 1985-86
 "1986 Income Distribution Survey"
 Income and Housing Section
 Australia Bureau of Statistics
 sample: adults age 18-64
 4418 women
 4467 men

NOTE: Exchange Rates (US\$1.00 =):

	U.K.	Canada	Australia
1985	.892 pounds	CN\$1.33	AS\$1.23
1986	.710 pounds	CN\$1.40	AS\$1.40
1987	.650 pounds	CN\$1.36	AS\$1.51

Appendix Table 2. Wage Equation Regression Coefficients, By Country,
For Women (page 1 of 2)

(results correspond to Table 5, Model 4)

	U.S.	U.K.	Canada	Australia
	B (S.E.)	B (S.E.)	B (S.E.)	B (S.E.)
PART TIME	-.15*** (.02)	-.14*** (.01)	-.04* (.02)	-.11*** (.02)
EDUCATION				
HIGH	.29*** (.03)	.13*** (.04)	.24*** (.03)	.10*** (.03)
MEDIUM	.15*** (.03)	.01 (.04)	.11*** (.03)	.01 (.02)
LOW	---	---	---	---
AGE	.03*** (.01)	.03*** (.01)	.04*** (.01)	.03*** (.01)
AGE2*100	-.03*** (.01)	-.04*** (.01)	-.04*** (.01)	-.03*** (.01)
OCCUPATIONS				
PROFESSIONS	.31*** (.04)	.50*** (.03)	.30*** (.05)	.28*** (.03)
ADMINISTRATION	.31*** (.04)	.46*** (.03)	.20*** (.05)	.29*** (.05)
SALES	.02 (.04)	.07 (.04)	-.04 (.05)	---
CLERICAL	.07** (.03)	.16*** (.02)	.09** (.05)	.13*** (.03)
SERVICE	-.04 (.04)	.67** (.32)	-.19*** (.05)	.10** (.03)
BLUE COLLAR	---	---	---	---
INDUSTRIES				
COMMERCE	-.19*** (.03)	-.10*** (.03)	-.10** (.05)	-.05 (.03)
CONSTRUCTION	-.03 (.07)	-.18*** (.06)	.07 (.09)	-.02 (.07)
UTILITIES	-.15*** (.04)	.23*** (.08)	.16*** (.06)	.06 (.04)
FINANCIAL SERVICES	-.04 (.03)	.13*** (.03)	.06 (.05)	-.01 (.04)
OTHER SERVICES	-.12*** (.02)	-.01 (.02)	.01 (.04)	.01 (.03)
MANUFACTURING	---	---	---	---
(Constant)	1.01*** (.10)	.27** (.10)	1.12*** (.12)	1.47*** (.11)
R2	.25	.42	.19	.15

*p<.10; **p<.05; ***p<.01

Appendix Table 2. Wage Equation Regression Coefficients, By Country,
For Men (page 2 of 2)

(results correspond to Table 5, Model 4)

	U.S.	U.K.	Canada	Australia
	B (S.E.)	B (S.E.)	B (S.E.)	B (S.E.)
PART TIME	-.23*** (.03)	.19*** (.04)	-.19*** (.04)	-.15*** (.03)
EDUCATION				
HIGH	.38*** (.02)	.13*** (.04)	.20*** (.02)	.14*** (.02)
MEDIUM	.21*** (.02)	.04 (.03)	.13*** (.02)	.05*** (.01)
LOW	---	---	---	---
AGE	.07*** (.01)	.05*** (.01)	.05*** (.01)	.03*** (.00)
AGE2*100	-.07*** (.01)	-.06*** (.01)	-.05*** (.01)	-.03*** (.00)
OCCUPATIONS				
PROFESSIONS	.20*** (.02)	.35*** (.02)	.10*** (.03)	.22*** (.02)
ADMINISTRATION	.20*** (.02)	.33*** (.02)	.15*** (.03)	.25*** (.02)
SALES	-.08*** (.03)	-.04 (.08)	-.02 (.04)	---
CLERICAL	-.10** (.04)	.17*** (.03)	-.04 (.04)	.13*** (.02)
SERVICE	-.08** (.03)	.27*** (.07)	-.05 (.04)	.02 (.02)
BLUE COLLAR	---	---	---	---
INDUSTRIES				
COMMERCE	-.20*** (.02)	-.14*** (.02)	-.17*** (.03)	-.14*** (.02)
CONSTRUCTION	-.18** (.09)	-.08*** (.07)	-.26*** (.07)	-.03 (.06)
UTILITIES	.04 (.02)	.04 (.04)	.03 (.03)	.07*** (.02)
FINANCIAL SERVICES	-.06 (.04)	.08** (.03)	-.14*** (.04)	-.07*** (.02)
OTHER SERVICES	-.17*** (.02)	-.03* (.02)	-.06** (.03)	-.02 (.03)
MANUFACTURING	---	---	---	---
(Constant)	.60*** (.11)	.17*** (.10)	1.29*** (.12)	1.57*** (.09)
R2	.28	.33	.14	.23

*p<.10; **p<.05; ***p<.01

Appendix Table 3. Means of Independent Variables, By Country,
For Women (page 1 of 2)

	U.S.	U.K.	Canada	Australia
PT35	.260	.504	.270	.367
EDUCATION				
HIGH	.476	.327	.524	.119
MEDIUM	.436	.579	.337	.478
LOW	.088	.094	.139	.403
AGE	35.85	37.21	34.98	35.31
OCCUPATIONS				
PROFESSIONS	.223	.210	.246	.223
ADMINISTRATION	.098	.058	.124	.043
SALES	.118	.067	.088	---
CLERICAL	.314	.348	.323	.353
SERVICE	.143	.001	.135	.188
BLUE COLLAR	.104	.316	.084	.184
INDUSTRIES				
COMMERCE	.207	.159	.158	.191
CONSTRUCTION	.012	.021	.012	.023
UTILITIES	.047	.011	.055	.045
FINANCIAL SERVICES	.107	.102	.103	.119
OTHER SERVICES	.488	.506	.553	.495
MANUFACTURING	.133	.181	.110	.122

Appendix Table 3. Means of Independent Variables, By Country,
For Men (page 2 of 2)

	U.S.	U.K.	Canada	Australia
PART TIME	.090	.047	.051	.038
EDUCATION				
HIGH	.504	.300	.495	.134
MEDIUM	.372	.572	.294	.551
LOW	.124	.128	.211	.046
AGE	37.40	38.78	37.16	37.47
OCCUPATIONS				
PROFESSIONS	.187	.207	.163	.225
ADMINISTRATION	.143	.156	.176	.122
SALES	.122	.009	.084	---
CLERICAL	.048	.073	.057	.085
SERVICE	.101	.011	.084	.088
BLUE COLLAR	.399	.544	.436	.481
INDUSTRIES				
COMMERCE	.179	.102	.162	.172
CONSTRUCTION	.109	.079	.086	.101
UTILITIES	.098	.040	.126	.151
FINANCIAL SERVICES	.049	.076	.052	.099
OTHER SERVICES	.308	.282	.213	.256
MANUFACTURING	.242	.339	.229	.196

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