

PROMOTION AND EARNINGS DIFFERENCES OF MALES AND FEMALES
IN LARGE CANADIAN FIRMS

by

KATHLEEN MARY CANNINGS

A.B., Brandeis University
(1974)

M.Sc.(Econ), Birkbeck College, University of London
(1980)

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Department of Urban Studies and Planning
October 15, 1984

Certified by: _____

Thesis Supervisor

Accepted by:

Head, Ph.D Committee

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ABSTRACT

The thesis integrates insights drawn from a number of social science disciplines into a single framework designed to explain female-male earnings differences. Using firm level data to explore the determinants of female-male earnings differences, we test alternative hypotheses that relate to human-capital attributes, occupational structure of the firm, internal relationships in the firm, and extra-firm household relations of individual employees. Specifically, the empirical analysis tests the impacts on earnings of human-capital attributes such as age and quantity and quality of education, functional and hierarchical occupational segregation, commitment to the firm, informal networks, perceived discrimination, commitment to the home, dominant-careers, and early socialization.

Empirical analysis is based upon cross-sectional data generated by means of a questionnaire survey administered in 1983 to employees of three large Canadian firms. The 2559 observations are primarily salaried professional, technical, and managerial employees, of whom 31 percent are females. The author designed the questionnaire to generate data that would permit the testing of the range of alternative hypotheses mentioned above. Three unique contributions of the thesis are the framing of the alternative hypotheses, the design of the questionnaire, and the construction of the variables to capture the impacts of the various hypotheses.

Across the three samples, the total mean female-male earnings differential ranges from just under twenty percent to just under forty percent. In keeping with the firm-specific nature of the data bases, regression analysis is carried out firm by firm. First, we analyze the determinants of earnings across all individuals by estimating OLS regressions on each of the total samples. We also estimate regressions on married sub-samples in order to test hypotheses that are unique to this group. We then estimate regressions for females and males separately as a prelude to the decomposition of the female-male earnings differential into coefficients, attributes, and interaction components.

The regression coefficients of the total samples as well as the married sub-samples reveal substantial negative returns to sex, supporting the hypothesis that discrimination on the basis of gender is a significant determinant of female-male earnings differences. Although certain

hypotheses are supported in some samples and not in others, age, years of service with the company, hierarchical occupational segregation, working overtime without pay, and division of labour in the household have the most generally significant impacts on earnings differentials. In the decompositions of the female-male earnings differentials, each of the three samples yields a distinct pattern in the allocation of the differential to the coefficients, attributes, and interaction components. The main sources of the differential in Sample 1 are occupational segregation and the interaction of an employee's occupation and the rate of return to that occupation. In Sample 2, the attributes component dominates because males have more human capital and are in better paying jobs than females. The coefficients component, a measure of earnings discrimination, is also substantial--on the order of 16 percent in the total sample and 11 percent in the married sub-sample--because males get higher returns to human capital and early socialization than females. The heterogeneous nature of the observations in Sample 2--the inclusion of some non-salaried but predominantly salaried employees--may account for the importance of earnings discrimination for this sample but not for the more homogeneous Sample 1. In the Sample 3 decomposition, years of service with the company and early division of labour in the home have the major impacts on the female-male earnings differential.

Thesis Supervisors: Professor Richard Freeman
Department of Economics, Harvard University

Professor Michael Piore
Department of Economics, M.I.T.

Professor Karen R. Polenske
Department of Urban Studies and Planning, M.I.T.

To B.L.

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Kathleen Cannings

Promotion and Earnings Differences of Males and Females
in Large Canadian Firms

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Chapter 1 Introduction: Women in the Canadian Labour Force

Over the last three decades there has been a significant shift in the sex composition of the paid labour force in a number of advanced industrialized nations. The shift has been particularly pronounced in Canada. In 1951, females made up only 22 percent of the Canadian labour force, but presently make up well over 52 percent. In 1960 the labour force participation rate of Canadian females advanced to 30 percent and was the lowest amongst nine major industrial countries. By 1981 it had climbed to 52 percent, amongst the highest rates for these nations (see Table 1-1).

There are many factors underlying this increased involvement of Canadian females in the paid labour force. There are "push" factors: with families faced by inflationary pressures, many married females have had to enter the labour market just to make ends meet. According to the National Council of Welfare, if females in two-parent families had not worked, the proportion of Canadian families below the poverty line in 1979 would have gone up from one in eight to one in four. In the 1970s, the contribution of married females to the incomes of families in which two parents worked was just under 30 percent (see Table 1-2). In these families, wives were still not, on average at least, the primary breadwinners, but nonetheless their contributions to family incomes were clearly significant.

There are "pull" factors: during the post-World War II boom, new opportunities opened up for females to enter the labour market, in no small degree due to a heightened consciousness on their part of the possibilities for personal development acquired by contact with, and

Table 1-1
Female Participation Rates in Nine Industrialized Countries
1960, 1970, and 1981.

<u>Country</u>	<u>1960</u>	<u>1970</u>	<u>1981</u>
Canada ¹	30.1	38.3	51.6
United States	37.7	43.3	52.1
Australia	NA	40.4	45.5
Japan	52.7	49.3	46.7
France	41.6	40.1	43.1
West Germany	41.2	38.4	38.5*
United Kingdom	39.5	42.0	46.6*
Italy	33.8	26.8	29.9**
Sweden	NA	50.0	60.5*

*Preliminary figures

**Rate in 1980

NA = not available

1 The rates for Canada in this table, which are drawn from the Labour Force Survey, differ slightly from those in other tables, which are based on census data.

Source: C. Sorrentino, "International Comparisons of Labor Force Participation, 1960-81," Monthly Labor Review 106, no. 2 (February 1983).

Table 1-2

Average Percentage Contributions of Women in the Labour Market to Family
Earnings in Two-Parent Families¹ by Number and Age of Children
Canada, 1971, 1975, and 1979

Number and Age of Children	Family Earnings		
	1971	1975	1979
No children ²	34.5	33.8	32.4
Children under 6 only	27.9	28.6	28.2
Children aged 6 to 15 only	23.9	25.0	25.0
Children under 6 and children aged 6 to 15	21.6	21.8	25.3
Weighted average	28.9	28.9	28.7

Notes: 1 Head aged less than 65.

2 For the purposes of this table, a child is defined as being under 16 years of age.

Source: Statistics Canada, Survey of Consumer Finances, special tabulations.
Economic Council of Canada, Annual Review, On The Mend, Ottawa, 1984.

participation in, the "women's movement." Not only are more females employed in female-dominated occupations, such as nursing, secretarial work, and teaching, but to some extent they have also moved into male-dominated jobs in both managerial and manual occupations.

Education has apparently provided a central means by which females can gain entry into the labour market. As can be seen from Table 1-3, from 1971 to 1981 the labour-force participation rates by level of education increased by more than 20 percent amongst females with a high school diploma, vocational-school certificate or diploma, or a bachelor's degree. More importantly, as females acquired more education, their labour-force participation rates climbed much more rapidly than did those of males.

The availability of more reliable methods of birth control techniques as well as greater information about, and acceptability of, their use appears to have aided the entry of females into the paid labour force. In 1960 the fertility rate (live births per 100 females of ages 15 to 44) of Canadian females was 13.1, the highest level among the nine largest industrial countries; by 1980 it had fallen to 6.7, an average level [Sorrentino, 1983]. Today, females have acquired a greater ability to choose between careers and families and to plan how to combine the two over time.

Table 1-4 suggests that marital status has been critical in permitting females to have children while participating in the paid labour force. In 1981, 45 percent of married females with children under two years of age participated in the labour force as compared with 25 percent in 1971--an increase of 84 percent. Among married females in 1971, the participation rate of those without children was higher than

Table 1-3

Participation Rates of Women and Men in the Labour Force by Level of Education, Canada
1971 and 1981

Level of Education	Women		Percent Change 1971 - 1981	Men		Percent Change 1971 - 1981
	1971	1981		1971	1981	
Primary or less	22.2	24.3	9.5	62.2	57.7	-7.8
Secondary	38.5	46.6	21.0	74.5	73.0	-2.1
Vocational diploma or certificate	51.9	65.0	25.2	88.0	85.4	-3.0
Post-secondary or non- university diploma	55.5	66.1	19.1	88.6	89.6	1.1
University without degree	59.6	69.3	16.3	87.0	88.2	1.4
Certificate	63.3	72.6	14.7	89.5	90.6	1.2
Undergraduate level	63.1	77.4	22.7	90.3	92.2	2.1
Bachelor's degree	69.0	78.3	13.5	92.5	91.5	-1.1
Master's degree or doctorate	70.0	80.8	15.4	91.1	92.4	1.4
Total	39.9	51.7	29.6	76.4	78.2	2.4

Source: Special compilation from the 1971 and 1981 Censuses, Statistics Canada.
Economic Council of Canada, Annual Review, On The Mend, Ottawa, 1984.

Table 1-4

Participation Rates of Women and Men in the Labour Force by Family Status, Canada
1971 and 1981

Family Status	Women		Percent Change 1971-1981	Men		Percent Change 1971-1981
	1971	1981		1971	1981	
Married:						
Without Children	40.6	49.6	22.2	73.5	72.5	-1.4
Child(ren) under 2 years	24.6	45.3	84.2	94.2	96.5	2.4
Child(ren) 3-5 years	30.8	51.2	66.2	93.8	96.2	2.6
Child(ren) 6-16 years	40.3	59.0	46.4	92.8	94.8	2.2
Single:						
Without children	53.5	62.0	15.9	63.4	69.4	9.5
Child(ren) under 2 years	41.7	39.7	-4.8	83.9	81.6	-2.7
Child(ren) 3-5 years	52.0	49.4	-5.0	84.7	86.9	2.6
Child(ren) 6-16 years	59.7	60.6	1.5	80.7	81.3	0.7
Other						
Without children	28.6	31.8	11.2	56.2	63.8	13.5
Child(ren) under 2 years	33.4	50.2	50.3	84.5	87.2	3.2
Child(ren) 3-5 years	44.0	60.3	37.1	85.8	91.0	6.1
Child(ren) 6-16 years	53.5	66.4	24.1	86.0	90.4	5.1
Total	39.9	51.7	29.6	76.4	78.2	2.4

Source: Special compilation from the 1971 and 1981 Censuses, Statistics Canada.
Economic Council of Canada, Annual Review, On the Mend, Ottawa, 1984.

for those with children. By 1981, this was no longer the case. Over the same period, participation rates among single females with preschool children decreased somewhat, although the participation rate for single females without children increased by 16 percent. The increase of participation rates of separated, divorced, and widowed ("other") females with children lay between the very high increases for married females with children and the very low or negative increases for single females with children.

Despite the rise in female labour-force participation rates, a fairly stable male-female earnings gap persisted from 1971 to 1981 (see Table 1-5), although, when decomposed by level of education, females with university degrees clearly made some relative gains. From Table 1-5 it seems apparent that those females with the highest education levels had the greatest gains in earnings relative to males with the same education levels. Specifically, from 1971 to 1981, those with a first university degree increased their relative earning power by over 25 percent and those with a master's degree or doctorate by over 12 percent, whereas females with a secondary education increased their relative earning power by less than eight percent and those with primary education or less by just over two percent.

It is now well recognized that much of the earnings gap between the sexes is due to the occupational segregation of females into a relatively small number of low-paying "female jobs," such as secretarial and clerical work [Blau, 1977; Gunderson, 1975 and 1979; Hartmann and Treiman, 1981]. Table 1-6 provides an indication of the shifts in occupational segregation that took place from 1971 to 1981 as well as the impacts of these shifts on relative earnings. In 1971 females made

Table 1-5

Average Earnings of Women and Men by Level of Education, Canada, 1971 and 1981

Level of Education	Average Earnings (1971)		Relative Disparity Women/Men	Average Earnings (1981)		Relative Disparity Women/Men	Percentage Change in Relative Disparity 1971 - 1981
	Women	Men		Women	Men		
Primary or less	2,783	5,387	51.67	7,587	14,390	52.71	2.04
Secondary	3,145	6,343	49.58	8,127	15,208	53.44	7.77
Vocational diploma or certificate	3,564	7,325	48.65	8,956	18,578	48.20	-0.93
Post-secondary or non- university diploma	4,129	7,500	55.05	9,998	18,086	55.28	0.42
University, no degree	5,111	8,295	61.62	12,148	19,590	62.01	0.63
Certificate	5,742	10,037	57.21	14,794	26,319	56.21	-9.63
Undergraduate level	3,515	6,468	54.34	9,161	16,982	53.94	-0.74
Bachelor's degree	6,847	14,975	45.72	16,691	29,048	57.46	25.67
Master's degree or doctorate	8,508	15,212	55.93	19,751	31,457	62.79	12.27
Total	3,561	6,952	51.22	9,589	17,807	53.85	5.13

Source: Special compilation from the 1971 and 1981 Censuses, Statistics Canada.
Economic Council of Canada, Annual Review, On The Mend, Ottawa, 1984.

Table 1-6

Numbers¹ and Average Annual Earnings of Women and Men in the Twenty Highest-Paying
and Twenty Lowest-Paying Occupations², Canada, 1970-71 and 1980-81

	<u>Women</u>		<u>Earnings</u>		<u>Men</u>		<u>Earnings</u>	
	<u>Number</u>				<u>Number</u>			
	1971	1981	1970	1980	1971	1981	1970	1980
20 Highest Paid ³	32,050	125,755	8,118	18,253	216,470	481,220	19,024	34,520
20 Lowest Paid ⁴	750,045	1,175,430	2,319	6,076	698,580	845,960	4,047	9,559

Notes: 1 Excludes those who reported zero or negative earnings for the year preceding the census - i.e., 1970 or 1980.

2 Using Statistics Canada's 1971 occupational classifications, 498 occupations have been combined into 200 groups. Of these 200 groups, the 20 lowest and highest paid occupations in 1970 have been chosen on the basis of combined female and male earnings.

3 Directors general, physicians and surgeons, dentists, judges and magistrates, lawyers and notaries, osteopaths and chiropractors, optometrists, sales, advertising and purchasing managers, veterinarians, architects, air pilot, navigators and flight engineers, university teachers, members of legislative bodies, administrators-teaching, personnel and industrial management, management occupations, administrations in medicine and health, government administrators, air transport foremen, physicists.

4 Babysitters, waiters(esses), hosts(esses) and stewards, guides and others, other farm, horticulture, and animal husbandry, inspecting and sampling, fabrication of textile products, sewing machine operators, other fabrication of textile products occupations, other apparel and furnishing service occupations, packaging occupations, other occupations - fishing, hunting, trapping, tailors and dressmakers, chefs and cooks, knitting occupations, other occupations - library file and correspondence clerks, other sales occupations, shoemakers and repairs, barbers and hairdressers, health care, labouring occupation - not elsewhere classified.

Source: Statistics Canada, 1971 and 1981 censuses, special tabulations.
Economic Council of Canada, Annual Review.

up less than 13 percent of the labour force in the twenty highest-paying occupations, and within these occupations their earnings were about 43 percent of those of males. Over the following decade, some headway was made: by 1981 females held just under 21 percent of the jobs in the top-paying occupations and were earning about 53 percent of male incomes. Over the same period, however, the number of females was increasing faster than the number of males in the twenty lowest-paying occupations. In 1971, females held 52 percent of the jobs in these occupations, while in 1981 they held 58 percent. On the other hand, within the low-paying occupations, the male-female earnings gap closed somewhat: from about 57 percent in 1971 to about 64 percent in 1981. Looking at these changes in participation and earnings of males and females in the highest-paying and lowest-paying occupations, it is clear that between 1971 and 1981 females entered the highest-paying occupations at a faster rate than they entered the lowest-paying occupations. As a result, there was an improvement in the overall earnings position of females relative to males. Nevertheless, even in the highest-paying occupations, a very large earnings gap still persists in 1984.

As Table 1-5 shows, there was some narrowing of the earnings gap (from 51.2 percent to 53.9 percent) over the decade. It could be argued that now that females are increasingly committing themselves to full-time participation in the labour force, the earnings gap will soon (say in a decade or two) become history--if not for all females then at least for females who enter the most lucrative occupations. For example, it might plausibly be hypothesized that, given the relatively recent entry of females into the highest-paying occupations, the earnings gap reflects an experience gap that is highly correlated with age. If so, as

males retire and as females become both more numerous and more experienced in these occupations, the earnings gap should disappear.

But until tested, a plausible hypothesis remains just that. It was the concern over the determinants of the earnings gap and other issues to do with female labour-force participation that led the Economic Council of Canada to develop a series of projects on women and the labour market--of which this study is one. The purpose of the study is to examine the determinants of the relative earnings of males and females within large corporate bureaucracies, with particular (but not exclusive) attention to be paid to managerial and technical personnel. The remaining chapters of this thesis report the theoretical structure, methodology, and statistical results of my research for the Economic Council of Canada as well as some thoughts on the policy implications of the findings for governments, corporations, and households.

Chapter 2 surveys theories of income discrimination on the basis of sex, as well as the empirical evidence on the determinants of the earnings gap. Chapter 3 presents a theoretical framework that synthesizes and extends the insights of the work by economists on earnings discrimination presented in Chapter 2 and also incorporates some relevant ideas and concepts from the fields of psychology and sociology. A series of testable hypotheses concerning earnings inequality are then generated, with an indication of the type of information that would be needed to perform the statistical tests. Chapter 4 outlines the logic and design of the employee questionnaire used to gather the relevant data. Particular emphasis is placed upon the types of variables that can be constructed from the questionnaire data and how specific variables relate to the various hypotheses put forth in Chapter 3. Chapter 5 contains a

discussion of how the data base was actually generated, including details on how the companies came to participate in the study and the way the questionnaires were distributed and collected. In the concluding section of this chapter, overviews are presented of the general characteristics of the firms that participated in the study and average female-male differences in the company samples (before-tax earnings by age, labour-force experience, years of service with the company, level of education and area of concentration, occupation within the company, and family status. Chapter 6 presents a discussion of the rationale behind the specification of the statistical models for regression analysis. The specific hypotheses to be tested (a subset of hypotheses from Chapter 3) are described as well as the statistical techniques to be used. The empirical results are then detailed. Chapter 7 summarizes the empirical findings and draws out the general implications of these findings for policy.

Chapter 2 Male-Female Earnings Differences: Theories and Empirical Studies

I. Theories

This chapter presents a general discussion of five theories that have been put forward to explain earnings inequalities. The most conventional approach is human-capital theory, which argues that people get paid according to investment in education and on-the-job training. A derivative of human-capital theory, however recognizes unexplained earnings differences and attributes them to tastes for discrimination: prejudices against some types of people that are unrelated to their productive capability enter into the utility functions of other types of people. Discrimination results when those with discriminatory tastes are able to maximize their own utility. Screening theory, in contrast, shifts the focus from prejudice to imperfect information. Employers have stereotypical views of the productive capabilities of certain groups of prospective employees. In the presence of imperfect information concerning the capabilities of specific people within those groups, employers view all job candidates in terms of the stereotype. The results of such practices may be a form of statistical discrimination. Dual labour-market theory differs from screening theory in placing the focus on institutional barriers to occupational mobility and earnings advancement within the labour market that favour some groups relative to others in their access to better-paying jobs. Labour-market segmentation theory is a direct derivative of dual labour-market theory, but places more emphasis on both the societal nature of the institutions that generate inequality and the role of behavioural traits as opposed to cognitive capabilities in determining access to jobs and earnings.

Human capital

Wage differences between males and females exist, and have persisted over time. Why? In a perfectly competitive world in which all labour has homogenous productive qualities, profit-maximization by employers would ensure that each worker receives a wage equal to the value of the marginal product of labour. If we drop the assumption that all workers have the same productive qualities, then wages would differ but all workers would still be paid the value of the marginal product of labour in any given employment.

Human capital theory [Becker, 1965] recognizes that different workers have different productive qualities because of individual choices to invest in activities whereby productive capabilities are attained. According to this theory, females are (biologically) suited for work in the home--nurturing husbands and children. Female labour-force participation depends on the relative returns of work in the home (the production of children and husbands) and work in the labour market (the production of marketable goods and services). An implication is that for significant proportions of their lives, females can derive relatively high "income" by working in the home, whereas males, being males, cannot. In the utility-maximizing household, nonparticipation by females in the paid labour force will be the result of rational decision-making, given the returns to labour in the home and the labour market. As a result, females choose to accumulate less "human capital" over the life cycle than do males, where "human capital" is defined as education and on-the-job training that renders one more productive in the paid labour market.

Mincer and Polachek [1974] explicitly extend the human-capital model

to a theory of male-female income differences. It is assumed a priori that females go through a personal calculus whereby they anticipate having and rearing children and consequently expect to withdraw from the labour force. There are two reasons why planned labour force withdrawal discourages investment in human capital applicable to the labour market. First, it shortens the time-frame for returns to such investments. Second, those skills that have been developed, whatever they might be, depreciate during periods of labour-force withdrawal. In sum, total investment in human capital relevant to the labour market is less the longer the periods of planned withdrawal from labour-force participation.

The human-capital model can also be applied to occupational segregation on the basis of sex. Given their attachment to the home, females choose to enter those occupations for which little investment in human capital is needed. A corollary to this theory is that females would choose to exclude themselves from occupations that would require that they invest in relatively large amounts of human capital, or firms may be unwilling to bear the cost of on-the-job training for females. Alternatively, it could be argued that females do invest in on-the-job training in the home, and that occupational segregation reflects the entry of women into the types of paid jobs for which housework has prepared them best. If so, the withdrawal of females from these types of jobs in the labour force would not result in the depreciation of previously acquired skills. While this application of human-capital theory might account for occupational segregation, it would not, however, explain why female-dominated jobs in the labour market tend to have a lower valuation than those dominated by men.

Tastes for discrimination

Within the human-capital framework, male-female earnings differences that can be explained by differences in investment in human capital would not be considered to reflect discrimination. It is only demand-side phenomena that are embedded in hiring practices of firms that can generate discriminatory outcomes. "Tastes" cannot be directly measured, so the empiricist merely asserts that the unexplained residual reflects the extent of the taste for discrimination by managers, workers, or even consumers. Although the "taste" theory of discrimination was originally intended to explain black/white discrimination [Becker 1957], it might also be extended to a theory of sex discrimination using a trade model. If extended to a theory of sex discrimination, it is assumed that males have a physical and psychological aversion to associating with females in the workplace, and hence experience a disutility when females are hired to work alongside of them.

Consider two societies, M and F, where F is relatively labour abundant and M is relatively capital abundant. Both societies are assumed to have identical production functions. When no discrimination exists, trade occurs. Society F exports labour and M exports capital until equal marginal products are achieved in M and F. Now, assume that males have a distaste for working with females, so that the proportion of F labour working with M capital becomes an argument in M's utility function. Given this distaste, employers from society M are prepared to sacrifice profits to preclude association with members of society F. Employees from society M will also be prepared to accept a lower wage to avoid being employed with members of society F.

Bergmann [1974] has followed Becker's earlier work [1957] in attri-

bute occupational segregation by race and sex to tastes for discrimination on the part of employers. Unlike Becker as well as Mincer and Polachek, Bergmann assumes that females and blacks in general have the same potential for accumulating human capital as do white males.

Bergmann's explanation of occupational segregation by race and sex draws upon the early theories of non-competing groups put forth by Cairnes [1874], Fawcett [1918], and Edgeworth [1922]. She argues that employers, who are predominantly white males, have a taste for discrimination that leads them to deny entry of blacks and females into most occupations. These occupations then become the preserves of white male workers. Like blacks, females are forced to crowd into a few occupations, lowering the value of the marginal product of labour and hence the wage in those employments. Males, on the other hand, are paid higher wages in the occupations they dominate than they would receive if entry by females was not artificially restricted.

There are problems with the Bergmann model. To begin with, it is not at all clear that the impact of a "taste for discrimination" can be analyzed in the same way with respect to blacks and females. In a racist society, whites may not want to associate with blacks, but in a sexist society the problem in the workplace is often that males want to associate too closely with females--hence the emergence of the problem of sexual harassment with its implications for the relations between males and females in the labour force. This asymmetry between the positions of blacks and females is simply not addressed by those who begin their analysis with a "taste for discrimination".

In addition, Bergmann's model lacks any explanation for the motives that lead employers to exclude females from some--in fact most--occupa-

tions. Indeed the theory contains no explanation of why the occupation of being an employer is male-dominated in the first place. Nor does it tell us why individual employers have a distaste for employing females in most occupations, but are willing to employ them in a few. Unlike the human-capital theorists, Bergmann does not assume that females are ideally suited to some employments and males to others. Presumably, in her model, all employers begin by attempting to hire males, but as the excess supply of female workers grows, and their wages fall, some employers are led to overcome their tastes for discrimination and hire females.

But the fact that they hire females in only a few occupations, so that occupational segregation arises, would have to occur because of a distaste on the part of male workers for working with females, perhaps enforced by union or professional practices. Bergmann, however, does not argue that some jobs are ideally suited for females and some for males. Therefore, her model contains no theory of why females are crowded into certain types of jobs--elementary school teaching, nursing, clerical work--rather than others. Like most theories that rely on unobserved tastes to "explain" discrimination, Bergmann's theory merely rationalizes a labour-market situation that has historically evolved. She does not attempt to explore the socio-economic determinants of this evolution.

In Becker's model, the firm takes technology and prices as given. If it does not make the right choices in its allocation of resources, it cannot compete. But implicit in Becker's theory is the assumption that firms pursue goals other than profit maximization. In this case firms in M pursue the taste for discrimination (that is, the avoidance of

association with members of F). If firms can successfully pursue the taste for discrimination, the implication is that these firms have some control over product markets- that is they do not merely respond to the dictates of the market as in traditional economic theory. As in behavioural theories of the firm [see, for example, Williamson, 1962], firms have discretionary market power.

As Arrow [1973] has pointed out, if these firms are embedded in a competitive economy, then discriminatory firms should not be able to compete over the long run if some firms pursue profit-maximization rather than the taste for discrimination as their goal. Given discrimination in the labour market, nondiscriminating firms will be very willing to hire females at less than the competitive wage, thereby gaining a cost advantage over those firms who continue to shun females. Nondiscriminating employers will net economic rents, that will equal the difference between what they have to pay female workers and the value of the marginal products of these workers. Nondiscriminating firms will capture a larger market share, forcing discriminating firms to exit from the industry. As they expand, and as new nondiscriminating firms enter the industry, all discriminatory rents will be bid away until discrimination in pay no longer exists.

Screening

Theories of discrimination have, however, been proposed that do not rely upon "tastes for discrimination" on the part of employers. In particular, screening models view discriminatory hiring practices as being motivated by the nature of the jobs themselves in combination with the objective perceptions on the part of employers as to what types of

workers would best fill these jobs. Some types of occupations require high levels of recruitment costs as well as initial productivity and/or on-the-job training at the firm's expense. Hence the firm incurs both wasted expense if a particular employee does not perform as expected, either immediately or in response to training, as well as high turnover costs if the employee who is hired (and where training is involved) becomes more productive but does not maintain his or her attachment to the firm. Therefore the firm wants to hire workers who have the highest probability of both possessing the necessary initial productive characteristics and remaining with the firm.

In a world of imperfect information, however, the firm faces considerable uncertainty in this regard when hiring and training any particular worker. In the face of uncertainty concerning the performance of individual workers, the firm attempts to use more impersonal information in deciding who to hire. Such hiring practices may be quite rational from the point of view of the profit-maximizing firm, but may nevertheless result in statistical discrimination [Phelps, 1972; Arrow, 1973; Spence, 1974; Aigner and Cain, 1977].

For example, it is generally known that the labour-force turnover of females is considerably higher than that of males [Perry, 1972]. Hence, for jobs where turnover costs are high, employers tend to hire only males. Given imperfect information, ascriptive characteristics are used as a proxy for actual worker characteristics. If the future conforms to the statistical trends of the past and if the amount of hiring done by the firm is large enough to be affected by statistical regularities within a reasonable time horizon, employers will reduce turnover costs.

But, as a result, some females who would have stayed with the firm

are not hired, whereas some males who will in fact cause the firm to incur turnover costs are hired. On an actuarial basis, the profit-maximizing firm has made the right hiring decisions. Nevertheless, for lack of perfect information about individual workers, some females suffer from discrimination due to the fact that they are female. That is, being viewed as a stereotypical female employee becomes a negative externality for individuals who happen to be female.

The model has logical appeal, but it may not adequately reflect the complexities of hiring decisions. When used as a theory of sex discrimination, screening models make strong assumptions about the unobservability of an individual female's ability. Personnel managers, however, know much more about job applicants than merely gender. Employers typically also have information on an individual's race, age, address, schooling, marital status, number of dependents, health, criminal record, previous work experience, test results, references, as well as the way in which the applicant presents himself or herself in a job interview. Although gender may play some role in the hiring process, it cannot simply be assumed a priori that it is the single most important factor determining the hiring decision.

One important implication of the screening model approach to sex discrimination is that incorrect beliefs by employers concerning the relative costs and benefits of hiring males and females could potentially set up a signal to females concerning their employability in particular occupations that will become a self-fulfilling prophecy even as females as an ascriptive group increase their long-run attachment to work in the paid labour force. If females know a priori that employers are sex-biased in hiring, they may choose not to invest in the acquisi-

tion of productive characteristics that are relevant for occupations that require long-term attachment to the firm. One result of such responses to market signals would be the exacerbation of overcrowding of females (who have now increased their labour-force participation rates) into those occupations in which they have historically tended to find employment.

Dual labour markets

Even though the screening models may be criticized on certain grounds, they have succeeded in going further in an explanation of the interaction of supply and demand on the labour market than either the human-capital or tastes models. Recognizing the fact that employee productivity in, and attachment to, the workplace cannot be known at the time of the labour-market exchange, the models are able to portray individual employers as being motivated by observable costs, not by unobservable tastes. In particular, insofar as they focus on turnover costs, screening models come to conclusions concerning sex discrimination that are very similar to those derived from dual labour-market models.

Dual labour-market theory has emerged out of the institutional tradition in U.S. labour economics [see, for example, Slichter, 1919; Dunlop, 1957; Slichter, Livernash, and Healey, 1960], a tradition in which the focus is on the relation between the internal structure of employment in the firm ("internal labour markets") and the hiring practices of the firm on the external labour market. In their extension and refinement of this tradition, Doeringer and Piore [1971] argue that the existence of internal labour markets or, more accurately, internal

job structures, is the key demand-side factor separating what they call the primary labour market from the secondary labour market.

The primary or core labour market is to be found in occupations, firms, and industries that use advanced technology and require large-scale capital commitments. Economies of scale create firms that are oligopolistic in the product market. The capital-intensive nature of the production processes necessitate high levels of on-the-job training, if only to ensure that workers do not make costly mistakes. As a result, the nature of the technology requires the development of internal job structures with well-defined promotion ladders. Over time, these job structures become institutionalized in the firm; Doeringer and Piore have defined an internal labour market as an administrative unit within which the pricing and allocation of labour is governed by a set of administrative rules and procedures that define the limits of horizontal and vertical occupational mobility. With high productivity through the use of capital-intensive methods and high profitability derived from oligopolistic market power, firms in which the primary labour market predominates can afford to pay high wages and fringe benefits to primary labour-market workers--rewards that are typically enforced by high levels of unionization. Moreover, quite aside from unionization, once they gain entry to the internal job ladders through "ports of entry" from the external labour market, primary labour-market workers are no longer in competition with workers on the external labour market in their climbs up the job ladders.

In contrast, workers in low productivity, labour-intensive occupations, firms, and industries enter the secondary labour market where turnover costs are low because of the nature of the technology, and

profit margins are low because of the highly competitive structures of industrial organization. In the secondary labour market, wages and fringe benefits are low, and labour turnover is high. There is little unionization. Working conditions are poor, and there is little chance for promotion or on-the-job training. These characteristics of jobs tend to reinforce economically undesirable characteristics of workers who perform these jobs. People who lack skills receive low wages in the secondary labour market; but low wages and poor working conditions keep them from enhancing their skill levels. Hence, once in the secondary labour market, it is difficult to acquire those characteristics that might enable one to gain entry to the primary market. In effect, dual labour markets give rise to noncompeting groups.

How well can dual labour-market theory explain the different economic positions of males and females in the Canadian labour market? As was argued in Chapter 1, much of the earnings gap is due to the occupational segregation of females into a relatively small number of low-paying "women's" jobs, such as secretarial and clerical work, teaching, child-care, and health services. Insofar as these occupations are characterized by low pay, low skill requirements, high turnover, little unionization, and little opportunity for advancement through their work, employment in these occupations would fit the description of the secondary labour market. But the characteristics of "women's" work does not, in fact, fit so neatly into the dual labour-market categories. In Canada, some occupations, such as teaching and nursing, requiring high levels of skill development have become highly unionized and are relatively highly paid. Other occupations, such as secretarial work, also require fairly high skill levels, but are not so highly paid.

Whether out of economic circumstances (the income of females has become increasingly important to basic standards of living for families) or out of the aspirations for work that goes beyond the kitchen, females have tended to remain in the paid labour force longer and with more persistence. For those females who have become permanent members of the labour force, the critical issue raised by the dual labour-market distinction between primary and secondary work is whether or not and to what extent there are possibilities for career advancement through promotion. Quite in keeping with the dual labour market notion that it is the nature of jobs that creates the characteristics of workers rather than vice versa, it could be argued that many females who aspire to permanent participation in the labour market develop only sporadic attachment because of their decreased lack of investment to secure primary labour-market jobs.

Labour-market segmentation

Although its main focus is on the nature of internal job structures, the dual labour-market perspective raises the issue of the relation between the types of occupations that males and females perceive as available to them in the economy and the ways in which males and females develop as participants in the paid labour force. Recently, attempts have been made to put the relation between jobs and workers in broader socio-economic perspective [Gordon, Reich, and Edwards, 1982]. Labour-market segmentation theory argues that the internal structures of jobs are shaped more to suit the hierarchical authority structures within the firm than to provide successive (vertically-related) stages of on-the-job training.

Different levels of the corporate hierarchy require different types of behavioural characteristics that are crucial to individual performance. For example, a person who is unable to delegate authority or give orders could not be productive at higher levels of the hierarchy, while a person who is unwilling or unable to take orders could not be productive at lower levels. In other words, productivity at work is viewed not only in terms of the technical capabilities of workers, but also in terms of behavioural traits [Edwards, 1976 and 1977].

The labour-market segmentation perspective on the nature of work raises the issue of how different types of behavioural characteristics are acquired. Bowles and Gintis [1976] have argued that the most important impact of schooling on the economic success of individuals is because of the inculcation of behavioural characteristics that are valued on the paid labour market, and that in fact the predominant function of schooling is to reinforce and transmit differential behavioural traits acquired through social acculturation in the family--the influence of the behaviour of parents on that of their children [see Kohn, 1969]. Hence the combination of social acculturation in the family and behavioural reinforcement in the schooling system functions to reproduce the hierarchical division of labour that is found in the typical workplace.

Although Bowles, Gintis, and Edwards confine their own empirical analyses to differences among white males, it would seem fruitful to extend their approach to differences between males and females. Whereas human-capital theory takes the sex-based division of labour as given--with females being seen as ideally suited for work in the home--the labour-market segmentation perspective asks how and to what extent the

attitudes and behavioural characteristics of males and females are shaped to reproduce the sex-based division of labour. In other words, like the hierarchical division of labour in the enterprise, the sex-based division of labour is inherently hierarchical: power resides with those (typically men) who control the household pursestrings, and the role of those (typically women) who must live off the earnings of others is to serve the needs of their "master".

Moreover, when females who accept a subservient role in the home enter the paid labour force, they tend to look for work where they can use their "service" skills. In addition, they are typically willing to accept wages that are supplementary to family income, because they view their participation in the labour force in this light. Insofar as family wages for males and supplementary wages for females remain the norms in society, even female heads of households who have to support a family on a full-time basis tend to find employment most readily in "women's" occupations and at "women's" (that is, supplementary) wages [for an historical perspective, see Humphries, 1978].

II. Empirical evidence

All these theoretical approaches are in need of empirical testing. Econometric efforts to account for the persistent earnings gap between males and females have not been particularly successful. Two empirical approaches dominate the literature, one focusing on supply-side impacts--the effects of worker characteristics on earnings--and the other on demand-side impacts--the effects of job and occupational characteristics on earnings.

The usual approach to estimation of the earnings gap is to estimate

two separate earnings functions for males and females where $Earnings = f(Human\ Capital)$. The estimated equations are then used to calculate how much earnings disparities would be reduced if females had the same levels of human capital as males. Female earnings are re-estimated, substituting in the means from the male wage regression equation for each of the human-capital characteristics. An estimate is derived of the average earnings expected if the only difference in average earnings between males and females was due to differences in the measured human-capital characteristics.

The variables typically used in the human-capital approach are education, on-the-job training, and experience--all those attributes embodied in the worker that determine the worth of the employee to the employer. There is normally no significant difference between males and females in terms of years of schooling (in U.S. studies, differences in years of education tend to be greatest between whites and blacks rather than between males and females). Hence, most approaches focus on work experience as the central explanation for earnings differences. Human-capital differences generally explain between 10 to 25 percent of the earnings gap [Oaxaca, 1973; Blinder, 1973; Sandell and Shapiro, 1978; and Sawhill, 1973].

But some recent studies that utilize the human capital approach go further in explaining the earnings gap [Mincer and Polachek, 1974 and 1978; Corcoran and Duncan, 1978]. Using data drawn from the National Longitudinal Survey and the Survey For Economic Opportunity (large U.S. national samples of married white wage and salary workers between ages 30 and 44), Mincer and Polachek found that differences in work experience alone account for almost half of the earnings differences. Their

central variables are education, actual labour market experience, and length of service with the firm.

If we assume that occupation is a way to qualify the quantity of investment in human capital, the Corcoran and Duncan study, which excludes occupation, can therefore be taken as a pure test of the human-capital model. As the theory states, economic agents invest in human capital as long as they can anticipate future returns on their present investments in education and experience. Under perfectly competitive assumptions, individuals have perfect mobility and perfect information about the economy and search for the highest return on their human capital, all of which implies that, in the long run at least, competitive forces will equalize returns on human capital across occupations and industries. That there are differences in returns for those in various occupations implies the existence of market imperfections. These imperfections include institutional rigidities to job mobility as well as discriminatory practises on the part of employers. The authors attribute almost one-third of the earnings gap to differences in work experience and over one-tenth to differences in on-the-job training. Females have less total work experience and on-the-job training. The authors note that differences in on-the-job training may result from discrimination in access to jobs with training opportunities.

Like Mincer and Polachek, Corcoran and Duncan utilize an available U.S. national data source--the ninth survey taken as part of the Panel Study of Income Dynamics. This survey was administered in 1976 to household heads and 3,000 wives, who were part of a national representative sample of almost 6,000 families. The questionnaire that formed the basis of the study included direct questions on the training content

of jobs, work history patterns, absenteeism because of an employee's illness, absenteeism due to illness of other family members, self-imposed restrictions on both job location and work hours, as well as plans to stop working for reasons other than training [Corcoran and Duncan, 1978, 5]. Their indicators of labour-force attachment include the last four factors listed above. These factors, however, explained none of the earnings gap. Insofar as females stay out of the labour force to rear children, when they do work their combined commitment to work in the home and in the labour market does not have a negative effect on earnings. The authors do note, however, that the wages of wives may be lower if moves of married couples are dictated by the careers of husbands. As Mincer and Polachek also note, geographic labour mobility of married women is often exogenous to the model due to the job changes of the husband [1978, 190].

Within the human-capital approach, "experience" is used in most wage equations as a proxy for acquired productivity characteristics. The majority of studies utilizing national data sets are handicapped by the lack of a measure for actual labour-force experience. The proxy utilized in studies using such data sets is (in years) age minus education minus six (or five). The fact that both Mincer and Polachek and Corcoran and Duncan use measures of actual labour-market experience undoubtedly goes some way in accounting for their relative success in explaining the earnings gap. But nevertheless, the returns to experience for females remain significantly lower than the returns to experience for males, and hence even in the most successful human-capital studies a large unexplained residual remains.

It should be noted that insofar as a correlation between wages and

experience is observed, it is difficult to ascertain whether it is higher productivity derived from on-the-job training or simply greater seniority that results in higher pay. Productivity, in the textbook sense, is defined as a measure of output per unit of resource input and can be easily measured where work is on a piece-rate basis. But such a straightforward relationship between input and output is usually not the case. The work of Medoff and Abraham [1979] utilizes performance evaluations as a direct measure of individual productivity for managers and professional employees in a single firm. They find that earnings are significantly correlated with experience, but not with performance ratings (that is, their measure of productivity). They therefore equate experience with seniority rather than productivity, and pose a problem for human-capital theorists who tend to assume that experience is an appropriate measure of productivity.

While Medoff and Abraham certainly pose a challenge to the assumptions of human capital theory, we might question whether performance ratings given by supervisors to subordinates reflect current relative productivities, given the inherent biases that must enter into such subjective evaluations. Although they do not explore differences between males and females in their study (their sample is made up entirely of white males), the findings of Medoff and Abraham have potentially important implications for estimating the earnings gap insofar as it is males who maintain longer-term attachments to the firm than do females and find it easier to climb internal job ladders to reap the rewards of seniority.

Differences between males and females across broadly defined occupational categories explain little of the male-female earnings gap [see

Brown, Moon, and Zoloth, 1978 and Buchele, 1982 where five to seventeen occupational categories are used]. Researchers have achieved greater success in explaining the earnings gap by gaining access to data sets that contain more narrowly defined occupational descriptions. Using 295 three-digit Census occupations, Sanborne [1964] accounts for 71 percent of the male-female earnings difference. The study, however, includes no variables that describe characteristics of jobs so we do not know why occupational differences account for the gap.

Three conclusions emerge from the literature surveyed above. First, males and females are employed in different kinds of jobs that yield females lower wages than males. Second, even when they are employed in the same kinds of jobs, females are paid less than males. Third, differences in the stocks of human capital do not adequately explain the major part of either of the above. These conclusions--and the associated unexplained residuals--have led researchers in different directions. The Polachek [1981] explanation of the lower earnings of females rests upon the specialization of female labour within the family. Females rationally choose jobs that maximize current wages and minimize their investment in training. England [1982], however, has refuted the predictions made by Polachek's theory. She concludes that there is no evidence that plans for intermittent employment make the choice by females of traditionally female occupations an economically rational one. She states furthermore that human-capital theory has not generated an explanation of occupational sex segregation that fits the evidence.

It can be argued that studies that utilize either more narrowly defined occupations or firm-level rather than national-level data bases will explain more of the differences in earnings between the sexes.

[See Agarwal, 1982 for a good summary of firm-level and national-level data bases for the United States and Canada.] The greater the number of factors controlled for, the smaller the differential will be. Most of the work on sex discrimination done thus far has utilized national data sets. Models for estimating the earnings gap that use national data sets are underspecified. Supply-side characteristics, such as education, experience, occupation, and hours and weeks worked, have been included in such models, but direct measures of performance, seniority, absenteeism, and turnover have not. Underspecification on the demand side appears to be even greater. For example, none of the studies has included demand-side factors, such as the nature of the firm's product market, industrial membership, technology, and size of the firm. Demand-side factors are important in terms of an employers' ability to pay. For example, different firms operating in the same labour market can pay different wage rates to workers in the same occupation. The importance of these demand-side variables is demonstrated by the work of Blau [1977]. She examines the distribution of male and female workers between firms and concludes that even when occupations are integrated, a large portion of earnings differences between the sexes is because females are employed in low-paying firms as compared to high-paying firms.

Publicly available firm-specific data bases for use in economic analysis are uncommon. In the case of male-female earnings differences, such firm-specific data sometimes become available when a researcher has been called in to analyze a particular discrimination suit. Even then, for reasons of confidentiality, the researcher may not be given the right to publish the results of the analysis. Nevertheless, a variety

of firm-specific studies have been done [for the United States: Malkiel and Malkiel, 1973; Cassell, Director, and Doctors, 1975; Ferber and Westmiller, 1976; Gordon and Morton, 1976; Osterman, 1979; for the United Kingdom: Chiplin and Sloane, 1976; Siebert and Sloane, 1981; for Canada: Robson and Lapointe, 1971; Shrank, 1977; Stelcner, 1979].

In a pioneering firm-specific study, Malkiel and Malkiel [1973] utilize data on 272 professional employees of a single firm (a research institute). They study the patterns of employment to analyze the allocation of jobs. After adjusting for actual labour-market experience, post high school education, marital status, college field of study, rate of absenteeism, and personal productivity (as measured by the number of publications), the female-male earnings ratio increases from 66 percent to between 75 and 89 percent. The firm provided the researchers with a 13 point ranking of job levels designed to indicate an individual's level of responsibility. By combining the job-level index with the other variables, the adjusted earnings ratio becomes 98 percent. Malkiel and Malkiel assume homogeneity with respect to career interests and attachment to the labour force, and therefore conclude that there is no discrimination in the form of unequal pay for equal work but rather discrimination due to job assignment. Females with the same qualifications as males are assigned to lower-level jobs. On the average, the level for male employees was 2.8 steps higher than for females. About one-half of the gross job-level difference can be attributed to the different characteristics (such as education and experience) of the males and females in the sample. The remaining half of the difference is unexplained and may be attributed either to discrimination against females or to other productivity-related characteristics that

may differ by sex -- characteristics that the researchers were admittedly unable to measure.

Osterman [1979] analyzes sex discrimination amongst 700 employees in a metropolitan publishing firm. Unlike Malkiel and Malkiel, Osterman does not assume that all employees are on the same job ladder. The central feature of his analysis is to identify hierarchically-structured job clusters (or internal labour markets) in terms of functions requiring related skills in order to investigate the male-female earnings differences within job clusters. Osterman concludes that the sex differential in earnings within clusters of similar jobs is much greater if marriage and children variables are excluded. Male employees reap higher returns from being married and having children than do female employees. He concludes that managers in this firm simply believe that married males with children deserve higher earnings than comparable females.

In an earlier study, Cassell, Director, and Doctors [1975] contrast discrimination within three separate internal labour markets. Unlike Malkiel and Malkiel and Osterman who focus on professional and managerial employees, Cassell, Director, and Doctors use a sample made up of 2300 blue collar and nonmanagerial white-collar employees. Cassell et. al examine the internal job structures of three separate firms. They estimate the standard wage regression with age (which is used as a proxy for precompany experience), race, sex, military experience, and a set of education dummies. They identify four types of discrimination: i) time-of-hire grade discrimination, but no post-hire discrimination for minority workers, ii) time-of-hire wage discrimination for females, iii) post-hire wage discrimination for females, and iv) post-hire grade dis-

crimination for females. A more specific finding is that in incentive-paid jobs, females receive grade promotions as rapidly as males who began at the same level, but tend to have lower earnings within each grade.

The most significant Canadian study to utilize a human-capital model to explore earnings differentials within a specific firm is one by Schrank [1977]. Schrank studies sex discrimination in faculty salaries at Memorial University in Newfoundland for 1973-1974. His data base includes 598 faculty workers of whom 494 are males and 104 are females. The main finding is that a large salary differential exists between the sexes because of differences in training and experience. A substantial unexplained difference arose between males and females who seemed to be professionally equivalent. To examine variation in patterns of discrimination throughout the university, he estimates pooled sample regression equations for individual faculties, such as Arts, Science, and Education. His major findings are that female faculty members are paid, on average, less than males with identical qualifications and experience who are in the same job. In addition, females are discriminated against in promotions to higher academic ranks and appointments. Evidence of sex discrimination in faculty salaries appears in all sectors of the university.

Two interesting British studies, Chiplin and Sloane [1976] and Siebert and Sloane [1981], utilize the human-capital model in a firm-specific context. The Chiplin and Sloane paper is based on a sample of 266 professional males and 269 females in a "specific occupation within a particular organization". As in the Osterman and Malkiel and Malkiel studies, the sample is made up of professional employees with high

academic qualifications, and data were collected from the firm's personnel records for individual employees. The firm is divided into two levels, with level 2 being higher than level 1 in terms of mean earnings and experience. The firm under study operates with a strong internal labour market with entry entirely restricted to level 1. Promotion to level 2 is a function of experience in level 1. Within each level there are grades that determine salary.

Two types of experience variables are included in the model, the first being work experience within each level and the second, work experience outside the company. With respect to education, Chiplin and Sloane assume that the majority of individuals in the sample possess identical years of schooling, because the occupational requirements are, in all cases, for a particular educational level. It is with this rationale in mind that they suppress the schooling variable in the model.

They estimate two separate equations for "basic" and "gross" salaries. Basic salary refers to the remuneration associated with the current job, while gross salary refers to the gross remuneration obtained over the twelve-month period. The results indicate that at least two-thirds of the variance in the log of salaries for the basic model can be explained by the experience variables. Specifically, the level 2 variables (for supervisory experience) are significant at the 1 percent level. For the male gross salary equation, the outside experience coefficient is significant, but negative, indicating that the firm under study operates with a pronounced internal labour market for this type of job. In the female gross-salary equation, the experience variable at level 1 has a positive and significant coefficient, indicating that on

average, females spend a longer period of time at level 1. In the actual measurement of discrimination, females are better paid according to the male equation than if rewarded according to their own earnings function. A general conclusion of the Chiplin and Sloane study is that while there is discrimination in terms of access to a higher-level job classification, it is possible to explain over half the difference in the proportions of males and females in the two grades in terms of different average characteristics, particularly length of experience. Furthermore, where females are promoted, they tend to be assigned to less responsible posts at lower salaries, the same conclusion reached by Malkiel and Malkiel for their U.S. firm.

The other major British study by Siebert and Sloane [1981] uses data obtained from the personnel files of five firms in light engineering, finance, the public sector, food processing, and clothing. Separate regressions relating weekly and annual earnings to experience and education are run, not only according to sex, but also according to marital status. Siebert and Sloane argue that employers might unjustifiably regard marital status as a proxy for commitment to work, indicating employment instability in the case of married females, but stability in the case of married males.

The results indicate that service with the firm and education are the most significant determinants of pay for all four sex-marital groups in all companies. The insignificance of outside service, coupled with the significance of internal service suggests strong internal labour markets. Their most important finding, however, is sex discrimination in the engineering company. Single females are paid up to 16 percent less than single males with similar characteristics. Marital status had

no effect in the engineering company and the clothing factory. They also assert that the financial institution exhibits a preference for hiring single females while the public service department prefers married to single persons of either sex.

III. Summary

A number of general conclusions can be drawn from these empirical studies. The first is that studies based on human-capital models that utilize national data sets find that females earn 60 percent or less than males. There is, therefore, no controversy over the existence of a large pay gap. There is, however, some difference of opinion concerning the causes of the differential. Research findings vary depending on (i) the explanatory variables used in the model, and (ii) the data base used to test the model.

Studies that utilize national data sets and a human capital model can account for 10 to 25 percent of the variation in earnings, while firm-level studies can account for 25 to 90 percent. The majority of studies reveal that to the extent that productivity is improved by simply doing the job, earnings will be related to experience. For those firm-level studies where strong internal labour markets exist, years of service with the company are more highly correlated with earnings than years of experience outside the company. In the firm-level studies, education and experience are highly significant in most but not all equations, while age is sometimes significant. At the level of the firm, the explanatory power of the human capital model seems high, given the small number of variables included in the model.

Firm-level studies obviously permit the researcher to control for

more factors than do national or regional studies, thus reducing the size of the unexplained residual. The major disadvantage of firm-level studies compared to more aggregated studies is the lack of generality of the findings of the former for the economy as a whole. The advantage of generality is somewhat dubious, however, when such a small portion of the earnings variance can be explained. It is the view of this researcher, at least, that the sources and mechanisms of male-female earnings differences have to be better understood before general conclusions can be drawn. Given the state of our present empirical knowledge on the sources of male-female earning differences, firm-level studies are in order.

To further our knowledge of this issue, it is not just more sophisticated data bases that are needed. We need to develop our conceptualization of sex-based earnings determination. Notwithstanding the existence of a number of studies that look at promotions within firms along internal job ladders, most of the empirical work on sex discrimination to date has been based on the human-capital model. As indicated in the first part of this chapter, a number of alternative hypotheses concerning the determinants of male-female earnings differences are suggested by the screening, dual labour market, and labour-market segmentation approaches. In general, however, these hypotheses have not been well enough specified for use in empirical work, including not only actual hypothesis testing, but also the acquisition of data that might make it possible to distinguish among alternative hypotheses.

To what extent then can the theories outlined in the first part of this chapter generate testable hypotheses that can lead us to an understanding of the male-female earnings gap? Are there additional theore-

tical perspectives originating from outside the discipline of economics that might be useful for a more comprehensive understanding of the determinants of the earnings gap? The following chapter addresses these questions, first by summarizing a perspective that, tries to integrate the relevant theoretical approaches, and then, drawing upon this perspective, by specifying nine hypothesis to explain male-female earnings differences.

Chapter 3 Testable Hypotheses

I. Introduction

A particular theory is only useful if it enables us to formulate testable hypotheses. Over time, a theory only remains useful if it increases our knowledge of underlying causal factors and, thereby, reduces the size of the unexplained "residual". The problem is that, while we theorize, the world that we are trying to understand itself undergoes change. Factors that may have had explanatory power at one point in time may no longer be significant, while new factors of potential importance might have to be integrated into our model. Hence, to generate potentially relevant testable hypotheses, we must not only synthesize the insights of the theoretical perspectives that are already at hand in the literature, but also seek to extend our perspective to take into account the changing historical situation.

As discussed in Chapter 1, the extent and nature of the participation of females in the Canadian labour force has changed dramatically over the last two decades, and it appears that the significant changes may be far from over. The increasing involvement of females in the paid labour force means that strains have been put on the traditional sex-based division of labour. In the world of paid work, moreover, females are increasingly entering occupations that have traditionally been almost the exclusive preserves of males. As stated above, one problem for hypothesis testing is that history matters. The behaviour of both employers and employees will be influenced by their perceptions of the relation between males and females in the workplace as well as by vested interests inherent in the historically-given status quo.

To get at these issues of the relation of perceptions and hence behaviour to the evolving reality, and the consequences for the relative earnings of males and females, we require much more specifically defined hypotheses than those that can be directly derived from the theories outlined in Chapter 2. It should also be noted that many, if not most, of the theories outlined above were not specifically developed to understand male-female earnings differences, and hence the theories will not necessarily build upon the differential constraints that males and females face in the labour market. We require a theoretical framework that recognizes the special constraints that women face in the labour market in general and in a corporate bureaucracy in particular. The construction of such a framework would, in our view, begin with an examination of the broader impact on earnings of the ways that males and females relate in the household as well as the different ways in which males and females are socialized.

Discrimination aside, the fact that, on average, males do better than females in the pursuit of careers implies that males have superior career-relevant skills than females. If this is the case, then a number of more profound questions are raised. How did males acquire superior skills than females? For policy purposes it is important to know whether the career-relevant skills were acquired prior to or after entering the corporate structure. Studies that invoke screening models imply that employers are reluctant to invest in the upgrading of the skills of females because they perceive them as being primarily attached to their families rather than to the firm. Hence the corporation runs the risk of being denied a return on this investment in human capital. One implication of such an attitude on the part of employers is that

females who do want to seek careers have to acquire the relevant training at their own expense, whereas males can often acquire it at company expense.

Females may also be deterred from investing in skills and pursuing careers by the absence of women at or near the top of job ladders [Kanter, 1977]. This "demonstration effect," itself deriving from the fact that females have only recently begun to vie in significant numbers for male-dominated jobs, may result in the reproduction of male dominance. Note that this outcome may occur even in the absence of an explicit policy of discrimination on the part of the firm. Rather females may choose not to acquire skills, to bid for promotion, to put in unpaid overtime, or they may choose to enter only those types of bureaucratic occupations (such as personnel management) where their sex has already made some progress.

The result of these constraints may well be occupational segregation within the bureaucratic structure, mirroring the observed occupational segregation in the society at large, with females predominating in low-paid managerial and technical jobs that have relatively short internal job ladders. As affirmative-action policies in the United States have recognized, discrimination cannot be dismissed as an issue just because females (or racial minorities) choose not to enter certain lines of work. The relevant policy issue may be rather the elimination of constraints that lead females to perceive their range of opportunities as being narrower than that of males.

The existence of male-dominated hierarchies within large corporations may provide males with better access to information and the attention of superiors. It has been argued that the development of

mentor relations are important for promotion within bureaucratic structures, and that males tend to have more mentor relations than females [Kanter, 1977; Thompson, 1978; Harlan and Weiss, 1981]. This line of argument recognizes that it is not impersonal market relations that determine internal promotion, but rather the personal knowledge that superiors have of subordinates. Superiors may not view themselves as discriminating against females. But the fact that they develop mentor relations more easily with males than with females leads them to make promotion decisions on the basis of incomplete information. It has also been observed that the motivation to improve and advance may be significantly affected by the degree of encouragement that supervisors give to subordinates. Males may receive substantially more information than females concerning the possibilities for promotion.

All these factors internal to the firm may lead females to perceive their work as jobs rather than as careers, thus reinforcing the perceptions of employers that the first loyalty of females is not to the firm but to the household. In fact, given the patriarchal attitudes of males and the nature of the early socialization of females, this perception may be correct even for females who genuinely wish to pursue careers. The choice for career-oriented females is then to avoid such constraints by avoiding marriage and or childbearing. That females have to make such choices while males do not amounts to institutional discrimination, and raises important issues for corporate and public policy concerning the provisions of daycare, the granting of paternity leaves, and accommodating the locational needs of two-career families. Indeed, as pointed out above, even females who, for the sake of their careers, resolve to avoid the constraints imposed by family relationships, may

fall victim to statistical discrimination if employers simply assume that, because they are females, they are subject to these constraints.

It is therefore important to ascertain the extent to which females in bureaucracies are constrained by the division of labour in the household and by the career preferences and requirements of their husbands or partners. Research must address the difficult and subjective question of the extent to which females acquiesce to constraints in a male-dominated culture. As recognized in the "fear-of-success" literature [Horner, 1972; Hennig and Jardim, 1977], females may experience great difficulty in competing for "male" jobs because the behavioural attributes required to succeed in these jobs--aggressive behaviour and the exercise of authority for example--contradict the ideals of feminine behaviour for which females have been socialized to strive.

The fear-of-success literature raises a crucially important issue concerning the nature of career-relevant skills within the enterprise. Although it is generally assumed that such skills are cognitive, and hence can be learned by those who possess the motivation and mental capacities, some economists have argued that career-relevant skills are behavioural, being the products of long periods of socialization within the family and schooling system [Bowles and Gintis, 1976; Edwards, 1976 and 1977]. It can be argued, for example, that the ability to exercise authority, which is surely an important determinant of productivity in most higher-level bureaucracies, cannot simply be learned by someone who has been raised to accept patriarchal dominance. One policy implication of this perspective is that equality between the sexes in the workplace requires that bureaucratic structures be changed to adapt to female behavioural traits rather than that females adapt to masculine culture.

The obvious cultural conflict that would be involved in altering bureaucratic structures points to the potentially deep-seated nature of the unequal positions of males and females in the corporate economy.

The approach just outlined may be viewed as creating a bridge between the work of social psychologists who seek to understand individual preference formation and the work of economists who seek to document the economic outcomes of the choices that are made. Supporting this bridge is the work of sociologists who seek to understand the nature of the institutional constraints that determine different ranges of choices for different segments of the population. The following hypotheses represent attempts to specify the nature of differential social constraints that males and females face, the related differences in behaviour manifested by choices made subject to these constraints, and economic impact of such constrained optimization.

II. Hypotheses

A number of testable hypotheses are suggested by this theoretical synthesis. Most conventional is the human-capital hypothesis that posits differential acquisition of education and experience as the source of male-female pay differences. The occupational-segregation hypothesis that argues that to a significant extent males and females are not allocated to jobs according to productive capabilities (as for, example, reflected in human-capital measures) but rather because some (generally lower-paying) jobs have been stereotyped as "women's work" while others have become the preserve of males. When looking at male-female differences within companies where internal job ladders are operative, an independent and chronologically prior source of occupa-

tional segregation may be the initial allocation of males and females to entry-level positions that may, in turn, hold out greater or lesser prospects of advancement within the firm. To test whether there is entry-level occupational segregation on the basis of sex, we put forth the port-of-entry hypothesis.

But the ability of males and females to take advantage of labour-market opportunities may be limited by the social relations of the household. The commitment-to-the-home hypothesis is designed to test whether differential household responsibilities of those who participate in the labour market have a significant impact on their earnings. A related hypothesis, that applies only to employees who are currently living with a spouse or partner, tests the impact of a "dominant-career" on earnings. The dominant-careers hypothesis posits that employees whose spouses or partners support their careers (in a number of ways to be specified below) will achieve higher earnings than employees who do not receive such support, and particularly when, to the contrary, it is the employee under consideration who is expected to support the career of the spouse or partner.

The commitment-to-the-home hypothesis, therefore, can also be viewed as testing the impact of commitment to the labour market on earnings. But, in addition, people pursue careers within specific firms. The commitment-to-the-firm hypothesis posits that "organization men and women"--such as those who work overtime without pay--will achieve higher earnings than those who simply see their position in the firm as a nine-to-five job. Of course, an underlying cause of differential commitment to the firm--and whether an individual views his or her employment as a job or as a career--may be differential commitment to

the home (including in some cases the dominant career of a spouse or partner).

Promotion and earnings may also be dependent on the informal relations that particular employees develop within the firm. The informal-networks hypothesis is designed to test whether the quantity and quality of informal contacts that an employee has with superiors are significant determinants of earnings. Our particular purpose here is to ascertain whether males are better at establishing informal networks than females and to what extent. It may also be the case that females do not seek out promotion opportunities and higher earnings within the firm because they do not think that a woman has much chance of upward mobility. The perceived-discrimination hypothesis is put forth to test whether the perceptions that employees have of sex bias in the firm's promotion practices are significant determinants of earnings actually achieved.

A final hypothesis--the early socialization hypothesis--addresses the potentially inbred nature of attitudes, motivation, and social skills that may have impacts on earnings. With the exception of the contribution to earnings of high-school education (a level that is attained by almost all managerial, professional, and technical employees in a modern corporation), all of the previous eight hypotheses focus on the impacts of adult experiences on the relative earnings of females and males. The early-socialization hypothesis posits that the female- or male-orientation of childhood activities and parental-role models will have significant impacts on the earnings of an individual as an adult.

In order to indicate the types of variables that would have to be constructed to capture the phenomena that these nine hypotheses are intended to reflect, the nature of each of the hypotheses will now be

discussed in more detail. With the appropriate data set (see Chapters 4 and 5), we will then be in a position to test these nine hypotheses by means of multivariate regression analysis (see Chapter 6).

The Human-Capital Hypothesis

The standard neoclassical approach to analyzing pay discrimination draws upon national data sets to explain pay differences between males and females in terms of schooling and on-the-job experience. These variables, however, explain only a minor portion (about 40% of the variance) of the gap between the sexes [in the Canadian context, see studies by Ostry, 1968; Holmes, 1976; Gunderson, 1975 and 1979; Robb, 1978]. The residual is then attributed to discrimination.

The simplest way to improve significantly upon these studies is to acquire data that will yield a more accurate measure of experience than the measure typically utilized. The traditional proxy for experience has been an individual's age minus years of schooling minus six, applied to both males and females. This measure may adequately approximate the labour experience of males, but it does not adequately measure the employment experience of females. On the average, females enter and exit from the labour force more than males because of childbirth and other household responsibilities (for example, job loss when a spouse or partner changes location). Ideally, we would want a more detailed data base that would yield a real, as opposed to proxy, measure of experience for each observation.

Given the problem of occupational segregation, we would also like to know the specific types of training that males and females have acquired. The returns to education may be very different, depending upon

the area of concentration (for example, arts as opposed to physical sciences). Most studies find that, on average, males and females have almost equal amounts of education measured simply by time. Area of concentration, therefore, could prove to be important as a determinant of differential outcomes. Such a finding, however, would raise a more profound question: why do females invest in types of education that tend to have relatively low rates of return?

The Occupational-Segregation Hypothesis

As a whole, the occupational segregation of females in the Canadian economy has been fairly well documented. But for lack of firm-specific data, the occupational segregation of females within large corporations has received little, if any, empirical analysis. Firm-level data would provide information on present occupation and occupational mobility within the firm as well as pay grade, enabling us to determine which types of jobs and occupations are male dominated and which types are female dominated. From supplementary firm-level data on the occupational structure of internal job ladders, we could then examine the extent to which horizontal distribution in employment determines vertical mobility. Specifically, we could assess whether, within corporate bureaucracies, female-dominated occupations in general and female-dominated jobs in particular provide normal access to shorter or more dead-end job ladders than do those occupations and jobs within which males dominate.

The Port-of-Entry Hypothesis

The port-of-entry hypothesis posits that an individual's initial broad occupational category or department within the firm affects his or

her subsequent upward mobility in the same company. Ports of entry will have such an effect only if, in and of themselves, they give employees differential access to vertical job ladders. If so, the initial horizontal distribution of individuals across occupational categories or departments will determine their subsequent vertical mobility. The career and earnings possibilities of females may be limited relative to those of males because females may have been concentrated in ports of entry that gave them access to relatively truncated job ladders. The port-of-entry hypothesis might also be termed the initial-occupational-segregation hypothesis.

The Commitment-to-the-Home Hypothesis

Screening theories argue that, particularly in jobs demanding long-term attachment to the firm, cost-minimizing employers prefer to hire males rather than females. It is supposed that females will tend to impose higher turnover and absenteeism costs on the enterprise because of their primary attachment to the household. But screening theories implicitly view the initial hiring decision as the be-all and end-all of the employer-employee relation. Females suffer statistical discrimination in the labour market (or labour exchange), not in the labour process (that is, within the firm). To test the screening hypothesis, we would need data that compared the productivity-related attributes as well as ascriptive characteristics, such as sex, of not only employees actually hired, but also those job applicants denied employment in the firm.

Statistical discrimination against females (such as that envisaged

by screening theories) might occur within the firm, even when employers have considerable information about the personal attributes and productivity performances of males and females. Just because a current employee is a female and therefore might get married, have (more) children, follow her husband to a new job in a new location, etc., the employer might assume that her first commitment will be to the home, and this assumption might prejudice the treatment of the female employee relative to the male employee in ways that are detrimental to the advancement of her career (for example, denial of promotion or on-the-job training). Of course, male employees might also get married, father children, have wives who are offered attractive jobs in different locations, etc., but employers might assume that the careers of males will always take precedence over servicing the direct needs of wives and children [for a controlled experiment that tested the attitudes of 1500 top executives in the U.S. and that found support for this proposition, see Rosen and Jerdee, 1974].

Insofar as screening methods are used by the firm in hiring and promoting, it is not clear whether employers actually consult statistical records or operate on the basis of "conventional wisdom" in their treatment of males and females. In any case, to test the statistical discrimination version of the commitment-to-the-home hypothesis as a determinant of male-female earnings differentials, we would need to know what employers were thinking about the family commitments that current employees might have in the future when they offered promotions, assignments, training, etc. to employees with different productive and ascriptive attributes.

In their treatment of employees, however, employers might also be

influenced by commitment to the home as manifested by actual absenteeism of employees for family-related reasons. To test this more concrete version of the commitment-to-the-home hypothesis, we would need to know more than just the duration and frequency of absences; we would need to know why employees are absent. An ideal data set would break absence down into its associated microcomponents, such as absences due to pregnancy and family responsibilities and absence due to illness.

Much has been written on the theme that "a woman's work is never done." We are therefore interested not only in the amount of time that employees take off from work for household matters, but also how the responsibility for such tasks as cleaning and cooking are allocated in the household even when an individual is working full-time. An ideal data base would have information on division of labour within the household for full-time employees in order to capture the degree to which the burden imposed by this division of labour constrains the income-earning activities of employees of different sexes.

It would also be of interest to examine the impact of the sex-based division of labour on attempts by males and females to secure promotions. For example, a recent study contends that the reason females do not get promoted is that they do not wish to be promoted [Hoffman and Reed, 1981]. It is argued that females do not bid for posted promotion opportunities. But the Hoffman and Reed study does not explore the factors constraining the choices that females do make, such as the choice not to bid for a posted promotion opportunity. It may be that, because of household responsibilities, females feel incapable of assuming increased corporate responsibilities, a constraint that may not apply to males.

The Dominant-Career Hypothesis

For those individuals who are married or attached, another powerful constraint on the careers of females may be the career requirements of their husbands or partners. The pursuit of careers often requires geographic mobility (and perhaps especially when one partner works for a multi-branch enterprise). Therefore, situations may often arise when one career has to give way for another--or at least when the material and psychological costs of not doing so in terms of commuting, duplicate household facilities, and disrupted family life may be considered by one or both of the partners as being too great.

In general, for those who have careers, a larger proportion of married women than married men will be members of dual-career households. Hence, precisely because of the survival of the pure sex-based division of labour within some family units, we would expect that males as a group will be less constrained by dual-career problems than females as a group. Information on the existence of the dual-career problem and on which career is dominant in household decision-making would permit us to ascertain the extent to which married males and married females face different constraints in the pursuit of careers and the implications of such differences for observed earnings and promotions.

The dominant-career variable may also be highly correlated with such variables as unpaid overtime, mentor relationships, and bids for promotion--a person who feels he or she has little control over the location or longevity of his or her career may be less willing to devote time to activities and strategies that are instrumental in career building.

Commitment-to-the-Firm Hypothesis

Mincer and Polachek [1975], who based their study on a national data set, found the child variable to be insignificant in explaining differences in full-time earnings among females as a whole, but negative and significant when limited to a subsample of highly educated females with strong labour-force attachment. They suggest that this subgroup responds to marriage and children not by working part-time, but by working fewer hours in a full-time job. Commitment to the firm and commitment to the home might be seen, therefore, as two sides of the same coin.

More commitment to the home, however, might reflect not so much less commitment to a particular firm, but less commitment to the labour market in general. To test the impact on earnings of the commitment-to-the-firm hypothesis as distinct from commitment to the labour market in general, we would need measures that reflect the extent to which employees view their future prospects for advancement as occurring within their current firm. For managerial and professional employees, one measure of commitment to the firm might be the willingness to put in unremunerated working time. Another indicator would be the number of outside jobs an individual has applied for since being with the company. We can assume that individuals who are committed to the company would apply for fewer jobs or none at all. Still another good indicator of commitment to the particular firm could be the salary increase that would be required to entice an individual away from his or her present job to take another position with the same promotional prospects. We would want to know whether, on the basis of these indicators, male employees reveal more commitment to the firm than do female employees.

The Informal-Network Hypothesis

Virtually all large organizations have rules and procedures for promotion and pay increases that are in principle meritocratic. Individual preferences are not supposed to determine professional advancement. Personal relationships are assumed to be independent of an individual's career progression. Alongside these formal procedures, however, informal interpersonal networks will inevitably arise. In pursuit of the firm's goals, trust and loyalty are essential, and hence the corporation cannot function on a purely impersonal basis. Moreover the people who inhabit the corporate structure will strive to develop personal relations within that structure for the sake of furthering their own goals.

These informal networks may supply superiors with information concerning the loyalty of subordinates that cannot be derived from formal performance evaluations. In making or recommending promotions, superiors may be more influenced by particular personalities than by any objectively determined productive characteristics of their subordinates. Indeed, the key to promotion in a large bureaucratic structure may well be the development of a mentor relationship as discussed earlier. Informal networks may also be important in that they allow people to discover what opportunities are available. Those with better access to these networks will have an advantage over those with lesser access in positioning themselves for promotion. In the male-dominated atmosphere of the large corporate enterprise, it is very conceivable that male employees will be better able to become involved in informal networks than female employees, with a relatively positive impact on their earnings.

The Perceived-Discrimination Hypothesis

The perceived-discrimination hypothesis tests the proposition that the success of females in gaining promotion within the corporation is adversely affected by the low proportion of females who have already gained promotion. The argument is that females at lower and middle managerial positions observe the current situation at the higher managerial levels, and they assume that the situation will persist. As a consequence they may be less motivated than men to invest in skills, contribute their unpaid overtime, or seek to develop informal networks within the firm, thus lessening their chances of promotion. To test this hypothesis requires data on whether employees think that there is sex bias in promotion and whether the number of people of a certain sex in top positions affects the motivation of males and females at lower levels of the corporate hierarchy to strive for advancement.

The Early-Socialization Hypothesis

Despite the rapid influx of females into the paid labour force over the past few decades, it is probably true that married women are viewed, and view themselves, first as mothers (as do mothers who are not married) and wives and second as income earners. Married men, on the other hand, may well view themselves as income earners first and fathers and husbands second. Insofar as females in general do not have access to jobs from which they can derive a family wage whereas males in general do, there is clearly a material basis for these perceptions. But even when these material constraints are lifted, there may still be a strong subjective element that leads even managerial and highly skilled females to see their household roles as dominating their corporate roles.

Psychologists and sociologists have argued that the types of activities that male and female children are encouraged to pursue and the types of role models they are encouraged to follow in their childhood prepares females for mothering and nurturing within the home, while preparing men for competing and aggressing in the world of paid work [Chodorow, 1980]. To some extent the sex-based division of labour is socio-biological. Females, not males, bear children and lactate. But well before females even think about the decision to marry or have children or pursue careers, they are exposed to psychological processes that emphasize mothering, not income earning.

Most females who are already participating in managerial and professional careers have the objective potential to put income earning ahead of mothering. But, unlike males, they may be constrained in so doing by ingrained psychological instincts. It would be of interest to examine the systematic relation between the quality of early socialization of males and females and economic outcomes. By gathering data on the early socialization of males and females, we could test the hypothesis that male-female differences in types of childhood activities and role models are significant determinants of male-female earnings and promotion differences within the corporation.

III. Summary

Throughout this discussion of the testable hypotheses, reference has been made to the nature of the "ideal data set." As will be discussed In Chapter 4, no data set even approaching the ideal was readily available for purposes of analyzing the sources of male-female earnings differences in Canada. A critical stage of the project was the genera-

tion of an appropriate (if not ideal) data set based upon a specially-designed questionnaire. The first part of the following chapter, therefore, points out the deficiencies, from the perspective of the hypotheses set out above, of the data bases that were available to analyze male-female earnings differences in Canada. The second part of the chapter goes on to show how a more germane set of variables has been constructed from the questionnaire that we have developed.

Chapter 4 Hypothesis Testing with Questionnaire Data

I. Existing Data Bases

There exist three main data sets that can be used as a basis for research on the earnings gap between males and females in Canada. However useful these data sets may be, they do not include the kind of information necessary to test the hypotheses outlined in Chapter 3.

After discussing the nature of these data bases, an assessment will be made of the strengths and weaknesses of the main studies that have utilized them. We then explain how the data generated by means of a firm-level questionnaire for this project overcomes some of these weaknesses. Finally, we show how relevant variables can be constructed from the questionnaire responses to test the hypotheses outlined in Chapter 3.

The three existing data sources suitable for analyzing the male-female earnings gap in Canada are (i) the Annual Survey of Consumer Finance, (ii) the Department of Labour Annual Survey of Wage Rates, Salaries and Hours of Labour, and (iii) the Census data collected every ten years. It should be noted that there exists in Canada no data base that is comparable to the U.S. National Longitudinal Survey data base that contains work histories of individuals over time. Data bases such as these are invaluable sources and are particularly useful when analyzing female participation in the labour force, because they contain information on exit from and reentry into the labour market.

The Survey of Consumer Finance (SCF) was conducted intermittently from 1951 to 1971. It is only since 1971 that it has been conducted on an annual basis. Aggregate data are available in annual reports, and

the underlying micro-data tapes containing observations on individuals are also available. The central drawback to the data base is that it does not resample the same individuals over time.

The only study that utilizes this data base is by Holmes [1976]. Drawing his observation from the SCF for 1967, he fits separate regressions for males and females, in which he specifies the following as independent variables: age, weeks worked, region, residence, immigration status, class of worker, marital status, occupation, and the nature of work (full-time or part-time) as well as education. His approach is slightly different from most in that he generates life-cycle incomes for individuals. Holmes finds a gross differential in male-female earnings of 59 percentage points, of which about 15 percentage points is accounted for by worker characteristics. In considering the impact of these characteristics over the life-cycle, Holmes shows that the potential earnings of the female university graduate rise from the level of the male high-school dropout to that of the male high school graduate. Three-quarters of the gross differential remains unexplained: earnings discrimination against females in the Canadian labour market is estimated to be 44 percent of male earnings.

The second major data base used to estimate the earnings gap is the Occupational Wage Survey (OWS) published annually by Labour Canada in Wage Rates, Salaries and Hours of Labour. The data are constructed on the basis of company reports that give the earnings of males and females for specific, narrowly-defined occupations. Gunderson [1983, 60] (the first researcher to use this data base [Gunderson, 1975]), argues that this data source enables researchers to compare male and female wages and salaries within a narrowly-defined occupation, controlling for

interoccupational, interindustry and interregional wage differences. When using the Occupational Wage Survey data, it is not necessary to control for other productivity-related factors, such as education, experience, or initiative; to the extent that these factors matter, they would result in different job descriptions. What is central, Gunderson asserts, is that the person can do the job, not that the person brings certain characteristics to the job. As he notes, someone with low formal education, but considerable work experience, may be in the same narrowly-defined occupation as one with the opposite characteristics.

The OWS data are relatively current, being generated annually, and the structure of the data allows occupations to be specified as being either in the primary or secondary labour market [Aw, 1980]. But the narrowly-defined occupational designations that are the distinctive feature of this data source have changed considerably over time. And just as many occupational titles change, so do the inherent skills that make up the jobs in those occupations. Hence it would be difficult, if not impossible, to do time-series analyses with these data. The data source also precludes researchers from analyzing the magnitude of the earnings gap that is due to differences in the productive attributes of males and females.

Given the fact that these data are generated at the level of the firm and within narrowly-defined occupations, the OWS enables us to calculate the potential male-female earnings differences within occupations, an advantage from the policy point of view because it is at this particular level that equal pay legislation applies. Gunderson [1975] shows that male wages exceed female wages by 22 percent in jobs with identical job descriptions. The differential is 8 percentage points

smaller in occupations with incentive-pay systems, implying that a payment system based on results will help to achieve equal pay. Another finding is that unionized companies had smaller differentials. According to Gunderson, this indicates that unions bargain for equal pay. The actual switch-over of equal-pay legislation from the Human Rights Act to the Employment Standards Act (which as Gunderson notes was meant to make the legislation more effective) had no significant impact on narrowing the male-female wage differentials.

Another major finding of the Gunderson study is the negative and statistically significant coefficient for the company-size variable, indicating that larger companies have smaller male-female wage differences than smaller companies. On the basis of wage differences in the trade sector, it is inferred that the preferences of customers are an important source of discrimination. This coefficient is 11 percentage points larger than the coefficient for the service-industry reference group.

The third major source utilized to analyze the male-female earnings gap in Canada is Census data. This data set offers excellent coverage of the population. It is available in published reports and in the Public Use Sample Tapes of individual records. Based on these published reports, aggregate comparisons can be made between the 1961, 1971, and 1981 data. Information is available on employment and wage income, cross-tabulated with age, education, class of worker (wage earner or self employed), weeks worked, part-time and full-time work, and occupation.

A central drawback of this data base is that it is published only once every ten years. Moreover, the information is not available until

several years after the reference period. The 1981 tapes, for example, only became available in late 1983. An additional shortcoming of the Census data is the absence of important variables, such as actual work experience and seniority as well as union status--all of which are central to analyzing the earnings gap.

The two most important studies that utilize the Census data are by Robb [1978] and Gunderson [1979]. Robb estimates separate regressions for males and females in Ontario. In an attempt to deal with the lack of an actual measure of labour-force experience, she compares the earnings of all males and single females over thirty years of age, as well as the earnings of all other males and all other females. Her rationale in making these comparisons is that single females aged thirty and over are, as a group, more like males in terms of career motivation and labour-force attachment, so that an analyst is, in effect, controlling for these critical variables.

Robb follows Oaxaca [1973] in her equation specification in that the earnings differentials are first calculated with the full regression and without standardization for personal characteristics for occupation and industry. The rationale behind the specification technique developed by Oaxaca is that by using the full regression, researchers will obtain a lower limit for discrimination. It may also be the case that there is discrimination between occupations as well as within specific occupations. By controlling for occupations and industry, we exclude the possibility that different occupation and industrial distributions for males and females may reflect occupational discrimination. Alternatively, by excluding the occupation and industry variables, it is argued that discrimination will be overestimated. We are "allowing" an unfair

advantage to workers who are actually less productive not because of personal productivity-related attributes but because they are concentrated in particular occupations and industries that have low levels of productivity. The combination of the two regressions enables researchers to acquire a "band" for discrimination [Oaxaca, 1973, 699; Robb, 1978, 357].

Robb finds that, between all males and all females, discrimination accounts for 58.9 percent of the logarithmic earnings differential in the full regression and 75.4 percent of the differential in the "personal characteristics" regression. These results are somewhat comparable to those of Oaxaca: 52.9 percent and 78.4 percent respectively. Her regressions for all males and single females over thirty yield substantially changed estimates; discrimination accounts for only 14.7 percent of the differential in the full regression and 36.9 percent in the regression not standardized for occupation and industry. A more detailed examination of her results reveals that males are rewarded more highly than females for comparable education and experience. As for the occupational variables, although males have an occupational distribution that yields higher earnings, females appear to gain an earnings advantage when they enter certain occupations. But the fact that part of the earnings difference is accounted for by differing occupational distributions is an indicator of some occupational discrimination.

Gunderson's [1979] results are based on a single full regression equation for males and females across Canada that contains more variables than Robb's. His results, however, are quite similar. Of the earnings difference, 63 percent can be attributed to wage discrimination and 37 percent is attributable to males having greater amounts of wage

determining characteristics. His results reveal that a substantial portion of the overall earnings advantage of males can be explained by their greater experience and their better occupational and industrial distribution as well as their marital status. For the same education, experience, and marital status, females receive lower earnings than male--all of which are the standard findings in the literature.

The work that has used these three data sets to analyze the male-female pay gap in Canada has increased our understanding of the extent of earnings differences and discrimination. But it has had little to say about the institutional sources of male-female earnings differences or the mechanisms of discrimination. Specifically, the nature of these data sets does not permit researchers to test the kinds of hypotheses outlined in Chapter 3. Previous research has not explored the impact of social relationships within the corporation and the family on male and female earnings differentials.

II. The Generation of Appropriate Firm-Level Data

Within economics at least, the academic literature to date has not concerned itself with how males and females acquire personal characteristics and attitudes that may be important determinants of labour-market outcomes. As affirmative-action legislation in the United States has recognized, the barriers to acquisition of income-producing traits may be the real source of discrimination. To argue that females are not discriminated against because they have not acquired as much in the way of productive attributes as have males may be to test for discrimination after the fact. In addition, we need to know more about what constitutes a productive attribute.

Standard economic analyses tend to ignore issues such as motivational factors or division of labour in the household. As Mincer and Polachek [1974, 170] note: "That the differential allocation of time and investments in human capital is sex linked and subject to technological and cultural changes is a matter of fact that is outside the scope of our analysis". Polachek [1975] recognizes that the structural differences between male and female wage equations are in part the result of the division of labour within the family. It is our view that such a recognition should lead us to explore the extent to which many of the estimates of sex discrimination are subject to significant bias.

To answer the questions raised by the theoretical perspective in Chapter 3 requires data on the special constraints that females face in acquiring productive attributes and pursuing careers in the corporate economy. If males do better than females in the pursuit of careers, it may indeed be that males have more or better career-relevant skills than females. But how did males acquire more or better skills than females? For policy purposes it is important to know whether career-relevant skills were acquired before or after entering the corporate structure. Past research has been constrained by both inadequate data bases and inadequate conceptualization of the institutional nature of the problem. In Chapter 3, we have begun to grapple with the problem of conceptualization, an ongoing process that must be stimulated and directed by empirical analysis.

To overcome the shortcomings of the existing data bases, we have developed a questionnaire that generates cross-sectional information needed to test the hypotheses outlined in Chapter 3. The analysis of male-female earnings differences is based upon data reported by 2511

employees (31 percent females) in three Canadian firms. The data are self-reported and comes from a questionnaire administered primarily to technical, professional, and managerial employees (in one company a broader occupational spectrum was included, although over three-quarters of the sample for this firm are bureaucratic employees). The general occupational focus allows us to analyze earnings differences among that portion of the labour force who have already invested in human capital. The firm-specific nature of the data base permits us to control for the particular behaviour and circumstances of firms, while at the same time extending the scope of analysis to an investigation of internal mobility within a firm.

In what follows, we list by hypothesis the variables that have been generated from the questionnaire data. For each variable, the assigned name is given as well as the specific definition. We also indicate (by number as they appear on the copy of the questionnaire in Appendix 1) the relevant question numbers used to construct each variable.

VARIABLES AND DEFINITIONS:

Sex discrimination

Sex: SEX, 1 if female, 0 if male (Q.2).

Human capital

Age: AGE, Age in years (Q.1)

AGE2, Age in years squared (Q.1).

Levels of education:

EDHS2, 1 if high school, 0 otherwise (Q.7).

EDTS2, 1 if CEGEP, community college, or technical institute, 0 otherwise (Q.7).

EDCS2, 1 if college classique, bachelor's degree or equivalent, 0 otherwise (Q.7).

EDPS2, 1 if master's or doctorate, 0 otherwise (Q.7).

Area of educational concentration:

ACON1, 1 if area of concentration is in humanities, or the arts (includes degrees in literature, fine arts languages, history or equivalent), 0 otherwise (Q.8).

ACON2, 1 if area of concentration is in social sciences (includes economics, anthropology, political science, sociology, education, business, psychology, and communications or equivalent), 0 otherwise (Q.8).

ACON3, 1 if area of concentration is in applied sciences (includes chemistry, biology, physics, environmental studies, engineering, computer science, statistics, maths, or equivalent), 0 otherwise (Q.8).

ACON4, 1 if area of training either in high school or beyond is technical or vocational (includes electrical, carpentry, plumbing, secretarial, or equivalent), 0 otherwise (Q.8).

Full-time labour force experience:

FTLFEX, full-time labour force experience in years (Q.13).

FTLFEX2, full-time labour force experience in years squared (Q.13).

Employment with present company:

FYSERVC, full-time years of service with the company (Q.10).

FYSERVC2, full-time years of service with the company squared (Q.10).

Occupational segregation

For sample 1, the following jobs have been aggregated into the following hierarchical occupations:

OCC1, 1 if team leader, project leader or supervisor, 0 otherwise (Q.9).

OCC2, 1 if analyst or programmer, 0 otherwise (Q.9).

OCC3, 1 if clerk or technician in operations support or computer operator, 0 otherwise (Q.9).

For sample 1, the functional (or departmental) occupations are:

SDN1, 1 if technical support, 0 otherwise (Q.9).

SDN2, 1 if software development, 0 otherwise (Q.9).

SDN3, 1 if operations support, 0 otherwise (Q.9).

SDN4, 1 if computer operations, 0 otherwise (Q.9).

For sample 2, the occupational categories are:

OCC1, 1 if director, chief of division, manager, or administrative staff, 0 otherwise (Q.9).

OCC2, 1 if clerical staff (includes secretary, typist, receptionist, or data entry clerk) (Q.9).

OCC3, 1 if engineering staff, 0 otherwise (Q.9).

OCC4, 1 if scientific research staff (includes chemist, biologist, agronomist, geologist, or surveyor), 0 otherwise (Q.9).

OCC5, 1 if computer staff (includes analyst or programmer), 0 otherwise (Q.9).

OCC6, 1 if secondary services staff or unskilled labourer, 0 otherwise (Q.9).

OCC7, 1 if financial staff (auditor, accountant, budget analyst, or real estate agent), 0 otherwise (Q.9).

OCC8, 1 if primary service staff (health, librarian, archival, law, or education), 0 otherwise (Q.9).

OCC9, 1 if skilled labourer (line installer, machinist, electrician, carpenter), 0 otherwise (Q.9).

OCC10, 1 if public relation staff, 0 otherwise (Q.9).

OCC11, 1 if bluecollar supervisor, 0 otherwise (Q.9).

For sample 3, the occupational categories are:

OCC1, 1 if scientific staff, engineering staff or computing staff, 0 otherwise (Q.9).

OCC2, 1 if management, administrative staff, or financial staff, 0 otherwise (Q.9).

OCC3, 1 if clerical staff, 0 otherwise (Q.9).

Port of entry

First departments into which individuals were hired (for sample 1 only; recent company reorganizations that affected department and occupational

made it impossible to gather reliable information on the first departments into which individuals were hired for samples 2 and 3):

FDN1, 1 if technical support, 0 otherwise (Q.9).

FDN2, 1 if software development, 0 otherwise (Q.9).

FDN3, 1 if operations support, 0 otherwise (Q.9).

FDN4, 1 if computer operations, 0 otherwise (Q.9).

FDN5, 1 if in miscellaneous category, 0 otherwise (Q.9).

Commitment to the home

Marital status:

MARRIED, 1 if married or living together as a couple, 0 otherwise (Q.3).

Number of children living with the respondent:

CHILD1, total number of children 5 years and under (Q.5).

CHILD2, total number of children 6 years and over (Q.5).

Time taken off from job for reasons other than a vacation:

LFAM, number of weeks absent from the labour force due to pregnancy and personal or family responsibilities (Q.17).

Division of labour in the household (applies only to marrieds or persons living with another as a couple):

DLHH, an index of household responsibilities that ranges from 0 to 300, constructed by totalling the percentages of cooking, housework/cleaning, and the transportation of children (jobs that have traditionally been the responsibility of females) done by the respondent (Q.42).

Dominant career

Willingness to move for the sake of spouse's/partner's career (applies only to marrieds or persons living with another as a couple):

UMOV, 1 if yes, 0 if no or don't know (Q.34).

Support of spouse or partner for respondent's career (applies only to marrieds or persons living with another as a couple):

SPSCAR2, 0 if not at all, 1 if offers moderate support, 2 if is extremely encouraging (Q.35).

Willingness of spouse or partner to move for the sake of respondent's career (applies only to marrieds or persons living with another as a couple):

SPMOB, 1 if yes, 0 if no or do not know (Q.36).

Willingness of a spouse or partner who is a professional to move for the sake of the respondent's career (applies only to marrieds or persons living with another as a couple):

SPSTRPRM, 1 if spouse or partner is a professional (Q.37A), and if SPMOB = 1, 0 otherwise.

Relative importance of respondent's career to the family with respect to income, career commitment, and personal satisfaction (applies only to marrieds or persons living with another as a couple):

IMCARTF, 1 if respondent's, 0 otherwise (Q.39A).

Commitment to the firm

Overtime work without pay:

WWOP, number of times that respondent worked overtime without pay in 1982 (0 if never, 5 if 1-10 times, 15 if 11-20 times, 25 if more than 20 times) (Q.20).

Increase in pay that would be necessary to entice the respondent to leave his or her with present firm to go to a similar job, with similar promotional prospects, in another firm:

CAROT, percent increase in pay (Q.14).

Outside jobs applied for while employed with present company:

OSJAP1, 1 if one or more outside jobs applied for, 0 otherwise (Q.19).

Total absence from the company:

TOTABFC, total number of weeks taken off from the company for reasons other than a vacation (Q17).

Informal network

Use of informal networks for career advice:

INFORM, an index of informal networks, constructed on the basis of the following weights for each contact: top executive = 3, current supervisor = 2, previous supervisor = 2, personnel = 1, colleague in area = 0, colleague in other area = 0, someone outside the company = 0 (Q.47).

For example, if an employee has had two contacts with a top

executive for career advice and two such contact with a previous supervisor, his or her INFORM index would be 10 [that is, $(2 \times 3) + (2 \times 2)$]. The weights used to construct INFORM are designed to capture the quality of each type of contact made in terms of the possible impact on earnings and promotion. The resulting index represents both the quality of the contact and the frequency with which an individual employee seeks out information regarding career prospects from that contact, the assumption being that the higher the level of contact, the higher the weight. The rank order of the weights is based on a hierarchy, but, as with all attempts to convert quality to quantity, the size of the weights is, somewhat arbitrary. Nevertheless, in the absence of a direct measure of the quality of informal networks, the relative weights seem reasonable.

Perceived discrimination

Perception of respondent that the employer has discriminated against him or her on the basis of sex:

PERCD, 1 if discrimination on the basis of sex perceived, 0 otherwise (Q.29).

Extent to which the number of people in top positions of respondent's sex affects his or her motivation to be promoted:

MOTS, 0 if the number of people in top positions of respondent's sex has no impact on motivation, 1 if it has a moderate impact, 2 if has significant impact (Q.31).

Early socialization

Gender-orientation of early childhood activities:

EARSOC, an index of the gender-orientation of early socialization that ranges from 6 to 15, representing the summation of items 1, 3, and 6 in Question 44. The lower the value of the index, the more masculine oriented was the respondent's early socialization experience (Q.44).

The male-oriented activities listed in Question 44--playing competitive sports, having a paper route, and playing with cars--constitute a somewhat crude, as well as stereotypical measure of early socialization, but they nevertheless serve as a way of testing the extent to which inbred masculinity or femininity have impacts on earnings (Q.44).

Early demonstration effect of the division of labour in the home between the respondent's parents when he or she was growing up:

EARDL, an index ranging from 0 to 5, where a value of 0 manifests a household with a non-traditional division of labour and a value of 5 manifests a household with a traditional division

of labour (Q.45).

For each of household repairs and auto maintenance, a score of 1 was entered if there was a check in the Father column, and a score of 0 otherwise. For each of cooking, housework/cleaning, and childrearing, a score of 1 was entered if there was a check in the Mother column, and 0 otherwise. The scores were then summed up to yield the EARDL index.

III. Summary

The development of these variables makes it possible to test the nine hypotheses put forth in Chapter 3. In Chapter 5 details are provided as to how the companies that participated in the study were selected, and then the demand-side and supply-side characteristics of the three firm-level samples are described.

Chapter 5 The Data Base

I. Selection of the Companies and Collection of the Data

The investigation of Sex Differences in Pay and Promotion in Canadian Bureaucracies is based on the data of 2561 employees in three large companies. The analysis focuses primarily on full-time, salaried personnel. In the samples drawn from companies 1 and 3, all employees are employed in either technical, managerial, or professional occupations. Approximately three-quarters of the sample drawn from company 2 are in one of the above three salaried categories, while the remainder are in lower-level clerical positions.

To solicit the participation of companies, an initial letter was sent to twenty companies in both the service and manufacturing sectors that were listed in the Financial Post 500. The letter was followed up by telephone conversations and interviews. Only fifteen of the twenty companies responded, and only five of these decided to participate in the final study. Subsequently, another company--designated Sample 2 below--heard about the project, and volunteered to participate.

The reasons given by the ten that did not want to participate included the following: our firm is trying to cut costs and improve productivity, and such a project would take up considerable management time; our firm is going through the throes of various organizational changes; similar studies have already been undertaken; women in our company do not have problems of this nature. Some companies indicated that they did not permit studies of this nature or any other type.

In May 1983, a detailed pretest was done on the smallest of the six participating companies--a publishing company with 75 employees. Along

with a cover letter to the employees, the employer sent a letter indicating that their participation was entirely voluntary and that anyone deciding to participate should deposit the questionnaire in a box by the front door as they were leaving to go home on a Friday night. As it turned out only six people completed the survey.

The main lesson to be learned from the pretest was that companies had to become more actively involved in administering the questionnaire. The main form that this involvement was to take would be to encourage employees to participate, while stressing, more strongly than was done in the pretest, the confidentiality of the responses. In addition, I wrote cover letters to be distributed with the questionnaires that stressed the confidentiality of the responses (see the cover letters in the appendix to this chapter). One simple way to ensure respondents a much higher level of confidentiality was by sending along envelopes that could be sealed after the completion of the questionnaire. The response rates of all the other five companies that agreed to participate in the study was greatly improved.

The questionnaire responses for all five of these companies were coded and entered on computer tape. At a late stage of the project, it was decided not to analyze two of the samples because of resource constraints. The two samples that were not analyzed were the smallest, with 136 and 119 usable responses respectively.

Sample-selection bias is inherent in the acquisition of questionnaire data through the voluntary participation of corporate organizations. It may be that these companies were confident that the study would reveal no systematic evidence of sex discrimination. On the other hand, since the data source remains confidential, the company may very

well have agreed to participate in order to obtain more insight into areas of personnel administration where there were improvements to be made. In any case, we do not expect to be able to make overarching generalizations about female-male earnings differences in Canada from these case studies. Given that many of the hypotheses, put forward in this study have never been tested before at the firm level, our primary interest is to discern the relative impacts of alternative hypotheses in a bureaucratic setting, however the necessary participation of the company might be obtained.

An additional, and more important, source of bias may have been the self-selection of individuals who took the time to fill out the questionnaires. It may be that those who felt most strongly about the issues raised in the questionnaire took the time to answer it. One company (see Table 5-1) distributed the questionnaires to one section of its operations, and ensured that all employees filled it out. In the other two companies (from which samples 2 and 3 were drawn), the completed questionnaires were only 40 percent and 18 percent, respectively, of those distributed. It is impossible to state with any degree of certainty what type of bias such response rates may impart to the empirical results.

II. Company and Sample Characteristics

Table 5-2 shows those characteristics of the companies from which samples 1, 2, and 3 were drawn that can be disclosed.

Sample 1

The first company is a large, private, multinational company located

Table 5-1

General Characteristics of Samples

	Sample 1	Sample 2	Sample 3
Total Employed	8,000	18,975	3,118
Total Professional, Managerial, Technical (PMT)	6,200	NA	NA
As Proportion of Total Employed	77.5%	NA	NA
Total Females Employed	2,400	3,493	312
As Proportion of Total Employed	30.0%	18.4%	10.0%
Total Males Employed	5,600	15,482	2,806
As Proportion of Total Employed	70.0%	81.6%	90.0%
Total Questionnaires Distributed	416	5,000	1,500
As Proportion of Total Employed	5.2%	26.4%	48.1%
As Proportion of PMT	6.7%	NA	NA
Total Responses	416	2,000	270
As Proportion of Total Distributed	100.0%	40.0%	18.0%
As Proportion of Entire Company	5.2%	10.5%	8.7%
As Proportion of PMT	6.7%	NA	NA
Total Usable Responses	386	1,915	260
As Proportion of Total Distributed	93.0%	38.3%	17.3%
As Proportion of Entire Company	4.8%	10.1%	8.3%
As Proportion of PMT	6.2%	NA	NA
Total Number of Females in Sample	178	550	65
As Proportion of Total Employed	2.2%	2.9%	2.1%
As Proportion of Total Females Employed	7.4%	15.8%	20.8%
As Proportion of Total Responses	42.8%	27.5%	24.1%
As Proportion of Total Usable Responses	46.1%	28.7%	25.0%
Total Number of Males in Sample	206	1,365	195
As Proportion of Total Employed	2.6%	7.2%	6.3%
As Proportion of Total Males Employed	3.6%	8.8%	7.5%
As Proportion of Total Responses	49.5%	68.5%	72.2%
As Proportion of Total Usable Responses	53.4%	71.3%	75.0%

NA = not available

Table 5-2
Characteristics of the Three Companies

Characteristics	Company 1	Company 2	Company 3
Size (Number of Employees)	8,000	20,000	3,118
Age	40	27	11
Region	Québec	Québec	Ontario
Ownership of Company	Private	Public	Private
Research and Development	Yes	Yes	Yes
Industrial Sector	Manufacturing	Service	Manufacturing
Multinational	No	Yes	No

in Québec. It employs 8,000 workers, is 40 years old, does research and development and is in the manufacturing sector. The specific portion of the company sampled represented the majority of technical, managerial, and professional personnel employed in the computer branch of the company.

Initial contact was made with the company in early November 1982, and final data collection occurred in early June 1983. The company administered 416 questionnaires in the company cafeteria to specific groups of employees at specific times. These employees represented 6.7 percent of the professional, managerial, and technical personnel employed by the company. They were given one hour to complete the questionnaire, and then to place it in a sealed envelope. Of the 400 questionnaires, all were completed, but because of reporting error and incomplete responses, only 386 questionnaires could be used.

The total number of females and males in the company is 2400 and 5600 respectively. Of the 386 usable observations, 178 were females and 206 were males. The total number of females in the sample represent 7.4 percent of the females employed in the company, 2.2 percent of the total population of the company, 48.2 percent of the total responses, and 46.1 percent of the total usable responses. The 206 males in the sample represent 3.6 percent of the males employed in the company, 2.6 percent of the total population of the company, 49.5 percent of the total responses, and 53.4 percent of the total usable responses. Breakdowns on the number of males and females in technical, managerial, and professional positions were not available for any of the samples.

There were four major departments in the company in which professional, technical, and managerial employees were represented. In terms

of the hierarchical structure they were from the top-down: technical services, software development, operations support, and computer operations. The seven basic job titles were team leader, project leader, supervisors (who were also senior analysts), analysts (junior, intermediate, and senior), programmers (junior, intermediate, and senior), operations support (enumerated O/S.1, O/S.2, and O/S.3), and computer programmers (with junior, intermediate, and senior levels).

Sample 2

The third company is a public-utilities company located in Québec. It employs 18,975 workers, is 27 years old, is not a multinational, is in the service sector, and is involved in R&D.

This particular company provided the largest of all the samples, but not all employees in this sample are professional, managerial, and technical. The respondents are all French speaking and responded to the translated version of the questionnaire.

Unlike the other companies in the study that were initially solicited by letter, this company heard of the study and contacted the project director about participating. The distribution and collection of the questionnaires were undertaken entirely by the company and occurred in mid-August 1983. A total of 5,000 questionnaires were sent out to 11 different regional areas in the Province of Québec (a condition upon which the company insisted in agreeing to participate in the study). We do not have information on how many questionnaires were sent to each region.

Of the 5000 questionnaires distributed, 2000 were returned, for a 40

percent response rate. But because of reporting error and incomplete responses, only 1915 questionnaires were usable, or 38.3 percent of those distributed. Employees represented in the sample were 10.1 percent of all those employed by the company. There were 550 females and 1365 males in the final usable sample. For the females, this represents 15.8 percent of the females in the company, 2.9 percent of the total population of the company, 27.5 percent of the total responses and 28.7 percent of the usable responses. For the males in the sample, this represents 8.8 percent of males in the company, 7.2 percent of the entire population of the company, and 71.3 percent of the final usable sample.

The company had recently reorganized its department and occupational categories, so that useful data on first departments, first job titles, and first pay grades were not available, as they were for company 1. We have differentiated employees by seventeen fairly narrowly defined occupations: 1. Member of management, chief of division, or director (includes advisors and consultants to the above); 2. Member of administrative staff (includes assistants, officers, agents, charges, preposes); 3. Member of clerical staff (includes secretarial, typist or receptionist); 4. Member of engineering staff (includes architects and planners), 5. Member of scientific staff (includes chemists, biologists, agronomists, geologists, surveyors and draftsmen); 6. Member of computer staff (includes analysts, operators and programmers); 7. Member of communications staff (telephone operators, general telecommunications); 8. Member of marketing and sales staff; 9. Member of finance staff (includes auditors, accountants, and budget analysts); 10. Member of service staff (health, librarian, archival, law, education); 11. Member of unskilled

labour staff (includes construction, drivers); 12. Member of skilled labour staff (includes line installers, machinists, electricians, and carpenters); 13. Member of public relations; 14. Member of bluecollar supervisors (includes foremen, coordinators, and construction planners); 16. Member of customer services; 17. Member of unidentifiable or inadequately defined occupation. The occupations have all been drawn from the raw printout for job titles that individuals put on their questionnaires combined with a list of over 4000 titles provided by the company.

The above occupational categories have been collapsed into 11 final categories, as indicated in Chapter 4.

Sample 3

The last sample is a private, high-tech company, in the manufacturing sector in Ontario. This company is involved in the telecommunications industry, is not a multinational, employs 3,118 employees, and is 11 years old. It is also involved in R&D.

Initial contact was made with this company in October 1982. The company assumed distribution of the questionnaire through the company mail. But unlike the other companies, as a condition of its participation in the study, Company 3 insisted that employees be able to use Canada Post to return the questionnaires to the project director at the Economic Council of Canada. It also meant that although the distribution of the questionnaires occurred in early July, completed questionnaires were not received until early September 1983. A total of 1500 questionnaires were distributed. Of these, 270 were returned but due to reporting error only 260, or 17.3 percent of those distributed, were usable. The usable sample represents 8.3 percent of those employed by

the company. There are 65 females and 195 males in the usable sample.

Females in the sample were 20.8 percent of the population of employed females, 2.1 percent of the employees of the company, 24.1 percent of the total responses, and 25 percent of the usable responses. Males in the sample were 7.5 percent of the population of employed males, 6.3 percent of the employees of the company, 72.2 percent of the total responses, and 75 percent of the usable responses.

The job titles have been categorized into the following groups: 1. scientific staff; 2. engineering staff; 3. management staff; 4. computing staff; 5. administrative and financial staff; 6. clerical and secretarial staff.

The preceding occupational categories have been collapsed into 3 final categories, as indicated in Chapter 4.

III. Descriptive Statistics

The following portion of Chapter 5 provides a statistical overview of the characteristics of Samples 1, 2, and 3 (for details of the various cross-tabulations, see Appendix 3).

Sample 1

Females are more equally distributed than males within the younger age cohorts. Males are much better represented in the older age groups. There are two possible explanations. First, in line with the increasing participation of females in the labour force, the company may not have hired as many females as males, say, ten or fifteen years ago as it does now. Second, some females who were hired earlier may have dropped out of the labour force to have children or, perhaps perceiving that their

chances for promotion with this particular company were slim, may have left the firm more readily than males.

In the 18-24 age cohorts, males, on average, earn less than females. Even though males and females have equivalent minimum values for earnings, the maximum value for males is higher. Therefore the average result suggests that the company is hiring more males than females at the lowest pay levels. The increase of earnings with age is greater for males than for females. There is only a small difference in the minimum earnings levels, but the maximum earnings differences indicate that males get promoted to higher pay grades more frequently or rapidly.

It is often argued that, although on average females and males have similar years of schooling, they tend to have less labour-force experience. Labour-market experience, as it has been used in this study, is measured by the actual number of years in the labour force. The measure excludes years that were spent either raising children at home and/or years spent full-time at school.

The longer the time that males spend in the labour force, the greater their earnings relative to females. The minimum earnings levels tend to be equivalent, but the maximum earnings levels exhibit a significant difference.

Because this study examines individual employees at the level of the firm, we can examine the relationship between before tax earnings and full-time years of service with the present company as distinct from labour-market experience. Like labour-force experience, the female/male earnings ratio fluctuates as years of service with the company increase. Males tend to have been with the company much longer than female employees but even for comparable years of service the returns to females are

much lower than for males. In some categories--specifically 10-12 years of service--females earn on average much less than the minimum earnings for males.

Education has provided a central means by which females have gained entry into the labour market in general and into specific jobs in Sample 1 in particular. The actual average years of education for males and females in Sample 1 are similar: females have 16.29 years of education and males 16.46. But there appear to be significant differences in the levels of education that males and females have obtained, and even more so in the areas of concentration that they have pursued. In this sample, 30.8 percent of females, but only 12.1 percent of males, specialized in the humanities, while 18.2 percent of females and 14.1 percent of males concentrated in the social sciences. In addition, 50.2 percent of females and 69.2 percent of males held degrees in the applied sciences. We cannot tell from these figures whether the company simply prefers to hire more males with computer-science degrees or whether it is constrained in its hiring by the supply of females with computer science degrees on the labour market.

It should be noted that Sample 1 does not contain any females with a professional degree--a degree that is associated with the highest level of remuneration. The majority of individuals in this sample have college degrees. The average earnings for males and females with a community college or CEGEP degree tend to be equivalent. The average earnings for males with college degrees tends to be higher than for females. The fact that the returns to holding a college degree are less for females than for males may reflect the particular quality of the degree obtained. One reason for the disparity is because, as a high-tech com-

pany, this firm favours or requires individuals with degrees in computer science, and most of these degrees are held by males. For both females and males, the pay of individuals holding science degrees tends to be higher than that of employees with other types of degrees.

Sample 1 is the only company in the analysis for which we have information on within-job earnings for individuals. The earnings disparity varies by the job groups as well as the numbers of males and females within each group. The job groups have been divided up according to skill, where skill reflects the particular expertise or authority required to perform a particular job. The information obtained from interviews with the employers of Sample 1 indicated that entry-level requirements for any position above that of operations support required a bachelor's degree in computer science (or the equivalent). Such positions include those of computer programmers and analysts.

The highest female/male earnings ratio--1.093--is amongst computer operators (JOB6). This position is divided into the junior, intermediate, and senior levels. A total of 48 percent of the positions are taken up by females, indicating that no crowding is present. We can only speculate that the reason that females are paid more than males is because they are considered to be better workers.

The second highest ratio--.982--is in operations support (JOB5) where females make up 64 percent of the job group. Unlike the computer operators who are encouraged and frequently promoted up to a higher O/S level, few, if any, employees go from an O/S position up to a higher position of analyst or programmer.

The position of analyst is hierarchically superior to that of programmer, and it has a earnings ratio of .896, which is higher than the

.856 earnings ratio for programmers. This fact contradicts the generally held view that ratios decrease as we move up the hierarchy. Note, however, that female programmers make up 40 percent of all programming positions, but only 15 percent of analysts positions.

The lowest ratio within all of the job categories is .716 for supervisors. Females make up 31 percent of all supervisors. Female and male supervisors have similar minimum earnings, but they also have the largest maximum earnings disparity of all the positions where females are represented.

In general, in those jobs in which males dominate, average earnings are higher. In the lower-paying jobs, where females are better represented, males tend to get paid the same as or less than females.

The seven jobs can be aggregated into three broader hierarchical occupations: OCC1, team leader, project leader, and supervisor; OCC2, analyst and programmer; and OCC3, operations support and computer operator. The most striking feature about these categorizations is the decreasing earnings ratio as we move up the occupational hierarchy. It is also worth noting that females are clustered in the lower-paying OCC3 category.

Employees are divided into two family-status groups--those who are married or living with another as a couple and those who are single (which includes those divorced, separated, or widowed). Both of these groups are examined with respect to the number of children that they have living with them.

Individuals who are female, married, and have children earn less than females who are married and do not have children. On the other hand, males who are married and living with children six years of age and up

earn more than males or females without children as well as males or females living with children five years and under. Male single employees have higher average earnings than female single employees. But note that the seventeen females who are single and living with children earn on average more than females who are in any of the marital categories. Further, the three females in this company who are single with children five years and under earn on average more than any of the other groups of females in the company.

Sample 2

Females are more equally distributed within the younger age cohorts 18-29. Males are much better represented in the older age groups. The possible explanations for these distributions have already been suggested in discussing Sample 1. In all the age cohorts, males on average earn more than females. Even though males and females have somewhat equivalent minimum values for earnings, the maximum value for males is higher. The maximum earnings differences indicate that males get promoted to higher pay grades more frequently, or perhaps more rapidly, than females.

As in Sample 1, the longer the time males spend in the labour force, the greater their earnings relative to females. The minimum earnings levels tend to be equivalent, but the maximum levels of earnings by labour force experience appear to be significantly different.

Like the preceding table on years of labour-force experience, the female/male earnings ratio fluctuates as years of service with the company increase. Males tend to have been with the company much longer than female employees, but even for comparable years of service the

earnings for females are much lower than for males.

There is a gap in the actual average years of education for males and females in Sample 2: females have 13.66 years of education and males 14.93. We note that 2.9 percent of females but only 1.6 percent of males in the sample specialized in the humanities, while 8.3 percent of females and 9.2 percent of males concentrated in the social sciences. 11.1 percent of females and 19.6 percent of males held applied science degrees. The greatest proportions (77.5 percent of the females and 69.5 percent of the males) have some type of vocational training.

The majority of individuals in this sample have high school and community college degrees. The average earnings gap between males and females is highest for those with community college or CEGEP degrees. The average earnings for males with college degrees is also higher than for females. Sample 2 contains 37 females and 216 males with professional degrees. Yet amongst this group, females on average earn only 75.2 percent of what males earn.

Amongst college graduates the greatest earnings gap is between females and males holding science degrees. But for females as well as males, this degree brings the earnings. The largest proportion of males and females have only high school education and this is where the earnings gap tends to be highest.

The occupations have been divided up according to skill, where skill reflects the particular expertise or authority required to perform a particular job. The earnings disparity varies by occupation as well as by the numbers of males and females within each group.

In terms of absolute numbers, females are crowded into the lowest-paying clerical staff category--OCC2. The within-occupation earnings

gap between males and females in this category is relatively high. The highest female-to-male earnings ratio--1.054--is amongst the skilled labour group, OCC9. But there are only 3 females and 229 males in OCC9, implying that this may not be a representative sample of females.

The second highest ratio--.957--is in secondary services (OCC6) where there are only 2 females and 28 males. Moving up the hierarchy, the lowest ratio--.779--is between female and male managers. The minimum and maximum earnings for females are substantially less than for males in this occupation, a finding noted also in Sample 1. In general, in those jobs in which males dominate, average earnings of all employees are higher. It might also be noted that there were no female bluecollar supervisors.

Individuals who are female, married (or living with someone as a couple), and do not have children earn less than females who are married and do have children. Males who are married and living with children six years of age and up earn more than males or females without children as well as males or females living with children five years and under. Male single employees have higher average earnings than female single employees. But the twelve females who are single and living with children who are six years and up earn on average more than females who are in any of the marital categories. There is also a large earnings disparity in favour of males for single employees living with children six years of age and up--a category in which there are more males than females.

Sample 3

Males are predominant in all age cohorts. Females are best repre-

sented relative to males within the younger age cohorts. With a ratio of .918, males on average earn just slightly more than their female counterparts in the 18-24 age cohorts. The increase of earnings with age is greater for males than for females. There is only a small difference in the minimum earnings levels but the maximum earnings differences indicate that males get promoted to higher pay grades more frequently or rapidly.

The longer the time that males spend in the labour force, the greater their earnings relative to females, though there are some exceptions at 0-1 and 12-14 years. The minimum earnings levels tend to be moderately in favour of females. The maximum levels of earnings by experience are heavily in favour of males.

The female/male earnings ratio fluctuates as years of service with the company increase. Male employees tend to have been with the company much longer than female employees, but even for comparable years of service the earnings of females are much lower than for males. Indeed, in some categories--specifically 6-8 years of service--females earn on average much less than the minimum earnings for males.

The actual average years of education for males and females in Sample 3 are very different--females have 15.84 years of education and males 18.43. 10.9 percent of females, but only .05 percent of males in the sample, specialized in the humanities, while 15.6 percent of females and 4.7 percent of males concentrated in the social sciences. In the applied sciences, 35.9 percent of females and 89.0 percent of males held degrees.

There also appear to be significant differences in the levels of education that males and females have obtained, and even more so in the

areas of concentration that they have pursued.

Females in Sample 3 tend to be more equally distributed across all levels of education than in the other two samples, while the largest numbers of males tend to be clustered in the college and professional degree categories. The returns to females for each level of education tend to be substantially lower than those of males with the same level of education. The fact that the returns to holding a college degree are less for females than for males may reflect the particular quality of the degree obtained. The firm from which Sample 3 is drawn is a high-tech company involved in R&D, and therefore it tends to favour individuals with degrees in the sciences. Most of these degrees are held by males.

The company tends to hire more individuals with science (in this case engineering) degrees than other areas of concentration. Amongst both males and females, individuals holding science degrees also tend to get paid more highly than all the other categories of degrees.

The occupations for Sample 3 are very narrowly defined. The first occupation (OCC1) is made up of the scientific, engineering, and computing staff; OCC2 is taken from management, administration and finance; and OCC3 is clerical staff. The largest number of females are employed in OCC1. The highest male-to-female earnings ratio--.697--is amongst this group. The only other comparable ratio is for OCC2 (note there were no male clericals in this sample) where we find that females earn 59 cents for every dollar that a male earns.

Individuals who are female, married, and have children earn more than females who are married and do not have children. On the other hand, males who are married and living with children six years of age

and up earn more than males or females without children as well as males or females living with children five years and under. Male single employees have higher average earnings than female single employees.

Chapter 6 Empirical Analysis

I. Model Specification

The model developed here explicitly specifies how an individual's career development and perceptions as well as the departmental and occupational structures of the firm affect earnings. Our model tests a broader array of hypotheses than are standard in the male-female earnings differences literature. In Chapter 3, we have discussed these hypotheses in detail, showing how they can be derived from various theoretical approaches to the nature of the labour market. In Chapter 4, we have constructed variables with which to test these hypotheses using our questionnaire.

The model encompasses four categories of hypotheses that seek to explain male-female earnings differences: human capital, demand-side variables reflecting the firm's departmental and occupational structure, the internal relations of the firm as experienced by the individual, and external relations that might affect an individual's career development.

Our human-capital model includes age and its quadratic, the level of education, the area of concentration, full-time years in the labour force and its quadratic, and full-time years of service with the company and its quadratic. The conventional definitions of the human-capital variables are experience in the labour force, on-the-job training, as well as education. Sometimes age, marital status, and the number of children are included for good measure. Most data sets used to test the model lack an actual measure for experience. The usual proxy for experience has been an individual's age minus years of schooling minus six, applied to both males and females. This measure does not adequately

ly reflect the labour-force experience of females, who, on average, exit and enter from the labour force more than males. Our data set measures experience in terms of actual years and months in the labour force. Besides total labour-force experience, we have a separate measure of years of service with the company. In addition, our model captures a qualitative dimension of the human-capital hypothesis in the form of an individual's area of educational concentration (for example, arts as opposed to physical sciences) that may prove an important determinant of differential outcomes. In sum, we believe that our specification of the human-capital model permits us to test a fuller and richer interpretation of the theory than is generally found in the literature.

Our model includes demand-side variables reflecting the horizontal and vertical organization of the firm (a detailed discussion of the departmental and occupational categories for each of the three samples has been presented in Chapter 4). An individual's functional department reflects his or her position in the firm's horizontal organization, whereas an individual's place in the occupational hierarchy reflects his or her position in the vertical organization of the firm. These variables are designed to test the occupational-segregation hypothesis in terms of the allocation of individuals to types of work as well as to hierarchical positions. Where the data permit (in Sample 1 only), we also include an individual's initial position within the firm in order to test a variant of the dual labour-market hypothesis--to what extent do the initial positions in the company of females and males have an impact on earnings differences.

In our model, there are three hypotheses that seek to explain how the internal relations of the firm as experienced by the individual

affect individual earnings. The first hypothesis tests whether the commitment of individual employees to the firm has a significant impact on their earnings. The measures of an individual's commitment to the firm are the extent to which he or she works overtime without pay, the number of times he or she has applied for outside jobs, and the salary increase that would be required to entice the employee away from his or her present job to take another position at another firm with the same promotional prospects. The second commitment-to-the-firm hypothesis examines the extent to which individuals have access to informal networks that might aid their earning power. Our measure of informal networks is an index of the quality and quantity of contacts that an individual has with hierarchical superiors--contacts that presumably aid his or her advancement in the firm. The third hypothesis examines the impact of perceived discrimination--the extent to which individuals perceive that gender in and of itself is a factor in promotion within the firm. One variant of the perceived discrimination hypothesis posits that the sex-composition of those in top corporate positions adversely affects the work motivation, and hence the earning power, of those of the under-represented sex lower down the hierarchy. A second variant of the perceived-discrimination hypothesis posits that an individual's perception that they have been the subject of sex discrimination will adversely affect their earnings, either because such discrimination has actually occurred or because the perception that it has occurred has an adverse impact on work motivation and the desire to invest in human capital.

The final set of hypotheses focuses upon relational factors external to the firm that might affect an individual's career development. We

consider three types of factors that have been prominent in the sociological literature. First, we focus upon the early socialization that an individual received while she or he was growing up. Specifically, we explore the impact on current earnings of the stereotypical gender-orientation of both early childhood activities and the role models provided by parents. Second, we examine the impact on earnings of an individual's current household responsibilities and relations, including the presence of children of different ages, marital status, and division of labour in the home. Third, for individuals who are married or living with someone as a couple, we examine the impact on earnings of dual careers if and when they are present. In particular, we test the hypothesis that the spouse's support for the career of an employee will have a significant impact on earnings.

The model used in the empirical analysis is the semi-log earnings equation that is standard in the literature on male-female earnings differences.

$$\ln(Y_i) = b_0 + \sum b_1 * SEX_i + \sum b_j * X_{ij} + \sum e_i$$

where Y_i = the earnings of individual i ,

SEX_i = the sex of individual i (1 if female, 0 if male),

X_{ij} = explanatory and control variables j for individual i .

In the full-regression model for this study, the relevant explanatory and control variables are those presented in the second part of Chapter 4. The regressions were run on samples from the three companies. As indicated in Table 5-1, Sample 2 has by far the largest

number of observations. Sample 1 has the highest response rate and the second largest number of observations. Assuming that problems of selectivity bias discussed earlier are not too great, we consider the data sets for Samples 1 and 2 to be quite robust. We are less confident about the robustness of Sample 3--the sample with both the smallest number of observations and the lowest response rate. Although we discuss the statistical results from Sample 3 below, we place more reliability on the findings from the first two samples.

A more sophisticated model of the determinants of earnings could have been developed. But given the novelty of many of the hypotheses that are being tested (see above Chapters 3 and 4), it was deemed advisable to use a model that is basically a direct expansion of that used in the existing male-female earnings-differences literature. The semi-log earnings equation specified above assumes that all the explanatory variables are exogeneous, and that therefore the statistical properties of the dependent variable will be the same as the disturbance term. In particular, we are assuming that earnings are log-normally distributed.

Under these assumptions, the semi-log earnings function extends the conventional human-capital approach that argues that an individual's earnings are determined by past investments in human capital. An individual invests, for example, in schooling in order to earn a rate of return, while the employer is willing to pay a rate of return to individuals who have made this investment insofar as the employment of human capital adds to the productivity of the firm. The actual rate of return is, of course, determined by the market equilibrium of supply and demand for the particular productive attribute.

In their own extension of this approach, Malkiel and Malkiel [1973]

add marital status to a semi-log earnings equation, but recognize that it is difficult to interpret the coefficient of such an attribute as a rate of return in the manner of, for example, the rate of return to an additional year of schooling. Given the variety of personal attributes that have been put forth as independent variables in Chapter 4, this criticism of the extension of the human-capital model bears some consideration.

One way of justifying the treatment of the coefficients of such variables as MARITAL (marital status), CHILD1 and CHILD2 (the child variables), DLHH (the division of labour in the household), and EARSOC (early childhood activities) as rates of return to these personal attributes is to draw upon the literature on hedonic prices [Rosen, 1974]. The notion of hedonic prices has been developed to explain competitive market behaviour where product differentiation is based upon the attributes contained in the product. In the labour market, the product being offered for sale is the labour-time of the individual, which has potential value to employers because of the quality of the labour services embodied in the product. The quality of the labour services can best be described by the personal attributes of the individuals who are selling their labour-time.

If we view earnings as equal to the value of the marginal product of the individual, then the variables in the earnings equation can be construed as factors (or proxies for factors) that affect the marginal productivity of the individual. The firm hires the labour-time of the individual in order to secure these attributes, and it pays the individual an amount equal to the value of the marginal product of his or her combined attributes. If the attributes that are valued (either positively

or negatively) by the firm also enter into the individual's utility function--which is to say that the individual has incurred costs to acquire these attributes for which she or he expects a rate of return --then the coefficients of the variables might be interpreted as equilibrium shadow prices for each attribute.

In the context of this study, however, whether or not the rates of return are equilibrium shadow prices is not of great importance for two reasons. First, the firm-specific nature of the study means that we have little way of knowing whether the markets for the particular attributes are in equilibrium or not. Second, and of more importance, because our focus is on internal job ladders and advancement through promotion within a particular firm, market forces will be working only imperfectly to determine the rates of return to particular attributes. On the one hand, information is imperfect on the market because the productive attributes of individual employees will have become known to the current firm but not necessarily to other firms that could be potential employers. On the other hand, the employee might find it risky to seek employment with another firm where he or she is (and his or her attributes are) less well-known, and therefore to some extent the current employer will have monopsony power.

Under these conditions, we can simply interpret the coefficients of attributes as firm-specific rates of return. Discrimination enters the model by considering the possibility that firms will value individuals differently on the basis of sex. If, controlling for all other factors, the coefficient of SEX is negative and statistically significant, then there is evidence of possible discrimination.

For each of the samples, we estimate a full model that includes all

of the four categories of hypotheses set out above. We also estimate a personal model that drops the demand-side variables--what we define as the occupational variables--and, in the case of Sample 1 only, the port-of-entry variables and the functional-department variables. This model then contains variables that measure only the personal characteristics of individuals in the samples. We also estimate a model that contains only the human-capital variables so that we can see whether the addition of the more non-conventional occupational segregation, internal relations, and external relations hypotheses have a significant impact on the explanatory power of the model. We repeat this estimation procedure for a subsample of people who are married or living with someone as a couple (that is, MARRIED = 1) in order to test the dominant-careers hypothesis and a variant of the commitment-to-the-home hypothesis--division of labour in the home--that applies only to this sub-sample.

In Section II below, we shall begin our discussion of these regression results by looking at changes in the size and significance of the coefficient of SEX as well as the coefficient of determination (R-squared) as we go from the human-capital to the personal to the full model. An increase in R-squared as we add explanatory variables to the model indicates that the model is more fully determined, while a decrease in the size of the sex coefficient as we add explanatory variables to the model indicates a systematic relation between these variables and sex. For each of our three samples, we shall then discuss the most significant results of the regression analysis for the full and personal models run on both the total sample and the married sub-sample.

In Section III of this chapter, we shall examine the results of the full and personal models estimated for females and males separately,

using the decomposition technique to isolate the sources of the earnings differences between females and males and measure their impacts in terms of the coefficients, attributes, and interaction components of the earnings differential.

II. Regression Results

For Sample 1, the arithmetic average earnings are \$18,271 for females and \$23,027 for males, yielding a ratio of .793; for Sample 2, \$24,340 for females and \$36,424 for males, yielding a ratio of .668; for Sample 3, \$22,825 for females and \$37,219 for males, yielding a ratio of .613. Ordinary-least squares regressions have been estimated with the natural log of before-tax 1982 earnings as the dependent variable, so that the focus of the study is on the female/male earnings ratio rather than the dollar differential between males and females. Note also that, because of the semi-log functional form, the expected earnings predicted by the regression equations are to be interpreted as geometric rather than arithmetic means.

Table 6-1

Impact of Sex on Earnings and the Coefficient of Determination in the Human Capital, Personal and Full Models

Model	<u>Sample 1</u>			<u>Sample 2</u>			<u>Sample 3</u>		
	SEX coefficient	R ²		SEX coefficient	R ²		SEX coefficient	R ²	
Human Capital	-.1298 (.0194)	.543		-.2447 (.0134)	.557		-.3056 (.0556)	.574	
Personal	-.0866 (.0303)	.672		-.1860 (.0241)	.587		-.2501 (.0661)	.664	
Full	-.0590 (.0161)	.914		-.1590 (.0239)	.628		-.2410 (.0684)	.670	

Note: standard errors are in parentheses.

Source: See Appendix 5

To what extent does sex discrimination underlie these earnings differentials? Table 6-1 summarizes the impact of the variable SEX (1 if female, 0 if male) in the human-capital, personal, and full models for each of our three total samples and married sub-samples. It also indicates the explanatory power of each of these models as summarized by the coefficient of determination.

For all three samples, the F-tests reveal that the independent variables representing social relationships internal and external to the firm in the personal models add significantly to the explanation of earnings variation in the human-capital models. The demand-side variables in the full models add significant explanatory power to that provided by the personal models in Sample 1 and 2, but not in Sample 3 (F-tests are presented in Appendix 6). Note that the proportions of the variance explained by the human-capital model are similar for all three samples, and that the proportions explained by the personal models are similar for Samples 1 and 3. But Sample 1, which has the lowest R-squared of the three human-capital regressions has the highest R-squared of the three personal regressions and by far the highest R-squared of the three full regressions. The proportion of the variance explained by the personal model in Sample 1 is higher than the proportions explained by the full models in the other two samples.

There is an obvious reason why Sample 1 appears so well specified by the full model when compared to the other two samples. The data were collected from one relatively specialized sector of the company--its computer arm--in which the hierarchy of present occupations was more self-evident than in the other two samples that were drawn from broader occupational cross-sections of their respective companies. In addition,

we were able to obtain data on current department and first department (or port of entry) for Sample 1, but we could not develop any meaningful categories for Samples 2 and 3.

The higher coefficients of determination in the personal models for Samples 1 and 3 compared to Sample 2 may be due to the fact that only Sample 2 contains some non-managerial personnel (about 37 percent of the total sample). In the design of the hypotheses that relate to non-human capital personal characteristics, we were particularly influenced by a literature that pertains primarily to managerial personnel. Our personal model may, therefore, be somewhat underspecified for non-managerial personnel.

In all cases the coefficient of SEX is negative, highly significant, and declines in magnitude as we go from the human capital to the personal to the full models. These results indicate that sex discrimination is a determinant of female-male earnings differences. The fact that the sex coefficient declines in magnitude as we augment the model with additional hypotheses indicates a systematic relationship between the added explanatory variables and sex. For Sample 1, the imputed costs for being female--that is, the proportionate shortfall of female earnings to male earnings attributable to sex, holding all other factors in the particular model constant--vary from 12 percent in the human capital model to 8 percent in the personal model to 6 percent in the full model; for Sample 2, 22 percent in the human capital model, 17 percent in the personal model, and 15 percent in the full model; for Sample 3, 26 percent in the human capital model, 22 percent in the personal model, and 21 percent in the full model.

Note that Sample 1, for which the R-squared is highest for the

personal and full regressions, also is the sample in which the impact of sex on the percentage earnings differential between males and females is lowest. Clearly, omitted variable bias is of more importance in Sample 2 and 3 than in Sample 1. To some extent, and perhaps to a large extent, SEX can be viewed as a residual variable rather than an explanatory variable. As such it may be picking up the impact of omitted variables that are correlated with sex. For example, the omission of port-of-entry from the Sample 2 and 3 models may be part of the reason that the impacts of SEX are so high in these models.

The regression results for the full and personal models on the total samples and the married sub-samples are presented in Tables 6-2 through 6-7. These models test the human-capital, occupational, internal-relations, and extra-firm hypotheses across females and males, holding sex constant. These results, therefore, permit us to discern which of the proposed explanatory variables have significant impacts on earnings regardless of gender. Comparisons of the full and personal regressions also permit us to explore the relation between the demand-side variables (which are omitted in the personal models) and the personal characteristics encompassed by the other three categories of hypotheses. The following summary of the most important statistical findings from each of the three total samples and married sub-samples will serve as a frame of reference in Section III of this chapter, where we employ the decomposition technique to analyze the particular sources of female-male earnings differences.

Sample 1, drawn from a large multinational company involved in research and development, is made up of 368 individuals, of which 197 are male and 169 are female. In both models (see Table 6-2), AGE is

TABLE 6-2
FULL AND PERSONAL EARNINGS EQUATIONS
FOR TOTAL SAMPLE 1

Variable	FULL MODEL		PERSONAL MODEL	
	Coefficient	S.E.	Coefficient	S.E.
CONSTANT	8.3348 ^{a/}	0.2256	8.4490 ^{a/}	0.3896
SEX	-0.0590 ^{a/}	0.1607	-0.0866 ^{a/}	0.0303
HUMAN CAPITAL				
AGE	0.0816 ^{a/}	0.0148	0.0794 ^{a/}	0.0262
AGE2	-1.1346-E3 ^{a/}	2.3962-E4	1.0980-E3 ^{b/}	4.3042-E4
EDTS2	-0.0326	0.0334	-0.1612 ^{a/}	0.0620
EDCS2	-0.0064	0.0318	5.6427-E3	0.0601
EDPS2	0.1634 ^{a/}	0.0604	0.4464 ^{a/}	0.1115
ACON2	-6.7025-E4	0.0154	-0.0593 ^{b/}	0.0291
ACON3	-1.1993-E3	0.013	0.0966 ^{a/}	0.0233
ACON4	-0.1601	0.0901	-0.1794	0.1700
FYSERV	1.3115-E4	3.9168-E4	1.8748-E3 ^{a/}	6.9866-E4
FYSERV2	3.1022-E3	-1.6220-E7	-4.5293-E6	2.7750-E6
FTLFEX	-8.3301-E4 ^{a/}	2.9441-E4	2.0047-E3 ^{a/}	5.5565-E4
FTLFEX2	5.0024-E6 ^{a/}	1.3903-E6	9.0598-E6 ^{a/}	2.6148-E6
DEMAND SIDE				
OCC1	0.2737 ^{a/}	0.0270		
OCC2	0.1643 ^{a/}	0.0263		
SDN1	0.2093 ^{a/}	0.0273		
SND2	0.1045 ^{a/}	0.0244		
SDN4	0.0183	0.0184		
FDN1	0.0796 ^{a/}	0.0273		
FDN2	0.0677 ^{a/}	0.0246		
FDN4	-0.0146	0.0173		
FDN5	0.0823 ^{a/}	0.0314		
INTERNAL RELATIONS				
TOTABFC	8.8988-E4	1.2379-E3	2.5314-E3	2.3470-E3
OSJAP1	-0.0135	0.0116	-0.0557 ^{b/}	0.0219
WWOP	4.4862-E4	1.0342-E3	4.5585-E3 ^{a/}	1.8624-E3
CAROT	1.5126-E3 ^{a/}	5.0717-E4	1.7791-E3	9.5901-E4
INFORM	0.0107 ^{a/}	2.7779-E3	0.0302 ^{a/}	5.0619-E3
PERCD	-2.6935-E3	0.0136	-0.0338	0.0256
MOTS1	-7.7444-E3	9.3842-E3	-0.0268	0.0179
EXTRA-FIRM RELATIONS				
MARITAL	0.0153	0.0115	6.7200-E3	0.2192
CHILD1	-0.0171-E3	8.9577-E3	-0.0405 ^{b/}	0.0169
CHILD2	-0.0129	9.1541-E3	-0.0318	0.0172
LFAM	-1.8351-E4	1.5334-E3	-1.7006-E3	2.9286-E3
EARSOC	1.6318-E3	2.2043-E3	3.2557-E4	4.2026-E3
EARDL	-2.7058-E3	4.6345-E3	0.0114	8.8371-E3
R ²	.914		.672	
NUMBER OF OBSERVATIONS		369		369

a = significant at 1% level.
b = significant at 5% level.

TABLE 6-3
FULL AND PERSONAL EARNINGS EQUATIONS FOR
MARRIED SUB-SAMPLE 1

Variable	FULL MODEL		PERSONAL MODEL	
	Coefficient	S.E.	Coefficient	S.E.
CONSTANT	8.6780 ^{a/}	0.3023	8.4130 ^{a/}	0.5461
SEX	-0.0733 ^{a/}	0.0250	0.0261	0.0494
HUMAN CAPITAL				
AGE	0.0592 ^{a/}	0.1915	0.0852 ^{b/}	0.0355
AGE2	-7.7277-E4 ^{b/}	3.0228-E4	-1.2004-E3 ^{b/}	5.7158-E4
EDTS2	-0.0425	0.0407	-0.2026 ^{b/}	0.0795
EDCS2	-0.0448	0.0381	-0.0973 ^{b/}	0.0756
EDPS2	0.1149	0.0703	0.3273 ^{b/}	0.1341
ACON2	0.0106	0.0173	1.5203-E3	0.0347
ACON3	0.0149	0.0154	0.1333 ^{a/}	0.0284
ACON4	-0.1589	0.0885	-0.2560	0.1755
FYSERV	-3.7419-E4	4.4889-E4	1.7458-E3 ^{b/}	8.3363-E4
FYSERV2	1.9657-E6	1.8632-E6	-5.3103-E6	3.2054-E6
FTLFEX	-6.0139-E4	3.5695-E4	-2.042-E3 ^{a/}	7.0965-E4
FTLFEX2	3.9364-E6 ^{b/}	1.7206-E6	1.0188-E5 ^{a/}	3.3987-E6
DEMAND SIDE				
OCC1	0.3136 ^{a/}	0.0329		
OCC2	0.1985 ^{a/}	0.0308		
SDN1	0.1847 ^{a/}	0.0295		
SND2	0.0842 ^{a/}	0.0261		
SDN4	-0.0119	0.0227		
FDN1	0.0632 ^{b/}	0.0315		
FDN2	0.0659 ^{b/}	0.0291		
FDN4	-0.0117	0.0192		
FDN5	0.0477	0.0358		
INTERNAL RELATIONS				
TOTABFC	-2.9463-E4	1.2367-E3	1.2206-E3	2.4790-E3
OSJAP1	-1.5982-E3	0.0133	-0.0387	0.0263
WWOP	-1.536-E4	1.1780-E3	3.840 -E3	2.2690-E3
CAROT	1.8412-E3 ^{a/}	5.8908-E4	1.6859-E3	1.1528-E3
INFORM	9.2872-E3 ^{a/}	3.2041-E3	0.0301 ^{a/}	6.1464-E3
PERCD	-0.0137	0.0156	-0.0513	0.0310
MOTS1	-2.1034-E3	0.0108	-0.0263	0.0215
EXTRA-FIRM RELATIONS				
CHILD1	-6.2142-E3	0.0100	-0.0247	0.0196
CHILD2	-0.0136	0.0117	-0.0222	0.0231
LFAM	5.0765-E4	1.5779-E3	-1.4177-E3	3.2027-E3
DLHH	6.9116-E5	1.1269-E4	-5.5684-E4 ^{b/}	2.2055-E4
EARSOC	4.1987-E3	2.4095-E3	4.270-E3	4.8626-E3
EARDL	2.3717-E4	5.1147-E3	0.0145	0.0103
UMOV	9.7563-E3	0.1057	-0.0596	0.0312
SPSCAR2	-6.5209-E3	8.4529-E3	-0.0310	0.0170
SPMOB	-0.1625	0.1424	-0.0292	0.0283
SPSTRPRM	-0.0201	0.0329	-0.0166	0.0665
IMPCARTF	0.0219	0.1631	0.0684 ^{b/}	0.0327
R ²	.934		.922	
NO. OF OBS.	257		257	

a = significant at 1% level.

b = significant at 5% level.

TABLE 6-4
FULL AND PERSONAL EARNINGS EQUATIONS FOR TOTAL SAMPLE 2

Variable	FULL MODEL		PERSONAL MODEL	
	Coefficient	S.E.	Coefficient	S.E.
CONSTANT	9.5040 ^{a/}	0.1237	9.5020 ^{a/}	0.1283
SEX	-0.1590 ^{a/}	0.0239	-0.1860 ^{a/}	0.1241
HUMAN CAPITAL				
AGE	0.0221 ^{a/}	6.5782-E3	0.0248 ^{a/}	6.8013-E3
AGE2	-2.4181-E4 ^{a/}	8.2426-E5	-2.8667-E4 ^{a/}	8.5116-E5
EDTS2	0.1130 ^{a/}	0.0127	0.1149 ^{a/}	0.0132
EDCS2	0.1361 ^{a/}	0.0231	0.1737 ^{a/}	0.0236
EDPS2	0.2785 ^{a/}	0.0275	0.3309 ^{a/}	0.0269
ACON2	-0.0367	0.0414	-2.6446-E3	0.0427
ACON3	0.0574	0.0407	0.0842 ^{b/}	0.0412
ACON4	-4.2538-E3	0.0404	-0.0137	0.0416
FYSERV	2.1456-E3 ^{a/}	2.3669-E4	2.1456-E3 ^{a/}	2.4550-E5
FYSERV2	-3.4697-E6 ^{a/}	5.7138-E7	-3.0808-E6 ^{a/}	5.9624-E7
FTLFEX	5.2088-E4	2.9662-E4	7.1171-E4 ^{b/}	3.0887-E5
FTLFEX2	-8.8692-E6	6.1502-E6	-1.0646-E6	6.4073-E7
DEMAND SIDE				
OCC1	0.2299 ^{a/}	0.0188		
OCC3	0.1156 ^{a/}	0.0311		
OCC4	0.1099 ^{b/}	0.0498		
OCC5	0.8531 ^{a/}	0.0319		
OCC6	-0.1242 ^{a/}	0.0428		
OCC7	0.0544	0.0402		
OCC8	0.0479	0.0264		
OCC9	0.1173 ^{a/}	0.0188		
OCC10	0.0137	0.0258		
OCC11	0.1069 ^{a/}	0.0235		
INTERNAL RELATIONS				
TOTABFC	7.4649-E4 ^{a/}	2.3486-E4	-8.9341-E4 ^{a/}	2.4550-E4
OSJAP1	-0.0136	0.0117	-0.0141	0.0122
WWOP	5.2132-E3 ^{a/}	1.0831-E3	7.3003-E3 ^{a/}	1.1143-E3
CAROT	-3.1540-E4	2.6332-E4	-1.1817-E4	2.7589-E4
INFORM	1.1125-E4	4.7616-E4	5.7837-E4	4.9772-E4
PERCD	-0.0149	0.0229	-9.3348-E3	0.0240
MOTS1	5.6018-E3	0.0114	-7.4750-E3	0.0119
EXTRA-FIRM RELATIONS				
CHILD1	0.0274 ^{a/}	9.0697-E3	0.0230 ^{b/}	9.5134-E3
CHILD2	0.0223 ^{a/}	6.7153-E3	0.0275 ^{a/}	7.0012-E3
MARITAL	4.7801-E3	0.0145	-3.5549-E3	0.0152
LFAM	-3.0403-E4	2.0995-E4	-2.9675-E4	2.2013-E4
EARSOC	-1.9814-E3	3.9857-E3	-4.0592-E3	4.1686-E3
EARDL	1.3140-E3	5.3259-E3	4.6007-E3	5.5496-E3
R ²	.6281	.587	-.622	.588
NO. OF OBS.	1893	1893	1506	1506

a = significant at 1% level.

b = significant at 5% level.

TABLE 6-5
FULL AND PERSONAL EARNINGS EQUATIONS FOR MARRIED SUB-SAMPLE 2

Variable	FULL MODEL		PERSONAL MODEL	
	Coefficient	S.E.	Coefficient	S.E.
CONSTANT	9.5701 ^{a/}	0.1485	9.5388 ^{a/}	0.1526
SEX	-0.1197 ^{a/}	0.0313	-0.1355 ^{a/}	0.0320
HUMAN CAPITAL				
AGE	0.0189 ^{b/}	7.5421-E3	0.0214 ^{a/}	7.7170-E3
AGE2	-2.0703-E4 ^{b/}	9.3572-E5	-2.4884-E4 ^{a/}	9.5604
EDTS2	0.1129 ^{a/}	0.0145	0.1180 ^{a/}	0.0148
EDCS2	0.1106 ^{a/}	0.0272	0.1484 ^{a/}	0.0275
EDPS2	0.2700 ^{a/}	0.0319	0.3287 ^{a/}	0.0310
ACON2	0.0106	0.0527	0.0359	0.0539
ACON3	0.0903	0.0512	0.1276 ^{b/}	0.0519
ACON4	0.0143	0.0523	3.5899-E3	0.0534
FYSERV	2.1915-E3 ^{a/}	2.6687-E4	2.2048-E3 ^{a/}	2.7283-E4
FYSERV2	-3.5239-E6 ^{a/}	6.3779-E7	-3.0908-E6 ^{a/}	6.5581-E7
FTLFEX	3.6647-E4	3.3364-E6	5.5572-E4	3.4364-E4
FTLFEX2	-6.3579-E7	6.8315-E7	-9.0986-E7	7.0411-E7
DEMAND SIDE				
OCC1	0.2117 ^{a/}	0.0215		
OCC3	0.1225 ^{a/}	0.0350		
OCC4	0.1692 ^{a/}	0.0596		
OCC5	0.1114 ^{a/}	0.0407		
OCC6	-0.1225 ^{a/}	0.0465		
OCC7	3.2763-E3	0.4649		
OCC8	0.0464	0.0300		
OCC9	0.0865 ^{a/}	0.0210		
OCC10	0.0179	0.0287		
OCC11	0.0871 ^{a/}	0.0249		
INTERNAL RELATIONS				
TOTABFC	-6.6609-E4 ^{b/}	2.8518-E4	-7.2916-E4 ^{b/}	2.9623-E4
OSJAP1	-0.0187	0.0132	-0.0210	0.0137
WWOP	4.7808-E3 ^{a/}	1.2090-E3	6.9359-E3 ^{a/}	1.2264-E3
CAROT	-4.4156-E4	3.0172-E4	-3.5924-E4	3.1320-E4
INFORM	3.0191-E4	5.2648-E4	6.2709-E4	5.4567-E4
PERCD	-0.0331	0.0287	-0.0301	0.0299
MOTS1	-8.4606-E3	0.0129	9.8793-E3	0.0134
EXTRA-FIRM RELATIONS				
CHILD1	0.0245 ^{b/}	9.6683	0.0185	0.0100
CHILD2	0.0264 ^{a/}	7.3824-E3	0.0292 ^{a/}	7.6379-E3
LFAM	-3.6904	3.1057-E4	3.9426-E4	3.2266-E4
DLHH	-3.0284-E4 ^{b/}	1.2698-E4	3.0167-E4 ^{b/}	1.3193-E4
EARSOC	-2.9348-E3	4.5934-E3	-3.7040-E3	6.2331-E3
EARDL	1.2980-E3	6.0284-E3	3.9732-E3	6.2331-E3
UMOV	3.7179-E3	0.0141	1.0505-E3	0.0147
SPSCAR2	-0.0120	9.7453-E3	-5.5977-E3	0.0101
SPMOB	0.0239	0.0144	0.2743	0.0149
SPSTRPRM	-0.0290	0.0460	-6.8111-E3	0.0477
IMPCARTF	0.0347	0.0195	0.0458 ^{b/}	0.0202
R ²	.622		.588	
NO. OF OBS.	1506		1506	

a = significant at 1% level
b = significant at 5% level

TABLE 6-6
FULL AND PERSONAL EARNINGS EQUATIONS FOR TOTAL SAMPLE 3

FULL MODEL			PERSONAL MODEL	
Variable	Coefficient	S.E.	Coefficient	S.E.
CONSTANT	8.1533 ^{a/}	0.5261	8.2894 ^{a/}	0.5180
SEX	-0.2410 ^{a/}	0.0684	-0.2501 ^{a/}	0.0661
HUMAN CAPITAL				
AGE	0.0611 ^{b/}	0.0290	0.0575 ^{b/}	0.0290
AGE2	-7.8439-E4 ^{b/}	3.8331-E4	-7.2696-E4	3.8200-E4
EDTS2	0.0260	0.1083	0.0378	0.1086
EDCS2	0.1608	0.1223	0.1765	0.1224
EDPS2	0.2748 ^{b/}	0.1259	0.2831 ^{b/}	0.1263
ACON2	0.2475	0.1455	0.2293	0.1454
ACON3	0.2300	0.1324	0.1798	0.1305
ACON4	0.0588	0.1501	-0.0154	0.1400
FYSERV	4.6118-E3 ^{a/}	1.0554-E3	4.8830-E3 ^{a/}	1.0364-E3
FYSERV2	-8.486-E6 ^{b/}	3.4275-E6	-9.1927-E6 ^{a/}	3.4077-E6
FTLFEX	2.2978-E3 ^{b/}	1.1583-E3	2.5445-E3 ^{b/}	1.1521-E3
FTLFEX2	-4.1688-E6	2.6696-E6	-4.749 -E6	2.6452-E6
DEMAND SIDE				
OCC1	0.0842	0.1153		
OCC2	0.1745	0.1197		
INTERNAL RELATIONS				
TOTABFC	-1.5116-E3	9.3632-E4	-1.6894-E3	9.3347-E4
OSJAP1	0.0275	0.0480	0.0413	0.0476
WWOP	5.0981-E3 ^{b/}	2.1941-E3	6.3606-E3 ^{a/}	2.1009-E3
CAROT	-1.5108-E3	1.2755-E3	-1.6615-E3	1.2779-E3
INFORM	-3.3442-E4	9.8992-E4	-2.9667-E4	9.9374-E4
PERCD	0.1538	0.1150	0.1640	0.1145
MOTS1	-0.0503	0.0549	-0.0593	0.0548
EXTRA-FIRM RELATIONS				
MARITAL	0.2480 ^{a/}	0.0527	0.2654 ^{a/}	0.0527
CHILD1	-7.6673-E3	0.0397	-2.2344-E3	0.0397
CHILD2	-0.0421	0.0316	-0.0419	0.0317
LFAM	1.7841-E4	3.3097-E4	5.6709-E5	3.2637-E4
EARSOC	9.0751	6.1715-E3	1.5314-E3	6.1850-E3
EARDL	9.2722-E3	0.0188	0.0121	0.0187
R ²	.670		.664	
NO. OF OBS.	254		254	

a = significant at 1% level

b = significant at 5% level

TABLE 6-7
FULL AND PERSONAL EARNINGS EQUATIONS FOR MARRIED SAMPLE 3

FULL MODEL			PERSONAL MODEL	
Variable	Coefficient	S.E.	Coefficient	S.E.
CONSTANT	9.2684 ^{a/}	0.4749	9.2867 ^{a/}	0.4366
SEX	-0.0782	0.0738	-0.0581	0.0727
HUMAN CAPITAL				
AGE	0.0288	0.0247	0.0270	0.0250
AGE2	-3.6397	3.0800-E4	-3.0092-E4	3.1094-E4
EDTS2	-8.0680-E3	0.1049	-0.0369	0.1028
EDCS2	0.1099	0.1095	0.1015	0.1083
EDPS2	0.2237 ^{b/}	0.1104	0.2009 ^{b/}	0.1094
ACON2	0.2246 ^{b/}	0.1150	0.2371 ^{b/}	0.1163
ACON3	0.1912 ^{b/}	0.0977	0.1486	0.0973
ACON4	0.0582	0.1259	6.5656-E4 ^{b/}	0.1091
FYSERV	1.3322-E3	8.7358-E4	1.9170-E3 ^{b/}	8.4894-E4
FYSERV2	-4.6642-E7	2.7652-E6	-2.0849-E6	2.7206-E6
FTLFEX	2.9097-E3 ^{a/}	1.0223-E3	3.0453-E3 ^{a/}	1.0314-E3
FTLFEX2	-5.3329-E6 ^{b/}	2.1266-E6	-6.0521-E6 ^{a/}	2.1326-E6
DEMAND SIDE				
OCC1	-0.0212	0.1093		
OCC2	0.0861	0.1153		
INTERNAL RELATIONS				
TOTABFC	-1.0928-E3	7.1624-E4	-1.3546-E3	7.1694-E4
OSJAP1	-2.0642-E4	0.0405	0.0117	0.0406
WWOP	4.6903-E3 ^{a/}	1.7869-E3	6.0045-E3 ^{a/}	1.7212-E3
CAROT	-1.8392-E3	9.7357-E4	-1.9866-E3 ^{b/}	9.8417-E4
INFORM	-4.7231-E4	7.0302-E4	-4.3055-E4	7.1192-E4
PERCD	-0.0356	0.1155	-0.0635	0.1145
MOTS1	0.0107	0.0481	6.1867	0.0484
EXTRA-FIRM RELATIONS				
CHILD1	0.4757	0.0292	0.0500	0.0295
CHILD2	-5.2229-E3	0.0250	-6.5740-E3	0.0253
LFAM	4.1479-E5	2.5598-E4	-1.2793-E4	2.4873-E4
OLHH	-1.3453-E3 ^{a/}	4.1456-E4	-1.5320-E3 ^{a/}	4.1287-E4
EARSOC	-4.4817-E4	5.1574-E3	1.3153-E3	5.1739-E3
EARDL	0.0109	0.0165	0.0153	0.0165
UMOV	0.0705	0.0488	0.0646	0.0490
SPSCAR2	-0.0549	0.0309	-0.0437	0.0309
SPMOB	0.0509	0.0409	0.0510	0.0414
SPSTRPRM	-0.2397 ^{b/}	0.1121	-0.2170	0.1129
IMPCARTF	0.1078	0.0598	0.0902	0.0602
R ²	.743		.733	
NO. OF OBS.	182		182	

a = significant at 1% level.
b = significant at 5% level.

significant and positively related to earnings. The negative and significant relation between the quadratic of age indicates that earnings rise at a decreasing rate with age. Both these results are as expected. Full-time labour force experience, however, is negatively related to earnings with a significant impact, while its quadratic is positive and significant--quite unexpected results. These results may be due to multicollinearity among age, labour-force experience, and experience with the company. An analysis of the combined impact of these variables in Sample 1, under some reasonable assumptions, reveals that an additional coterminous year of age, labour-force experience, and service with the company increases earnings by 15 percent (see Appendix 8 for details of this calculation).

In all three samples, we estimate the implied rate of return for a year of advanced education, on the assumption that a technical degree represents two years, a college degree five years (standard in Québec), and a professional degree ten years. For Sample 1, the impact of technical and college education on earnings cannot be distinguished from that of high school, but the relative impact of a professional degree is highly significant and positive. The holder of a professional degree gains an earnings differential of 18 percent over someone with a high school degree. Note that no females in the sample had a professional degree, so that the 18 percent earnings differential pertains to males.

In the personal model, we drop the occupational (hierarchical and functional) and port-of-entry variables. Any correlation between these variables and those that remain in the model renders the coefficients of the latter subject to left-out variable bias. This bias, however, is interesting in its own right. To the extent that the left-out variables

are endogenous, determined in part by the remaining variables in the system, the comparison of the full and personal models reveals the indirect effects of the exogenous variables through the channels of occupation and advancement. Thus, not only can we analyze the direct impacts of personal characteristics on earnings variation, but also we gain some insight into the indirect impacts of the personal variables through occupational segregation, port of entry, and functional or horizontal departments.

In the personal model, a social-sciences concentration, becomes negative and significant, implying a 6 percent earnings difference when compared to a humanities concentration. This change probably occurs because of correlation with the port-of-entry variable. A person's area of concentration would most likely have the greatest impact in determining his or her initial job. This explanation would not hold, however, if a concentration in the humanities were also correlated to a roughly equivalent extent with the same ports of entry as an area of concentration in the social sciences. Holding a science degree has a positive and significant impact on earnings (implying a 10 percent difference), whereas the possession of such a degree was insignificant in the total regression. This change was expected because, as stated earlier, over the past several years a computer sciences degree has been a necessary prerequisite for entry into the programmer and analyst jobs in this particular firm. The significance of the area of concentration variable supports our hypothesis that the quality of the degree obtained is important to earnings.

In the models that include the demand-side variables, occupations are categorized both by hierarchical and functional position in the

firm. Given the other variables in the models, the significance of the hierarchical and functional occupational variables indicates either that inefficiency exists in the allocation of jobs within the firm or that our model does not capture all the personal attributes that contribute to vertical mobility. For example, if included personal-attribute variables could explain what makes an individual a team leader rather than a technician, then hierarchical or functional position per se would not be important as a determinant of earnings. In terms of hierarchical comparisons, a manager makes 31 percent more, and programmers or analysts earn 18 percent more, than an identically qualified individual who is a computer operator. With the exception of the computer operations department, functional dummy variables are positive and significant, indicating that those in technical support and software development earn significantly more--23 percent and 11 percent, respectively--than those in operations support.

In our study, employees are classified by their first functional department to test whether current earnings are related to port of entry. The first department dummies indicate that two departments, (technical support and software development) as well as the "not-elsewhere-classified" department are significantly different from the excluded operations support department. The implied differentials are 8 percent, 7 percent, and 9 percent, respectively. Analogous to our discussion of the current hierarchical and functional occupational variables, port of entry would not be a significant determinant of earnings if there was an efficient allocation of people to their first jobs or if we had included all the attributes that determined both initial job placements and subsequent advancement.

To understand why some people might have more access to internal job ladders than others, we examine the extent to which individuals participate in the internal relations of the firm and how they perceive their position in the firm's hierarchy. For males and females together, there are no significant impacts on earnings because of total absence from the company, outside job applications, or working overtime without pay. But another indicator of commitment to the firm, CAROT--the percent increase in pay needed to induce one to leave the company--has a significant impact on earnings. An individual who would require 10 percent more than she or he is currently earning to leave the company earns a 1.5 percent premium compared to an individual who would leave the company with no earnings increment. In line with our hypothesis, it can be argued that an individual with a low supply elasticity to the outside labour market sees his or her future with the firm as better than an individual with a high supply elasticity and that this greater commitment to the firm manifests itself in better performance for the firm, resulting in higher current earnings.

In the personal model, the pursuit of an outside job becomes significant with a negative impact on earnings. A comparison with the full model estimates implies that this variable is correlated with lower-paying occupational categories. Individuals who apply for one or more outside positions earn 5 percent less than those who do not attempt to leave the firm. A comparison of the full and personal models also indicates that a correlation exists between the more highly-paying occupations and the extent to which employees do extra unpaid work. In the personal model, an individual employee who works overtime without pay 4 times earns a premium of 2 percent over an individual employee who

does no unpaid overtime, a differential that is statistically significant.

Informal networks within the firm are measured by an index (INFORM) of both the frequency and quality of contacts with superiors who may exert influence over an employee's upward mobility. The index has a highly significant and positive impact on earnings in both the total and personal models.

Turning to extra-firm relations, a comparison of the full and personal models indicates a correlation between employees with children under 6 and the lower-paying occupations. In the personal regression run on the married sub-sample, the division of labour in the household variable is negative and significant, indicating that a married individual who is less constrained by household responsibilities earns more than an individual who is more constrained.

The main reason for examining a sub-sample of married employees is to highlight the effects of a dual-career household on the individual's earnings. For this purpose, the following variables have been included: whether or not the individual is willing to relocate to advance the career of the spouse, whether a spouse or partner is supportive of the employee having a career, whether a spouse would be willing to relocate in order to benefit an employee's career, whether the spouse is professional and willing to relocate for the sake of an employee's career and the importance of the employee's career to the family. The only variable supporting the dominant-careers hypothesis is the importance of the career to the family in the personal model, a finding that individuals in higher-paying occupations are more likely to have the primary career.

Sample 2, drawn from a large, public-sector utility company, is the

largest of all the samples. Regressions were run on 1892 individuals--1354 males and 538 females--all of whom are French-speaking (they received French translations of the questionnaires and responded in French).

Of the human-capital variables, AGE is positively related to earnings and significant. Like Sample 1 we find that there are decreasing rates of returns to maturity. Full-time years of service with the company is positive and significant, while earnings rise at a decreasing rate the longer an individual works with the company. Unlike the results in Sample 1, the signs of labour-force experience and its quadratic are as expected, although the only significant coefficient is the linear term in the personal regression. All the education variables are positive and highly significant for both the total and personal models, strongly supporting the conventional human-capital hypothesis. As in Sample 1, holding a science degree has a positive and significant impact on earnings, again supporting the hypothesis that the quality of the degree obtained is of some consequence for earnings.

There are eleven occupational categories (aggregated from about 12,000 job titles) included in the full model. In terms of hierarchical status, from top down, they are management, financial staff, scientific research staff, engineering staff, computer staff, public-relations staff, primary-services staff, bluecollar supervisors, skilled labourers, clerical staff, and secondary-services staff.

A manager earns 26 percent more than an identically qualified clerical staffperson (the reference group), while both engineering staff and scientific research staff earn 12 percent more. Individuals in the skilled-labour category also earn 12 percent more than clerical staff,

most likely because the skilled workers belong to militant public-sector unions. Computing staff earn 9 percent more than clerical staff, blue-collar supervisors 11 percent more, but secondary-services staff 12 percent less. Note that there are no females in the bluecollar supervisor group.

In Sample 2, we are unable to examine the impact on earnings of mobility up internal job ladders from initial ports of entry. We can, however, explore aspects of the commitment of individuals to the firm and their perceptions of their chances for mobility within the enterprise. In contrast to the results from the other samples, absence from the company for reasons other than a vacation has a negative and significant impact on earnings. Further, those individuals who work overtime without pay one time (the mean in the sample) earn significantly more than individuals who do no unpaid overtime work. It might be noted that in Sample 1, the mean value for working overtime without pay was almost 4 and in Sample 3 almost 11. We assume that the relatively small amount of unpaid overtime done by those in Sample 2 may be due in part to the presence of non-bureaucratic employees. Perhaps this is because, unlike Samples 1 and 3 that are drawn from private-sector firms, Sample 2 is drawn from a firm in the public sector, where promotion is based more on seniority than performance, and where people are more inclined to "work to rule" (in this case, coming to work at nine and leaving at five).

Another contrast with the other samples is that those who have children in Sample 2 reap significantly higher earnings than those who do not. The returns to having an additional child, 5 years and under, is 2 percent, and 6 years and over, 3 percent. This employer may perceive employees with children as more stable. Amongst the married sub-sample,

a highly negative coefficient supports the division-of-labour-in-the-household hypothesis, indicating that those individuals who are less constrained by household duties earn more. In the personal model, the finding that individuals with the household's primary career earn significantly more than individuals whose career is less important to the household supports the dominant-careers hypothesis. Note that, as in Sample 1, this variable has a significant impact in the personal model but not in the full model, suggesting a correlation between higher-paying positions in the firm and having the dominant-career.

Sample 3, a medium-sized high-tech company, has a total of 253 employees, with 189 males and 62 females. There may have been significant self-selection among those who responded, because the responses as a proportion of the questionnaires distributed was only 17 percent--by far the lowest of all the samples. The results derived from this sample may not, therefore, be representative of the underlying population.

Analogous to the results of the other samples, AGE is positively related to earnings and significant, with a decreasing rate of return to maturity. The extra returns to holding technical and college degrees cannot be distinguished from the returns to high-school education. But an individual with a professional degree earns 32 percent more than a high school graduate, an annual rate of return of 3 percent. Occupations in Sample 3 are categorized by hierarchical position in the firm, with management, administrative, and financial personnel at the top; scientific, engineering, and computing staff in the middle; and clerical/secretarial staff at the bottom. The occupational variables are not significant determinants of earnings in any of the models, suggesting that there is an efficient allocation of people to jobs within

the firm and/or that for this sample our model captures all the personal attributes that contribute to vertical mobility.

Examining the internal relations of the firm, we note that those individuals who worked overtime without pay 11 times (the sample average) in 1982 earned 6 percent more than an individual who did no unpaid overtime work. Of the extra-firm factors that may affect earnings, we find that marital status functions as a positive and significant determinant of earnings in both models. We might posit that employers perceive marital status as evidence of apparent stability, just as they might view those individuals with children as more stable employees. Amongst the married sub-sample, the division-of-labour-in-the-household variable is negative and significant at the 1 percent level--a finding common to all samples. The dominant-career variables indicate that an employee whose spouse is professional and is willing to relocate for the sake of that employee's job earns significantly less than an employee who has an unwilling spouse.

In summary, across all samples certain variants of each of our four categories of hypotheses--human capital, occupational, internal relations, and extra-firm relations--have significant impacts on earnings. These results confirm the prime argument that motivated this study; namely, that the traditional human-capital framework should be extended to include both demand-side factors and social relationships.

Among the human-capital variables, age is important across all the samples. Years of service with the company, which is highly correlated with age, has an additional significant impact in two of the three samples. In general, the contributions of age and company experience dominate the expected human-capital impacts of labour-force experience. In

all the samples, holders of a professional degree appear to be duly rewarded. In addition, in two of the three samples, a scientific background yields an individual a clear-cut advantage in pay. This finding suggests that the quality as well as the level of education should be taken into account in human-capital models.

It is difficult to make generalizations about the impacts of occupations across all samples because each occupational structure is unique to the particular firm. Moreover, we were able to gather much more information about occupational status and mobility for Sample 1 than for the other two. With this caveat in mind, all our findings reveal that managers earn significantly more than any of the other groups within the samples. Given the hierarchical structures of the corporations in our study, we are, of course, not surprised to find that managers are highly paid relative to other employees. Nevertheless, given all the other factors held constant in our model, there is no inherent reason for a significant positive return to being a manager. In one case, the existence of strong unions among skilled workers appears to have a significant impact on earnings. We did not collect data on the union status of employees, mainly because we were mainly interested in managerial level personnel. The inclusion of a union variable may well have picked up this occupational impact. In the one sample where we are able to test the port-of-entry hypothesis, initial departmental placement in the firm is an important determinant of earnings, lending support to the independent importance of internal job ladders as a means to higher earnings.

Amongst the internal-relations variables, working overtime without pay is significant across all the samples in the personal models and in two of the three samples in the full models. We view these results as

very strong support for the commitment-to-the-firm hypothesis because the interpretation of unpaid overtime as a "gift exchange" [see Akerlof, 1982] within the firm is clear-cut. The employee gives his or her extra labour to the firm, with no assurance that the firm will return the gift in the form of promotion or higher pay. The significance of this variable indicates that individuals who are presently being better rewarded expect the "gifts" of higher pay to continue to be forthcoming in the future if they give the firm their "gifts" of unpaid work now. A longitudinal analysis would be needed, however, to document this relationship more fully. Various other internal-relations hypothesis are supported in one or the other of the samples. In Sample 1, which is clearly the most homogeneous sample in terms of internal job structures, informal networks have a significant impact on earnings even in the full model, while outside job applications have a significant impact in the personal model. In Sample 2, absence from the company for reasons other than a vacation has a significant negative impact.

Amongst the extra-firm factors, division of labour in the household is negative and significant across all married sub-samples for the personal models and in two of the three full models. Dual realms of responsibility, which of course have traditionally been seen as being the lot of females, have a significant impact here across both males and females. Whether or not work in the home affects the earning power of females more than males is a result that will have to await the upcoming decomposition of the female-male earnings differential from regressions run for females and males separately. In two of the samples for the personal models, individuals who have the primary career in the household earn significantly more than individuals whose career is less

important to the household, supporting the dominant-career hypothesis. In the total samples, marital status is an important determinant of positive earnings for Sample 3, but not for any of the other samples. The impact on earnings of having children also varies across samples. In Sample 1, the presence of young children in the home inhibits earnings, but in Sample 2, having children who are both young (under the age of 6) and older tends to increase earnings. One plausible reason for the different impacts of the child variables is the fact that Sample 1 is drawn from a company in the private sector, whereas Sample 2 is drawn from a company in the public sector. It is considered discriminatory for a public-sector company to inquire whether or not employees have children. It might be argued that the public-sector company, lacking information about the family responsibilities of its employees, cannot discriminate in terms of pay and promotion against those who do have children. But again, this form of discrimination is generally considered to be a problem for females rather than males. We must turn to a comparison of the results of the models run on females and males separately to take the analysis further.

III. Decomposition

For each sample, the estimation of separate regressions for females and males permits us to decompose the difference in the mean-estimated earnings of females and males into three components according to the following identity:

$$(1) \ln \bar{BTE} \bar{S}_f - \ln \bar{BTE} \bar{S}_m \equiv \Sigma[(b_f - b_m) * \bar{X}_f] + \Sigma[b_f * (\bar{X}_f - \bar{X}_m)] - \Sigma[(b_f - b_m) * (\bar{X}_f - \bar{X}_m)],$$

where $\ln \bar{BTE} \bar{S}_f$ and $\ln \bar{BTE} \bar{S}_m$, are the logarithms of average earnings from females and males respectively, b_f and b_m are vectors of regression coefficients for females and males respectively, and $\bar{X}_f$ and $\bar{X}_m$ are vectors of the means of the explanatory variables for males and females respectively.

The term, $\Sigma[(b_f - b_m) * \bar{X}_f]$, is called the coefficients component, and shows (in log points) the difference in earnings between females and males that is due to differences in the rates of return that each group receives for attributes, given the mean attributes possessed by females.

The term, $\Sigma[b_f * (\bar{X}_f - \bar{X}_m)]$, is called the attributes component, and shows (in log points) the difference in earnings that is due to differences in mean attributes, given the estimated female rates of return to attributes.

The term, $-\Sigma[(b_f - b_m) * (\bar{X}_f - \bar{X}_m)]$, is called the interaction component, because it shows the extent to which the female-male earnings difference is due to the interaction of coefficient and attribute differences rather than due only to the independent effects of coefficient differences and attribute differences as captured in the first two components. The interaction component indicates, therefore, that the differences in coefficients and attributes are correlated. We might argue that such correlation occurs because the respective rates of returns to attributes to females and/or males influence each of the sexes in their decisions to acquire attributes. If this be the case, then a single-equation model, such as we have used throughout this study, may not be appropriate. Although the potential need for a more sophisticated model

has already been implicitly raised in the theoretical discussions in Chapter 2, we have chosen to follow the literature in using less sophisticated econometric specifications. Nevertheless, one function of the decomposition of the OLS results is to see whether in fact the interaction component is large, a finding that would indicate that further research is required to specify a model of female-male earnings differences in which attributes are determined endogenously.

Given the decomposition identity specified in (1), a negative coefficients component will indicate an unfavourable position for females relative to males in terms of rates of returns to attributes, while a negative attributes component will indicate an unfavourable position for females in terms of attributes endowments. In our model, the quantity of attributes is always positive. Therefore, when both the coefficients component, $\Sigma[(b_f - b_m) \cdot \bar{X}_f]$, and the interaction component, $-\Sigma[(b_f - b_m) \cdot (\bar{X}_f - \bar{X}_m)]$, are negative, females must have both lower rates of return and fewer attributes than males. Having fewer attributes is not always unfavourable to females because an attribute such as the division of labour in the household (DLHH) or early childhood activities (EARSOC) may have negative rates of return. Therefore, if males have more of this attribute (in these cases, more household work or more female-oriented childhood activities), females may have an earnings advantage. In all cases where the earnings advantage goes to one sex and the attributes advantage goes to the other, the sign of the interaction component will depend upon which element dominates the other, that is, a negative interaction component indicates an earnings disadvantage for females, but not necessarily both coefficient and attribute disadvantages. Note that the interaction component is $-\Sigma[(b_f - b_m) \cdot (\bar{X}_f - \bar{X}_m)]$.

Therefore, if females have both higher returns and more attributes than males, the interaction result will decrease the female-male earnings differential.

The decomposition identity could also have been specified using male weights:

$$(2) \ln \bar{B} \bar{T} \bar{E} \bar{S}_f - \ln \bar{B} \bar{T} \bar{E} \bar{S}_m \equiv \Sigma[(b_f - b_m) * \bar{X}_m] + \Sigma[b_m * (\bar{X}_f - \bar{X}_m)] + \Sigma[(b_f - b_m) * (\bar{X}_f - \bar{X}_m)].$$

Comparing (1) and (2), $\Sigma[(b_f - b_m) * \bar{X}_m] = \Sigma[(b_f - b_m) * \bar{X}_f] - \Sigma[(b_f - b_m) * (\bar{X}_f - \bar{X}_m)]$, and $\Sigma[b_m * (\bar{X}_f - \bar{X}_m)] = \Sigma[b_f * (\bar{X}_f - \bar{X}_m)] - \Sigma[(b_f - b_m) * (\bar{X}_f - \bar{X}_m)]$. When the interaction component is zero, the coefficients and attributes components are equal whether female or male weights are used. When the interaction component is small, the relative magnitudes of the respective components in (1) and (2) will be similar. It is, therefore, only when large coefficient differences are associated with large attribute differences that the index number problem becomes an issue; that is, the choice of female or male weights in carrying out the decomposition becomes a matter of concern.

From a policy point of view, however, the use of the female weights would seem to be more appropriate for our purposes. We are assuming from the outset that females are disadvantaged relative to males in the labour market, an assumption that is borne out by the statistical results presented above. Therefore, policies (whether household, firm, or government) should be focussed on differences in coefficients given the attributes that females actually have, differences in attributes given the coefficients that females actually have, and the interaction of the two differences. It would not appear appropriate to evaluate female

disadvantages under the counterfactual premises that females have male mean attributes and male rates of return as implied in (2).

Within the econometric literature, the interaction term has been ignored in the decomposition of female-male earnings differences [Oaxaca, 1973; Holmes, 1976; Robb, 1978; Gunderson, 1979; Osterman, 1979]. Using our notation, the typical decomposition combines male and female weights in the following manner:

$$(3) \ln \bar{B} \bar{T} \bar{E} \bar{S}_f - \ln \bar{B} \bar{T} \bar{E} \bar{S}_m \equiv \Sigma [(b_f - b_m) * \bar{X}_f] + \Sigma [b_m * (\bar{X}_f - \bar{X}_m)].$$

The coefficients component in (3) is identical to the coefficients component in the formulation in (1), while the attributes component in (3) is identical to the attributes component in (1). Compared to (1), however, the interaction component has been absorbed into the attributes component in (3), while compared to (2), the interaction component has been absorbed into the coefficients component. The attribute component in (1) shows the proportion of the total earnings difference that is due to female-male attributes differences, given female rates of return; whereas the attributes component in (3) shows the proportion that is due to attributes differences given the male rates of return.

Our previous discussion has already indicated the disadvantages of a decomposition formulation such as (3) that mixes male and female weights into the first two components, and as a result does not show the interaction component. In the absence of the interaction component, we have no indication of the extent to which the use of either male or female weights matter in the derivation of the first two components. By the same token, we have no measure of the degree to which differential

attribute acquisition may be endogenously determined in response to differential rates of return. Without a formulation that yields the interaction component, for policy purposes, we cannot separate the extent to which female earnings would be improved by greater attribute endowments holding current estimated rates of return constant--as measured by the attribute component in (1)--from the extent to which female earnings would be improved by a more complex simultaneous alteration of attributes and rates of return--as measured by the interaction component in (1).

With this theoretical background on alternative decomposition formulations, we now summarize the decomposition results using female weights for the female and male regressions estimated in Part II of this chapter. Details of the decompositions with both male and female weights are presented in Appendix 9. The impact on earnings differentials of the intercepts always appears only as part of the coefficients component of the decomposition. Osterman [1979] treats the intercept differential as a separate "unexplained" component, whereas Gunderson [1979] includes it as part of the coefficients component. We follow Gunderson in this matter, because we want the coefficients component to indicate earnings discrimination, whether explained or unexplained. Moreover, as stated in Part II of this chapter, our interpretation of the intercept is that it reflects the returns to individuals who are in the excluded categories of the dummy variables as well as simply unexplained returns. From the tables presented in Appendix 9 below, the reader can easily calculate the impact of the coefficients component without the intercept.

Table 6-8 summarizes the percent total earnings differential for

Table 6-8

Decomposition of Female-Male Earnings Differential
(percent)

		Coefficients Component	Attributes Component	Interaction Component	Total Differential
Sample 1	TFR	3.53	-11.10	-10.95	-18.52
	TPR	-11.73	-11.48	4.69	-18.52
	MFR	0.76	-9.74	-13.10	-22.08
	MPR	-8.88	-13.34	0.13	-22.08
Sample 2	TFR	-15.93	-27.01	9.75	-33.18
	TPR	-16.81	-21.51	5.14	-33.18
	MFR	-11.27	-33.98	10.36	-34.89
	MPR	-10.76	-30.65	6.51	-34.89
Sample 3	TFR	-76.76	3.91	33.40	-39.49
	TPR	-74.19	2.67	32.03	-39.49
	MFR	-0.76	-82.24	44.18	-38.82
	MPR	8.84	-68.63	20.97	-38.82

TFR = total sample, full regression

TPR = total sample, personal regression

MFR = married sub-sample, full regression

MPR = married sub-sample, personal regression

Source: see Appendix 9.

each regression and the associated percentages of the differential accounted for by each of the three components in (1). For each sample, we shall examine the decomposition for the full regression and personal regression estimates based on the total samples and married sub-samples.

In Sample 1, drawn from a large multinational in research and development, females earn 19 percent less than males. Little of the differential is due to earnings discrimination as reflected in the coefficients component. In the full decomposition, the most negative total impact for females is due to occupational segregation, where females earn 16 percent less. In the personal decomposition, the human-capital hypothesis and the intercept pick up much of the impact of the dropped hypotheses, although in opposite directions. The negative impact on the human-capital variables indicates that, given their human-capital endowments, females are channeled into the lower-paying occupational categories. Males earn 59 percent more than females because of human-capital variables.

The full coefficients component is positive for females, indicating earnings discrimination of 4 percent in their favour. The positive value of the coefficients component is largely the result of early socialization. The regression coefficients show that females receive positive returns to the two early socialization variables (both of which have higher values when early socialization is more female-oriented), while males receive negative returns. Of particular importance within this hypothesis are the returns to early childhood activities, a higher value of which reflects the female orientation of these activities. In the personal decomposition, the coefficients component becomes negative, indicating that females now earn 12 percent less than males because of

rates of return. As in the total impact, human capital, and in particular age, dominates the coefficients component. In Sample 1, older males tend to be in much higher-paying positions within the firm than older females.

In the full decomposition, females earn 11 percent less than males because of the attributes component. The occupational-segregation and port-of-entry hypotheses have the greatest impacts. A comparison of the port-of-entry coefficients of each of the regressions for females and males indicates that initial functional placement in the firm has a significant impact on current earnings amongst females but not amongst males. In the female regression, those who entered the company in technical support, software development, and miscellaneous ports of entry have current earnings that are, respectively, 14, 12, and 38 percent higher than the earnings of those who entered in computer operations. But relatively few females either begin or end up in these better-paying departments, as the decomposition results indicate. The promotion opportunities for males are greater than they are for females, apparently because males have access not only to longer but also to a wider array of internal job ladders. In the personal decomposition, the attributes component changes very little. Now, however, human capital, and in particular age, stands out as the major factor in determining the overall attributes component. Not only do older males get paid better than older females as indicated by the coefficients component, but on average males are older than females in this sample.

The full interaction component is also negative, and therefore reflects the disadvantages of females relative to males in both coefficients and attributes. The earnings differential associated with the

interaction component is -11 percent. The largest impacts are found in occupational segregation and commitment to the home. Although both males and females receive negative returns to commitment to the home, the coefficients component for this hypothesis indicates that per unit of commitment females are less penalized. But the fact that on average females have more units of commitment to the home means that the interaction of the coefficients differences and attributes differences is negative, and therefore unfavourable to females. In the personal decomposition, the interaction term changes significantly, becoming positive, mainly because of the positive impact of early socialization. Despite the fact that females have more of the negatively-rewarded, female-oriented early socialization attributes than males, the even more negative returns to males turn this factor into an advantage for females in the interaction of returns and attributes.

In the married sub-sample, the intercept of the full decomposition is much more negative than in the total sample comparison, although in the married personal decomposition the intercept is highly positive. In both married decompositions (but particularly in the full), human-capital is very high and positive, with the coefficients component being the dominant factor. Married females receive extremely high returns to AGE relative to married males. This result may occur because married males are on average older and have already reached the peak of their (relatively steep) earnings profiles, whereas married females are younger and are just beginning to move up their (relatively flat) earnings profiles. Neither commitment to the home nor dominant careers has a strong impact in any of the components of the decomposition.

In Sample 2, drawn from a large public-sector utility, the total

differential is 33 percent in favour of males. In the full decomposition, the major hypotheses that explain the differential are human capital and early socialization. Within the human-capital hypothesis, age is an important factor that favours males, but the most dominant factor underlying the human-capital impact is full-time labour-force experience. In contrast to Sample 1 where early childhood activities and the gender-orientation of parents' role models were positive, both the elements of early socialization are now negative. About three-fifths of the impact of early socialization is due to the earnings disadvantage that females have because of the female-orientation of early childhood activities. In the personal decomposition, early socialization replaces human capital as the hypothesis with the largest negative impact.

In the full decomposition, the coefficients component is 16 percent in favour of males. The negative impacts of human capital and early socialization are of about the same order of magnitude, and account for the importance of these hypotheses in the total differential. The greatest absolute impact in the coefficients component, however, is found in the intercept element, which is large and positive, indicating that the base earnings of females are more than the base earnings of males. In the personal decomposition, human capital has only a small coefficients impact, indicating that across occupations, females are not receiving substantially lower returns to their investment in human capital than males. But early socialization has even a larger negative impact than in the full decomposition, indicating a correlation between early socialization differences and occupational differences, for which there is no intuitive explanation.

The overall attributes component is 27 percent in favour of males, and all the components of the constituent hypotheses are negative as well. The largest negative impacts are human capital, where years of service with the company are particularly important, and occupational segregation, where males are particularly favoured by their predominance in management positions. It is interesting to note that the coefficients component for occupational segregation is positive, although not large. The female and male regression coefficients indicate that the dispersion between females in clerical jobs (the excluded occupational category) and females who get into better-paying positions is greater than the dispersion between clerical males and higher-level males, and this impact must be offsetting any tendency for females to be clustered in lower-paying jobs. The attributes component becomes somewhat less negative in the personal decomposition. All of the entries in the attributes component remain negative, with no dramatic changes from the full decomposition.

The full interaction component favours females by 10 percent. The major influence is occupational segregation, where the positive coefficients difference (indicating more earnings dispersion by occupation amongst females than amongst males) more than counteracts the negative attributes difference. In the personal decomposition, the impact of the interaction component falls to 5 percent, half its level in the full decomposition. An inspection of the positive impact of early socialization reveals that care must be taken in interpreting the interaction component. In this case, females have more of an attribute (more female-oriented early socialization) than males for which they receive a lower--and indeed negative--return, and yet the net interaction result

is favourable to females.

The results of the married decompositions are similar to those of the total decompositions, and the impacts of dominant career and commitment to the home on the total differential are small. By dropping occupational segregation and port of entry, the impact of dominant career changes from small and negative to small and positive; in the personal male regression those males whose spouses support their careers earn less than those whose spouses do not--a rather counterintuitive finding.

In Sample 3, drawn from a medium-sized high-tech company, the total differential favours males by 39 percent (the largest proportional difference of the three samples). In the full decomposition, the intercept is very large, indicating that the explanatory variables account for considerably more variance in earnings in the male regression than in the female regression. Human capital, and, in particular years of service with the company, is important in the total impact, as is early socialization, where the percentage impact of the early division of labour in the home is about three times larger than that of early childhood activities. In the personal decomposition, early socialization continues to have a strong positive impact, but both the intercept and commitment to the firm have negative impacts. All the entries in the commitment-to-the-firm hypothesis are negative, with CAROT being by far the most important. Males have higher earnings than females because it would take more of a monetary inducement to get them to leave the firm.

The full coefficients component is 77 percent in favour of males, a finding of very substantial earnings discrimination. The basis for this result is found in the differential base earnings of males and females as reflected in the intercept differential. Without the intercept ele-

ment the coefficients component would be slightly in favour of females. The fact that the intercept term, or base earnings, is so much higher amongst males than amongst females is in itself something that needs to be explained through a better specification of the model. Even though not adequately explained by our model, what this result does indicate is that the route to higher earnings may be very different for females than for males. Human capital has a high positive impact because females get a much higher return than males for years of service with the company. The human-capital advantage is, however, more than offset by the negative of commitment to the home, where absence from the labour force due to personal and family responsibilities is the main factor. The personal coefficients component favours males by 74 percent. Except for the intercept and human capital (which continues to be quite favourable to females), the entries are similar to those in the full decomposition.

In both the full and personal decompositions, the attributes component is 4 percent in favour of females because they have more of the valued human-capital attributes than males. In particular, the large positive impact of the quadratic of years of service with the company is because females get increasing rates of returns to years of service with the company.

The full interaction component is positive and very large, accounting for 33 percent of the total differential. The major factor that apparently favours females is commitment to the home. But again, the interaction term must be given careful interpretation. In this case, females receive a lower (although slightly positive) return to commitment to the home than males, but have more of this less valued attribute. Two "negatives" simply make a "positive": in substance, if not in

result, the interaction component hardly reflects a situation favourable to females. The personal interaction component is somewhat smaller than in the full decomposition, but still accounts for over 30 percent of the differential with the magnitudes of the hypothesis entries similar to those in the full decomposition.

Relative to the total sample decompositions, the intercept of the married sample decompositions go from being very large and negative to being even larger, but positive. Human capital exhibits a similar reversal. Years of service with the company no longer has an important impact, but the negative impact of AGE has become large--quite in contrast to the positive impact of AGE in the married decompositions for Sample 2. Married females, however, gain a considerable advantage from the impact of labour-force experience, due to a much higher coefficients component and despite a negative attributes component. Dominant career has a strong positive impact, mainly due to the coefficients component. The major entry within the dominant-career hypothesis is SPSCAR2--the support that a spouse give to an employee's career. Amongst married males, the return to this attribute is negative, whereas, amongst married females, it is positive. In addition, amongst males, the average impact of the mean amount of housework on earnings is a 9 percent reduction, and amongst, females, a 37 percent reduction. The total impact of commitment to the home is highly negative due to both the coefficients and attributes components.

To summarize the decomposition results, in Sample 1, there is a 19 percent earnings differential in favour of males. The difference is due to earnings discrimination--indeed females do somewhat better on returns to attributes than do males, largely because of the impact of early

female socialization. Where females lose out relative to males is in the possession of earnings-relevant attributes that are either captured by or related to occupation within the firm or port of entry. The interaction component is also negative, reflecting the disadvantages of females relative to males in both rates of return to attributes and the acquisition of attributes. The earnings differential associated with the interaction component is 11 percent. The largest impacts are found in occupational segregation and commitment to the home. Although both males and females receive negative returns to commitment to the home, the coefficients component for this hypothesis indicates that per unit of commitment, females are penalized less. The fact that on average females have more units of commitment to the home means that the interaction of the coefficient and attributes differences is negative, and therefore unfavourable to females.

In Sample 2, the primary explanations for the earnings differential of 33 percent in favour of males are the human-capital and early-socialization hypotheses. Within the human-capital hypothesis, full-time labour force experience is the dominant factor favouring males, and, in addition, age is also an important attribute. The coefficient component of almost 16 percent in favour of males can also be explained mainly by the human-capital and early-socialization hypotheses. Males do some 27 percent better than females because of their attributes, in particular because of levels of human capital (especially years of service with the company) and access to better-paying occupations. Males are particularly favoured in the acquisition of managerial positions. The interaction component favours females by almost 10 percent, with the major influence being occupational segregation.

In Sample 3, the total earnings differential favours males by almost 40 percent, the largest differential of the three samples. Both human capital (and in particular years of service with the company) and early socialization have the major impacts on this differential. Within early socialization, the influence of early division of labour in the home on the earnings differential is about three times larger than that of early childhood activities. In the coefficients component, females are favoured by human-capital attributes because, unexpectedly, they receive a much higher rate of return than males for years of service with the company. This human-capital advantage is, however, more than offset by the negative impact of commitment to the home, where absence from the labour force for personal reasons and family responsibilities is the main factor penalizing females. The attributes component favours females because they have more of the highly-valued human-capital attributes than males. In particular, females atypically get increasing returns to years of service with the company. The interaction component is positive and very large, primarily because females receive a less negative return to this attribute than males, but have more of it.

As can be seen in Table 6-8, each of the three samples yields a distinct pattern in the allocation of the total differential to the coefficients, attributes, and interaction components.

In the Sample 1 full regressions, the main source of the differential is occupational segregation (an attribute) and the interaction of an employee's occupation and the rate of return to that occupation. When the occupational segregation hypothesis is dropped in the personal regressions, the favourable impact for males is picked up by the human-capital element of the coefficients component, indicating that males in

higher-paying occupations get a higher return to their human capital than do females.

In Sample 2, the attributes component again dominates because males have more human capital and better-paying jobs than females. But the coefficients component is also substantial--on the order of 16 percent in the total sample and 11 percent in the married sub-sample--because males get higher returns to human capital and early socialization than females. This last result indicates that females are penalized more than males for having had feminine-oriented childhood experiences. The fact that earnings discrimination is important in the full model for Sample 2 but not for Sample 1 may be because well over one-third of the observations in the Sample 2 data set are non-salaried employees, whereas all employees in Sample 1 are salaried.

In Sample 3, the results for both the total sample married sub-sample decompositions are dominated by the intercept terms, which are included in the coefficients components in Table 6-8. Across all these female-male comparisons, commitment to the home has a large impact in favour of males (see Appendix 9). But in going from the total sample to the married sub-sample the intercept term goes from being highly negative to highly positive, indicating that not only better but also different specifications of the earnings functions might be required to understand the sources of female-male earnings differentials in this firm.

Notwithstanding these different patterns, it is possible to make some summary statements about the decomposition results from all three samples. There is fairly consistent evidence of earnings discrimination in the total personal regression models. Sample 3, as we have seen,

yields some unexpected results, with very different decompositions of the total differential for the total sample and marrieds only. With the exception of Sample 3, differences in attributes are a more potent determinant of earnings differences than rates of return. To some extent, the source of these differences can be described as institutional discrimination--as in the case of early socialization, which has a large impact on male-female differences in all the samples (although in some cases in the form of earnings discrimination). The acquisition of female-oriented early socialization attributes cannot be simply dismissed as a rational choice that females, but not males make. Even when choice in the acquisition of attributes by the respondents is a clear possibility, as in the case of area of concentration in higher education, it would seem advisable to look more closely at whether or not males and females face differential social constraints in making these choices, before simply assuming that the unequal outcomes represent the best of all possible worlds.

IV. Summary

A summary statement of the statistical findings across all samples can only be that certain variants of our four categories of hypotheses --human capital, occupational, internal relations, and extra-firm relations-- have significant impacts on earnings. As indicated above these results confirm the prime argument of the study; namely, that the traditional human-capital framework should be extended to include demand-side, intra-firm, and extra-firm factors.

Of the human-capital variables age has a significant and positive impact on earnings across all the samples. On average, the contributions

of age and years of service with the company dominate the expected human-capital impacts of labour-force experience. Two other findings suggest that the quality and the level of education should be taken into account in human-capital models. In all samples, holders of a professional degree get higher returns, and in two of the three samples a scientific background yields an individual a clear-cut earnings advantages over the designated reference group. In the decomposition for samples two and three, the largest components of the differential are also due to human capital.

Amongst the internal-relations variables, working overtime without pay is significant and positive across all the samples. We view these results as strong support for the commitment-to-the-firm hypothesis, in that the employee gives her or his extra labour to the firm with only an implicit understanding that the firm will return the "gift" in the form of promotion or higher pay. Also, in Sample 1, which is the most homogeneous sample in terms of internal job structures, informal networks have a significant and positive impact on earnings, while outside job applications have a negative and significant impact on earnings. In Sample 2, absence from the company for reasons other than a vacation also has a significant, negative effect on earnings.

Some extra-firm factors were also important. Across the married sub-samples, the division of labour in the household is negative and significant, implying that individuals who do more housework earn less in the firm. Also, dual realms of responsibility, traditionally the lot of females, have significant impacts on earnings. In all of the sample decompositions, the impact of early socialization is strong, suggesting that the sources of female-male earnings may be deeply imbedded in the

social structure. If so, quick and fast policy solutions to mitigate sex-based earnings differentials may not be appropriate. If female-male earnings equality is a desired outcome, then more far-reaching institutional and cultural reforms may be necessary.

Chapter 7: Conclusion

This thesis has made two major contributions to the literature on earnings differences between females and males . The first is the integration of insights drawn from a number of social science disciplines into a single framework designed to explain female-male earnings differences. The second contribution is that the analysis goes considerably further than the conventional literature on female-male earnings differences in attempting to distinguish between pure earnings discrimination and earnings differences that are due to unequal institutional constraints that females and males face--a form of inequality that can be labelled institutional discrimination. Specifically, we locate constraints on career choices of males and females and the sources of institutionalized discrimination that females or males face within the firm. Using firm-level survey data, we test a number of alternative hypotheses relating to human-capital attributes, organizational structure of the firm, internal relations that individuals experience in the firm, and external household relations that affect the earnings of bureaucratic employees. We broaden the model to include extra-firm personal attributes (such as early socialization, marital status, the number of children in the family, the division of labour in the home) as well as intra-firm personal attributes (such as perceived discrimination, informal networks, and unpaid overtime).

Besides going beyond the conventional literature by examining how various social processes affect earnings differences, we also improve upon the human-capital analysis itself. In our analysis, we have generated better measures of human-capital variables, such as experience and education, than are typically available. For example, rather than using

proxies for labour-force experience or years of service with the company, we have acquired actual measures. For education, we capture not only the specific level of education, but also the quality of the education received, particularly in terms of the area of concentration for a bachelor's degree.

In keeping with the firm-specific nature of the data base, the analysis has proceeded on a firm-by-firm case-study basis. In particular, we explore the relation between the occupational structures in different firms and earnings differentials. Our statistical analysis permits us to determine the importance of particular variables as determinants of earnings over all individuals (the total sample regressions) as well as between males and females (the decompositions). (Appendix 7 also contains a detailed discussion of the separate regression findings for the sub-samples of females and males.)

Our regression analyses of the total samples as well as married sub-samples indicate substantial negative returns to sex, supporting the hypothesis that discrimination on the basis of gender is a significant determinant of female-male earnings differences. To gain more insight into the particular sources of female-male earnings differences, we employ the decomposition technique based upon the estimation of separate earnings functions for females and males. Across the samples, the total mean female-male earnings differential ranges from just under twenty percent to just under 40 percent.

As we have shown in Table 6-8 and discussed above, each of the three samples yields a distinct pattern in the allocation of the total differential to the coefficients, attributes, and interaction components. Focusing on the full models that include demand-side as well as supply-

side variables, the main source of the total earnings differential in Sample 1 is occupational segregation (an attribute) and the interaction of an employee's occupation and the rate of return to that occupation. In Sample 2, the attributes component again dominates because males have more human capital and are in better-paying jobs than females. But the coefficients component is also substantial--on the order of 16 percent in the total sample and 11 percent in the married sub-sample--because males get higher returns to human capital and early socialization than females. Again, the heterogeneous nature of the observations in Sample 2--the inclusion of non-salaried as well as salaried employees--may account for the importance of earnings discrimination for this sample but not for the more homogeneous Sample 1. In Sample 3, the results for both the total sample and married sub-sample decompositions are dominated by the intercept terms, although in different directions. In addition, commitment to the home has a large impact in favour of males.

The general results of our study can be usefully compared with three previous investigations of female-male earnings differentials--those of Malkiel and Malkiel [1973], Osterman [1979], and Gunderson [1979]. The first two studies are similar to ours in that they are firm-level, and focus on salaried workers. Although based upon a nation-wide sample of waged and salaried workers in Canada, the Gunderson study is of interest to us because the data base is Canadian.

Osterman's in his [1979] study of salaried personnel in a publishing company attempts to analyze the impact of internal labour markets on sex discrimination. Our Sample 1 contains only salaried workers in the computer arm of the corporation, and in terms of educational level and homogeneity of occupational focus, appears to be similar to Osterman's

sample. Nevertheless the female-male earnings differential in his sample approaches 40 percent, whereas in our sample it is under 20 percent. At 66 percent, the R-squared for the total sample reported by Osterman is very close to our total personal R-squared of 67 percent. In decomposing the female-male earnings differential, Osterman's coefficient component (including the intercept term) is 18 percent in favour of males, mainly because of years of service with the company, whereas our coefficients component is 4 percent in favour of females, mainly because of the impact of early socialization. Osterman's combined attribute and interaction component yields an earnings differential of 19 percent, with the quadratic of years of service and the number of children having the greatest favourable impacts for males, whereas our combined attribute and interaction component yields a differential of 22 percent, with occupational segregation having the greatest favourable impact for males.

Osterman criticizes the Malkiel and Malkiel [1973] study of a male-female earnings differences in a research organization because their specification of demand-side job categories in terms of hierarchical levels fails to reflect the firm's internal labour markets. Osterman's own demand-side categories are in terms of functional (or what he calls skill) distinctions, which, he argues, reflect skill-related job clusters that contain internal job ladders. Along with Osterman, we view the internal labour market hypothesis as extremely important to any study of earnings differences in large organizations, and particularly when examining salaried employees, who generally look to vertical mobility in the firm for a career. The significant impacts of occupational segregation in Samples 1 and 2 in our study confirms the importance of

an analysis of the relation between internal job ladders on earnings. But we do not necessarily follow Osterman in viewing the extent of internal job ladders in the firm as being determined exclusively by function or skill. In bureaucratic organizations, people often move across functional departments as they make their way up the hierarchy. In looking across functions, Osterman may capture one possible dimension of the positioning of individuals on internal job ladders, whereas, in looking at hierarchical levels holding other factors constant, Malkiel and Malkiel may capture the relative ability of individuals to move up job ladders regardless of function.

The data contained in Sample 1 in our study permit us to test the impacts of both of these dimensions-- current functional department and current hierarchical level--on current earnings variation. In addition, we have been able to analyze the impact of port-of-entry functional departments on current earnings differences. In the total regression for Sample 1, all three dimensions of occupational categorization have significant impacts on earnings. In the decomposition of the full model for Sample 1, we find that hierarchical levels and ports of entry, but not current functional departments, are important sources of the female-male earnings differential.

Of the samples in our study, Sample 2, which contains non-salaried as well as salaried employees, seems most comparable to Gunderson's [1979] sample drawn from the 1971 Canadian Census. The Sample 2 earnings differential of 33 percent in favour of males is somewhat below the 40 percent differential in Gunderson's sample. In his study, greater rates of returns to attributes yield males earnings that are 23 percent higher than females receive, with the main impacts coming from earnings

discrimination in education and experience. In our Sample 2, earnings discrimination yields a males a differential of 16 percent, mainly because of labour force experience and early socialization advantages over females. In his study, the combined impact of the attributes and interaction components is a 17 percent earnings differential in favour of males, primarily because of labour force experience. In our sample, these components combined also give males a 17 percent advantage, with the main advantage coming from years of service with the company. In sum, despite the differences in the sources from which the two samples were drawn as well as the different specifications of the earnings functions, the findings of our Sample 2 study and Gunderson's study yield broadly similar results. Recall however, that to make these comparisons we have had to follow Gunderson's practice of combining the attribute and interaction components of the female-male earnings differential--a practice that obfuscates the independent impact of the possession of attributes on earnings differences. In particular, for our sample, the combination of the two components would lead us to ignore occupational segregation as a primary reason for the earnings disadvantages of females.

Indeed, despite the broad similarity of the overall results presented above, the primary differences between Gunderson's results from a national sample and our results from a firm-level sample derive from our more detailed specification of the characteristics of the model. In keeping with the emphasis of analyses of female-male earnings differences over the last decade or so, we find occupational segregation to be an important demand-side determinant of the female-male earnings differential. On the supply-side, we find not only returns to human-capital

factors but also the gender-orientation of early socialization to be particularly important determinants of the earnings differences between the sexes. This last result is a wholly new, and intriguing, quantitative finding, but (as discussed in earlier chapters) one that has received considerable qualitative discussion in the literature on women in the labour force.

In our view, the results of this study are robust enough to warrant further research along the same lines. One potential problem that future research should address more fully is possible selectivity bias in the response to questionnaires. Survey research of the type carried out in this study requires the utmost cooperation of personnel management in the distribution and collection of the survey instrument, and of employees in taking time and care to respond to the questionnaires. Even then selectivity bias may still remain in that the firms that the more cooperative firms may be qualitatively different than the less cooperative firms in terms of the relative treatment and experiences of male and female employees. Short of imposing the dissemination of the information on firms (just as, for example, firms must supply the government with social insurance information), there do not appear to be practical ways of overcoming the potential problem that those individuals and firms who cooperate may be significantly different than those who do not.

In our view these data problems are, however, more than offset by the benefits to be reaped from the availability of the type of data that we have been able to collect. Only with such data can we begin to test alternative hypotheses that derive from the insights of sociology, organization behaviour, and economics. Indeed there is much more in the way

of analysis that can be done with our data sets than we have been able to pursue in this thesis. For example, rather than analyzing the determinants of earnings, we could make the rate of promotion (promotions per year of service to the firm) and distance of promotion (pay grades per promotion) the dependent variables in our to explore more directly whether and why males move up the career ladder faster than females.

To some extent, the source of these differences can be described as institutional discrimination. Two institutional factors that have an important impact in this study are current hierarchical occupation and point of entry, both of which appear to be highly correlated with area of educational concentration. It may very well be that females do not secure the training necessary to get in higher-paid jobs because they perceive that these occupations are not open to people of their sex. If this be the case, then it would be quite plausible to argue that the existing labour market and internal hierarchical structure determine adverse outcomes for females, even though females may be said to choose these outcomes. Such an argument is, of course, a rationale for affirmative action programs.

Another general finding of this study is the adverse impact of household division of labour on both married females and married males, although females are generally more affected because of the greater amount of housework that they do. Obviously, if people are to have households, and particularly ones with children in them, someone has to do the work. A prominent economist has argued that it is at this point that public policy ends: economists and policy makers should not invade the privacy of the household.

But the results of this study have confirmed the notion that house-

hold relations--whether in early childhood or in adulthood--do affect careers and earnings, and constitute part of a continuing social process. This study goes beyond an overly narrow focus on technical attributes to explore the impact of social relationships--issues of the differential impact on males and females of the family, school, and organization of the workplace. Although the thesis structure has been developed within the discipline of economics, we have been able to incorporate the approaches of such disciplines as organizational behaviour and sociology into the overall framework. In our view, any further advances in understanding the differing economic experiences of males and females must occur within a conceptual framework that integrates the various approaches in the social sciences. Quite apart from the particular findings of this thesis, the approach developed here will be useful for those intent on extending or in developing yet a new integrated framework.

APPENDIX 1

QUESTIONNAIRES IN ENGLISH
WITH FRENCH TRANSLATIONS

1. How old are you? _____
2. What is your sex? () Male () Female
3. Please indicate your present marital status? Check one

1. () Single	4. () Widowed
2. () Married	5. () Living together as a couple
3. () Divorced	6. () Separated
4. Do you have any children living with you? Check one

1. () Yes	() No	[If no, go to question 6]
5. Indicate the number of children living with you who are:

1. () 5 years and under	2. () 6-12 years old	3. () over 12 years old
6. Please give the following information about your income, your spouse/ partner's income (where possible) as well as the number of weeks you were both employed in your present firms during the period of 1982.

	Yourself	Spouse or Partner
1. Earnings before taxes in present firm in 1982		
2. Number of weeks employed in present firm in 1982		

7. Please indicate the levels of education obtained by yourself and your spouse or partner. Please check for each individual the highest educational level achieved.

	Yourself	Spouse or Partner
Less than high school graduation		
High school graduation		
CEGEP		
Community college		
Technical institute		
College classique		
Bachelor's degree		
Undergraduate diploma or certificate (include teaching)		
Professional degree (e.g., law, medicine)		
Master's degree		
Doctorate		

8. In your education please indicate:

	Yourself	Spouse or Partner
1. Area of concentration for highest degree completed		

9. Please give the following information about your employment experience in your present firm. For example indicate if you are presently an administrative assistant but were initially hired as a secretary. Also indicate if grades are attached to these jobs and dates of placement.

Your first: Job Title _____
 Grade Level _____
 Date of Placement _____
 Department _____

Your present: Job Title _____
 Grade Level _____
 Date of Placement _____
 Department _____

10. How long have you been employed with your present company?

	<u>Years</u>	<u>Months</u>
1. Full time basis	_____	_____
2. Part time basis	_____	_____

11. Has the nature of the work that you do changed since you have been with the firm? 1. () Yes 2. () No

22. Indicate which one of the following you would prefer. Check one.
1. ☐ Being promoted and receiving higher earnings
 2. ☐ Receiving higher earnings without being promoted
 3. ☐ Being promoted without higher earnings
23. How many times have you applied for a promotion since you have been with your company? Check one.
1. ☐ none
 2. ☐ 1 time
 3. ☐ 2 times
 4. ☐ 3 times
 5. ☐ 4 times
 6. ☐ other (specify no. of times)
24. How many times have you applied and not received a promotion since you have been with your company? Check one.
1. ☐ none
 2. ☐ 1 time
 3. ☐ 2 times
 4. ☐ 3 times
 5. ☐ 4 times
 6. ☐ other (specify no. of times)
25. How many times have you been offered a promotion since you have been with your company? Check one.
1. ☐ none
 2. ☐ 1 time
 3. ☐ 2 times
 4. ☐ 3 times
 5. ☐ 4 times
 6. ☐ other (specify no. of times)
26. A. How many times have you declined a promotion when one was offered since you have been with your company? Check one. (If you checked none go to the next question. If not go to part B of this question.)
1. ☐ none
 2. ☐ 1 time
 3. ☐ 2 times
 4. ☐ 3 times
 5. ☐ 4 times
 6. ☐ other (specify the no. of times)
- B. If you declined a promotion when one was offered, please specify the reason. Check one of the following.
1. ☐ Too much responsibility required for the position.
 2. ☐ Personal and family responsibilities
 3. ☐ Frequent illness
 4. ☐ Not enough responsibility
 5. ☐ Location of job
 6. ☐ Not interested
27. How many times have you been offered a promotion and accepted since you have been with your company? Check one.
1. ☐ none
 2. ☐ 1 time
 3. ☐ 2 times
 4. ☐ 3 times
 5. ☐ 4 times
 6. ☐ other (specify no. of times)
28. Would you be interested in pursuing additional training (in the form of outside education) at your own expense in order to get promoted?
1. ☐ not interested
 2. ☐ very interested
 3. ☐ am already paying for outside education
29. If you think you have been discriminated against by your employer what was this discrimination in regards to? Check where applicable.
1. ☐ My age
 2. ☐ My sex
 3. ☐ My sexual preference
30. If you think you have been discriminated against, what form did this discrimination take? Check where applicable.
1. ☐ Earnings
 2. ☐ Recommendation for promotion
 3. ☐ Evaluation of my performance
 4. ☐ Support and encouragement on the job
31. To what extent do you feel that the number of people of your sex in top positions affects your motivation to be promoted? Check one.
1. ☐ Not a consideration
 2. ☐ Has moderate effect
 3. ☐ Has significant impact on my motivation
32. To what extent have you been encouraged by your supervisors to improve and advance? Check one
1. ☐ not at all
 2. ☐ moderately
 3. ☐ significantly
33. On the following scale what do you think the chances are for a person in your position to work up to a higher level? Check one
1. ☐ Poor
 2. ☐ Fair
 3. ☐ Good
 4. ☐ Excellent

We now want to ask you some questions of a more personal nature. Remember that because you remain anonymous you are protected. Please answer all questions where applicable. If not married or attached please begin answering question 44. If married or attached answer questions 34 through 43.

34. If your spouse's or partner's occupation required that he/she move to another city to keep his/her present job, or obtain a new one at a similar level, would you be willing to move? Check one
 1. () Yes 2. () No 3. () Don't know
35. To what extent does your spouse/partner support you having a career? Check one
 1. () Not at all 2. () Offers moderate support
 3. () Is extremely encouraging
36. If your present job required you to move, would your spouse or partner be willing to go. Check one
 1. () Yes 2. () No 3. () Don't know
37. A. What is your spouse's/partner's occupation? _____
 B. Where does he/she normally work? Check one
 1. () at home 2. () physically away from home
38. [Answer only if you have children] If one of your children were to become ill while at a daycare centre or at school who would usually get the call and pick the child up?
 1. () I would 2. () My spouse or partner would
 3. () Would depend on who is more readily available or easily reached
39. A. With respect to income, career commitment and personal satisfaction, whose job, your's or your spouse's/partner's, is more important to the family? Check one 1. () Mine 2. () My spouse's/partner's
 B. Please indicate why. Check one
 1. () Benefits are better 4. () Career commitment is stronger
 2. () Income is higher 5. () Prestige or status is better
 3. () Personal satisfaction derived from job is greater
40. Do you have any household responsibilities that make you unavailable for work at certain times? 1. () Yes () No
 [If you answered yes go to question 41. If not, proceed to question 42]
41. What are these responsibilities? Check one
 1. () Childcare or transport of children 2. () Housework
 3. () Looking after another relative 4. () Other
42. To what extent are you or your spouse or partner involved in the following house-related activities? Estimate the percentage of each person's involvement and enter in the appropriate space. Each activity should add up to 100%. Do not put checks.

	Mostly by you	Almost entirely by spouse or partner	Other Person
1. Cooking			
2. Yard & outside maintenance			
3. Housework/cleaning			
4. Transportation of children			

43. If you filled out the other person column for any of the above activities please indicate who would pay for the service.
 1. () Paid for by me 2. () Paid for by spouse or partner
44. As children, our parents emphasized different activities that we should pursue. Listed below are some fairly common activities. Rank the activities from 1 to 6 in the order that they were emphasized by parents, assigning 1 as most emphasized and 6 as least emphasized. For example if you were encouraged to have a paper route put 1 after paper route. If learning to cook was least emphasized put 6 after learning to cook.

	Rank		Rank
1. Play competitive sports	—	4. Take care of younger brothers and sisters	—
2. Learn to cook	—	5. Play with dolls	—
3. Have a paper route	—	6. Play with cars	—

45. Who was the primary individual who performed most of the following tasks while you were growing up? Check one for each activity

	<u>Mother</u>	<u>Father</u>	<u>Other</u>
1. Household repairs	—	—	—
2. Auto maintenance	—	—	—
3. Cooking	—	—	—
4. Housework/Cleaning	—	—	—
5. Child rearing	—	—	—

46. Listed below are 4 supervisory and managerial qualities that are commonly thought to be important for effective performance. Follow instructions A and B separately.

- A. Please rank these qualities generally according to your perception of their importance for a supervisor/manager to be effective. Assign 1=most important, 4=least important and other numbers in between.
 B. Please check off for each quality whether you would consider it to be more characteristic of a male or female, or equally characteristic of both.

	<u>A</u>	<u>B</u>
	General Ranking	Male Female Equal
Ability to delegate authority		
Inter-personal relations		
Decision making ability		
Business knowledge		

47. Have you ever used any of the following for career advice? Please indicate how many times any of the following have been used. For example, you may have used personnel 3 times and a colleague 2 times.

Top Executive	—	Colleague in Other Area	—
Current Supervisor	—	Personnel	—
Previous Supervisor	—	Someone Outside Company	—
Colleague in Area	—		

48. What is your perceived need for a mentor (a guide or advisor) to be successful in your career? Check one of the following.
 1. () Necessary for success
 2. () Helpful but not necessary for success
 3. () Not helpful for success
49. If you presently have a mentor, indicate his or her sex.
 1. () Male 2. () Female
50. Whether or not you presently have a mentor what sex would you prefer a mentor to be?
 1. () Male 2. () Female 3. () doesn't matter
51. Whom would you rather have as your immediate supervisor or manager? Check one
 1. () Male 2. () Female 3. () doesn't matter
52. Do you think you could be more productive with a male manager or with a female manager? Check one
 1. () Male 2. () Female 3. () doesn't matter
53. What sex is your immediate supervisor or manager?
 1. () Male 2. () Female
54. Were you promoted from within your company to fill your present position?
 1. () Yes 2. () No
55. Indicate how you view your work. Check one.
 1. () As a job 2. () As a career

Questionnaire de l'employé

1. Quel âge avez-vous ? ()
2. De quel sexe ? () Masculin () Féminin
3. Veuillez indiquer votre statut civil actuel.
 1. () Célibataire
 2. () Marié(e)
 3. () Divorcé(e)
 4. () Veuf ou veuve
 5. () Vivant avec un(e) autre comme couple
 6. () Séparé(e)
4. Avez-vous des enfants vivant avec vous? Cochez une seule réponse.
 1. () Oui () Non [Dans la négative, passez à la question 6]
5. Précisez le nombre d'enfants vivant avec vous qui sont :
 1. () de 5 ans et moins
 2. () de 6 à 12 ans
 3. () de plus de 12 ans.
6. Veuillez indiquer votre revenu, ainsi que celui de votre conjoint ou partenaire (si possible) de même que le nombre de semaines durant lesquelles vous avez tous deux été employés dans l'entreprise où vous travaillez actuellement durant l'année 1982 :

	Vous-même	Votre conjoint ou partenaire
1. Revenus avant impôt dans votre entreprise actuelle en 1982		
2. Nombre de semaines employées par l'entreprise actuelle en 1982		

7. Veuillez indiquer les niveaux d'éducation obtenus par vous-même et votre conjoint ou partenaire; cochez pour chaque individu le niveau le plus élevé.

	Vous-même	Votre conjoint ou partenaire
Inférieur au diplôme secondaire		
Diplôme secondaire		
CECEP		
Collège communautaire		
Ecole technique		
Collège classique		
B.A.		
Diplôme sous-gradué ou certificat) (y inclus l'enseignement)		
License professionnelle (par exemple, droit, médecine)		
Maîtrise		
Doctorat		

8. Pour votre niveau d'éducation, veuillez indiquer le :

	Vous-même	Votre conjoint ou partenaire
1. Domaine de concentration du plus haut niveau de scolarité atteint		

9. Donnez des renseignements concernant votre emploi dans l'entreprise où vous travaillez actuellement. Par exemple, précisez que vous êtes actuellement un adjoint administratif, mais que vous avez d'abord été engagé(e) comme secrétaire. Indiquez également si des niveaux sont prévus dans ces emplois ainsi que les dates d'entrée en fonction.

Votre premier titre d'emploi : _____
 Votre premier niveau d'emploi : _____
 Votre première date d'entrée en fonction : _____
 Département _____
 Votre titre d'emploi actuel : _____
 Votre niveau d'emploi actuel : _____
 La date d'entrée en fonction de votre emploi actuel : _____
 Département _____

10. Depuis quand êtes-vous à l'emploi de votre entreprise actuelle ?

	Années	Mois
1. À plein temps	_____	_____
2. À temps partiel	_____	_____

11. La nature de votre travail a-t-elle changé depuis que vous êtes à l'emploi de cette entreprise ? 1. () Oui 2. () Non
12. Depuis combien de temps faites-vous plus ou moins le même genre de travail que celui que vous faites actuellement dans cette entreprise ?
_____ années _____ mois
13. Depuis combien de temps faites-vous activement partie de la main-d'oeuvre (excluez les années d'étude à plein temps ainsi que celles consacrées à plein temps à l'éducation de vos enfants) ?
- | | <u>Années</u> | <u>Mois</u> |
|--------------------|---------------|-------------|
| 1. À plein temps | _____ | _____ |
| 2. À temps partiel | _____ | _____ |
14. Au cours de cette expérience de travail, pendant combien de temps au total avez-vous été en chômage ? _____ années _____ mois
- Ne répondez aux questions 15 et 16 que si vous supervisez ou dirigez actuellement d'autres employés, ou si vous l'avez déjà fait. Sinon, passez à la question 17.
15. Combien d'employés avez-vous surveillés ou dirigés, directement et indirectement, lors de votre premier emploi dans cette entreprise ? _____
16. Combien d'employés surveillez-vous ou dirigez-vous actuellement, directement et indirectement, dans votre entreprise ? _____
17. Si vous avez pris des congés dans votre emploi actuel pour des raisons autres que des vacances, veuillez indiquer combien de temps ainsi que les raisons de ces absences, et si votre entreprise vous a accordé ce temps avec ou sans rémunération.

	<u>Durée de l'absence</u>			Accordé par l'entre- prise	Non accordé par l'entreprise	Avec rémuné- ration	Sans rémuné- ration
	<u>ans</u>	<u>mois</u>	<u>sem.</u>				
1. Maladie ou incapacité	—	—	—	—	—	—	—
2. Grossesse	—	—	—	—	—	—	—
3. Responsabilités personnelles ou familiales	—	—	—	—	—	—	—
4. Fréquentation de l'école	—	—	—	—	—	—	—
5. Autres	—	—	—	—	—	—	—

18. Quelle est la longueur totale du temps durant lequel vous avez été incapable de travailler depuis votre premier emploi ? Indiquez la totalité des absences pour chacune des raisons suivantes :

	<u>Années</u>	<u>Mois</u>	<u>Semaines</u>
1. Maladie ou incapacité	_____	_____	_____
2. Grossesse	_____	_____	_____
3. Responsabilités personnelles ou familiales	_____	_____	_____
4. Fréquentation de l'école	_____	_____	_____
5. Autres	_____	_____	_____

19. À combien de postes à l'extérieur avez-vous présenté votre candidature depuis que vous travaillez pour l'entreprise actuelle ?

1. () aucun 3. () de 4 à 6 emplois
2. () de 1 à 3 emploi 4. () pour plus de 6 emplois

20. Veuillez indiquer combien de fois vous avez fait du temps supplémentaire dans votre entreprise au cours de 1982. Cochez à l'endroit approprié.

	<u>Avec rémunération</u>	<u>Sans rémunération</u>
Aucune	_____	_____
De 1 à 10 fois	_____	_____
De 11 à 20 fois	_____	_____
Plus de 20 fois	_____	_____

21. Précisez le pourcentage d'augmentation de salaire qu'il vous faudrait pour vous pousser à quitter votre emploi actuel et prendre un emploi similaire, avec les mêmes perspectives d'avancement, dans une autre entreprise (par exemple, une augmentation de 10 %, de 50 %, etc.) _____

La prochaine série de questions concerne spécifiquement l'avancement que vous avez obtenu dans l'entreprise où vous travaillez actuellement. Veuillez répondre avec le plus de précision possible. Souvenez-vous que vous n'avez pas à signer ce questionnaire et qu'il est ainsi impossible de vous attribuer les renseignements qui y sont contenus dès que vous avez placé ces feuilles dans l'enveloppe scellée.

22. Lequel des changements suivants préférez-vous ? Cochez une seule réponse.
1. () Avoir de l'avancement et recevoir un salaire plus élevé.
 2. () Recevoir un salaire plus élevé sans avancement.
 3. () Recevoir de l'avancement sans salaire plus élevé.
23. Combien de fois avez-vous présenté votre candidature pour obtenir de l'avancement depuis que vous travaillez pour l'entreprise qui vous emploie actuellement ? Cochez une seule réponse.
- | | | |
|---------------|---------------|---|
| 1. () aucune | 3. () 2 fois | 5. () 4 fois |
| 2. () 1 fois | 4. () 3 fois | 6. () autre (précisez le nombre de fois) |
24. Combien de fois avez-vous présenté votre candidature, sans avoir obtenu d'avancement depuis que vous êtes à l'emploi de cette entreprise ? Cochez une seule réponse.
- | | | |
|---------------|---------------|---|
| 1. () aucune | 3. () 2 fois | 5. () 4 fois |
| 2. () 1 fois | 4. () 3 fois | 6. () autre (précisez le nombre de fois) |
25. Combien d'opportunités d'avancement vous ont-elles été offertes depuis que vous êtes à l'emploi de cette entreprise ? Cochez une seule réponse.
- | | | |
|---------------|---------------|--|
| 1. () aucune | 3. () 2 fois | 5. () 4 fois |
| 2. () 1 fois | 4. () 3 fois | 6. () autre (précisez le nombre d'opportunités) |
26. A. Combien de fois avez-vous refusé l'avancement qu'on vous offrait depuis que vous êtes à l'emploi de cette compagnie ? Cochez une seule réponse.
(Si vous indiquez aucune passez à la question suivante. Sinon, passez à la partie B de cette question.)
- | | | |
|---------------|---------------|---|
| 1. () aucune | 3. () 2 fois | 5. () 4 fois |
| 2. () 1 fois | 4. () 3 fois | 6. () autre (précisez le nombre de fois) |
- B. Si vous avez refusé une occasion d'avancement qui vous était offerte, veuillez préciser les raisons. Cochez une seule réponse.
1. () L'emploi comportait trop de responsabilités.
 2. () Responsabilités personnelles et familiales.
 3. () Fréquentes indispositions.
 4. () Pas assez de responsabilités.
 5. () Lieu de travail.
 6. () Non intéressé(e).
27. Combien de fois vous a-t-on offert de l'avancement que vous avez accepté depuis que vous êtes à l'emploi de cette entreprise ? Cochez une seule réponse.
- | | | |
|---------------|---------------|---|
| 1. () aucune | 3. () 2 fois | 5. () 4 fois |
| 2. () 1 fois | 4. () 3 fois | 6. () autre (précisez le nombre de fois) |
28. Seriez-vous intéressé(e) à obtenir une formation supplémentaire (à l'extérieur de votre travail) à vos propres frais, afin d'obtenir de l'avancement ?
- | | |
|-------------------------|--------------------------|
| 1. () non-intéressé(e) | 2. () très intéressé(e) |
| 3. () je le fais déjà | |
29. Si vous estimez avoir fait l'objet de discrimination par votre employeur, cette attitude avait trait à quel facteur ? Cochez l'endroit approprié.
- | | | |
|----------------|-----------------|----------------------------------|
| 1. () mon âge | 2. () mon sexe | 3. () mes préférences sexuelles |
|----------------|-----------------|----------------------------------|
30. Si vous estimez avoir fait l'objet de discrimination, sous quelle forme s'est-elle présentée ? Cochez l'endroit approprié.
- | | |
|--|---|
| 1. () salaire | 3. () appréciation de mon rendement |
| 2. () recommandation en vue de l'avancement | 4. () aide et encouragement dans mon travail |
31. Jusqu'à quel point estimez-vous que le nombre de personnes de votre sexe occupant des postes supérieurs vous influencent du point de vue de votre avancement ? Cochez une seule réponse.
- | | |
|--|--------------------------|
| 1. () sans rapport | 2. () influence modérée |
| 3. () très grande influence sur ma motivation | |
32. Jusqu'à quel point avez-vous été encouragé(e) par vos supérieurs à vous améliorer vous-même et à obtenir de l'avancement ? Cochez une réponse.
- | | | |
|-------------------|-------------------|------------------|
| 1. () aucunement | 2. () modérément | 3. () fortement |
|-------------------|-------------------|------------------|

33. Indiquez par l'échelle suivante les chances dont dispose une personne dans votre situation d'atteindre un poste plus élevé. Cochez une seule réponse.
1. () faible 2. () assez bonne 3. () bonne 4. () excellente

Nous voulons maintenant vous poser quelques questions de nature plus personnelle. Souvenez-vous que le caractère anonyme du questionnaire vous assure toute la protection nécessaire. Veuillez répondre à toutes les questions qui vous concernent. Si vous n'êtes pas marié(e) ou ne vivez pas avec une autre personne, veuillez passer à la question 44. Si vous l'êtes, répondez aux questions 34 à 43.

34. Si l'emploi de votre conjoint ou partenaire exigeait que vous déménagiez dans une autre ville pour garder cet emploi ou en obtenir un nouveau de niveau semblable, accepteriez-vous de le suivre ? Cochez une réponse.
1. () Oui 2. () Non 3. () je n'en suis pas sûr(e)
35. Dans quelle mesure votre conjoint ou partenaire encourage-t-il votre carrière ? Cochez une réponse.
1. () aucunement 2. () modérément 3. () extrêmement
36. Si votre emploi actuel exigeait que vous déménagiez, votre conjoint ou partenaire serait-il prêt à vous suivre ? Cochez une réponse.
1. () Oui 2. () Non 3. () je ne suis pas sûr(e)
37. A. Quelle est l'occupation de votre conjoint ou partenaire ? _____
B. Où travaille-t-il normalement ? Cochez une réponse.
1. () à la maison 2. () à l'extérieur du foyer
38. [Ne répondez que si vous avez des enfants] Si l'un de vos enfants tombait malade à la garderie ou à l'école, qui recevrait normalement l'appel et irait le chercher ?
1. () moi-même 2. () mon conjoint ou partenaire
3. () celui des deux qui serait le plus facilement disponible ou accessible
39. A. Du point de vue revenu, de l'engagement dans votre carrière et de votre satisfaction personnelle, quel travail, celui de votre conjoint ou partenaire ou le vôtre, est-il le plus important pour la famille ? Cochez une réponse.
1. () le mien 2. () celui de mon conjoint ou partenaire
- B. Veuillez en indiquer la raison. Cochez une réponse.
1. () les avantages sont plus grands
2. () le revenu est plus élevé
3. () la satisfaction personnelle est plus grande
4. () l'engagement dans la carrière est plus grand
5. () le prestige et le statut social sont plus élevés
40. Avez-vous des responsabilités familiales qui vous empêchent de vous rendre au travail à certains moments ? 1. () Oui () Non
[Dans la négative, passez à la question suivante. Dans le cas contraire, sautez à la question 42]
41. Quelles sont ces responsabilités ? Cochez une réponse
1. () soins ou transport des enfants 3. () soins d'un autre parent
2. () travail au foyer 4. () autre
42. Jusqu'à quel degré vous-même, conjoint ou partenaire êtes-vous engagé(e) dans les activités de ménage suivantes ? Faites une estimation du pourcentage de participation de chaque personne et indiquez-le à l'endroit approprié. Pour chaque activité, le total devrait atteindre 100 %. Ne cochez pas.

	Surtout par vous-même	Presque entièrement par mon conjoint ou partenaire	Autre Personne
1. Cuisine			
2. Entretien du jardin et de l'extérieur			
3. Ménage et nettoyage			
4. Transport des enfants			

43. Si vous avez indiqué un pourcentage dans la colonne autre personne ci-dessus, veuillez dire qui doit payer pour ce service.
1. () moi-même 2. () mon conjoint ou partenaire

44. Enfants, nos parents nous encourageaient à poursuivre diverses activités. Nous avons établi une liste des plus courantes. Indiquez le rang de 1 à 6 selon l'insistance de vos parents, en accordant 1 à l'activité la plus encouragée et 6 à la moindre. Par exemple, si vous étiez surtout encouragé(e) à livrer les journaux, mettez 1 à l'endroit approprié. Si vous étiez peu poussé(e) à apprendre à faire la cuisine, mettez le chiffre 6 vis-à-vis cette rubrique.

	<u>Rang</u>		<u>Rang</u>
1. Exercer des sports compétitifs	_____	4. Prendre soin de frères et soeurs plus jeunes	_____
2. Apprendre à cuisiner	_____	5. Jouer avec des poupées	_____
3. Livrer les journaux	_____	6. Jouer avec des voitures	_____

45. Qui s'occupait surtout des tâches suivantes pendant votre éducation ? Cochez une personne pour chaque activité.

	<u>Mère</u>	<u>Père</u>	<u>Autre</u>
1. Petits travaux de réparation	_____	_____	_____
2. Entretien de l'auto	_____	_____	_____
3. Cuisine	_____	_____	_____
4. Travail ménager	_____	_____	_____
5. Soins des enfants	_____	_____	_____

46. Voici quatre qualités généralement reconnues comme importantes pour le rendement efficace d'un directeur ou d'un cadre. Suivez les instructions en A et B séparément.

- A. Veuillez établir le rang de ces qualités selon votre perception de leur importance pour l'efficacité d'un directeur ou d'un cadre. Accordez 1 à la plus importante, et descendez jusqu'à 4 pour la moins importante.
- B. Veuillez cocher, pour chacune des qualités, selon que vous la considérez davantage comme une caractéristique de l'homme ou de la femme, ou de façon égale pour les deux.

	<u>A</u>	<u>B</u>
	<u>Rang</u> <u>général</u>	<u>Homme</u> <u>Femme</u> <u>Egal</u>
Caractéristiques		
Aptitude à déléguer l'autorité	_____	_____
Relations interpersonnelles	_____	_____
Aptitude à prendre des décisions	_____	_____
Connaissances du domaine	_____	_____

47. Avez-vous déjà eu recours à une des personnes suivantes pour obtenir un conseil au sujet de votre carrière ? Indiquez le nombre de fois, selon le cas, pour chacun d'entre eux. Par exemple, vous pouvez vous adresser trois fois au personnel et deux fois à un collègue.

Cadre supérieur	_____	Collègue d'un autre secteur	_____
Directeur actuel	_____	Personnel	_____
Ancien directeur	_____	Personne à l'extérieur de l'entreprise	_____
Collègue du même secteur	_____		_____

48. À quel degré estimez-vous avoir besoin d'un conseiller (ou d'un guide) pour réussir dans votre carrière ? Cochez une réponse.
1. () nécessaire au succès 2. () utile mais non nécessaire au succès
3. () inutile au succès

49. Si vous avez présentement un conseiller, dites de quel sexe il est.
1. () masculin 2. () féminin

50. Que vous ayez ou non actuellement un conseiller, de quel sexe aimeriez-vous mieux qu'il soit ?
1. () masculin 2. () féminin 3. () aucune importance

51. Qui préféreriez-vous avoir comme supérieur et directeur immédiat ? Cochez une réponse.
1. () un homme 2. () une femme 3. () aucune importance

52. Croyez-vous pouvoir être plus productif(ve) avec un supérieur homme ou avec un supérieur femme ? Cochez une réponse.
1. () un homme 2. () une femme 3. () aucune importance

53. De quel sexe est votre supérieur ou directeur immédiat ?
1. () masculin 2. () féminin

54. L'emploi que vous occupez actuellement a-t-il été obtenu grâce à un avancement au sein de l'entreprise ou non ?
1. () oui 2. () non

55. Précisez la manière dont vous considérez votre travail. Cochez une réponse.
1. () comme un emploi 2. () comme une carrière

APPENDIX 2

PROBLEMS WITH THE DATA

Problems Encountered With the Data

The statistical package used to process the data deleted those observations where one variable was absent; that is, when an individual did not respond to one particular variable the computer would delete the entire questionnaire response for that person. In order to retain as many usable observations as possible, what was required were a number of mini-programs that set out rules for dealing with missing data. In what follows, we discuss the general problems encountered with each variable and the solution to each problem that was adopted in order to retain and purify the data.

Variable and definition: AGE

Questions without answers: We can easily estimate a person's age if we consider the number of years they have spent in the labour force, in addition to their years of schooling (High School = 12 years, CEGEP = 17 years, Bachelors = 17 years, Masters or Doctorate = 22 years minus the number of years they have been out of the labour force.

Variable and definition: SEX
1 if female
0 if male

Questions without answers: If an individual has not indicated their sex, it is possible to verify their sex by examining whether or not they have taken maternity leave or if they indicate they have been subjected to sexual discrimination. If in each case this procedure has not proved sufficient, then the entire observation was deleted.

Variable and definition : MARITAL
1 if married or living together as a couple
0 otherwise

Questions without answers: With missing marital status, all that is required is to check question 6, part b, the before-tax earnings for the spouse or question 7b, the education for the spouse. A further way of checking is to see if they answered any of the questions between 34 and 43. If these rules apply, the individual is married or living together as a couple; if not they are considered to be single.

Variable and Definition : CHILD1

Total number of children 5 years and under
CHILD2

Total number of children 6 years and over

Questions without answers : If this question is left blank, there is no other way to interpret it. A "0" is indicated.

Variable and definition : the log of BTES

Actual before-tax earnings for self in 1982
BTESP

Actual before-tax earnings for spouse/partner
NWEPPFS

Number of weeks employed in present firm for self in 1982.

Questions without answers : If BTES and NWEPPFS were missing the observation was deleted

BTES = mean/sex/group

NWEPPFS = mean/sex group

Variable and definition : EDLVLFS

Years of highest level of education completed for self.

EDLVLSP

Years of highest level of education for spouse or partner

EDHS2, EDHSSP2

1 if high school, 0 otherwise

EDTS2, EDTSP2

1 if CEGEP, community college, or technical institute, 0 otherwise

EDCS2, EDCSP2

1 if college classique, bachelor's degree or equivalent, 0 otherwise

EDPSP2

1 if Master's or Doctorate, 0 otherwise

The above levels assume that high school takes 12 years, CEGEP 14 years, A bachelor's degree, 17 years, and a professional degree an average of 22 years.

Questions without answers : It is fairly simple to identify the level of education of the individual, as well as the spouse by examining the answers for question number 8, which is the area of concentration for the highest degree completed. In the case of the individual not answering the question, we substitute the mean by sex and job title was substituted. Where absent for the spouse a mean (depending on whether the individual is a professional or not, i.e. whether SPOCC=1 or SPOCC=0) was substituted.

Variable and definition : Area of concentration

ACON1

1 if area of concentration is in humanities (includes degrees in literature, fine arts, philosophy, literature, fine arts, languages and history, or equivalent), 0 otherwise.

ACON2

1 if area of concentration is in social sciences, (includes economics, anthropology, political science, sociology, education, business, psychology and communications or equivalent, 0 otherwise.

ACON3

1 if area of concentration is in applied sciences, (includes chemistry, biology, computer science, statistics, maths, physics, engineering, or any equivalent), 0 otherwise.

ACON4

1 if area of high school training is high school (includes vocational and commercial training)

Questions without answers: In cases where individuals did not fill out this question, the observation was deleted.

More than one answer: In those cases where individuals indicated that they completed more than one degree (for example perhaps 2 bachelor's degrees), only the ACON most relevant to their present occupation was coded.

Variables and definition: FJT and SJT

First and second job title

FPGL and SPGL

First and second pay grade level

FDPL and SDPL

First and second date of placement

FDN and SDN

First and second department numbers

Questions without answers: A. When FJT and SJT were missing, and in those cases where the company structure was known, in terms of departments and pay grade levels, all we had to do was to check any of these remaining variables. In the majority of cases, when SJT was missing and was checked against present pay grade level and second department number we could isolate the job title. The process was just the reverse when FJT was missing.

B. When pay grade levels were missing, it was useful to look at other questionnaires with the same problem. If information was given on job titles and before-tax earnings it is easy to isolate what the pay grades are. Before-tax earnings are a good proxy only if SPGL is missing. In the case where FPGL is missing the issue becomes a little trickier. All we could do here was to look at FJT and FDN.

C. If FDPL and SDPL were missing, at least in the first case, all that was required was to look at question 10 which gives full time years of employment with the company. It is this way that I determined the corresponding date. If SDPL was missing, we substitute the answer that was given in question 12.

D. If FDN AND SDN were missing and pay grades, and job titles, are filled in and the firm's organizational structure is clear cut and in transition, in some cases these can be estimated.

Variable and Definition: FYSERVC

Full time years of service with the company

FYSERV 2

Square of previous variable

PYSERV

Part-time years of service with the company

Questions without answers : If any of the above were missing we needed only look to question 9 for the first date of placement. If this last variable was missing, we substitute the mean by sex. If missing for PYSERV, I put "0".

Questions with questionable answers: If it is the case that answers to number 10 are greater than FDPL (first date of placement with the company) then we can be assured that the answer given for question is accurate.

Variable and definition: CNOW

1 if nature of work has changed

0 otherwise

This variable was not used.

Variable and definition: LTDSW

Length of time doing the same kind of work

Questions without answers : In the case where this variable is omitted from an individual's questionnaire it is possible to substitute the response from question 11. If the nature of the work has changed, that is if question 11 = 1, the amount of time doing the same kind of work would be equal to the number of years up until July 1983 (the time when the questions were filled out). If on the other hand the nature of the work had not changed, if Question 11=0, the same answer for number 10 is indicated, the years of service with the company.

Questions with questionable answers: The responses here can be very ambiguous and can only be corrected depending on what the individual wrote for question number 10. For example, it is possible that the number of months or years written down for question number 12 could be larger than the number of years employed with the company. In this case we can correct the answers with what was written for number 10 if the response to question number 11 was negative. If for question number the response was positive, the answer for question 12 would be the same as it is for question FDPL or the first date of placement with the company up until July 1983.

Variables and definitions: FTLFEX

Full-time labour force experience

FTLFEX 2

Square of previous variable

PTLFEX

Part-time labour force experience

Questions without answers : In cases where answers to this question are absent, we utilize the traditional proxy variable, AGE - Years of schooling - 6.

For PTLFEX a "0" is indicated.

Ambiguous answers : In those cases when FTLFEX is not equal to or greater than FYSERVC, we proceed as though the individual had not answered the question.

Variable and definition: UNEMPLOY

Years and months unemployed.

Questions without answers : Nonresponses were substituted with means

The following span of control variables were only available for individuals who were in managerial or supervisory positions.

Variable and definition: PASSPAN

Actual number of employees first managed

Questions without answers : If individuals do not answer this question we assume that they do not manage or supervise anybody and set the answers equal to "0".

Variable and definition: PRESPAN

Number of employees presently manage

Questions without answers : If an individual has not filled this question in and is a manager, I substitute the means by the group they work in.

Variables and definitions: CDI

Length of time off from the company due to illness

CDIPOL

1 if the leave of absence was granted by the company, 0 otherwise.

CDIPAY

1 if pay was available from the company, 0 otherwise.

Note that the last two variables in each of the following sets are coded exactly as the last two in the set immediately above.

CDFAM: CDFAMPOL: CDFAMPAY

Length of time taken off from the company due to pregnancy and family responsibilities.

CED: CEDPOL: CEDPAY

Length of time taken off from the company due to education.

COTH

Length of time taken off due to other reasons.

TOTABFC

Total amount of time taken off from the company

Questions without answers : A "0" is indicated where nothing has been filled in.

Questions with incomplete answers: One issue is clear, and that is that if the company pays for a part or a total of the leave most certainly the leave was granted. Therefore, if it is indicated that the holiday was paid for by the company, the leave was obviously granted.

In the case when the leave was not remunerated, we cannot confirm that it was in accordance with company policy.

Matters are complicated further if someone who has taken a leave forgets to write down whether it was granted by the company and whether they got paid. For the same reason as given in 1 it seems reasonable to assume that the company granted the leave. To see if the holiday was remunerated, we can look at how long the person was employed with the company. For individuals who have worked for more than one year it seems fair to assume that leaves due to sickness or some sort of physical incapacity were to be granted. In most cases after working for a year, pregnancy leave is also covered.

Questions with more than one answer: The greatest problems with more than one answers are when individuals have indicated that they took a holiday but that they have been paid and that they have not been paid. That is some were paid and not entirely paid. This presents interpretive problems. In this case I have coded the variables as if the individuals received remuneration.

Variables and definitions: LFDI

Total absence from the labour force due to illness or disability.

LFAM

Total absence from the labour force due to pregnancy and family responsibility.

LFED

Total absence time going to school.

LOTH

Total absence time due to other

TOTABFLF

Total absence time from the labour force

Questions without answers: Here a "0" is indicated when a response is missing.

Variable and definition: OSJAP

Number of outside jobs applied for since being with the company.

0 if none, 2 if 1-3, 5 if 4-6, 8 if more than 6

OSJAP1

1 if any, 0 otherwise

Questions without answers: If an individual has not filled in the question a mean by sex is indicated.

Variable and definition: WWOP

Number of times worked overtime without pay in 1982.
0 if none, 5 if 1-10 times, 15 if 11-20 times, 25 if greater than 20 times.

Questions without answers: Where absent, a mean by sex was used.

Variable and definition: CAROT

Percentage increase in pay to leave present company.

Questions without answers: Where missing, a mean by sex was used.

Variable and definition: PREFPERN

Preference to being promoted rather than receiving higher earnings without being promoted.
1 for 1 or 3, and 0 for 2

Questions without answers: This is a dummy variable and gets deleted if it was not filled in.

Variable and definition: PROMOAP

Number of times applied for a promotion since working for present company.

Questions without answers: If this answer was missing, and question 24 is missing then we substituted the mean by sex. If missing and question 24 is not missing, then we put what was written down for question 24. (Response to Question 24 must be greater than response to Question 23. If not, we substituted the answer for question for 24.

Variable and definition: PROMOAPNR

Number of times applied and not received promotion since working with present company.

Questions without answers: In cases where this answer was missing, it is important to indicate what was recorded for question 23. If nothing was indicated for either question we substituted a mean by sex. On the other hand, if question 23 had "none" as an answer, it was essential to assign "none" for question 24.

Variable and definition: PROMFF

Number of times offered a promotion since working with the company.

Questions without answers: We substituted a mean by sex.

Variable and definition: PROMDOFF

Number of times declined a promotion when one was offered.

Questions without answers: We substituted a mean by sex.

Variable and definition: RPROMDF1

Too much responsibility.

RPROMDF2

Personal and family responsibilities.

RPROMDF3

Frequent illness

RPROMDF4

Not enough responsibility.

RPROMDF5

Location of job

RPROMDF6

Not interested

Questions without answers: Because all of the above are dummy variables, they were immediately deleted when not filled in properly.

Variable and definition: NPROMOS

Number of times offered a promotion and accepted.

NPROMOS = PROMFF-PROMDFF. NPROMOS is now calculated by the number of promotions you have been offered since you have been with the company minus the number of times you have declined when one was offered. This now equals the total number of promotions offered and accepted with the present company. Means are substituted for both of these variables when missing.

Variable and definition: HK

1 if interested, 0 otherwise

Questions without answers: If not completed, the observation gets deleted.

Variable and definition: PERCD

1 if sexual discrimination, 0 otherwise

Questions without answers: If not completed, the observation gets deleted.

Variable and definition: PERCDF1

Form of discrimination (EARNINGS)

PERCDF2

Form of discrimination (RECOMMENDATION)

PERCDF3

Form of discrimination (EVALUATION OF PERFORMANCE)

PERCDF4

Form of discrimination (SUPPORT AND MANAGEMENT ON THE JOB)

Questions without answers: These were dummies and were deleted.

Variable and definition: MOTS

Effect on motivation of having people in top positions of similar sex.
0 if not a consideration
1 if moderate effect
2 if significant effect

Questions without answers: We substituted the mean by sex.

Variable and definition: MOTSUP

Effect on motivation of being encouraged by superiors to advance

0 if not at all
1 if moderately
2 if significantly

Questions without answers: We substituted the mean by sex.

Variable and definition: CUPMOB

Perceived chance for upward mobility
0 if poor
1 if fair
2 if good
3 if excellent

Questions without answers: We substituted the mean by sex.

*** Questions 34-43 were only answered by married people

Variable and definition: UMOV

Willingness of self to move to support spouse/partners career
1 if yes. 0 if no.

Questions without answers: If not completed, the observation was deleted.

Variable and definition: SPSCAR2

Support of spouse for having a career
0 if not at all
1 if offers moderate support
2 if is extremely encouraging

Questions without answers: If missing and marital=1, then we substituted the mean by sex.

Variable and definition: SPMOB

Willingness of spouse or partner to move to support career of self.

1 if yes, 0 if no.

Questions without answers: If not completed, the observation was deleted.

Variable and definition: SPOCC

Spouse's or partner's occupation

1 if occupation is professional, 0 otherwise

Questions without answers: If not completed, the observation was deleted.

Variable and definition: SPSTRP

If spouse or partner is willing to move and is professional.

If SPOCC = 1 and question 36 = yes then SPSTRP = 1

If SPOCC = 1 and question 36 = no then SPSTRP = 0

If SPOCC = 0 then SPSTRP = 0

If SPOCC = 1 and question 36 = missing then SPSTRP = missing

If SPOCC = missing and question 36 = yes then SPSTRP = missing

If SPOCC = missing and question 36 = no then SPSTRP = 0

If SPOCC = missing and question 36 = missing SPSTRP = missing

Variable and definition: IMCARTF

Order of importance of career of self or spouse to family

1 if mine, 0 otherwise

RIMPCATF

Reasons for importance for career to family

1 if benefits are better

2 if income is higher

3 if personal satisfaction derived from job is higher

4 if career commitment is stronger

5 if prestige or status is better

This variable appears as a frequency distribution

Questions without answers: If not completed, the observation was deleted.

Variable and definition: SXDMAN

Family responsibilities

1 if family responsibilities make you unavailable for work, 0 otherwise

Questions without answers: If not completed, the variable was deleted.

Variable and definition: SXDMRES

- 1 if involved in the transport of children
- 2 if involved in housework
- 3 if looking after another relative
- 4 if other

This variable appears as a frequency distribution

Questions without answers: In cases where neither Q 41 or Q 40 were answered, we assumed that the individual had no family responsibilities that prevented them from going to work and left it blank. However if a positive answer was written for Q 40, we should logically expect an answer for Q 41. While it is impossible to know exactly what the responsibilities were we ascribed a 4 for other. All individuals who were married or living together as a couple and indicated a "NO" for question 40 received a "0" for this index.

Variable and definition: DLHH

Division of labour in the household

This variable was calculated entirely in percentages. In these calculations, we specifically excluded yard and outside maintenance. Included in these calculations were the percentage participation in cooking, cleaning, and the transport of children. If a female put 100% for each item, she would get a total of 300%. If a male put 100% for each item, he would get a total of 300%. The lower the score for females, the more they were raised in a fairly nontraditional household where their spouses or partners do most of the work. But a lower value for males implies a more traditional division of labour in the home. The only column summed up here is the "mostly by you" column.

Questions without answers: We substituted means by marital status and sex.

Variable and definition: EARSOC

Early socialization activities

Items are summed up only for the more masculine activities such as playing competitive sports, having a paper route, and playing with cars.

Questions without answers: We substituted means by sex.

Variable and definition: EARDL

Early demonstration effect of division of labour

Questions without answers: We substitutes means by sex.

Variable and definition: IMPERF

Qualities of being a good manager

This variable appears as a frequency distribution

Questions without answers: If absent, the variable was deleted.

Variable and definition: INFORM

Information networks with superiors in firms
The following weights have been assigned for each contact;
Top exec =3 , Current super = 2, Previous super = 2, Personnel =1, Colleague in area = 0, Colleague in other area = 0, Someone outside the company = 0

Questions without answers: If missing, the entry was assigned a "0".

Variable and definition: PNMENT2

Perceived need for a mentor
0 if necessary for success
1 if helpful but not necessary
2 if not helpful for success

Questions without answers: If missing, we substituted a mean by sex.

Variable and definition: SXMENT

Present sex of mentor
1 for female ,0 for male

Questions without answers: If not completed, the observation was dropped.

Variable and definition: SXPRFMNT

1 if preference is for male
2 if preference is for female
3 if no preference

Questions without answers: If missing, we substituted a mean by sex.

Variable and definition: SXPRFMAN

1 if preference is for male
2 if preference is for female
3 if no preference

Questions without answers: If missing, we substituted a mean by sex.

Variable and definition: HDPRDSXM

Present managers influence over productivity
1 if 1 for Q 52 and 1 for Q 53
1 if 1 for Q 52 and 2 for Q 53
1 if doesn't matter
0 if 1 for Q 52 and 2 for Q 53
0 if 2 for Q 52 and 1 for Q 53

Questions without answers: If either one of these was missing, then the observation was deleted.

Variable and definition: PROMOFW

Promoted form within
1 for yes, 0 for no.

Questions without answers: If missing, the variable was deleted.

Variable and definition: PERCW1

Perceived view of work
1 as a job, 0 as career.

Questions without answers: If missing, the observation was deleted.

APPENDIX 3

DESCRIPTIVE STATISTICS FOR THE SAMPLES

		<u>SAMPLE</u>		
		1	2	3
1. EARNINGS BY AGE	<u>Tables</u>	A3-1	A3-9	A3-17
2. EARNINGS BY FULL-TIME LABOUR-FORCE EXPERIENCE	<u>Tables</u>	A3-2	A3-10	A3-18
3. EARNINGS BY YEARS OF SERVICE WITH THE COMPANY	<u>Tables</u>	A3-3	A3-11	A3-19
4. EARNINGS BY LEVEL OF EDUCATION	<u>Tables</u>	A3-4	A3-12	A3-20
5. AVERAGE YEARS OF EDUCATION AND AREA OF CONCENTRATION	<u>Tables</u>	A3-5	A3-13	A3-2 1
6. EARNINGS BY AREA OF CONCENTRATION	<u>Tables</u>	A3-6	A3-14	A3-2 2
7. EARNINGS BY OCCUPATION	<u>Tables</u>	A3-7A	A3-15	A3-2 3
8. WITHIN JOB EARNINGS	<u>Tables</u>	A3-7		
9. EARNINGS BY FAMILY STATUS	<u>Tables</u>	A3-8	A3-16	A3-2 4

Table A3-1

Earnings by Age, Sample 1
(1982 Dollars)

AGE	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
18 - 24	20	20	18,130	16,465	1665	1.101	12,800	12,800	22,500	24,600
25 - 29	65	64	18,012	20,627	-2615	0.873	14,000	14,000	24,600	29,100
30 - 34	69	56	18,240	22,331	-4091	0.816	15,600	15,800	29,600	36,800
35 - 39	18	43	19,175	26,193	-7018	0.732	16,000	16,300	30,800	39,948
40 - 44	3	16	25,700	31,966	-6266	0.803	21,000	25,900	32,000	45,000
45 - 49	-	3	-	31,800	-	-	-	28,100	-	38,300
50 - 54	-	3	-	37,766	-	-	-	34,300	-	39,700
Over 54	-	-	-	-	-	-	-	-	-	-

Table A3-2

Earnings by Full Time Labour Force Experience, Sample 1
(1982 Dollars)

Years of Service	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
0 - 1	16	12	17,514	23,987	-6,473	0.730	12,800	15,850	24,800	36,800
1 - 2	22	19	17,664	17,373	290	1.017	13,500	12,800	22,190	24,900
2 - 4	25	30	18,866	21,460	-2,594	0.879	13,850	13,900	24,600	27,000
4 - 6	22	38	18,682	20,370	-1,688	0.917	15,500	15,800	28,000	29,100
6 - 8	26	24	18,235	23,481	-5,245	0.777	15,500	15,800	24,800	36,800
8 - 10	33	20	17,534	20,599	-3,066	0.851	15,890	14,000	26,200	39,948
10 - 12	18	12	18,935	25,615	-6,680	0.739	16,000	16,000	30,800	33,400
12 - 14	7	21	19,061	24,528	-5,467	0.777	17,200	16,300	29,600	31,214
14 - 16	5	3	20,747	23,316	-2,569	0.890	16,200	16,400	25,116	27,650
16 - 20	-	16	-	31,579	-	-	-	25,900	-	45,000
20 - 24	1	5	32,000	31,560	440	1.014	32,000	29,000	32,000	32,500
24 - 28	-	2	-	33,200	-	-	-	28,100	-	38,300
over 28	-	3	-	37,766	-	-	-	34,300	-	39,700

Table A3-3

Earnings by Full Time Years Of Service With the Company, Sample 1
(1982 Dollars)

Years of Service	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
0 - 1	7	5	18,742	19,166	-424	0.978	12,800	15,850	26,046	27,181
1 - 2	27	25	17,511	17,856	-345	0.981	13,500	12,800	22,190	27,000
2 - 4	62	49	17,407	21,324	-3,917	0.816	13,850	13,900	24,600	35,214
4 - 6	48	59	18,034	21,803	-3,769	0.827	15,500	15,800	28,000	39,948
6 - 8	19	19	19,652	24,744	-5,092	0.794	16,000	16,300	24,800	45,000
8 - 10	6	7	24,025	25,678	-1,654	0.936	17,300	17,800	30,800	29,500
10 - 12	2	8	22,800	28,573	-5,773	0.798	16,000	25,500	29,600	39,300
12 - 14	4	14	25,554	30,478	-4,923	0.816	21,000	25,900	32,000	39,700
14 - 16	-	6	-	27,741	-	-	-	25,900	-	29,400
16 - 20	-	8	-	30,225	-	-	-	26,500	-	34,700
20 - 24	-	5	-	31,920	-	-	-	28,800	-	34,300
24 - 28	-	-	-	-	-	-	-	-	-	-
over 28	-	-	-	-	-	-	-	-	-	-

Table A3-4

Earnings by Levels of Education, Sample 1
(1982 Dollars)

Level of Education	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
1	1	5	16,000	22,040	-6040	0.725	16,000	13,900	16,000	34,300
2	39	33	15,926	15,571	355	1.022	12,800	12,800	22,000	17,800
3	134	162	19,110	24,336	-5226	0.785	14,800	14,000	32,000	39,700
4	-	3	-	41,079	-	-	-	38,290	-	45,000

1 = High school degree

2 = Community college (Cegep) or technical college degree

3 = College degree (college classique)

4 = Professional degree (Masters, Doctorate)

Table A3-5

Average Years of Education and Areas of Concentration, Sample 1

	Female	Male
Average Years of Education	16.29	16.46
% ACON1 (Humanities Concentration)	30.8	12.1
% ACON2 (Social Sciences)	18.2	14.1
% ACON3 (Applied Sciences)	50.2	69.2
% ACON4 (Vocational Training)	0.0	0.4

Table A3-6

Earnings by Area of Concentration, Sample 1
(1982 Dollars)

ACON	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
1	54	25	16,926	18,786	-1,860	0.901	14,000	13,801	32,000	45,000
2	32	29	17,980	22,369	-4,388	0.804	14,800	15,800	30,800	39,948
3	88	142	19,424	24,025	-4,601	0.808	12,800	12,800	28,000	38,300
4	-	1	-	14,000	-	-	-	14,000	-	14,000

ACON 1 = Humanities Concentration

ACON 2 = Social Sciences

ACON 3 = Applied Sciences

ACON 4 = Vocational Training

Table A3-7

Earnings by Occupation, Sample 1
(1982 Dollars)

Occupation	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
OCC1	5	21	21,765	33,255	-11,490	0.654	17,200	17,800	30,800	45,000
OCC2	57	109	21,962	26,051	-4,089	0.843	15,000	13,850	32,000	34,300
OCC3	113	75	16,404	16,115	289	1.017	12,800	12,800	22,800	17,800

OCC1 = JOB 1 (Team Leader)
 JOB 2 (Project Leader)
 JOB 3 (Supervisor)

OCC2 = JOB 4 (Analyst)
 JOB 7 (Programmer)

OCC3 = JOB 5 (Operations Support)
 JOB 6 (Computer Operator)

Table A3-7a

Within Job Earnings, Sample 1
(1982 Dollars)

Job	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
JOB1	-	2	-	42,474	-	-	-	39,948	-	45,000
JOB2	1	10	30,800	36,853	-6,053	0.835	30,800	32,230	30,800	39,700
JOB3	4	9	19,506	27,208	-7,702	0.716	17,200	17,800	26,046	36,100
JOB4	6	32	25,218	28,145	-2,927	0.896	20,544	21,000	32,000	34,300
JOB7	51	77	21,579	25,180	-3,601	0.856	15,000	13,850	28,000	29,850
JOB5	89	50	16,425	16,711	-286	0.982	15,500	15,800	17,500	17,800
JOB6	24	25	16,322	14,922	1,400	1.093	12,800	12,800	22,800	16,800

JOB1 = Team Leader

JOB2 = Project Leader

JOB3 = Supervisor

JOB4 = Analyst

JOB7 = Programmer

JOB5 = Operations Support

JOB6 = Computer Operator

Table A3-8

Earnings by Family Status, Sample 1
(1982 Dollars)

Family Status		n		Mean		Difference	Ratio	Minimum		Maximum	
		F	M	F	M			F	M	F	M
Married	1)	36	42	19,046	20,576	-1,530	0.925	14,000	14,000	30,800	29,600
	2)	49	77	17,357	22,946	-5,588	0.756	14,000	14,000	28,000	39,948
	3)	-	40	18,008	28,715	-10,707	0.627	15,850	14,000	29,600	39,700
Single	1)	42	46	18,598	21,018	-2,420	0.884	12,800	12,800	26,046	45,000
	2)	3	-	22,342	-	-	-	15,899	-	28,000	-
	3)	14	-	19,402	-	-	-	15,800	-	32,000	-

1 = Without children

2 = Living with children (5 years and under)

3 = Living with children (6 years and up)

Married = or living together as a couple

Single = includes divorced, separated and widowed

Table A3-9

Earnings by Age, Sample 2
(1982 Dollars)

AGE	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
18 - 24	104	60	19,729	23,147	-3,418	0.852	10,000	9,000	32,000	36,000
25 - 29	177	244	23,230	28,763	-5,533	0.808	7,300	10,244	42,000	53,000
30 - 34	96	286	24,995	34,070	-9,075	0.734	7,400	11,000	43,000	72,000
35 - 39	72	262	29,018	39,041	-10,023	0.743	14,000	20,000	52,500	70,000
40 - 44	44	180	27,643	41,828	-14,186	0.661	15,800	22,868	54,000	82,000
45 - 49	20	127	27,726	42,329	-14,602	0.655	20,000	16,000	50,000	80,000
50 - 54	14	108	26,508	41,306	-14,798	0.642	16,000	20,747	42,000	80,000
55 - 59	9	72	28,475	41,472	-12,997	0.687	18,000	20,000	55,000	88,800
60 - 64	3	15	23,012	37,218	-14,206	0.618	15,000	25,075	33,036	54,000
Over 64	-	1	-	65,000	-	-	-	65,000	-	65,000

Table A3-10

Earnings by Full Time Labour Force Experience, Sample 2

Years of Service	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
0 - 1	6	8	21,200	30,850	-9,650	0.687	18,000	22,800	25,000	44,000
1 - 2	32	36	18,984	23,313	-4,329	0.814	14,130	9,000	40,065	47,600
2 - 4	50	62	21,190	26,632	-5,443	0.796	12,000	16,000	34,000	43,000
4 - 6	90	107	22,386	29,303	-6,917	0.764	10,000	13,500	39,353	58,000
6 - 8	75	120	22,980	32,035	-9,055	0.717	7,300	10,244	40,000	54,000
8 - 10	79	155	24,867	34,602	-9,735	0.719	7,400	11,000	49,500	70,000
10 - 12	51	96	26,241	35,397	-9,155	0.741	7,500	19,000	52,500	72,000
12 - 14	23	83	24,895	38,357	-13,463	0.649	20,000	16,000	33,000	65,000
14 - 16	26	98	27,367	37,840	-10,472	0.723	15,000	16,000	54,000	70,000
16 - 20	42	173	26,809	40,122	-13,312	0.668	14,000	20,000	50,000	65,000
20 - 24	30	110	28,319	42,414	-14,095	0.668	16,000	22,868	49,726	82,000
24 - 28	18	102	27,091	41,111	-14,019	0.659	18,200	21,892	40,000	78,000
over 28	17	205	31,594	39,926	-8,333	0.791	21,000	20,000	55,000	88,800

Table A3-11

Earnings by Full Time Years Of Service With the Company, Sample 2
(1982 Dollars)

Years of Service	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
0 - 1	10	9	16,227	22,279	-6,052	0.728	7,300	11,000	26,000	44,000
1 - 2	84	118	21,433	27,357	-5,924	0.783	11,071	9,000	47,000	53,000
2 - 4	90	146	22,948	31,592	-8,644	0.726	15,600	16,000	45,000	80,000
4 - 6	98	163	23,075	32,448	-9,373	0.711	10,000	10,244	48,000	63,000
6 - 8	60	130	24,018	34,083	-10,065	0.705	8,000	18,000	45,000	65,000
8 - 10	62	112	26,931	36,823	-9,892	0.731	18,000	12,000	52,500	70,000
10 - 12	30	87	24,822	38,492	-13,670	0.645	8,480	21,000	43,000	72,000
12 - 14	19	67	24,697	38,827	-14,130	0.636	7,500	22,000	33,400	65,000
14 - 16	18	89	28,901	39,121	-10,220	0.739	19,000	16,000	52,000	63,000
16 - 20	27	141	27,428	41,898	-14,470	0.655	19,000	24,500	54,000	80,000
20 - 24	22	93	28,546	42,478	-13,932	0.672	16,000	22,000	49,726	88,800
24 - 28	12	92	31,561	40,857	-9,296	0.772	25,000	22,800	41,000	78,000
over 28	7	108	34,005	40,934	-6,930	0.831	26,000	22,000	55,000	80,000

Table A3-12

Earnings by Level of Education, Sample 2
(1982 Dollars)

Level of Education	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
0	11	50	22,072	32,712	-10,640	0.675	11,071	18,000	33,500	50,000
1	284	352	22,806	31,083	-8,277	0.734	7,300	16,000	41,000	62,000
2	156	573	23,038	35,256	-12,218	0.653	10,600	9,000	45,000	82,000
3	49	163	29,389	39,061	-9,672	0.752	8,000	17,000	55,000	70,000
4	37	216	35,373	47,026	-11,653	0.752	12,500	11,000	52,000	88,800

0 = Less than high school

1 = High school degree

2 = Community college (Cegep) or technical college degree

3 = College degree (college classique)

4 = Professional degree (Masters, Doctorate)

Table A3-13

Average Years of Education and Areas of Concentration, Sample 2

	Female	Male
Average Years of Education	13.66	14.93
% ACON1 (Humanities Concentration)	2.9	1.6
% ACON2 (Social Sciences)	8.3	9.2
% ACON3 (Applied Sciences)	11.1	19.6
% ACON4 (High School with Vocational Concentration)	77.5	69.5

Table A3-14

Earnings by Area of Concentration, Sample 2
(1982 Dollars)

ACON	n		Mean		<u>Difference</u>	<u>Ratio</u>	<u>Minimum</u>		<u>Maximum</u>	
	F	M	F	M			F	M	F	M
1	16	22	28,528	36,045	-7,518	0.791	12,500	25,500	49,726	55,000
2	45	125	29,372	39,449	-10,076	0.744	8,000	10,244	55,000	79,000
3	60	266	31,883	43,375	-11,492	0.735	13,000	9,000	52,500	88,800
4	418	942	22,556	34,069	-11,513	0.662	7,300	12,000	45,000	82,000

ACON 1 = Humanities Concentration

ACON 2 = Social Sciences

ACON 3 = Applied Sciences

ACON 4 = Vocational Training

Table A3-15

Earnings by Occupation, Sample 2
(1982 Dollars)

Occupation	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
OCC0	4	202	29,250	35,730	-6,481	0.819	20,000	13,000	34,000	70,000
OCC1	59	330	36,044	46,272	-10,228	0.779	12,500	17,000	55,000	88,800
OCC2	374	100	21,300	23,184	-1,884	0.919	7,300	10,244	32,000	34,176
OCC3	7	115	34,900	40,101	-5,202	0.870	24,300	13,500	45,000	63,000
OCC4	3	22	37,333	39,717	-2,385	0.940	30,000	17,000	45,000	58,000
OCC5	35	32	28,308	30,383	-2,075	0.932	14,130	9,000	43,000	45,000
OCC6	2	28	23,250	24,281	-1,031	0.957	19,000	16,800	27,500	40,000
OCC7	8	28	31,432	34,033	-2,601	0.923	26,000	11,000	41,000	79,000
OCC8	24	65	27,043	33,330	-6,287	0.811	16,000	12,000	39,353	70,000
OCC9	3	229	33,000	31,304	1,696	1.054	27,000	14,000	38,000	60,502
OCC10	20	74	25,831	33,031	-7,200	0.782	13,870	16,000	40,000	53,500
OCC11	-	130	-	35,996	-	-	-	22,000	-	52,000

OCC0 = Unidentifiable Group
 OCC1 = Management and Administrative Staff
 OCC2 = Clerical Staff
 OCC3 = Engineering Staff
 OCC4 = Scientific Research Staff
 OCC5 = Computer Staff
 OCC6 = Secondary Services
 OCC7 = Finance Staff
 OCC8 = Primary Services
 OCC9 = Skilled Labour
 OCC10 = Public Relations
 OCC11 = Bluecollar Supervisors

Table A3-16

Earnings by Family Status, Sample 2
(1982 Dollars)

Family Status	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
Married	1)	175 233	23,693	32,228	-8,535	0.735	7,300	12,000	47,000	70,000
	2)	101 431	24,427	34,101	-9,674	0.716	7,400	11,000	49,500	65,000
	3)	70 507	25,781	41,556	-15,776	0.620	15,600	20,747	55,000	88,800
Single	1)	165 159	23,856	31,834	-7,979	0.749	12,000	9,000	50,000	82,000
	2)	12 2	27,035	25,000	2,036	1.081	16,000	22,000	46,000	28,000
	3)	16 23	27,548	42,059	-14,511	0.655	18,000	16,000	52,500	65,000

1 = Without children

2 = Living with children (5 years and under)

3 = Living with children (6 years and up)

Married = or living together as a couple

Single = includes divorced, seperated and widowed

Table A3-17

Earnings by Age, Sample 3
(1982 Dollars)

AGE	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
18 - 24	11	18	14,319	15,597	-1,278	0.918	800	6,200	22,200	28,500
25 - 29	23	52	22,763	30,731	-7,968	0.741	12,000	6,960	31,400	54,000
30 - 34	8	48	19,808	38,439	-18,631	0.515	9,361	18,750	31,300	80,000
35 - 39	10	30	29,970	44,989	-15,020	0.666	16,500	29,000	51,000	84,000
40 - 44	6	19	24,616	46,126	-21,510	0.534	17,000	31,400	32,400	74,000
45 - 49	3	8	29,359	52,682	-23,324	0.557	23,077	29,000	37,000	66,000
50 - 54	2	8	31,400	42,495	-11,096	0.739	23,000	28,730	39,800	51,400
54 - 59	1	8	23,000	50,426	-27,427	0.456	23,000	21,500	23,000	73,000
59 - 64	-	1	-	38,200	-	-	-	38,200	-	38,200

Table A3-18

Earnings by Full Time Labour Force Experience, Sample 3
(1982 Dollars)

Years of Service	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
0 - 1	2	5	19,500	16,060	3,440	1.214	12,000	6,200	27,000	34,000
1 - 2	12	25	20,247	20,790	-543	0.974	10,659	7,380	31,400	38,600
2 - 4	7	30	19,293	31,150	-11,857	0.619	13,000	15,000	30,000	52,000
4 - 6	9	22	21,217	34,574	-13,356	0.614	9,361	6,960	31,300	54,000
6 - 8	8	21	18,250	38,669	-20,420	0.472	800	26,560	27,000	48,000
8 - 10	4	13	20,812	42,307	-21,495	0.492	19,000	20,000	22,000	80,000
10 - 12	3	11	21,200	43,399	-22,200	0.488	18,600	24,000	23,000	65,000
12 - 14	2	12	50,500	47,466	3,033	1.064	50,000	38,000	51,000	69,400
14 - 16	6	5	26,217	49,200	-22,983	0.533	17,200	30,000	50,000	84,000
16 - 20	8	16	24,397	44,650	-20,253	0.546	17,000	29,000	34,500	74,000
20 - 24	3	14	35,500	47,720	-12,220	0.744	29,700	34,700	39,800	66,000
24 - 28	-	4	-	46,298	-	-	-	28,730	-	63,400
over 28	-	14	-	45,361	-	-	-	21,500	-	73,000

Table A3-19

Earnings by Full Time Years Of Service With the Company, Sample 3
(1982 Dollars)

Years of Service	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
0 - 1	3	6	10,866	10,106	760	1.075	800	6,200	19,800	21,000
1 - 2	25	69	20,486	29,836	-9,350	0.687	9,361	11,000	34,500	51,000
2 - 4	11	28	24,554	35,356	-10,802	0.694	13,000	21,000	50,000	52,000
4 - 6	7	21	27,171	39,242	-12,071	0.692	16,500	20,000	50,000	54,000
6 - 8	9	8	23,100	42,145	-19,045	0.548	19,000	37,000	29,7000	48,000
8 - 10	7	19	26,993	43,863	-16,870	0.615	17,200	21,500	51,000	80,000
10 - 12	-	8	-	45,531	-	-	-	34,000	-	54,000
12 - 14	2	7	29,450	46,857	-17,407	0.628	26,500	32,000	32,400	69,400
14 - 16	-	3	-	74,333	-	-	-	65,000	-	84,000
16 - 20	-	14	-	50,215	-	-	-	31,000	-	66,000
20 - 24	-	6	-	43,621	-	-	-	28,730	-	55,000
24 - 28	-	1	-	52,000	-	-	-	52,000	-	52,000
over 28	-	2	-	58,500	-	-	-	44,000	-	73,000

Table A3-20

Earnings by Levels of Education, Sample 3
(1982 Dollars)

Level of Education	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
0	4	2	21,350	28,100	-6,750	0.760	17,200	21,500	28,000	34,700
1	14	8	17,839	39,819	-21,979	0.448	800	20,000	23,000	73,000
2	14	28	23,546	30,973	-7,427	0.760	13,452	6,960	34,500	63,400
3	18	71	24,114	33,651	-9,536	0.717	9,361	6,200	51,000	58,000
4	14	83	25,852	42,430	-16,578	0.609	10,659	11,000	50,000	84,000

0 = Less than high school

1 = High school degree

2 = Community college (Cegep) or technical college degree

3 = College degree (college classique)

4 = Professional degree (Masters, Doctorate)

Table A3-21

Average Years of Education and Areas of Concentration, Sample 3

	<u>Female</u>	<u>Male</u>
Average Years of Education	15.84	18.43
% ACON1 (Humanities Concentration)	10.9	0.5
% ACON2 (Social Sciences)	15.6	4.7
% ACON3 (Applied Sciences)	35.9	89.0
% ACON4 (Vocational Training)	37.5	5.2

Table A3-22

Earnings by Area of Concentration, Sample 3
(1982 Dollars)

ACON	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
1	7	2	25,285	36,500	-11,983	0.693	16,500	29,000	51,000	44,000
2	10	9	24,720	38,030	-13,311	0.650	13,000	21,275	50,000	73,000
3	23	170	25,669	37,652	-11,983	0.682	9,361	6,200	50,000	84,000
4	24	10	18,591	29,671	-11,079	0.626	800	6,960	28,000	49,053

ACON 1 = Humanities Concentration

ACON 2 = Social Sciences

ACON 3 = Applied Sciences

ACON 4 = High School with Vocational Concentration

Table A3-23

Earnings by Occupation, Sample 3
(1982 Dollars)

Occupation	n		Mean		Difference	Ratio	Minimum		Maximum	
	F	M	F	M			F	M	F	M
OCC1	27	125	22,207	31,837	-9,630	0.697	9,361	6,200	39,800	53,000
OCC2	20	66	28,375	47,414	-19,039	0.598	16,500	6,960	51,000	84,000
OCC3	17	-	17,276	-	-	-	800	-	23,000	-

OCC1 = Member of Scientific Staff, Engineering and Computing

OCC2 = Management, Administrative and Finance

OCC3 = Clerical and Secretarial

Table A3-24

Earnings by Family Status, Sample 3
(1982 Dollars)

Family Status		n		Mean		Difference	Ratio	Minimum		Maximum	
		F	M	F	M			F	M	F	M
Married	1)	26	53	22,837	34,029	-11,192	0.671	10,659	6,200	34,500	56,000
	2)	6	42	26,283	40,366	-14,083	0.651	17,200	20,000	50,000	69,400
	3)	9	49	30,488	47,342	-16,853	0.644	16,500	21,500	51,000	84,000
Single	1)	18	48	18,185	27,797	-9,612	0.654	800	6,960	39,800	80,000
	2)	1	-	20,000	-	-	-	20,000	-	20,000	-
	3)	4	-	21,900	-	-	-	18,600	-	26,500	-

1 = Without children

2 = Living with children (5 years and under)

3 = Living with children (6 years and up)

Married = or living together as a couple

Single = includes divorced, seperated and widowed

APPENDIX 4

TOTAL SAMPLE AND
MARRIED SAMPLE MEANS

TABLE A4-1	TOTAL SAMPLE 1 MEANS
TABLE A4-2	TOTAL MARRIED SAMPLE 1 MEANS
TABLE A4-3	TOTAL SAMPLE 2 MEANS
TABLE A4-4	TOTAL MARRIED SAMPLE 2 MEANS
TABLE A4-5	TOTAL SAMPLE 3 MEANS
TABLE A4-6	TOTAL MARRIED SAMPLE 3 MEANS

TOTAL SAMPLE MEANS

	Total	Male	Female	Female - Male
n	370	199	171	
LNLTES	9.960116	10.00281	9.797919	-.204809
Intercept	1	1	1	0
SEX	.4621622	0	1	1
AGE	30.77297	31.68342	29.71345	-1.96997
AGE2	975.8054	1040.960	899.9325	-140.977
FYSEKVC	69.70270	81.00503	56.54971	-24.4553
FYSEKVC2	7239.768	9953.075	4082.175	-5870.90
FTLFEX	91.55946	101.7035	79.75439	-21.9491
FTLFEX2	12769.83	16059.56	8941.427	-7118.14
EDTS2	.1945946	.1658291	.2200702	.0622411
EDCS2	.772973	.7839196	.7602339	-.023686
EDPS2	.0081081	.0150754	0	-.015075
ACON2	.1567568	.1407035	.1754306	.0347351
ACON3	.6081081	.6934673	.5087719	-.184695
ACON4	.0027027	.0050251	0	-.005025
OCC1	.0648649	.1005025	.0233918	-.077111
OCC2	.4297297	.5226131	.3216374	-.200976
SDN1	.1054054	.1708543	.0292398	-.141615
SDN2	.3648649	.4120603	.3099415	-.102119
SDN4	.1486486	.1457286	.1520468	.0063182
FDN1	.1081081	.1557789	.0526316	-.103147
FDN2	.3162162	.3718593	.251462	-.120397
FDN4	.4486486	.3567839	.5555556	.1987717
FDN5	.0351351	.0552764	.0116959	-.043581
MARITAL	.727027	.7738693	.6725146	-.101355
CHILD1	.4297297	.4974874	.3508772	-.146610
CHILD2	.4459459	.4572864	.4327485	-.024538
LFAM	1.781081	.1708543	3.654971	3.484117
TOTABFC	2.656757	1.346734	4.181287	2.834553
OSJAP1	.2162162	.2512563	.1754386	-.075818
WVOP	3.783784	4.422111	3.040936	-1.38117
CAROT	13.18378	13.97487	12.26316	-1.71172
INFORM	1.316216	1.748744	.8128655	-.935878
PERCD	.2054054	0	.4444444	.4444444
MOTS1	.672973	.6482412	.7017544	.0535132
EARSOC	9.674692	7.280189	12.46126	5.181090
EARDL	4.241216	4.247487	4.233918	-.013569

SAMPLE 1

Table A4-2

MARRIED SAMPLE MEANS

	Total	Male	Female	Female - Male
n	253	148	110	
LNSTES	9.927062	10.03322	9.704236	-.248931
Intercept	1	1	1	0
SEX	.4263566	0	1	1
AGE	31.49225	32.62162	29.97273	-2.64889
AGE2	1016.229	1095.784	909.1909	-186.593
FYSERV	74.65116	87.39865	57.5	-29.89866
FYSERV2	7950.194	10952.57	3910.627	-7041.95
FTLFEX	96.21705	107.8716	80.53636	-27.3353
FTLFEX2	13480.84	17184.90	8497.191	-8687.71
EDTS2	.1705426	.1283784	.2272727	.0988943
EDCS2	.7984496	.8243243	.7636364	-.060688
EDPS2	.0077519	.0135135	0	-.013514
ACON2	.1705426	.1418919	.2090909	.0671990
ACON3	.5891473	.6959459	.4454545	-.250491
ACON4	.003876	.0067568	0	-.006757
OCC1	.0697674	.1013514	.0272727	-.074079
OCC2	.4147287	.5405405	.2454545	-.295086
SDN1	.127937	.2027027	.0272727	-.17543
SDN2	.3449612	.4121622	.2545455	-.157617
SDN4	.1085271	.0945946	.1272727	.0326781
FDN1	.1162791	.1621622	.0545455	-.107617
FDN2	.3139535	.3986486	.2	-.192649
FDN4	.4341085	.3100108	.6	.2891892
FDN5	.0387597	.0675676	0	-.067568
CHILD1	.5852713	.6486486	.5	-.148649
CHILD2	.5193798	.5810011	.4363636	-.144718
LFAM	1.937985	.1824324	4.3	4.117568
DLHH	91.75112	27.59939	178.0644	150.4650
TOTABFC	2.934109	1.506757	4.854545	3.347789
OSJAP1	.2248062	.2432432	.2	-.043243
WVOP	3.895349	4.695946	2.818182	-1.87776
CAROT	13.13953	13.93243	12.07273	-1.85971
INFORM	1.395348	1.878378	.7454545	-1.13292
PERCD	.2209302	0	.5181818	.5181818
MOTS1	.6782946	.6554054	.7090909	.0536855
EARSOC	9.372191	7.240445	12.24036	4.999912
EARDL	4.201550	4.25	4.136364	-.113636
UMOV	.2364341	.0405405	.5	.4594595
SPSCAR2	1.307866	1.421821	1.154545	-.267275
SPMOB	.4224806	.6959459	.0545454	-.641401
SPSTRPH	.0232558	.0337838	.0090909	-.024693
IMPCARTF	.6511628	.9391892	.2636364	-.675553

SAMPLE 2

Table A4-3

TOTAL SAMPLE MEANS

	Total	Male	Female	Female - Male
n	1894	1355	539	
LNBTES	10.34267	10.45744	10.05414	-.403292
Intercept	1	1	1	0
SEX	.2845829	0	1	1
AGE	35.89863	37.61697	31.57885	-6.03812
AGE2	1380.517	1505.396	1066.584	-438.812
FYSERVC	143.9176	160.1616	103.0816	-57.08
FYSERVC2	32083.2	38007.29	17190.55	-20816.7
FTLFEX	180.9578	200.2716	132.4045	-67.8671
FTLFEX2	46141.22	54357.03	25487.36	-28869.7
EDTS2	.3848997	.4228782	.2894249	-.133453
EDCS2	.1119324	.1202952	.0909091	-.029386
EDPS2	.1335797	.1594096	.0686456	-.090764
ACON2	.0897571	.0922509	.0834079	-.008763
ACON3	.1721225	.19631	.1113173	-.084993
ACON4	.718057	.695203	.7755102	.0803072
OCC1	.2053854	.2435424	.109462	-.134080
OCC3	.0644139	.0848708	.012987	-.071884
OCC4	.0131996	.0162362	.0055659	-.010670
OCC5	.0353749	.0236162	.0649351	.0413189
OCC6	.0158395	.0206642	.0037106	-.016954
OCC7	.0190074	.0206642	.0148423	-.005822
OCC8	.0469905	.0479705	.0445269	-.003444
OCC9	.1224921	.1690037	.0055659	-.163438
OCC10	.0496304	.0546125	.0371058	-.017507
OCC11	.0686378	.095941	0	-.095941
MARITAL	.8009504	.8642066	.6419295	-.222277
CHILD1	.3854277	.4413284	.244098	-.196430
CHILD2	.7059134	.8671587	.3005566	-.566602
LFAM	4.542239	1.025092	13.38404	12.35895
TOTABFC	11.11932	8.730627	17.1243	8.393673
OSJAP1	.2835269	.3107011	.2152134	-.095488
WVOP	1.370116	1.660517	.6400742	-1.02044
CAROT	25.30412	25.89889	23.80091	-2.08998
INFORM	4.540127	4.894465	3.649351	-1.24511
PERCD	.063358	.0081181	.2022263	.1941032
MOIS1	.3046463	.2760148	.3766234	.1006006
EARSOC	9.692306	8.403647	12.93188	4.528233
EARDL	4.221935	4.256601	4.134788	-.121813

SAMPLE 2

Table A4-4

MARRIED SAMPLE MEANS

	Total	Male	Female	Female - Male
n	1507	1162	342	
LMBTES	10.37645	10.47472	10.04548	-.429232
Intercept	1	1	1	0
SEX	.2289317	0	1	1
AGE	36.69542	38.21773	31.56812	-6.64961
AGE2	1435.784	1548.037	1057.701	-490.336
FYSERV	151.3099	166.3597	100.6203	-65.7394
FYSERV2	34385.47	39976.34	15554.77	-24421.6
FTLFEX	189.5036	207.2831	129.6203	-77.6628
FTLFEX2	49276.16	56941.36	23458.87	-33482.5
EDTS2	.3954877	.4302926	.2782609	-.152032
EDCS2	.1061712	.1153184	.0753623	-.039956
EDPS2	.1393497	.1574871	.0782609	-.079226
ACON2	.0036098	.0095009	.0637681	-.025733
ACON3	.1738553	.1901893	.1188406	-.071349
ACON4	.7272727	.7002616	.7913043	.0830427
OCC1	.2169874	.2504303	.1043478	-.146083
OCC3	.0650299	.0791738	.0173913	-.061783
OCC4	.0119443	.0137694	.0057971	-.007972
OCC5	.0272064	.0180723	.057971	.0398987
OCC6	.0172528	.020654	.0057971	-.014857
OCC7	.01858	.0215146	.0086957	-.012819
OCC8	.0464499	.0473322	.0434783	-.003854
OCC9	.1287326	.1643718	.0086975	-.155674
OCC10	.052422	.0576592	.0347826	-.022877
OCC11	.0836098	.1084337	0	-.108434
CHIL1	.4717983	.5086059	.3478261	-.160780
CHIL2	.8414068	.9741824	.3942029	-.579980
LFAM	4.489715	.5180723	17.86667	17.34859
DLHH	93.22641	73.65549	159.1436	85.48807
TOTABFC	11.30723	8.802065	19.74493	10.94286
OSJAP1	.2853351	.3089501	.2057971	-.103153
WWOP	1.426676	1.729776	.4057971	-1.32398
CAROT	25.14068	25.83563	22.8	-3.03563
INFORM	4.657598	4.975904	3.585507	-1.39040
PERCD	.0491042	.0094664	.1826037	.1731423
MOTS1	.3065693	.2771084	.4057971	.1286887
EARSOC	9.455045	8.400171	13.05167	4.651497
EARDL	4.225627	4.253330	4.132320	-.121009
UMOV	.2627737	.2013769	.4695652	.2681883
SPSCAR2	1.257356	1.231355	1.344928	.1135723
SPMOB	.64499	.7607573	.2550725	-.505685
SPSTRPRM	.0165893	.0197935	.0057971	-.013996
IMPCARTE	.810219	.9414802	.3681159	-.573364

SAMPLE 3

Table A4-5

TOTAL SAMPLE MEANS

	Total	Male	Female	Female - Male
n	255	191	64	
LBETES	16.31233	16.43842	9.936618	-.502402
Intercept	1	1	1	0
SEX	.2509804	0	1	1
AGE	33.47451	34.07853	31.67188	-2.40666
AGE2	1201.027	1243.335	1074.766	-168.569
FYSERVC	74.72549	81.63351	54.10938	-27.5241
FYSERVC2	10646.18	12703.70	4505.797	-8197.90
FILFEX	126.0431	132.5812	106.5313	-26.0499
FILFEX2	27025.05	30128.38	17763.53	-12364.9
EDPS2	.1647059	.1465969	.21875	.0721531
EDCS2	.345098	.3664921	.28125	-.085242
EDPS2	.3803922	.434555	.21875	-.215805
ACON2	.0745096	.0471204	.15625	.1091296
ACON3	.7568627	.8900524	.359375	-.530677
ACON4	.1333333	.052356	.375	.322644
OCC1	.5950784	.6544503	.421875	-.232575
OCC2	.3372549	.3455497	.3125	-.033050
MARITAL	.7215686	.7486911	.640625	-.108066
CHILD1	.2627451	.3036649	.140625	-.163040
CHILD2	.5411765	.5960506	.375	-.221859
LFAM	14.26667	.1361257	56.4375	56.30137
TOTABFC	5.745098	5.701571	5.875	.1734293
OGJAP1	.2705882	.2774869	.25	-.027487
WWOP	11.11765	11.88482	8.828125	-3.05669
CAROT	24.75686	25.31414	23.09375	-2.22039
INFORM	7.592157	8.392670	5.203125	-3.18955
PERCD	.0431373	0	.171875	.171875
MOTS1	.2509804	.1570681	.53125	.3741819
EARSOC	9.613076	8.785065	12.08417	3.299109
EARDL	4.023855	4.042319	3.96875	-.073569

SAMPLE 3

Table A4-6

MARRIED SAMPLE MEANS

	Total	Male	Female	Female - Male
n	183	142	41	
LNBTES	10.44972	10.55930	10.06845	-.491339
Intercept	1	1	1	0
SEX	.2240437	0	1	1
AGE	35.25683	36.19718	32	-4.19718
AGE2	1327.497	1394.282	1096.195	-298.087
FYSERV	87.15847	96.16901	55.95122	-40.2178
FYSERV2	13420.82	16012.52	4444.683	-11567.8
FTLFEX	147.0492	157.7324	110.0488	-47.6836
FTLFEX2	33613.31	38038.68	18285.44	-19752.2
EDTS2	.1639344	.1549296	.195122	.0401924
EDCS2	.3169399	.3239437	.2926829	-.031261
EDPS2	.3989071	.4507042	.2195122	-.231192
ACON2	.0546448	.0422535	.097561	.0553075
ACON3	.7759563	.8673239	.3902439	-.49708
ACON4	.1202186	.056338	.3414634	.2851254
OCC1	.5519126	.5915493	.4146341	-.176915
OCC2	.3989071	.4084507	.3658537	-.042597
CHILD1	.3551913	.4084507	.1707317	-.237719
CHILD2	.7103025	.7887324	.4390244	-.349708
LEAM	16.21858	.1619718	71.82927	71.66730
DLHH	87.53005	67.85211	155.6829	87.83081
TOTAFEC	6.054645	6.387324	4.902439	-1.48488
OSJAP1	.284153	.3028169	.2195122	-.083305
WVOP	11.22951	11.93662	8.730483	-3.15613
CAROT	25.46448	25.85915	24.00756	-1.76159
INFOR1	7.890710	9.654930	5.243902	-3.41103
PERCD	.0273224	0	.1219512	.1219512
MOIS1	.2349727	.1478873	.5365854	.3886981
EARSOC	9.426439	8.681616	12.00629	3.324678
EARDL	4.066027	4.014668	4.243902	.2292341
UNOV	.2622951	.1549296	.6341463	.4792167
SPSCAR2	1.573882	1.521271	1.756090	.2348271
SPMOB	.6065574	.6901408	.3170732	-.373068
SPSTRPRM	.0273224	.0211268	.0487805	.0276537
IMPCARTE	.8032707	.9295775	.3658537	-.563724

APPENDIX 5

REGRESSION TABLES

TABLE A5-1	SAMPLE 1	TOTAL SAMPLE HUMAN CAPITAL MODEL
TABLE A5-2	SAMPLE 1	TOTAL SAMPLE FULL REGRESSION
TABLE A5-3	SAMPLE 1	TOTAL SAMPLE PERSONAL REGRESSION
TABLE A5-4	SAMPLE 1	TOTAL FULL REGRESSION MALES
TABLE A5-5	SAMPLE 1	TOTAL FULL REGRESSION FEMALES
TABLE A5-6	SAMPLE 1	TOTAL PERSONAL REGRESSION MALES
TABLE A5-7	SAMPLE 1	TOTAL PERSONAL REGRESSION FEMALES
TABLE A5-8	SAMPLE 2	TOTAL SAMPLE HUMAN CAPITAL MODEL
TABLE A5-9	SAMPLE 2	TOTAL SAMPLE FULL REGRESSION
TABLE A5-10	SAMPLE 2	TOTAL SAMPLE PERSONAL REGRESSION
TABLE A5-11	SAMPLE 2	TOTAL FULL REGRESSION MALES
TABLE A5-12	SAMPLE 2	TOTAL FULL REGRESSION FEMALES
TABLE A5-13	SAMPLE 2	TOTAL PERSONAL REGRESSION MALES
TABLE A5-14	SAMPLE 2	TOTAL PERSONAL REGRESSION FEMALES
TABLE A5-15	SAMPLE 3	TOTAL SAMPLE HUMAN CAPITAL MODEL
TABLE A5-16	SAMPLE 3	TOTAL SAMPLE FULL REGRESSION
TABLE A5-17	SAMPLE 3	TOTAL SAMPLE PERSONAL REGRESSION
TABLE A5-18	SAMPLE 3	TOTAL FULL REGRESSION MALES
TABLE A5-19	SAMPLE 3	TOTAL FULL REGRESSION FEMALES
TABLE A5-20	SAMPLE 3	TOTAL PERSONAL REGRESSION MALES
TABLE A5-21	SAMPLE 3	TOTAL PERSONAL REGRESSION FEMALES
TABLE A5-22	SAMPLE 1	TOTAL MARRIED SAMPLE HUMAN CAPITAL MODEL
TABLE A5-23	SAMPLE 1	MARRIED FULL REGRESSION
TABLE A5-24	SAMPLE 1	MARRIED PERSONAL REGRESSION

APPENDIX 5

REGRESSION TABLES

TABLE A5-25	SAMPLE 1	MARRIED FULL REGRESSION MALES
TABLE A5-26	SAMPLE 1	MARRIED FULL REGRESSION FEMALES
TABLE A5-27	SAMPLE 1	MARRIED PERSONAL REGRESSION MALES
TABLE A5-28	SAMPLE 1	MARRIED PERSONAL REGRESSION FEMALES
TABLE A5-29	SAMPLE 2	TOTAL MARRIED SAMPLE HUMAN CAPITAL MODEL
TABLE A5-30	SAMPLE 2	MARRIED FULL REGRESSION
TABLE A5-31	SAMPLE 2	MARRIED PERSONAL REGRESSION
TABLE A5-32	SAMPLE 2	MARRIED FULL REGRESSION MALES
TABLE A5-33	SAMPLE 2	MARRIED FULL REGRESSION FEMALES
TABLE A5-34	SAMPLE 2	MARRIED PERSONAL REGRESSION MALES
TABLE A5-35	SAMPLE 2	MARRIED PERSONAL REGRESSION FEMALES
TABLE A5-36	SAMPLE 3	TOTAL MARRIED SAMPLE HUMAN CAPITAL MODEL
TABLE A5-37	SAMPLE 3	MARRIED FULL REGRESSION
TABLE A5-38	SAMPLE 3	MARRIED PERSONAL REGRESSION
TABLE A5-39	SAMPLE 3	MARRIED FULL REGRESSION MALES
TABLE A5-40	SAMPLE 3	MARRIED FULL REGRESSION FEMALES
TABLE A5-41	SAMPLE 3	MARRIED PERSONAL REGRESSION MALES
TABLE A5-42	SAMPLE 3	MARRIED PERSONAL REGRESSION FEMALES

SAMPLE 1

Table A5-1

TOTAL SAMPLE

Human Capital Model

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	8	13.759204	1.719901	53.520	0.0001
ERROR	361	11.601029	0.032136		
TOTAL	369	25.360233			
ROOT MSE		0.179265	R-SQUARE	0.5425	
DEP MEAN		9.908115	ADJ R-SQ	0.5324	
C.V.		1.809271			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.760481	0.065173	149.763	0.0001
SEX	1	-0.129843	0.019420	-6.686	0.0001
EDTS2	1	-0.091059	0.065044	-1.400	0.1624
EDCS2	1	0.133456	0.061952	2.154	0.0319
EDPS2	1	0.644727	0.121379	5.312	0.0001
EYSERV	1	0.002430539	0.0007075495	3.435	0.0007
EYSERV2	1	-0.0000029893	0.00000291956	-1.024	0.3066
ETLFEX	1	-0.0010925	0.0004122505	-2.650	0.0084
ETLFEX2	1	0.00000542152	0.00000149219	3.633	0.0003

TOTAL FULL REGRESSION

DEP VARIABLE: LNBIES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F
MODEL	35	23.181178	0.662319	101.518	0.0001
ERROR	334	2.179062	0.006524139		
TOTAL	369	25.360233			
ROOT MSE		0.080772	R-SQUARE	0.9141	
DEP MEAN		9.908115	ADJ R-SQ	0.9051	
C.V.		0.8152119			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	8.334822	0.225637	36.939	0.0001
SEX	1	-0.059049	0.016072	-3.674	0.0003
AGE	1	0.081595	0.014809	5.510	0.0001
AGE2	1	-0.00113459	0.000239619	-4.735	0.0001
EDT52	1	-0.032602	0.033369	-0.977	0.3293
EDC52	1	-0.00644851	0.031782	-0.203	0.8393
EDPS2	1	0.163365	0.060423	2.704	0.0072
ACCN2	1	-0.000670254	0.015387	-0.044	0.9653
ACCN3	1	-0.00119934	0.013237	-0.091	0.9279
ACCN4	1	-0.160134	0.090090	-1.777	0.0764
EYSERV	1	0.0001311509	0.0003916847	0.335	0.7380
EYSERV2	1	3.10224E-07	0.00000162204	0.191	0.8484
ETLEEX	1	-0.000833013	0.0002944074	-2.829	0.0049
ETLEEX2	1	0.00000500245	0.00000139038	3.598	0.0004
BCC1	1	0.273700	0.026985	10.142	0.0001
BCC2	1	0.164329	0.026271	6.255	0.0001
SDN1	1	0.209322	0.027342	7.656	0.0001
SDN2	1	0.104547	0.024407	4.284	0.0001
SDN4	1	0.018255	0.018397	0.992	0.3218
EDM	1	0.079632	0.027268	2.920	0.0037
EJT2	1	0.067737	0.024573	2.757	0.0062
EJT4	1	-0.014603	0.017247	-0.847	0.3978
EJT5	1	0.082299	0.031430	2.618	0.0092
MARITAL	1	0.015318	0.011467	1.336	0.1825
BHILD1	1	-0.017149	0.008957773	-1.914	0.0564
BHILD2	1	-0.012923	0.009154111	-1.412	0.1590
LFAM	1	-0.000183512	0.001533397	-0.120	0.9048
TOTABFC	1	0.0008898822	0.001237888	0.719	0.4727
BSJAB1	1	-0.013521	0.011593	-1.166	0.2444
#WOP	1	0.0004486263	0.001034213	0.434	0.6647
GARDY	1	0.001512576	0.0005071669	2.982	0.0031
INFORM	1	0.010714	0.00277786	3.857	0.0001
BERCO	1	-0.00269348	0.013560	-0.199	0.8427
EDT51	1	-0.00774449	0.009384159	-0.825	0.4098
BARSDC	1	0.001631815	0.002204351	0.740	0.4597
BARDE	1	-0.00270582	0.004634506	-0.584	0.5597

SAMPLE 1

Table A5-3

TOTAL SAMPLE

PERSONAL REGRESSION

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	26	17.040932	0.655420	27.023	0.0001
ERROR	343	8.319309	0.024255		
TOTAL	369	25.360233			
ROOT MSE		0.155739	R-SQUARE	0.6720	
DEP MEAN		9.908116	ADJ R-SQ	0.6471	
C.V.		1.571829			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	8.449048	0.389624	21.685	0.0001
SEX	1	-0.086608	0.030288	-2.859	0.0045
AGE	1	0.079395	0.026205	3.030	0.0026
AGE2	1	-0.00109799	0.0004304197	-2.551	0.0112
EDTS2	1	-0.161236	0.061961	-2.602	0.0097
EDCS2	1	0.005642689	0.060068	0.094	0.9252
EDPS2	1	3.446421	0.111530	4.003	0.0001
ACOM2	1	-0.059333	0.029118	-2.038	0.0424
ACOM3	1	0.096633	0.023303	4.147	0.0001
ACOM4	1	-0.179376	0.169980	-1.055	0.2920
EYSERV	1	0.001874765	0.0006986629	2.683	0.0076
EYSERV2	1	-0.0030045293	0.00000277501	-1.632	0.1036
ETLFBX	1	-0.00200473	0.0005556473	-3.608	0.0004
ETLFBX2	1	0.00000905974	0.00000261475	3.465	0.0006
WARTAL	1	0.006720006	0.021915	0.307	0.7593
SHILO1	1	-0.040481	0.016892	-2.396	0.0171
SHILO2	1	-0.031768	0.017197	-1.847	0.0656
LFAM	1	-0.00170058	0.002928612	-0.581	0.5618
EDTABFC	1	0.002531378	0.002346968	1.079	0.2815
BSJAB1	1	-0.055739	0.021918	-2.543	0.0114
WOB	1	0.004558492	0.001862445	2.448	0.0149
CARDT	1	0.001779096	0.0009590118	1.855	0.0644
INFORM	1	0.030178	0.005061932	5.962	0.0001
BERED	1	-0.033843	0.025613	-1.321	0.1873
MOTS1	1	-0.026829	0.017907	-1.498	0.1350
EARSDC	1	0.0003255701	0.004202574	0.077	0.9303
BARDE	1	0.011356	0.008837141	1.285	0.1996

TOTAL FULL REGRESSION

Males

DEP VARIABLE: LNBYES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	33	15.707895	0.475997	88.155	0.0001
ERROR	165	0.890929	0.005399569		
TOTAL	198	16.598824			
ROOT MSE		0.073482	R-SQUARE	0.9463	
DEP MEAN		10.002809	ADJ R-SQ	0.9356	
C.V.		0.7346112			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

BERCO =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	8.617991	0.299605	28.765	0.0001
AGE	1	0.067385	0.019117	3.525	0.0005
AGE2	1	-0.000895761	0.0002975164	+3.013	0.0030
EDTS2	1	-0.060826	0.039811	+1.528	0.1285
EDCS2	1	-0.036225	0.035213	+1.029	0.3051
EDPS2	1	0.096873	0.060105	1.612	0.1089
ACON2	1	-0.014460	0.022421	+0.645	0.5199
ACON3	1	-0.00923289	0.018781	+0.492	0.6236
ACON4	1	-0.141414	0.088854	+1.592	0.1134
EYSERV	1	0.0004809396	0.000497657	0.966	0.3353
EYSERV2	1	-0.0000014333	0.00000190197	+0.754	0.4522
ETLFBX	1	-0.000397576	0.0004176241	+0.952	0.3425
ETLFBX2	1	0.00000321044	0.00000173614	1.849	0.0662
BCC1	1	0.370159	0.031993	11.570	0.0001
BCC2	1	0.248748	0.030755	8.088	0.0001
SDN1	1	0.178603	0.030528	5.850	0.0001
SDN2	1	0.099916	0.028902	3.457	0.0007
SDN4	1	-0.011540	0.025418	+0.454	0.6504
EJT1	1	0.036194	0.033240	1.089	0.2778
EJT2	1	0.032822	0.030741	1.068	0.2872
EJT4	1	-0.017979	0.026469	+0.679	0.4979
EJT5	1	0.065192	0.038819	1.679	0.0950
MARITAL	1	0.018634	0.017013	1.095	0.2750
CHILD1	1	-0.028842	0.010516	+2.743	0.0068
CHILD2	1	-0.020057	0.012335	-1.626	0.1059
EFAH	1	-0.015683	0.010465	+1.499	0.1358
ECTABFC	1	0.0008711617	0.001223235	0.712	0.4774
BSJAP1	1	-0.036290	0.014284	+2.541	0.0120
AWOP	1	0.00120940	0.001406464	0.860	0.3911
MARBT	1	0.0006055728	0.0005910939	1.024	0.3071

SAMPLE 1

Table A5-4

TOTAL FULL REGRESSION

Males

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
INFORM	1	0.011344	0.003211554	3.532	0.0005
BERCO	0	1		.	.
MOTS1	1	-0.019217	0.012010	+1.650	0.1008
EARSBC	1	-0.00548353	0.00431699	+1.270	0.2058
EARDK	1	-0.00488396	0.006130484	+0.797	0.4268

TOTAL FULL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	32	4.252323	0.132885	28.291	0.0001
ERROR	138	0.648207	0.004697155		
TOTAL	170	4.900527			
ROOT MSE		0.068536	R-SQUARE	0.8677	
DEP MEAN		9.797919	ADJ R-SQ	0.8371	
E.V.		0.6994934			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR 8 MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

SDPS2 =
ACOM4 =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.576829	0.389132	22.041	0.0001
AGE	1	0.065229	0.025915	2.517	0.0130
AGE2	1	-0.000999913	0.0004296061	-2.328	0.0214
BDTS2	1	-0.00631464	0.053010	-0.119	0.9054
BDCS2	1	0.028219	0.052438	0.538	0.5913
SDPS2	0	0	0	0	0
ACOM2	1	-0.020023	0.019051	-1.051	0.2951
ACOM3	1	-0.00925926	0.016379	-0.565	0.5728
ACOM4	0	0	0	0	0
EYSERV	1	0.0007192072	0.0008167677	0.881	0.3801
EYSERV2	1	8.72327E-07	0.0000527805	0.165	0.8690
ETLFEX	1	0.0003245204	0.0004948991	0.656	0.5131
ETLFEX2	1	-0.0000023431	0.00000295216	-0.794	0.4287
BCC1	1	0.086799	0.042283	2.053	0.0420
BCC2	1	0.046445	0.042199	1.101	0.2730
BDN1	1	0.274719	0.050135	5.480	0.0001
BDN2	1	0.109006	0.037870	2.878	0.0046
BDN4	1	0.019102	0.024262	0.787	0.4324
EJT1	1	0.132393	0.043503	3.043	0.0028
EJT2	1	0.113458	0.037930	2.991	0.0033
EJT4	1	-0.019332	0.019923	-0.970	0.3336
EJT5	1	0.325367	0.065133	4.995	0.0001
VARIABLE	1	-0.000955946	0.014348	-0.067	0.9470
BHILD1	1	-0.00781188	0.015138	-0.516	0.6066
BHILD2	1	0.008819579	0.012577	0.701	0.4843
EFAM	1	-0.00105166	0.00373826	-0.281	0.7789
TOTABFC	1	0.00112041	0.003709436	0.302	0.7631
BSJAP1	1	0.025599	0.016892	1.515	0.1319
HWDP	1	-0.000899133	0.001343226	-0.669	0.5044

SAMPLE 1

Table A5-5

TOTAL FULL REGRESSION

Females

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
CARWT	1	0.002958139	0.000795653	3.718	0.0003
INFORM	1	0.00190494	0.004419389	0.431	0.6671
BERCD	1	-0.011677	0.012699	-0.920	0.3594
HOTS1	1	-0.033666	0.013640	-2.468	0.0148
BARSDC	1	0.0006281027	0.002299509	0.273	0.7851
BARDE	1	0.002773845	0.00611384	0.454	0.6508

SAMPLE 1

Table A5-6

TOTAL PERSONAL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	24	12.004837	0.500202	18.945	0.0001
ERROR	174	4.593987	0.026402		
TOTAL	198	16.598824			
ROOT MSE		0.162488	R-SQUARE	0.7232	
DEP MEAN		10.002808	ADJ R-SQ	0.6851	
C.V.		1.62442			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

BERCD =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEP	1	7.951344	0.567925	14.001	0.0001
AGE	1	0.106842	0.037623	2.840	0.0051
AGER	1	-0.0014277	0.0005987327	+2.385	0.0182
EDT52	1	-0.272137	0.080416	+3.384	0.0009
EDCS2	1	-0.051268	0.074941	+0.684	0.4948
EDPS2	1	0.338344	0.126502	2.675	0.0082
ACON2	1	-0.041116	0.047570	+0.864	0.3886
ACON3	1	0.139443	0.036743	3.795	0.0002
ACON4	1	-0.182613	0.186046	+0.982	0.3277
EYSERV	1	0.001874872	0.0009954283	1.883	0.0613
EYSERV2	1	-0.000006576	0.0000035934	+1.830	0.0690
ETLEBX	1	-0.00221062	0.0008887132	+2.487	0.0138
ETLEFX2	1	.00000967051	.00000368315	2.626	0.0094
MARITAL	1	-0.00751999	0.037103	+0.203	0.8396
CHIL01	1	-0.049115	0.022427	+2.190	0.0299
CHIL02	1	-0.022231	0.026301	+0.845	0.3992
KFAM	1	-0.012113	0.022865	+0.530	0.5970
TOTABFC	1	0.00165874	0.002632272	0.630	0.5294
MSJAR1	1	-0.084299	0.030273	+2.785	0.0060
WDP	1	0.005824355	0.002799323	2.081	0.0389
BAROT	1	0.0006920902	0.00129467	0.535	0.5936
INFORM	1	0.031758	0.006514133	4.875	0.0001
BERCD	0	0		.	.
EDT51	1	-0.029298	0.025933	+1.130	0.2601
BARSDC	1	0.013881	0.009090209	1.527	0.1286
BARDK	1	0.003352326	0.013090	0.256	0.7982

TOTAL PERSONAL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	23	2.499874	0.108690	6.655	0.0001
ERROR	147	2.400653	0.016331		
TOTAL	170	4.900527			
ROOT MSE		0.127793	R-SQUARE	0.5101	
DEP MEAN		9.797919	ADJ R-SQ	0.4335	
C.V.		1.304284			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR 8 MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

#DP52 =
#CON4 =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
INTERCEPT	1	8.831038	0.643067	13.733	0.0001
AGE	1	0.063061	0.043383	1.454	0.1482
AGE2	1	-0.00110592	0.0007265342	-1.522	0.1301
#DTS2	1	-0.078626	0.098309	-0.800	0.4251
#DCS2	1	0.052151	0.097626	0.534	0.5940
#DP52	0				
#CON2	1	-0.073181	0.033667	-2.174	0.0313
#CON3	1	0.040683	0.027318	1.489	0.1386
#CON4	0				
EYSERVIC	1	.00002128595	0.001393727	0.015	0.9878
EYSERVIC2	1	0.0000169783	.00000909218	1.867	0.0638
FTLFEX	1	-0.000743992	0.0008146694	-0.913	0.3626
ETLFBX2	1	.00000217381	.00000472187	0.460	0.6459
MARITAL	1	0.002742223	0.025918	0.106	0.9159
#HILD1	1	-0.051723	0.027212	-1.901	0.0593
#HILD2	1	-0.00243263	0.022583	-0.108	0.9144
KFAM	1	0.0002660694	0.006814477	0.039	0.9689
TOTALFC	1	0.00189534	0.006722927	0.282	0.7784
#SJAP1	1	-0.032235	0.030046	-1.073	0.2951
#WOP	1	0.001062092	0.002310298	0.460	0.6464
#ARBT	1	0.003783521	0.001387195	2.727	0.0072
#NFQRM	1	0.010412	0.008022572	1.298	0.1964
#ERCO	1	-0.034483	0.022205	-1.553	0.1226
#DTS1	1	-0.058942	0.023879	-2.468	0.0147
#ARSQC	1	-0.00439447	0.004146496	-1.060	0.2910
#ARDL	1	0.022613	0.010966	2.062	0.0410

SAMPLE 2

Table A5-8

TOTAL SAMPLE

Human Capital Model

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	8	138.624	17.328025	295.604	0.0001
ERROR	1885	110.497	0.058619		
C TOTAL	1893	249.121			
ROOT MSE		0.242114	R-SQUARE	0.5565	
DEP MEAN		10.342667	ADJ R-SQ	0.5546	
C.V.		2.340923			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.887912	0.021190	466.637	0.0001
SEX	1	-0.244689	0.013365	-18.309	0.0001
EDTS2	1	0.131139	0.013283	9.873	0.0001
EDCS2	1	0.234686	0.019202	12.222	0.0001
EDPS2	1	0.456998	0.018389	24.851	0.0001
FYSERV	1	0.002225607	0.0002488162	8.945	0.0001
FYSERV2	1	-.0000032546	6.08913E-07	-5.345	0.0001
FTLFEX	1	0.001617767	0.0002457611	6.583	0.0001
FTLFEX2	1	-.0000026448	5.15377E-07	-5.132	0.0001

SAMPLE 2

Table A5-9

TOTAL SAMPLE

Full Regression

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	36	156.477	4.346572	87.124	0.0001
ERROR	1857	92.644659	0.049889		
C TOTAL	1893	249.121			
RJOT MSE		0.223359	R-SQUARE	0.6281	
DEP MEAN		10.342667	ADJ R-SQ	0.6209	
C.V.		2.159592			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.504008	0.123697	76.833	0.0001
SEX	1	-0.158997	0.023891	-6.655	0.0001
AGE	1	0.022070	0.006578144	3.355	0.0008
AGE2	1	-0.000241805	0.0003824259	-2.934	0.0034
EDTS2	1	0.113045	0.012713	8.892	0.0001
EDCS2	1	0.136105	0.023110	5.890	0.0001
EDPS2	1	0.278493	0.027483	10.133	0.0001
ACON2	1	-0.036741	0.041425	-0.887	0.3752
ACON3	1	0.057429	0.040695	1.411	0.1584
ACON4	1	-0.00425376	0.040394	-0.105	0.9161
FYSERVC	1	0.002145631	0.0002366848	9.065	0.0001
FYSERVC2	1	-0.000034697	5.71376E-07	-6.073	0.0001
FTLFEX	1	0.0005208802	0.000296623	1.756	0.0792
FTLFEX2	1	-8.86915E-07	6.15020E-07	-1.442	0.1494
DCC1	1	0.229914	0.018923	12.215	0.0001
DCC3	1	0.115552	0.031095	3.716	0.0002
DCC4	1	0.109889	0.049797	2.207	0.0275
DCC5	1	0.085314	0.031904	2.674	0.0076
DCC6	1	-0.124169	0.042844	-2.898	0.0038
DCC7	1	0.054384	0.040287	1.350	0.1772
DCC8	1	0.047927	0.026373	1.817	0.0693
DCC9	1	0.117332	0.018842	6.227	0.0001
DCC10	1	0.013684	0.025814	0.530	0.5961
DCC11	1	0.106827	0.023543	4.538	0.0001
MARITAL	1	-0.00478017	0.014538	-0.329	0.7423
CHILDI	1	0.027422	0.009069668	3.023	0.0025
CHILDI2	1	0.022275	0.006715334	3.317	0.0009
LFAM	1	-0.000304033	0.0002099547	-1.448	0.1478
TOTABFC	1	-0.00074649	0.0002348617	-3.178	0.0015
DSJAP1	1	-0.013553	0.011730	-1.155	0.2481
MWOP	1	0.005213214	0.0010831	4.813	0.0001
CARDT	1	-0.000315404	0.0002633188	-1.198	0.2311
INFORM	1	0.0001124537	0.0004761554	0.236	0.8133
PERCD	1	-0.014898	0.022866	-0.652	0.5148
MJTS1	1	-0.00560177	0.011379	-0.492	0.6226
EARSDC	1	-0.00198139	0.00398565	-0.497	0.6192
EARDL	1	0.00131401	0.005325884	0.247	0.8052

SAMPLE 2

Table A5-10

TOTAL SAMPLE

Personal Regression

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	26	146.276	5.625993	102.131	0.0001
ERROR	1867	102.845	0.055086		
C TOTAL	1893	249.121			
ROOT MSE		0.234704	R-SQUARE	0.5872	
DEP MEAN		10.342667	ADJ R-SQ	0.5814	
C.V.		2.269279			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.502022	0.128328	74.045	0.0001
SEX	1	-0.186028	0.024109	-7.716	0.0001
AGE	1	0.024849	0.006801342	3.654	0.0003
AGE2	1	-0.000286667	0.00008511552	-3.368	0.0008
EDTS2	1	0.114878	0.013214	8.694	0.0001
EDCS2	1	0.173743	0.023621	7.355	0.0001
EDPS2	1	0.330942	0.026921	12.293	0.0001
ACON2	1	-0.00264458	0.042681	-0.062	0.9506
ACON3	1	0.084206	0.041203	2.044	0.0411
ACON4	1	-0.013672	0.041598	-0.329	0.7424
FYSERV	1	0.002145577	0.0002454982	8.740	0.0001
FYSERV2	1	-0.0000030808	5.96236E-07	-5.167	0.0001
FTLFEX	1	0.0007117086	0.0003088715	2.304	0.0213
FTLFEX2	1	-0.0000010646	6.40734E-07	-1.662	0.0968
MARITAL	1	-0.00355487	0.015236	-0.233	0.8155
CHILD1	1	0.022973	0.009513408	2.415	0.0158
CHILD2	1	0.027476	0.007001177	3.924	0.0001
LFAM	1	-0.00029675	0.0002201344	-1.348	0.1778
TOTABFC	1	-0.000893405	0.000245504	-3.639	0.0003
DSJAP1	1	-0.014120	0.012241	-1.154	0.2488
WROP	1	0.007300292	0.001114331	6.551	0.0001
CARDT	1	-0.000181705	0.000275894	-0.659	0.5102
INFORM	1	0.0005783672	0.0004977264	1.162	0.2454
PERCD	1	-0.00933476	0.023982	-0.389	0.6971
MOTS1	1	-0.00747502	0.011917	-0.627	0.5306
EARSDC	1	-0.00405921	0.004168623	-0.974	0.3303
EARDL	1	0.004600707	0.005549593	0.829	0.4072

TOTAL FULL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	35	71.761831	2.050338	50.014	0.0001
ERROR	1319	54.072649	0.040995		
C TOTAL	1354	125.834			
ROOT MSE		0.202473	R-SQUARE	0.5703	
DEP MEAN		10.457437	ADJ R-SQ	0.5589	
C.V.		1.93616			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.389633	0.145700	64.445	0.0001
AGE	1	0.021642	0.007807289	2.772	0.0056
AGE2	1	-0.000206487	0.00009499338	-2.174	0.0299
EDTS2	1	0.116817	0.014009	8.339	0.0001
EDCS2	1	0.153910	0.025149	6.120	0.0001
EDPS2	1	0.298976	0.029948	9.983	0.0001
ACON2	1	-0.035721	0.048461	-0.737	0.4612
ACON3	1	0.052647	0.047953	1.098	0.2725
ACON4	1	0.004409153	0.047121	0.094	0.9255
FYSERV	1	0.001590828	0.0002507474	6.344	0.0001
FYSERV2	1	-0.000023528	5.78139E-07	-4.070	0.0001
FTLFEX	1	0.001062571	0.000330418	3.216	0.0013
FTLFEX2	1	-0.000021507	6.48512E-07	-3.316	0.0009
DCC1	1	0.171074	0.019878	8.606	0.0001
DCC3	1	0.062180	0.030765	2.021	0.0435
DCC4	1	0.036459	0.048939	0.745	0.4564
DCC5	1	-0.038348	0.040194	-0.954	0.3402
DCC6	1	-0.169217	0.040951	-4.132	0.0001
DCC7	1	-0.059030	0.042112	-1.402	0.1612
DCC8	1	0.024553	0.028403	0.864	0.3975
DCC9	1	0.075050	0.018457	4.066	0.0001
DCC10	1	-0.032173	0.027337	-1.177	0.2394
DCC11	1	0.066369	0.022437	2.958	0.0032
MARITAL	1	0.016827	0.018156	0.927	0.3542
CHILD1	1	0.021245	0.009197492	2.310	0.0210
CHILD2	1	0.017067	0.006909126	2.470	0.0136
LFAM	1	-0.000296264	0.000272497	-1.087	0.2771
TOTABFC	1	-0.000583372	0.0002882877	-2.024	0.0432
OSJAP1	1	-0.022260	0.012230	-1.820	0.0690
WWOP	1	0.00555369	0.001065093	5.214	0.0001
CAROT	1	-0.0000202569	0.0002841647	-0.071	0.9432
INFORM	1	0.00002855031	0.0004516137	0.063	0.9496
PERCD	1	-0.085830	0.062724	-1.368	0.1714
MOTS1	1	0.011424	0.012544	0.911	0.3626
EARSDC	1	0.005264033	0.004518824	1.165	0.2443
EARJL	1	0.00828901	0.005809032	1.427	0.1538

TOTAL FULL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	34	26.944089	0.792473	11.878	0.0001
ERROR	504	33.625362	0.066717		
C TOTAL	538	60.569452			
ROOT MSE		0.258296	R-SQUARE	0.4448	
DEP MEAN		10.054144	ADJ R-SQ	0.4074	
C.V.		2.569053			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

OCC11 =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.695833	0.258022	37.578	0.0001
AGE	1	0.020000	0.013390	1.494	0.1359
AGE2	1	-0.000266054	0.0001707825	-1.558	0.1199
EDTS2	1	0.034085	0.029546	1.154	0.2492
EDCS2	1	0.045512	0.051422	0.885	0.3765
EDPS2	1	0.196520	0.065196	3.014	0.0027
ACON2	1	-0.083971	0.082694	-1.015	0.3104
ACON3	1	0.040711	0.079106	0.515	0.6070
ACON4	1	-0.072603	0.079490	-0.913	0.3615
FYSERV	1	0.003785638	0.0006234391	6.072	0.0001
FYSERV2	1	-0.0000078196	0.0000188704	-4.144	0.0001
FTLFEX	1	-0.00125741	0.0007208849	-1.744	0.0817
FTLFEX2	1	0.00000356429	0.00000182631	1.952	0.0515
OCC1	1	0.345572	0.045507	7.594	0.0001
OCC3	1	0.255026	0.114276	2.232	0.0261
OCC4	1	0.346369	0.161817	2.141	0.0328
OCC5	1	0.187674	0.059444	3.157	0.0017
OCC6	1	0.123536	0.191782	0.644	0.5198
OCC7	1	0.282809	0.098882	2.860	0.0044
OCC8	1	0.073434	0.062831	1.169	0.2431
OCC9	1	0.444693	0.152623	2.914	0.0037
OCC10	1	0.107138	0.061771	1.734	0.0835
OCC11	0	0	.	.	.
MARITAL	1	-0.030734	0.025330	-1.213	0.2256
CHILD1	1	0.042776	0.027344	1.564	0.1184
CHILD2	1	0.030667	0.019980	1.535	0.1254
LFAM	1	-0.000202059	0.0003867899	-0.522	0.6016
TOTABFC	1	-0.000968407	0.0004603232	-2.104	0.0359
OSJAP1	1	0.015211	0.028489	0.534	0.5936
WWDOP	1	0.006763304	0.003638341	1.859	0.0636

SAMPLE 2

Table A5-12

TOTAL FULL REGRESSION

Females

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
CARDT	1	-0.000745374	0.0005761167	-1.294	0.1963
INFORM	1	0.00124598	0.001985761	0.627	0.5306
PERCD	1	-0.020358	0.028780	-0.707	0.4797
MDTS1	1	-0.022543	0.023869	-0.944	0.3454
EARSOC	1	-0.00871535	0.007927312	-1.099	0.2721
EARDL	1	-0.013970	0.011430	-1.222	0.2222

SAMPLE 2

Table A5-13

TOTAL PERSONAL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	25	65.231545	2.609262	57.220	0.0001
ERROR	1329	60.602935	0.045600		
C TOTAL	1354	125.834			
ROOT MSE		0.213543	R-SQUARE	0.5184	
DEP MEAN		10.457437	ADJ R-SQ	0.5093	
C.V.		2.042016			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.388485	0.150145	62.529	0.0001
AGE	1	0.020722	0.008032479	2.580	0.0100
AGE2	1	-0.000197955	0.00009755014	-2.029	0.0426
EDTS2	1	0.120191	0.014462	8.311	0.0001
EDCS2	1	0.183342	0.025754	7.119	0.0001
EDPS2	1	0.348882	0.029732	11.734	0.0001
ACON2	1	-0.00405071	0.050403	-0.080	0.9360
ACON3	1	0.068022	0.049403	1.377	0.1688
ACON4	1	0.018569	0.049011	0.379	0.7048
FYSERV	1	0.001674824	0.0002592599	6.460	0.0001
FYSERV2	1	-0.0000022546	6.02404E-07	-3.743	0.0002
FTLFEX	1	0.001259228	0.0003431827	3.669	0.0003
FTLFEX2	1	-0.0000024795	6.75515E-07	-3.671	0.0003
MARITAL	1	0.017085	0.019066	0.896	0.3704
CHILD1	1	0.017698	0.009672113	1.830	0.0675
CHILD2	1	0.022669	0.00723703	3.132	0.0018
LFAM	1	-0.000255582	0.0002868085	-0.891	0.3730
TOTABFC	1	-0.000633058	0.0003025098	-2.093	0.0366
OSJAP1	1	-0.025814	0.012790	-2.018	0.0438
WWOP	1	0.007639391	0.001092586	6.992	0.0001
CARDT	1	0.0001016678	0.0002978069	0.341	0.7329
INFORM	1	0.0004833789	0.0004733134	1.021	0.3073
PERCD	1	-0.130575	0.065622	-1.990	0.0468
MDTS1	1	0.011708	0.013164	0.889	0.3740
EARSOC	1	0.004297345	0.004732809	0.908	0.3640
EARDL	1	0.011445	0.00606991	1.886	0.0596

TOTAL PERSONAL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	25	22.345014	0.893801	11.995	0.0001
ERROR	513	38.224438	0.074512		
C TOTAL	538	60.569452			
ROOT MSE		0.272968	R-SQUARE	0.3689	
DEP MEAN		10.054144	ADJ R-SQ	0.3382	
C.V.		2.714981			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.586029	0.268779	35.665	0.0001
AGE	1	0.030965	0.013962	2.218	0.0270
AGE2	1	-0.000409889	0.0001786005	-2.295	0.0221
EDTS2	1	0.035871	0.031045	1.155	0.2484
EDCS2	1	0.119285	0.052917	2.254	0.0246
EDPS2	1	0.302017	0.063285	4.772	0.0001
ACON2	1	0.0003912744	0.083566	0.005	0.9963
ACON3	1	0.144691	0.079448	1.821	0.0692
ACON4	1	-0.098448	0.081291	-1.211	0.2264
FYSERV	1	0.003886556	0.0006555326	5.929	0.0001
FYSERV2	1	-0.000074449	0.0000196858	-3.782	0.0002
FTLFEX	1	-0.00147107	0.0007432811	-1.979	0.0483
FTLFEX2	1	0.0000043891	0.0000187131	2.345	0.0194
MARITAL	1	-0.025225	0.026625	-0.947	0.3439
CHILD1	1	0.048439	0.028708	1.687	0.0922
CHILD2	1	0.032195	0.020923	1.539	0.1245
LFAM	1	-0.000209662	0.0004036985	-0.519	0.6037
TOTABFC	1	-0.00142463	0.0004813559	-2.960	0.0032
OSJAP1	1	0.026970	0.029948	0.901	0.3682
WWDOP	1	0.007363724	0.003766315	1.955	0.0511
CARJT	1	-0.000764206	0.0006060842	-1.261	0.2079
INFDR4	1	0.0009207347	0.00208498	0.442	0.6590
PERCD	1	-0.00604904	0.030168	-0.201	0.8412
MDTS1	1	-0.033703	0.025003	-1.348	0.1783
EARSOC	1	-0.012194	0.008318698	-1.466	0.1433
EARDL	1	-0.011190	0.011950	-0.936	0.3495

Table A5-15

SAMPLE 3

TOTAL SAMPLE

Human Capital Model

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	8	40.119768	5.014971	41.352	0.0001
ERROR	246	29.833415	0.121274		
C TOTAL	254	69.953183			
ROOT MSE		0.348244	R-SQUARE	0.5735	
DEP MEAN		10.312327	ADJ R-SQ	0.5597	
C.V.		3.37697			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.439535	0.094158	100.252	0.0001
SEX	1	-0.305614	0.055610	-5.496	0.0001
EDTS2	1	0.139947	0.087410	1.601	0.1106
EDCS2	1	0.382402	0.082549	4.632	0.0001
EDPS2	1	0.524316	0.081287	6.450	0.0001
FYSERV	1	0.004912166	0.00107685	4.562	0.0001
FYSERV2	1	-.0000099302	.00000347618	-2.857	0.0046
FTLFEX	1	0.004596291	0.0007715032	5.958	0.0001
FTLFEX2	1	-.0000090894	0.0000017847	-5.093	0.0001

Table A5-16

SAMPLE 3

TOTAL SAMPLE

Full Regression

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	28	46.832147	1.672577	16.349	0.0001
ERRJR	226	23.121035	0.102305		
C TOTAL	254	69.953183			
ROOT MSE		0.319852	R-SQUARE	0.6695	
DEP MEAN		10.312327	ADJ R-SQ	0.6285	
C.V.		3.10165			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	8.153305	0.526072	15.498	0.0001
SEX	1	-0.240978	0.068401	-3.523	0.0005
AGE	1	0.061072	0.029037	2.103	0.0366
AGE2	1	-0.000784385	0.0003833074	-2.046	0.0419
EDTS2	1	0.026021	0.108299	0.240	0.8103
EDCS2	1	0.160759	0.122346	1.314	0.1902
EDPS2	1	0.274813	0.125875	2.183	0.0300
ACON2	1	0.247531	0.145517	1.701	0.0903
ACON3	1	0.230040	0.132404	1.737	0.0337
ACON4	1	0.058842	0.150132	0.392	0.6955
FYSERV	1	0.004611793	0.001055419	4.370	0.0001
FYSERV2	1	-0.000008486	0.0000342746	-2.476	0.0140
FTLFEX	1	0.002297837	0.001158301	1.984	0.0495
FTLFEX2	1	-0.0000041688	0.0000266959	-1.562	0.1198
DCC1	1	0.084187	0.115337	0.730	0.4662
DCC2	1	0.174524	0.119714	1.458	0.1463
MARITAL	1	0.248018	0.052737	4.703	0.0001
CHILD1	1	-0.00766726	0.039713	-0.193	0.8471
CHILD2	1	-0.042126	0.031584	-1.334	0.1836
LFAM	1	0.0001784129	0.0003309704	0.539	0.5904
TOTABFC	1	-0.00151162	0.0009363151	-1.614	0.1078
DSJAP1	1	0.027525	0.047958	0.574	0.5666
WADP	1	0.005098096	0.002194101	2.324	0.0210
CARDT	1	-0.00151079	0.001275515	-1.184	0.2375
INFORM	1	-0.000334419	0.0009899154	-0.338	0.7358
PERCD	1	0.153780	0.115008	1.337	0.1825
MJTS1	1	-0.050323	0.054885	-0.917	0.3602
EARSOC	1	0.000907507	0.006171456	0.147	0.8832
EARDL	1	0.009272162	0.018775	0.494	0.6219

SAMPLE 3

Table A5-17

TOTAL SAMPLE

Personal Regression

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	26	46.436419	1.786016	17.316	0.0001
ERROR	228	23.516764	0.103144		
C TOTAL	254	69.953183			
ROOT MSE		0.321160	R-SQUARE	0.6638	
DEP MEAN		10.312327	ADJ R-SQ	0.6255	
C.V.		3.11433			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	8.289446	0.518064	16.001	0.0001
SEX	1	-0.250097	0.066108	-3.783	0.0002
AGE	1	0.057543	0.028968	1.986	0.0482
AGE2	1	-0.000726956	0.0003820026	-1.903	0.0593
EDTS2	1	0.037807	0.108564	0.348	0.7280
EDCS2	1	0.176541	0.122394	1.442	0.1506
EDPS2	1	0.283126	0.126269	2.242	0.0259
ACON2	1	0.229265	0.145383	1.577	0.1162
ACON3	1	0.179832	0.130450	1.379	0.1694
ACON4	1	-0.015438	0.140017	-0.110	0.9123
FYSERV	1	0.004882996	0.001036444	4.711	0.0001
FYSERV2	1	-0.0000091927	0.0000340768	-2.698	0.0075
FTLFEX	1	0.002544466	0.001152051	2.209	0.0282
FTLFEX2	1	-0.000004749	0.0000264519	-1.795	0.0739
MARITAL	1	0.256422	0.052747	4.861	0.0001
CHILD1	1	-0.00223436	0.039670	-0.056	0.9551
CHILD2	1	-0.041874	0.031696	-1.321	0.1878
LFA4	1	0.0005670844	0.0003263729	0.174	0.8622
TOTABFC	1	-0.00168942	0.0009334656	-1.810	0.0716
OSJAP1	1	0.041323	0.047622	0.868	0.3865
WWDP	1	0.006360587	0.002100915	3.028	0.0027
CARDT	1	-0.00166146	0.00127793	-1.300	0.1949
INFJRM	1	-0.000296665	0.0009937441	-0.299	0.7656
PERCD	1	0.164008	0.114544	1.432	0.1536
MOTS1	1	-0.059312	0.054778	-1.083	0.2801
EARSOC	1	0.001531447	0.006185028	0.248	0.8047
EARDL	1	0.012141	0.018722	0.648	0.5173

TOTAL FULL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	25	27.649544	1.105982	15.568	0.0001
ERROR	165	11.722287	0.071044		
C TOTAL	190	39.371831			
ROOT MSE		0.266541	R-SQUARE	0.7023	
DEP MEAN		10.438420	ADJ R-SQ	0.6572	
C.V.		2.553462			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

OCC2 =+INTERCEP-1*OCC1
PERCD =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	B	8.250170	0.566839	14.555	0.0001
AGE	1	0.082085	0.031234	2.628	0.0094
AGE2	1	-0.000933594	0.0004082152	-2.287	0.0235
EDTS2	1	-0.317924	0.152028	-2.091	0.0380
EDCS2	1	-0.171209	0.160978	-1.064	0.2891
EDPS2	1	-0.082882	0.164753	-0.503	0.6156
ACON2	1	0.269922	0.234568	1.151	0.2515
ACON3	1	0.256400	0.216341	1.185	0.2377
ACON4	1	-0.204643	0.217197	-0.942	0.3475
FYSERV	1	0.003153152	0.001028553	3.066	0.0025
FYSERV2	1	-.0000056865	.00000328461	-1.731	0.0853
FTLFEX	1	0.00323339	0.001220973	2.648	0.0089
FTLFEX2	1	-.0000070817	0.0000027875	-2.541	0.0120
OCC1	B	-0.098101	0.050604	-1.939	0.0543
OCC2	0	0	.	.	.
MARITAL	1	0.171787	0.055202	3.112	0.0022
CHILD1	1	-0.010499	0.036629	-0.287	0.7748
CHILD2	1	-0.075522	0.030692	-2.461	0.0149
LFAM	1	0.012766	0.035318	0.361	0.7182
TOTABFC	1	-0.00121585	0.0008430423	-1.442	0.1511
OSJAP1	1	0.008378295	0.045961	0.182	0.8556
WWOP	1	0.005603548	0.002105009	2.662	0.0085
CARJT	1	0.000407614	0.001241113	0.328	0.7430
INFORM	1	-0.000243844	0.0008462912	-0.288	0.7736
PERCD	0	0	.	.	.
MJTS1	1	-0.031870	0.056828	-0.561	0.5757
EARSOC	1	0.0006803968	0.006716233	0.101	0.9194
EARDL	1	-0.00562974	0.019111	-0.295	0.7687

TOTAL FULL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	27	11.807254	0.437306	2.359	0.0083
ERROR	36	6.674345	0.185398		
C TOTAL	63	18.481599			
ROOT MSE		0.430579	R-SQUARE	0.6389	
DEP MEAN		9.936018	ADJ R-SQ	0.3680	
C.V.		4.333519			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	6.997745	1.595777	4.385	0.0001
AGE	1	0.069894	0.096230	0.726	0.4723
AGE2	1	-0.00109728	0.00138588	-0.792	0.4337
EDTS2	1	0.310859	0.212988	1.460	0.1531
EDCS2	1	0.469969	0.321279	1.463	0.1522
EDPS2	1	0.660633	0.347405	1.902	0.0652
ACON2	1	0.277109	0.292375	0.948	0.3496
ACON3	1	0.278151	0.267408	1.040	0.3052
ACON4	1	0.426325	0.308651	1.381	0.1757
FYSERV	1	0.030408	0.007680511	3.959	0.0003
FYSERV2	1	-0.000156147	0.00004748082	-3.289	0.0023
FTLFEX	1	-0.00623322	0.005403687	-1.154	0.2563
FTLFEX2	1	0.00002659838	0.00001722578	1.544	0.1313
DCC1	1	0.244597	0.212580	1.151	0.2575
DCC2	1	0.239519	0.232766	1.029	0.3103
MARITAL	1	0.153426	0.156317	0.982	0.3329
CHILD1	1	0.022017	0.160166	0.137	0.8914
CHILD2	1	0.087310	0.126000	0.693	0.4928
LFAM	1	0.0005466887	0.000940305	0.581	0.5646
TOTABFC	1	-0.00626392	0.005621644	-1.114	0.2726
DSJAP1	1	-0.065276	0.159483	-0.409	0.6947
WWD	1	0.003404528	0.007062566	0.482	0.6327
CARDT	1	-0.00569913	0.00458082	-1.244	0.2215
INFORM	1	0.002279029	0.014689	0.155	0.8776
PERCD	1	0.035328	0.190713	0.185	0.8541
MDTS1	1	-0.146215	0.147405	-0.992	0.3279
EARSDC	1	0.008499068	0.015489	0.549	0.5866
EARDL	1	0.069181	0.065971	1.049	0.3013

TOTAL PERSONAL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	24	27.382544	1.140939	15.797	0.0001
ERROR	166	11.989288	0.072225		
C TOTAL	190	39.371831			
RJDT MSE		0.268746	R-SQUARE	0.6955	
DEP MEAN		10.438420	ADJ R-SQ	0.6515	
C.V.		2.574589			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

PERCD =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	8.258974	0.571511	14.451	0.0001
AGE	1	0.073615	0.031183	2.361	0.0194
AGE2	1	-0.000818436	0.0004072115	-2.010	0.0461
EDTS2	1	-0.324899	0.153243	-2.120	0.0355
EDCS2	1	-0.170702	0.162309	-1.052	0.2945
EDPS2	1	-0.085121	0.166112	-0.512	0.6090
ACON2	1	0.293446	0.236192	1.242	0.2158
ACON3	1	0.251173	0.218114	1.152	0.2512
ACON4	1	-0.203395	0.218993	-0.929	0.3544
FYSERV	1	0.003542423	0.001017108	3.483	0.0006
FYSERV2	1	-0.0000065486	0.00000328129	-1.996	0.0476
FTLFEX	1	0.003592532	0.001216821	2.952	0.0036
FTLFEX2	1	-0.0000080002	0.00000276966	-2.889	0.0044
MARITAL	1	0.177977	0.055565	3.203	0.0016
CHILD1	1	-0.00401318	0.036777	-0.109	0.9132
CHILD2	1	-0.075888	0.030945	-2.452	0.0152
LFAM	1	0.012623	0.035610	0.354	0.7234
TOTABFC	1	-0.00150057	0.0008370191	-1.793	0.0748
DSJAP1	1	0.021838	0.045809	0.477	0.6342
WNOP	1	0.007024879	0.001989528	3.531	0.0005
CARJT	1	0.0002064531	0.001247	0.166	0.8697
INFORM	1	-0.000249877	0.0008532874	-0.293	0.7700
PERCD	0	0	0	0	0
MOTS1	1	-0.033374	0.057293	-0.583	0.5610
EARSOC	1	0.0005873345	0.006771628	0.087	0.9310
EARDL	1	-0.00123199	0.019133	-0.064	0.9487

TOTAL PERSONAL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	25	11.536583	0.461463	2.525	0.0049
ERROR	38	6.945016	0.182764		
C TOTAL	63	18.481599			
RJOT MSE		0.427509	R-SQUARE	0.6242	
DEP MEAN		9.936018	ADJ R-SQ	0.3770	
C.V.		4.302615			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	7.468477	1.536390	4.861	0.0001
AGE	1	0.054376	0.094625	0.575	0.5689
AGE2	1	-0.000839386	0.001357317	-0.618	0.5400
EDTS2	1	0.301277	0.210226	1.433	0.1600
EDCS2	1	0.434044	0.317594	1.367	0.1798
EDPS2	1	0.645476	0.343456	1.879	0.0679
ACON2	1	0.250628	0.289211	0.867	0.3916
ACON3	1	0.251219	0.255927	0.982	0.3325
ACON4	1	0.246989	0.259289	0.953	0.3468
FYSERV	1	0.029206	0.007518657	3.885	0.0004
FYSERV2	1	-0.000150646	0.00004679535	-3.219	0.0026
FTLFEX	1	-0.0057595	0.005350886	-1.076	0.2886
FTLFEX2	1	0.00002531498	0.00001706993	1.483	0.1463
MARITAL	1	0.184797	0.152857	1.209	0.2341
CHILD1	1	0.029640	0.158296	0.187	0.8525
CHILD2	1	0.084984	0.123412	0.689	0.4952
LFAM	1	0.0003366225	0.0008971588	0.375	0.7096
TOTABFC	1	-0.00591572	0.005570086	-1.062	0.2949
DSJAP1	1	-0.036925	0.155095	-0.238	0.8131
WROP	1	0.004840962	0.006902647	0.701	0.4874
CARDT	1	-0.00644502	0.004506582	-1.430	0.1608
INFDRM	1	0.002476339	0.014386	0.172	0.8642
PERCD	1	0.053368	0.188650	0.283	0.7788
MOTS1	1	-0.185097	0.142526	-1.299	0.2019
EARSOC	1	0.010455	0.014926	0.700	0.4879
EARDL	1	0.071861	0.065101	1.104	0.2766

SAMPLE 1

Table A5-22

TOTAL MARRIED SAMPLE

Human Capital Model

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	8	9.672388	1.209048	35.659	0.0001
ERROR	249	8.442617	0.033906		
TOTAL	257	18.115004			
ROOT MSE		0.184136	R-SQUARE	0.5339	
DEP MEAN		9.927062	ADJ R-SQ	0.5190	
C.V.		1.85489			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.856743	0.085789	114.895	0.0001
SEX	1	-0.155919	0.024459	-6.375	0.0001
EDTS2	1	-0.149527	0.084150	-1.777	0.0768
EDCS2	1	0.048009	0.079577	0.603	0.5469
EDPS2	1	0.498735	0.152302	3.275	0.0012
EYSERV	1	0.002379246	0.0008875339	2.681	0.0078
EYSERV2	1	-0.0000033523	0.0000035105	-0.955	0.3405
ETLFX	1	-0.00118202	0.0004782254	-2.472	0.0141
ETLFX2	1	0.00000614691	0.0000168968	3.638	0.0003

MARRIED FULL REGRESSION

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	40	16.921681	0.423042	76.928	0.0001
ERROR	217	1.193323	0.005499185		
TOTAL	257	18.115004			
ROOT MSE		0.074156	R-SQUARE	0.9341	
DEP MEAN		9.927062	ADJ R-SQ	0.9220	
C.V.		0.7470135			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
INTERCEP	1	8.678035	0.302275	28.709	0.0001
SEX	1	-0.073289	0.024997	-2.932	0.0037
AGE	1	0.059243	0.019153	3.093	0.0022
AGE2	1	-0.000772771	0.0003022849	+2.556	0.0113
EDTS2	1	-0.042528	0.040685	+1.045	0.2971
EDCS2	1	-0.044816	0.038110	+1.176	0.2409
EDPS2	1	0.114862	0.070315	1.634	0.1038
ACCN2	1	0.010631	0.017285	0.615	0.5392
ACCN3	1	0.014859	0.015351	0.968	0.3341
ACCN4	1	-0.147967	0.088509	+1.672	0.0960
EYSERV	1	-0.000374192	0.0004488929	+0.834	0.4054
EYSERV2	1	0.00000196569	0.00000186319	1.055	0.2926
ETLFBX	1	-0.000601385	0.0003569461	-1.685	0.0935
ETLFBX2	1	0.00000393639	0.00000172057	2.288	0.0231
ZCC1	1	0.313591	0.032936	9.521	0.0001
ZCC2	1	0.198465	0.030785	6.447	0.0001
SDN1	1	0.184741	0.029532	6.256	0.0001
SDN2	1	0.084234	0.026110	3.226	0.0014
SDN4	1	-0.011862	0.022662	-0.523	0.6012
EJT1	1	0.063239	0.031547	2.005	0.0462
EJT2	1	0.065871	0.029103	2.263	0.0246
EJT4	1	-0.011710	0.019151	-0.611	0.5415
EJT5	1	0.047702	0.035819	1.332	0.1843
SHILO1	1	-0.00621428	0.010048	+0.613	0.5369
SHILO2	1	-0.013575	0.011677	+1.163	0.2463
KFAH	1	0.0005076461	0.001577851	0.322	0.7480
DLHM	1	0.00006911514	0.0001126859	0.613	0.5403
TOTAFBC	1	-0.000294634	0.001236747	+0.238	0.8119
ZSJAB1	1	-0.00159829	0.013286	+0.120	0.9044
HWOP	1	-0.0001536	0.001177968	-0.130	0.8964
GARDT	1	0.001841182	0.0005890842	3.125	0.0020
INFORM	1	0.009287169	0.003204135	2.898	0.0041
BERCD	1	-0.013685	0.015607	+0.877	0.3815
EDTS1	1	-0.00210343	0.010781	-0.195	0.8455
GARSOC	1	0.004198665	0.002409511	1.743	0.0828
GARDL	1	0.000237167	0.005114601	0.046	0.9631
BMOW	1	0.009756312	0.015671	0.623	0.5342
SPSCAR2	1	-0.00652089	0.008452909	+0.771	0.4413
SPMOB	1	-0.016252	0.014240	+1.141	0.2550

SAMPLE 1

Table A5-23

MARRIED FULL REGRESSION

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
SPSTPRM	1	-0.020059	0.032942	-0.609	0.5432
IMPCARTE	1	0.021946	0.016309	1.346	0.1798

MARRIED PERSONAL REGRESSION

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	31	12.902631	0.416214	18.046	0.0001
ERROR	226	5.212374	0.023064		
TOTAL	257	18.115004			
ROOT MSE		0.151867	R-SQUARE	0.7123	
DEP MEAN		9.927062	ADJ R-SQ	0.6728	
C.V.		1.529829			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
INTERCEP	1	8.413001	0.546078	15.406	0.0001
SEX	1	0.026134	0.049381	0.529	0.5972
AGE	1	0.085180	0.035554	2.396	0.0174
AGE2	1	-0.00120039	0.0005715784	-2.100	0.0368
BDTS2	1	-0.202557	0.079518	-2.547	0.0115
BDCS2	1	-0.097289	0.075600	-1.287	0.1995
BDFS2	1	0.327257	0.134081	2.441	0.0154
ACON2	1	0.001520316	0.034732	0.044	0.9651
ACON3	1	0.133346	0.028425	4.691	0.0001
ACON4	1	-0.256012	0.175484	-1.459	0.1460
EYSERV	1	0.001745709	0.0008336358	2.094	0.0374
EYSERV2	1	-0.0000053103	0.00000320535	-1.657	0.0990
ETLFEX	1	-0.00204159	0.0007096538	-2.877	0.0044
ETLFEX2	1	0.00001018775	0.00000339872	2.998	0.0030
GHIL01	1	-0.024674	0.019596	-1.259	0.2093
GHIL02	1	-0.022198	0.023117	-0.960	0.3380
KFAM	1	-0.00141774	0.003202721	-0.443	0.6584
OLHH	1	-0.000556842	0.0002205496	-2.525	0.0123
TUTAFEC	1	0.001220664	0.002479007	0.492	0.6229
JSJAP1	1	-0.038651	0.026301	-1.470	0.1431
JWDP	1	0.003839873	0.00226897	1.692	0.0920
SAROT	1	0.001685927	0.001152829	1.462	0.1450
INFORM	1	0.030081	0.006146453	4.894	0.0001
BERCO	1	-0.051292	0.031031	-1.653	0.0997
YOTS1	1	-0.026344	0.021543	-1.223	0.2227
SARSDC	1	0.00427036	0.004862629	0.878	0.3808
SARDL	1	0.014517	0.010334	1.405	0.1614
MGCV	1	-0.059628	0.031262	-1.907	0.0577
SPSCAR2	1	-0.031001	0.017058	-1.817	0.0705
SPMOB	1	-0.029209	0.028302	-1.032	0.3032
SPSTRPRM	1	-0.016559	0.066450	-0.249	0.8035
IMPCARTF	1	0.068354	0.032681	2.092	0.0376

MARRIED FULL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	38	11.062169	0.291110	60.980	0.0001
ERROR	109	0.520347	0.004773826		
TOTAL	147	11.582515			
ROOT MSE		0.069093	R-SQUARE	0.9551	
DEP MEAN		10.033217	ADJ R-SQ	0.9394	
C.V.		0.6886413			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR 8 MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

BERCO =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
INTERCEP	1	8.725485	0.394715	22.106	0.0001
AGE	1	0.058943	0.024501	2.406	0.0178
AGE2	1	-0.000764596	0.0003700075	-2.066	0.0412
EDTS2	1	-0.062253	0.050990	-1.221	0.2248
EDCS2	1	-0.048454	0.042368	-1.144	0.2553
EDPS2	1	0.035323	0.072475	0.487	0.6270
ACOM2	1	-0.024762	0.026681	-0.928	0.3554
ACOM3	1	-0.014185	0.021748	-0.652	0.5156
ACOM4	1	-0.144839	0.092846	-1.560	0.1217
EYSERV	1	0.0003516153	0.000592671	0.593	0.5542
EYSERV2	1	-0.0000015977	0.0000224357	-0.712	0.4779
ETLFBX	1	-0.000145012	0.0005073602	-0.286	0.7756
ETLFBX2	1	0.000002482	0.0000211443	1.174	0.2430
ACC1	1	0.421719	0.041522	10.156	0.0001
ACC2	1	0.307653	0.039095	7.869	0.0001
SDN1	1	0.153303	0.034036	4.504	0.0001
SDN2	1	0.070904	0.031676	2.238	0.0272
SDN4	1	0.0009025625	0.030565	0.030	0.9765
EJT1	1	-0.00396802	0.039536	-0.100	0.9202
EJT2	1	-0.00810244	0.036801	-0.220	0.8262
EJT4	1	-0.051150	0.031316	-1.633	0.1053
EJT5	1	0.050023	0.042822	1.168	0.2453
CHIED1	1	-0.016955	0.012854	-1.319	0.1899
CHIED2	1	-0.017934	0.015604	-1.149	0.2529
KFAM	1	-0.011123	0.012286	-0.906	0.3671
QLHH	1	0.0001291397	0.0001809709	0.714	0.4770
SDTABFC	1	-0.000555786	0.001270363	-0.438	0.6626
SSJAP1	1	-0.030566	0.016314	-1.874	0.0637
WOP	1	0.002052296	0.001438574	1.379	0.1708
BARBY	1	0.0002697679	0.0008102397	0.333	0.7398

SAMPLE 1

Table A5-25

MARRIED FULL REGRESSION

Males

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
INFORM	1	0.010303	0.003797179	2.712	0.0078
BERCO	0				
HQTS1	1	-0.00616531	0.013652	-0.452	0.6525
BARSDC	1	0.0001820856	0.004951887	0.037	0.9707
BARDE	1	-0.00428729	0.007008838	-0.612	0.5420
PMOV	1	0.005643375	0.035581	0.159	0.8743
SPSCAR2	1	-0.014136	0.010230	-1.382	0.1699
SPMOD	1	-0.000154238	0.015534	-0.010	0.9921
SPSTRPRM	1	-0.047074	0.037727	-1.248	0.2148
IMPCARF	1	0.031213	0.028512	1.095	0.2760

MARRIED FULL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	36	2.363897	0.065664	18.660	0.0001
ERROR	73	0.256882	0.003518933		
TOTAL	109	2.620779			
ROOT MSE		0.059321	R-SQUARE	0.9020	
DEP MEAN		9.784236	ADJ R-SQ	0.8536	
C.V.		0.6062875			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR 8 MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

BDPS2 =
ACON4 =
EJT5 =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	7.491469	0.650087	11.524	0.0001
AGE	1	0.132573	0.043139	3.073	0.0030
AGE2	1	-0.00207828	0.0007111172	-2.923	0.0046
BDTS2	1	-0.00849754	0.064769	-0.131	0.8960
BDCS2	1	0.005051196	0.064542	0.078	0.9378
BDPS2	0	0	.	.	.
ACON2	1	0.007357047	0.021838	0.337	0.7372
ACON3	1	0.020252	0.019278	1.050	0.2970
ACON4	0	0	.	.	.
EYSERVC	1	0.001118824	0.00101761	1.099	0.2752
EYSERVC2	1	-0.0000061816	0.0000726751	-0.851	0.3978
ETLEEX	1	0.0000984543	0.0007254854	0.134	0.8909
ETLEEX2	1	-4.99121E-07	0.00000451352	-0.111	0.9123
BCC1	1	0.082975	0.094015	1.536	0.1288
JCC2	1	0.015344	0.049046	0.313	0.7553
SDN1	1	0.314032	0.063117	4.975	0.0001
SDN2	1	0.097275	0.046044	2.113	0.0381
SDN4	1	0.016283	0.033891	0.480	0.6323
EJT1	1	0.156363	0.060171	2.599	0.0113
EJT2	1	0.149681	0.058138	2.575	0.0121
EJT4	1	-0.00457827	0.021482	-0.213	0.8318
EJT5	0	0	.	.	.
BHIK01	1	-0.022737	0.017379	-1.308	0.1949
BHIL02	1	-0.00457893	0.017951	-0.255	0.7994
LFAM	1	-0.00272637	0.003889125	-0.701	0.4855
DLHH	1	-0.0000477689	0.0001439728	-0.332	0.7410
BDTABFC	1	0.003656192	0.003891086	0.940	0.3505
BSJAP1	1	0.043952	0.019232	2.295	0.0252

SAMPLE 1

Table A5-26

MARRIED FULL REGRESSION

Females

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
#WDP	1	-0.00126807	0.001728995	-0.733	0.4657
#AROT	1	0.002776496	0.0008227163	3.375	0.0012
#NFORM	1	-0.00128137	0.005645063	-0.227	0.8211
#ERCD	1	-0.024023	0.014476	-1.659	0.1014
#QTS1	1	-0.016097	0.018437	-0.873	0.3855
#ARSOC	1	0.001694468	0.002587808	0.655	0.5147
#ARDK	1	0.011183	0.007418531	1.507	0.1361
#MDW	1	0.00120325	0.015796	0.076	0.9395
#PSCAR2	1	0.002403436	0.013218	0.182	0.8562
#PHOB	1	-0.00993388	0.039185	-0.254	0.8006
#PSTRPRM	1	0.148076	0.077816	1.903	0.0610
#MPCARTF	1	0.022463	0.018279	1.229	0.2230

MARRIED PERSONAL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	29	8.432339	0.290770	10.892	0.0001
ERROR	118	3.150175	0.026696		
TOTAL	147	11.582515			
ROOT MSE		0.163390	R-SQUARE	0.7280	
DEP MEAN		10.033217	ADJ R-SQ	0.6612	
C.V.		1.628494			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

BERCD =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	8.036927	0.821333	9.785	0.0001
AGE	1	0.108873	0.052007	2.093	0.0385
AGE2	1	-0.00150134	0.0007985644	-1.880	0.0626
BDS2	1	-0.366219	0.107279	-3.414	0.0009
BDCS2	1	-0.152138	0.093902	-1.620	0.1079
BDCS2	1	0.211154	0.155648	1.357	0.1775
ACGN2	1	-0.017707	0.099995	-0.295	0.7684
ACGN3	1	0.134454	0.046089	2.917	0.0042
ACGN4	1	-0.318660	0.202682	-1.572	0.1186
EYSERV	1	0.001594105	0.001267309	1.258	0.2109
EYSERV2	1	-0.0000068818	0.00000445128	-1.546	0.1248
ETLFEX	1	-0.00182733	0.001144638	-1.596	0.1131
ETLFEX2	1	0.00001009404	0.00000477144	2.116	0.0365
GHILO1	1	-0.035119	0.028169	-1.247	0.2150
GHILO2	1	-0.026737	0.034615	-0.772	0.4414
BFAM	1	0.003738612	0.028236	0.132	0.8949
DLHM	1	-0.00069799	0.0004023832	-1.735	0.0854
QOTABFC	1	-0.000712974	0.002835888	-0.246	0.8060
QJAP1	1	-0.070967	0.036638	-1.937	0.0551
WOP	1	0.003998099	0.003162227	1.264	0.2086
GARDJ	1	0.0000800448	0.001852493	0.043	0.9656
INFORM	1	0.032372	0.007990751	4.051	0.0001
BERCD	0	0			
QTSJ	1	-0.014622	0.030879	-0.474	0.6367
BARSDC	1	0.026695	0.010811	2.469	0.0150
GARDK	1	-0.000370427	0.015873	-0.023	0.9814
UMOV	1	-0.129099	0.079351	-1.627	0.1064
SPSCAR2	1	-0.038189	0.023344	-1.636	0.1045
SPMOB	1	-0.00663402	0.034866	-0.190	0.8494
SPSTRPM	1	-0.122232	0.085348	-1.432	0.1547

SAMPLE 1

Table A5-27

MARRIED PERSONAL REGRESSION

Males

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HQ: PARAMETER=0	PROB > T
IMPCARTF	1	0.011590	0.065216	0.178	0.8592

MARRIED PERSONAL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	28	1.535263	0.054831	4.091	0.0001
ERROR	81	1.085516	0.013401		
TOTAL	109	2.620779			
ROOT MSE		0.115765	R-SQUARE	0.5858	
DEP MEAN		9.784236	ADJ R-SQ	0.4426	
C.V.		1.183174			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR 8 MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

BDPS2 =
ACON4 =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	7.851503	1.049499	7.481	0.0001
AGE	1	0.124325	0.070507	1.763	0.0816
AGE2	1	-0.00205415	0.001176855	-1.745	0.0847
BDTS2	1	-0.051509	0.125536	-0.410	0.6827
BDCS2	1	-0.00387962	0.125327	-0.031	0.9754
BDPS2	0	0			
ACON2	1	-0.000628097	0.040245	-0.016	0.9876
ACON3	1	0.112983	0.033440	3.379	0.0011
ACON4	0	0			
EYSERV	1	0.0004932925	0.001771111	0.279	0.7813
EYSERV2	1	0.00000577072	0.0001283536	0.450	0.6542
ETLFEX	1	-0.000183945	0.001238467	-0.149	0.8823
ETLFEX2	1	-0.000001307	0.000007801	-0.168	0.8674
BHILD1	1	-0.068429	0.031814	-2.151	0.0345
BHILD2	1	0.011466	0.033311	0.344	0.7317
KFAM	1	0.0004304482	0.006955104	0.062	0.9508
DLHM	1	-0.000197975	0.0002764806	-0.716	0.4760
TOTABFC	1	0.002143612	0.006890796	0.311	0.7565
SSJAB1	1	0.001080479	0.035380	0.031	0.9757
WDR	1	0.002562965	0.003091783	0.829	0.4096
BARDT	1	0.00275347	0.001415191	1.946	0.0552
INFORM	1	0.020100	0.010405	1.932	0.0569
BERCO	1	-0.052618	0.025959	-2.027	0.0460
BDTS3	1	-0.065185	0.031228	-2.087	0.0400
BARSUC	1	-0.00342789	0.004693819	-0.730	0.4673
BARDL	1	0.034776	0.012556	2.770	0.0070
BMOV	1	-0.043079	0.029081	-1.481	0.1424
SPSCAR2	1	-0.00710063	0.023971	-0.296	0.7678
SPMOB	1	-0.023933	0.071241	-0.336	0.7378

SAMPLE 1

Table A5-28

MARRIED PERSONAL REGRESSION

Females

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
BPSTRPM	1	0.183044	0.145410	1.259	0.2117
BMPCARTF	1	0.041694	0.033562	1.242	0.2177

SAMPLE 2

Table A5-29

TOTAL MARRIED SAMPLE

Human Capital Model

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	8	107.714	13.464259	229.592	0.0001
ERROR	1498	87.849232	0.058644		
C TOTAL	1506	195.563			
ROOT MSE		0.242166	R-SQUARE	0.5508	
DEP MEAN		10.376451	ADJ R-SQ	0.5484	
C.V.		2.333803			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.909774	0.024989	396.560	0.0001
SEX	1	-0.261479	0.016158	-16.182	0.0001
EDTS2	1	0.139001	0.014887	9.337	0.0001
EDCS2	1	0.226191	0.022095	10.237	0.0001
EDPS2	1	0.474251	0.020321	23.338	0.0001
FYSERV	1	0.00229323	0.0002767421	8.287	0.0001
FYSERV2	1	-.0000032815	6.71294E-07	-4.888	0.0001
FTLFEX	1	0.00138353	0.0002789571	4.960	0.0001
FTLFEX2	1	-.0000023312	5.71195E-07	-4.081	0.0001

MARRIED FULL REGRESSION

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	41	121.791	2.970524	58.990	0.0001
ERROR	1465	73.771822	0.050356		
C TOTAL	1506	195.563			
ROOT MSE		0.224402	R-SQUARE	0.6228	
DEP MEAN		10.376451	ADJ R-SQ	0.6122	
C.V.		2.162607			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.570120	0.148530	64.432	0.0001
SEX	1	-0.119652	0.031310	-3.821	0.0001
AGE	1	0.018873	0.007542088	2.502	0.0124
AGE2	1	-0.000207028	0.00009357159	-2.213	0.0271
EDTS2	1	0.112933	0.014456	7.812	0.0001
EDCS2	1	0.110599	0.027151	4.073	0.0001
EDPS2	1	0.270002	0.031905	8.463	0.0001
ACON2	1	0.010157	0.052689	0.193	0.8472
ACON3	1	0.090279	0.051184	1.764	0.0780
ACON4	1	0.014245	0.052285	0.272	0.7853
FYSERV	1	0.002191509	0.0002668708	8.212	0.0001
FYSERV2	1	-0.0000035239	6.37790E-07	-5.525	0.0001
FTLFEX	1	0.0003664696	0.0003336403	1.098	0.2722
FTLFEX2	1	-6.35799E-07	6.83150E-07	-0.931	0.3522
DCC1	1	0.211675	0.021454	9.866	0.0001
DCC3	1	0.122523	0.035023	3.498	0.0005
DCC4	1	0.169239	0.059622	2.839	0.0046
DCC5	1	0.111424	0.040711	2.737	0.0063
DCC6	1	-0.122509	0.046778	-2.619	0.0089
DCC7	1	0.003276274	0.046488	0.070	0.9438
DCC8	1	0.046385	0.029955	1.549	0.1217
DCC9	1	0.086503	0.021022	4.115	0.0001
DCC10	1	0.017902	0.028742	0.623	0.5335
DCC11	1	0.087112	0.024890	3.500	0.0005
CHILD1	1	0.024551	0.009668254	2.539	0.0112
CHILD2	1	0.026348	0.007382359	3.569	0.0004
LFAM	1	-0.000369038	0.0003105654	-1.188	0.2349
DLHM	1	-0.00030284	0.0001269811	-2.385	0.0172
TOTABFC	1	-0.000660892	0.0002851832	-2.317	0.0206
DSJAP1	1	-0.018698	0.013197	-1.417	0.1568
WWDOP	1	0.004780751	0.001208997	3.954	0.0001
CARDT	1	-0.000441554	0.0003017222	-1.463	0.1436
INFORM	1	0.0003019057	0.0005264842	0.573	0.5664
PERCD	1	-0.033141	0.028748	-1.153	0.2492
MJTS1	1	-0.00846061	0.012876	-0.657	0.5112
EARSOC	1	-0.00293481	0.004593371	-0.639	0.5230
EARDL	1	0.001298023	0.00602841	0.215	0.8295
UMDV	1	0.00371789	0.014071	0.264	0.7916
SPSCAR2	1	-0.012048	0.009745276	-1.236	0.2165

MARRIED FULL REGRESSION

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PRJB > T
SPMOB	1	0.023858	0.014380	1.659	0.0973
SPSTRPRM	1	-0.028973	0.045949	-0.631	0.5284
IMPCARTF	1	0.034699	0.019465	1.783	0.0749

SAMPLE 2

Table A5-31

MARRIED PERSONAL REGRESSION

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	31	114.997	3.709584	67.915	0.0001
ERROR	1475	80.566188	0.054621		
C TOTAL	1506	195.563			
ROOT MSE		0.233712	R-SQUARE	0.5880	
DEP MEAN		10.376451	ADJ R-SQ	0.5794	
C.V.		2.252328			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PRJB > T
INTERCEP	1	9.538847	0.152648	62.489	0.0001
SEX	1	-0.135513	0.032025	-4.231	0.0001
AGE	1	0.021366	0.007716952	2.769	0.0057
AGE2	1	-0.000248843	0.00009560396	-2.603	0.0093
EDTS2	1	0.118028	0.014807	7.971	0.0001
EDCS2	1	0.148427	0.027458	5.406	0.0001
EDPS2	1	0.328656	0.031049	10.585	0.0001
ACON2	1	0.035819	0.053858	0.665	0.5061
ACON3	1	0.127573	0.051947	2.456	0.0142
ACON4	1	0.003589915	0.053377	0.067	0.9464
FYSERV	1	0.002204842	0.0002728281	8.081	0.0001
FYSERV2	1	-0.0000030908	6.55813E-07	-4.713	0.0001
FTLFEX	1	0.0005557152	0.0003436404	1.617	0.1061
FTLFEX2	1	-9.09864E-07	7.04112E-07	-1.292	0.1965
CHILD1	1	0.018485	0.010035	1.842	0.0657
CHILD2	1	0.029184	0.007637868	3.821	0.0001
LFAM	1	-0.000394263	0.0003226553	-1.222	0.2219
DLHM	1	-0.000301666	0.0001319316	-2.287	0.0224
TOTABFC	1	-0.000729158	0.000296236	-2.461	0.0140
DSJAP1	1	-0.020992	0.013662	-1.536	0.1246
WWOP	1	0.006935882	0.001226415	5.655	0.0001
CARDT	1	-0.000359243	0.0003132078	-1.147	0.2516
INFORM	1	0.0006270857	0.0005456736	1.149	0.2507
PERCD	1	-0.030094	0.029870	-1.007	0.3139
MOTS1	1	-0.00987926	0.013352	-0.740	0.4595
EARSOC	1	-0.00370399	0.004758837	-0.778	0.4365
EARDL	1	0.003973156	0.006233102	0.637	0.5239
UMOV	1	0.001050464	0.014616	0.072	0.9427
SPSCAR2	1	-0.00559772	0.010066	-0.556	0.5782
SPMOB	1	0.027433	0.014895	1.842	0.0657
SPSTRPRM	1	-0.00681106	0.047683	-0.143	0.8864
IMPCARTF	1	0.045762	0.020163	2.270	0.0234

SAMPLE 2

Table A5-32

MARRIED FULL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	40	57.567366	1.439184	39.097	0.0001
ERRJR	1121	41.264184	0.036810		
C TOTAL	1161	98.831550			
ROOT MSE		0.191860	R-SQUARE	0.5825	
DEP MEAN		10.474715	ADJ R-SQ	0.5676	
C.V.		1.831646			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.467149	0.159003	59.541	0.0001
AGE	1	0.021263	0.008091737	2.628	0.0087
AGE2	1	-0.000200096	0.00009747962	-2.053	0.0403
EDTS2	1	0.122675	0.014393	8.523	0.0001
EDCS2	1	0.132868	0.026581	4.999	0.0001
EDPS2	1	0.282252	0.031682	8.909	0.0001
ACON2	1	-0.012739	0.056659	-0.225	0.8221
ACON3	1	0.068504	0.056081	1.222	0.2221
ACON4	1	-0.00195603	0.055473	-0.035	0.9719
FYSERV	1	0.001401925	0.000258265	5.428	0.0001
FYSERV2	1	-0.0000019712	5.91863E-07	-3.331	0.0009
FTLFEX	1	0.0006737696	0.0003365432	2.002	0.0455
FTLFEX2	1	-0.0000014765	6.59083E-07	-2.240	0.0253
OCC1	1	0.167263	0.020448	8.180	0.0001
OCC3	1	0.065801	0.032053	2.053	0.0403
OCC4	1	0.080143	0.054709	1.465	0.1432
OCC5	1	0.005417263	0.046113	0.117	0.9065
OCC6	1	-0.169101	0.042423	-3.986	0.0001
OCC7	1	-0.063301	0.042565	-1.487	0.1373
OCC8	1	0.026526	0.029273	0.906	0.3650
OCC9	1	0.049171	0.019168	2.565	0.0104
OCC10	1	-0.0075867	0.027382	-0.277	0.7818
OCC11	1	0.060000	0.022133	2.711	0.0068
CHILD1	1	0.018536	0.009007966	2.058	0.0399
CHILD2	1	0.023271	0.007028933	3.311	0.0010
LFAM	1	-0.00126094	0.001056721	-1.193	0.2330
DLHH	1	-0.000223173	0.0001311283	-1.702	0.0890
TJTABFC	1	-0.000486807	0.0002949691	-1.650	0.0991
OSJAP1	1	-0.022788	0.012544	-1.817	0.0695
WHOP	1	0.005348841	0.001075381	4.974	0.0001
CARDT	1	-0.000141522	0.0002953199	-0.479	0.6319
INFDR4	1	0.0003316684	0.0004682259	0.708	0.4789
PERCD	1	-0.085350	0.059862	-1.426	0.1542
MDTS1	1	0.009210636	0.012908	0.714	0.4757
EARSOC	1	0.002782637	0.004579424	0.608	0.5435
EARDL	1	0.00989695	0.006006595	1.648	0.0997
UMOV	1	-0.00188961	0.014467	-0.131	0.8961
SPSCAR2	1	-0.020009	0.009575659	-2.090	0.0369
SPMJB	1	0.031068	0.013979	2.222	0.0265

SAMPLE 2

Table A5-32

MARRIED FULL REGRESSION

Males

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
SPSTRPRM	1	-0.041560	0.040974	-1.014	0.3107
IMPCARTF	1	0.039130	0.024700	1.584	0.1134

MARRIED FULL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	39	20.357008	0.521975	5.818	0.0001
ERROR	305	27.363436	0.089716		
C TOTAL	344	47.720444			
ROOT MSE		0.299527	R-SQUARE	0.4266	
DEP MEAN		10.045483	ADJ R-SQ	0.3533	
C.V.		2.981704			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

DCC11 =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.703820	0.398317	24.362	0.0001
AGE	1	0.023783	0.020387	1.167	0.2443
AGE2	1	-0.000348327	0.0002605314	-1.337	0.1822
EDTS2	1	0.025591	0.043865	0.583	0.5601
EDCS2	1	-0.020384	0.081793	-0.249	0.8034
EDPS2	1	0.158923	0.104654	1.519	0.1299
ACON2	1	0.022979	0.140008	0.164	0.8697
ACON3	1	0.063831	0.125550	0.508	0.6115
ACON4	1	-0.035962	0.137911	-0.261	0.7945
FYSERV	1	0.006069819	0.0009920486	6.118	0.0001
FYSERV2	1	-0.0000145569	0.00000318078	-4.577	0.0001
FTLFEX	1	-0.00216722	0.001089474	-1.989	0.0476
FTLFEX2	1	0.00000617361	0.00000278527	2.217	0.0274
DCC1	1	0.368063	0.071921	5.118	0.0001
DCC3	1	0.360306	0.158501	2.273	0.0237
DCC4	1	0.588851	0.237060	2.484	0.0135
DCC5	1	0.257598	0.103002	2.501	0.0129
DCC6	1	0.156382	0.230423	0.679	0.4979
DCC7	1	0.292925	0.198382	1.477	0.1408
DCC8	1	0.101389	0.098710	1.027	0.3052
DCC9	1	0.443042	0.183734	2.411	0.0165
DCC10	1	0.101058	0.093865	1.077	0.2825
DCC11	0	0	0	0	0
CHILD1	1	0.051257	0.037588	1.360	0.1748
CHILD2	1	0.040609	0.027702	1.466	0.1437
LFAM	1	-0.000331321	0.0004868959	-0.680	0.4967
DLHM	1	-0.000392391	0.0003256073	-1.205	0.2291
TOTABFC	1	-0.00132352	0.000815189	-1.624	0.1055
OSJAP1	1	0.012213	0.042391	0.288	0.7735
WMDP	1	0.00725371	0.007364101	0.985	0.3254

SAMPLE 2

Table A5-33

MARRIED FULL REGRESSION

Females

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PRJB > T
CARDT	1	-0.00111457	0.000880619	-1.266	0.2066
INFORM	1	0.001734698	0.002838718	0.611	0.5416
PERCD	1	-0.052161	0.043979	-1.186	0.2365
MJTS1	1	-0.027827	0.034913	-0.797	0.4261
EARSOC	1	-0.016031	0.012792	-1.253	0.2111
EAKDL	1	-0.022076	0.016880	-1.308	0.1919
UMOV	1	0.054419	0.036857	1.476	0.1408
SPSCAR2	1	-0.00220918	0.027956	-0.079	0.9371
SPMJB	1	-0.011573	0.043068	-0.269	0.7883
SPSTRPRM	1	0.206843	0.227176	0.910	0.3633
IMPCARTF	1	0.024563	0.038819	0.633	0.5274

MARRIED PERSONAL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	30	52.867563	1.762252	43.362	0.0001
ERROR	1131	45.963987	0.040640		
C TOTAL	1161	98.831550			

ROOT MSE	0.201594	R-SQUARE	0.5349
DEP MEAN	10.474715	ADJ R-SQ	0.5226
C.V.	1.924577		

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.420594	0.163373	57.663	0.0001
AGE	1	0.021525	0.008275577	2.601	0.0094
AGE2	1	-0.000209641	0.00009952682	-2.106	0.0354
EDTS2	1	0.132166	0.014747	8.962	0.0001
EDCS2	1	0.164846	0.027098	6.083	0.0001
EDPS2	1	0.336174	0.031672	10.614	0.0001
ACON2	1	0.024867	0.058810	0.423	0.6725
ACON3	1	0.100031	0.058102	1.722	0.0854
ACON4	1	0.012712	0.057728	0.220	0.8257
FYSERV	1	0.001540641	0.0002647039	5.820	0.0001
FYSERV2	1	-0.0000018722	6.11478E-07	-3.062	0.0023
FTLFEX	1	0.0008384876	0.0003474984	2.413	0.0160
FTLFEX2	1	-0.0000017858	6.82483E-07	-2.617	0.0090
CHILD1	1	0.012857	0.009422163	1.365	0.1727
CHILD2	1	0.026548	0.007334446	3.620	0.0003
LFAM	1	-0.00150355	0.001107301	-1.358	0.1748
DLMH	1	-0.000201949	0.0001373129	-1.471	0.1416
TOTABFC	1	-0.000510578	0.0003091247	-1.652	0.0989
OSJAP1	1	-0.027294	0.013084	-2.086	0.0372
WOP	1	0.007454472	0.001093716	6.816	0.0001
CARDT	1	-0.000140962	0.0003083214	-0.457	0.6476
INFJRM	1	0.0006771512	0.0004891176	1.384	0.1665
PERCD	1	-0.120379	0.062315	-1.932	0.0536
MOTS1	1	0.008297611	0.013474	0.616	0.5381
EARSOC	1	0.001880486	0.004774142	0.394	0.6937
EARDL	1	0.012971	0.006260718	2.072	0.0385
UMOV	1	-0.00335882	0.015157	-0.222	0.8247
SPSCAR2	1	-0.015025	0.009984698	-1.505	0.1327
SPHJB	1	0.034912	0.014595	2.392	0.0169
SPSTRPRM	1	-0.021145	0.042924	-0.493	0.6224
IMPCARTF	1	0.050809	0.025847	1.966	0.0496

MARRIED PERSONAL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	30	17.309128	0.576971	5.957	0.0001
ERROR	314	30.411316	0.096851		
C TOTAL	344	47.720444			
ROOT MSE		0.311209	R-SQUARE	0.3627	
DEP MEAN		10.045483	ADJ R-SQ	0.3018	
C.V.		3.098004			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.671986	0.402492	24.030	0.0001
AGE	1	0.027898	0.020893	1.335	0.1827
AGE2	1	-0.000400908	0.0002681545	-1.495	0.1359
EDTS2	1	0.013243	0.045348	0.292	0.7705
EDCS2	1	0.045409	0.083018	0.547	0.5848
EDPS2	1	0.288609	0.094396	3.057	0.0024
ACON2	1	0.085305	0.134731	0.633	0.5271
ACON3	1	0.213393	0.124452	1.715	0.0874
ACON4	1	-0.078884	0.133247	-0.592	0.5543
FYSERV	1	0.005640499	0.001021254	5.523	0.0001
FYSERV2	1	-0.0000120932	0.0000322476	-3.750	0.0002
FTLFEX	1	-0.00199888	0.001101412	-1.815	0.0705
FTLFEX2	1	0.00000592482	0.00000280175	2.115	0.0352
CHILD1	1	0.055770	0.038803	1.437	0.1516
CHILD2	1	0.045225	0.028475	1.588	0.1132
LFAM	1	-0.0002223	0.0004989545	-0.446	0.6562
DLH1	1	-0.000439977	0.0003347269	-1.314	0.1897
TOTABFC	1	-0.00179987	0.0008301829	-2.168	0.0309
DSJAP1	1	0.026273	0.043760	0.600	0.5487
W4OP	1	0.006186104	0.007625247	0.811	0.4178
CARJT	1	-0.0008764	0.0009009434	-0.973	0.3314
INFJRM	1	0.001397723	0.002932872	0.477	0.6340
PERCD	1	-0.032488	0.045071	-0.721	0.4716
MOTS1	1	-0.034698	0.035712	-0.972	0.3320
EARSOC	1	-0.017666	0.013031	-1.356	0.1762
EARDL	1	-0.018689	0.017269	-1.082	0.2800
UMOV	1	0.045602	0.037814	1.206	0.2287
SPSCAR2	1	0.017282	0.028504	0.606	0.5447
SPHJB	1	0.012425	0.043843	0.283	0.7771
SPSTRPRM	1	0.192016	0.229582	0.836	0.4036
IMPCARTF	1	0.047979	0.039480	1.215	0.2252

SAMPLE 3
TOTAL MARRIED REGRESSION
Human Capital Model

Table A5-36

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR>F
MODEL	8	17.563676	2.195459	39.067	0.0001
ERROR	174	9.778288	0.056197		
C TOTAL	182	27.341964			
ROOT MSE		0.237059	R-SQUARE	0.6424	
DEP MEAN		10.449719	ADJ R-SQ	0.6259	
C.V.		2.26857			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PR> T
INTERCEP	1	9.798217	0.077404	126.586	0.0001
SEX	1	-0.300513	0.046241	-6.499	0.0001
EDTS2	1	0.056402	0.068548	0.823	0.4117
EDCS2	1	0.293134	0.064018	4.579	0.0001
EDPS2	1	0.394423	0.062383	6.323	0.0001
FYSERV	1	0.001592728	0.000831355	1.916	0.0570
FYSERV2	1	-7.30425E-07	.00000256173	-0.285	0.7759
FTLFEX	1	0.004053324	0.0005359387	6.374	0.0001
FTLFEX2	1	-.0000079051	.00000138233	-5.719	0.0001

MARRIED FULL REGRESSION

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	33	20.341028	0.616395	13.119	0.0001
ERRJR	149	7.000936	0.046986		
C TOTAL	182	27.341964			
ROOT MSE		0.216763	R-SQUARE	0.7439	
DEP MEAN		10.449719	ADJ R-SQ	0.6872	
C.V.		2.074342			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.286438	0.474871	19.556	0.0001
SEX	1	-0.078155	0.073790	-1.059	0.2912
AGE	1	0.028829	0.024689	1.168	0.2448
AGE2	1	-0.000363965	0.0003079985	-1.182	0.2392
EDTS2	1	-0.00806798	0.104805	-0.077	0.9367
EDCS2	1	0.109862	0.109520	1.003	0.3174
EDPS2	1	0.223713	0.110362	2.027	0.0444
ACON2	1	0.224580	0.115325	1.952	0.0528
ACON3	1	0.191178	0.097727	1.956	0.0523
ACON4	1	0.058166	0.125880	0.462	0.6447
FYSERV	1	0.001332196	0.0008735755	1.525	0.1294
FYSERV2	1	-4.66424E-07	0.0000276516	-0.169	0.8663
FTLFEX	1	0.002909696	0.00102233	2.846	0.0050
FTLFEX2	1	-0.0000053329	0.0000212558	-2.508	0.0132
DCC1	1	-0.021184	0.109253	-0.194	0.8465
DCC2	1	0.086111	0.115296	0.747	0.4563
CHILD1	1	0.047570	0.029202	1.629	0.1054
CHILD2	1	-0.00522291	0.024971	-0.209	0.8346
LFAM	1	0.0004147943	0.0002559695	0.162	0.8715
DLH1	1	-0.00134525	0.0004145581	-3.245	0.0015
TOTABFC	1	-0.00109281	0.000716238	-1.526	0.1292
OSJAP1	1	-0.000206422	0.040483	-0.005	0.9959
WMDP	1	0.004690318	0.001786845	2.625	0.0096
CARJ1	1	-0.00183917	0.0009735715	-1.889	0.0608
INFORM	1	-0.000472309	0.0007030155	-0.672	0.5027
PERCD	1	-0.035631	0.115499	-0.308	0.7581
MDTS1	1	0.010721	0.048080	0.223	0.8239
EARSOC	1	-0.000448171	0.005157373	-0.087	0.9309
EARDL	1	0.010854	0.016468	0.659	0.5108
UMOV	1	0.070488	0.048786	1.445	0.1506
SPSCAR2	1	-0.054881	0.030895	-1.776	0.0777
SPMDB	1	0.050916	0.040860	1.246	0.2147
SPSTRPRM	1	-0.239628	0.112146	-2.137	0.0343
IMPCARTF	1	0.107805	0.059834	1.802	0.0736

MARRIED PERSONAL REGRESSION

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	31	20.058489	0.647048	13.415	0.0001
ERROR	151	7.283475	0.048235		
C TOTAL	182	27.341964			
ROOT MSE		0.219625	R-SQUARE	0.7336	
DEP MEAN		10.449719	ADJ R-SQ	0.6789	
C.V.		2.101727			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.286669	0.463656	20.029	0.0001
SEX	1	-0.058113	0.072689	-0.799	0.4253
AGE	1	0.027005	0.025001	1.080	0.2818
AGE2	1	-0.000300916	0.0003109399	-0.968	0.3347
EDTS2	1	-0.036921	0.102798	-0.359	0.7200
EDCS2	1	0.101509	0.108288	0.937	0.3500
EDPS2	1	0.200923	0.109393	1.837	0.0682
ACON2	1	0.237055	0.116278	2.039	0.0432
ACON3	1	0.148635	0.097273	1.528	0.1286
ACON4	1	-0.000656563	0.109143	-0.006	0.9952
FYSERV	1	0.001917003	0.0009489394	2.258	0.0254
FYSERV2	1	-0.0000020849	0.00000272062	-0.766	0.4447
FTLFEX	1	0.003045333	0.001031351	2.953	0.0037
FTLFEX2	1	-0.0000060521	0.0000021326	-2.838	0.0052
CHILD1	1	0.049995	0.029524	1.693	0.0925
CHILD2	1	-0.00657404	0.025292	-0.260	0.7953
LFAM	1	-0.000127932	0.0002487335	-0.514	0.6078
DLH4	1	-0.00153201	0.0004128738	-3.711	0.0003
TOTABFC	1	-0.0013546	0.000716935	-1.889	0.0608
DSJAP1	1	0.011699	0.040619	0.288	0.7737
WWOP	1	0.006004498	0.00172124	3.488	0.0006
CARJT	1	-0.00198659	0.0009841676	-2.019	0.0453
INFJRM	1	-0.000430546	0.0007119176	-0.605	0.5462
PERCD	1	-0.063482	0.114480	-0.555	0.5800
MOTS1	1	0.006186726	0.048399	0.128	0.8985
EARSDC	1	0.001315253	0.005173935	0.254	0.7997
EARDL	1	0.015326	0.016537	0.927	0.3555
UNOV	1	0.064606	0.049016	1.318	0.1895
SPSCAR2	1	-0.043724	0.030899	-1.415	0.1591
SPMOB	1	0.050962	0.041378	1.232	0.2200
SPSTRPM	1	-0.216965	0.112879	-1.922	0.0565
IMPCARTF	1	0.090172	0.060179	1.498	0.1361

SAMPLE 3

Table A5-39

MARRIED FULL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	30	10.687223	0.356241	9.132	0.0001
ERROR	111	4.329949	0.039009		
C TOTAL	141	15.017173			
ROOT MSE		0.197506	R-SQUARE	0.7117	
DEP MEAN		10.559801	ADJ R-SQ	0.6337	
C.V.		1.870356			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

DCC2 =+INTERCEP-1*DCC1
PERCD =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	B	9.385185	0.555161	16.905	0.0001
AGE	1	0.039902	0.030410	1.312	0.1922
AGE2	1	-0.000451398	0.0003678809	-1.227	0.2224
EDTS2	1	-0.122669	0.153819	-0.797	0.4269
EDCS2	1	0.023250	0.159328	0.146	0.8842
EDPS2	1	0.117653	0.160825	0.732	0.4660
ACON2	1	0.124485	0.191873	0.649	0.5178
ACON3	1	0.161195	0.169740	0.950	0.3443
ACON4	1	-0.049235	0.179122	-0.275	0.7839
FYSERV	1	0.0008049606	0.0009432005	0.853	0.3953
FYSERV2	1	8.47464E-07	0.0000030717	0.276	0.7831
FTLFEX	1	0.002434214	0.001247977	1.951	0.0536
FTLFEX2	1	-0.000004994	0.0000249885	-1.999	0.0481
DCC1	B	-0.111280	0.046818	-2.377	0.0192
DCC2	0	0	0	0	0
CHILD1	1	0.036146	0.028851	1.253	0.2129
CHILD2	1	-0.014469	0.026028	-0.556	0.5794
LFAM	1	-0.00128625	0.029132	-0.044	0.9649
DLHM	1	-0.00133587	0.0004473271	-2.986	0.0035
TOTABFC	1	-0.000859873	0.0006778662	-1.268	0.2073
OSJAP1	1	-0.013944	0.042273	-0.330	0.7421
WWOP	1	0.005765245	0.001832985	3.145	0.0021
CARDT	1	-0.000948327	0.001014569	-0.935	0.3520
INFORM	1	-0.000498151	0.0006570346	-0.758	0.4499
PERCD	0	0	0	0	0
MJTS1	1	0.010298	0.052881	0.195	0.8459
EARSOC	1	-0.000151006	0.006153144	-0.025	0.9805
EARDL	1	-0.0025736	0.017307	-0.149	0.8821
UNMNV	1	0.059140	0.054527	1.046	0.2977

SAMPLE 3

Table A5-39

MARRIED FULL REGRESSION

Males

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PRJB > III
SPSCAR2	1	-0.063568	0.031186	-2.038	0.0439
SPHDB	1	0.048369	0.042322	1.143	0.2556
SPSTRPRM	1	-0.400957	0.127984	-3.133	0.0022
IMPCARTE	1	0.089722	0.080730	1.111	0.2688

SAMPLE 3

Table A5-40

MARRIED FULL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	32	4.006494	0.125203	1.570	0.2591
ERROR	8	0.637904	0.079738		
C TOTAL	40	4.644398			
ROOT MSE		0.282379	R-SQUARE	0.8627	
DEP MEAN		10.068462	ADJ R-SQ	0.3133	
C.V.		2.804592			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	12.278752	3.067872	4.002	0.0039
AGE	1	-0.220089	0.152357	-1.445	0.1866
AGE2	1	0.003281936	0.002252922	1.457	0.1933
EDTS2	1	0.800915	0.492833	1.625	0.1428
EDCS2	1	0.827754	0.589606	1.404	0.1980
EDPS2	1	0.971328	0.721161	1.347	0.2149
ACON2	1	0.373613	0.327768	1.140	0.2873
ACON3	1	-0.096434	0.287586	-0.335	0.7460
ACON4	1	0.615999	0.439071	1.403	0.1982
FYSERV	1	0.001317558	0.012644	0.104	0.9196
FYSERV2	1	0.00004748444	0.00007856147	0.604	0.5623
FTLFEX	1	0.025934	0.010332	2.510	0.0364
FTLFEX2	1	-0.0000772765	0.00003121367	-2.476	0.0384
OCC1	1	0.423449	0.376161	1.126	0.2929
OCC2	1	0.166014	0.359629	0.462	0.6566
CHILD1	1	-0.00575719	0.232870	-0.025	0.9809
CHILD2	1	0.122777	0.168456	0.729	0.4869
LFAM	1	-0.00227292	0.001605385	-1.416	0.1946
DLH1	1	-0.00631595	0.002709319	-2.331	0.0491
TOTABFC	1	-0.028574	0.015245	-1.874	0.0978
OSJAP1	1	-0.194538	0.235928	-0.825	0.4335
WWOP	1	-0.016927	0.011512	-1.470	0.1797
CARDT	1	-0.010597	0.005685916	-1.864	0.0994
INFJRM	1	-0.017112	0.023666	-0.723	0.4902
PERCD	1	0.195787	0.368128	0.532	0.6093
MOTS1	1	0.079090	0.256289	0.309	0.7655
EARSOC	1	-0.034786	0.021159	-1.644	0.1388
EARDL	1	-0.022592	0.102185	-0.221	0.3326
UMOV	1	-0.102989	0.292890	-0.352	0.7342
SPSCAR2	1	0.398483	0.185515	2.148	0.0640
SPMDB	1	-0.043326	0.232504	-0.186	0.8568
SPSTRPRM	1	0.319394	0.378467	0.844	0.4232
IMPCARTF	1	0.090213	0.200764	0.449	0.6651

MARRIED PERSONAL REGRESSION

Males

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	29	10.466841	0.360926	8.884	0.0001
ERROR	112	4.550332	0.040628		
C TOTAL	141	15.017173			
ROOT MSE		0.201564	R-SQUARE	0.6970	
DEP MEAN		10.559801	ADJ R-SQ	0.6185	
C.V.		1.908784			

NOTE: MODEL IS NOT FULL RANK. LEAST SQUARES SOLUTIONS FOR THE PARAMETERS ARE NOT UNIQUE. SOME STATISTICS WILL BE MISLEADING. A REPORTED DF OF 0 OR B MEANS THAT THE ESTIMATE IS BIASED. THE FOLLOWING PARAMETERS HAVE BEEN SET TO 0, SINCE THE VARIABLES ARE A LINEAR COMBINATION OF OTHER VARIABLES AS SHOWN.

PERCD =

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	9.376569	0.566555	16.550	0.0001
AGE	1	0.033958	0.030929	1.098	0.2746
AGE2	1	-0.000330239	0.0003718179	-0.888	0.3764
EDTS2	1	-0.209165	0.152523	-1.371	0.1730
EDCS2	1	-0.046728	0.159802	-0.292	0.7705
EDPS2	1	0.039451	0.160658	0.246	0.8065
ACON2	1	0.204970	0.192742	1.063	0.2999
ACON3	1	0.183175	0.172970	1.059	0.2919
ACON4	1	-0.100540	0.181470	-0.554	0.5807
FYSERV	1	0.001553903	0.0009072781	1.713	0.0995
FYSERV2	1	-0.0000014618	0.00000297388	-0.492	0.6240
FTLFEX	1	0.00264296	0.00127046	2.080	0.0398
FTLFEX2	1	-0.0000059818	0.00000251467	-2.379	0.0191
CHILD1	1	0.035625	0.029443	1.210	0.2298
CHILD2	1	-0.018406	0.026509	-0.694	0.4889
LFAM	1	-0.00245062	0.029726	-0.082	0.9344
DLHH	1	-0.00157042	0.0004452711	-3.527	0.0006
TJTABFC	1	-0.00120521	0.0006757163	-1.784	0.0772
OSJAP1	1	0.004946564	0.042373	0.117	0.9073
HWOP	1	0.007244052	0.001759592	4.117	0.0001
CARDT	1	-0.00111246	0.001033013	-1.077	0.2838
INFORM	1	-0.000471325	0.0006704352	-0.703	0.4835
PERCD	0	0	0	0	0
MOTS1	1	-0.00606161	0.053509	-0.113	0.9100
EARSOC	1	0.001278401	0.006249503	0.205	0.8383
EARDL	1	0.002783893	0.017512	0.159	0.8740
U4DV	1	0.035942	0.056822	0.633	0.5293
SPSCAR2	1	-0.049339	0.031235	-1.580	0.1170
SPHJB	1	0.056953	0.043034	1.323	0.1884
SPSTRPRM	1	-0.381944	0.130358	-2.930	0.0041

SAMPLE 3

Table A5-42

MARRIED PERSONAL REGRESSION

Females

DEP VARIABLE: LNBTES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	30	3.858489	0.128616	1.637	0.2079
ERRJR	10	0.785909	0.078591		
C TOTAL	40	4.644398			
ROOT MSE		0.280341	R-SQUARE	0.8308	
DEP MEAN		10.068462	ADJ R-SQ	0.3231	
C.V.		2.784345			

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	13.676521	2.803480	4.878	0.0006
AGE	1	-0.242598	0.145214	-1.671	0.1257
AGE2	1	0.003247673	0.002166287	1.499	0.1647
EDTS2	1	0.348180	0.342380	1.017	0.3332
EDCS2	1	0.451109	0.516048	0.874	0.4025
EDPS2	1	0.577328	0.645491	0.894	0.3921
ACON2	1	0.518573	0.306455	1.692	0.1215
ACON3	1	0.089090	0.250444	0.356	0.7294
ACON4	1	0.291368	0.314200	0.927	0.3756
FYSERV1	1	-0.00458365	0.011793	-0.389	0.7057
FYSERV2	1	0.00006524115	0.00007690123	0.848	0.4161
FTLFEX	1	0.022805	0.009944919	2.293	0.0448
FTLFEX2	1	-0.000064065	0.00002941584	-2.178	0.0544
CHILD1	1	0.103004	0.216035	0.477	0.6438
CHILD2	1	0.194609	0.158587	1.227	0.2479
LFAM	1	-0.00112042	0.001338929	-0.837	0.4223
DLH4	1	-0.0043596	0.002256785	-1.932	0.0322
TOTABFC	1	-0.024494	0.014622	-1.675	0.1248
OSJAP1	1	0.014394	0.171711	0.084	0.9348
WWOP	1	-0.013768	0.010963	-1.256	0.2377
CARDT	1	-0.011989	0.005488631	-2.184	0.0538
INFJRM	1	-0.00891612	0.022676	-0.393	0.7024
PERCD	1	0.419543	0.325984	1.287	0.2271
MOTS1	1	-0.128630	0.187947	-0.684	0.5093
EARSDC	1	-0.036521	0.020767	-1.759	0.1092
EARDL	1	-0.035964	0.099039	-0.363	0.7241
UMOV	1	-0.00279973	0.239356	-0.012	0.9909
SPSCAR2	1	0.314053	0.172309	1.823	0.0984
SPMJB	1	-0.035761	0.204912	-0.175	0.8649
SPSTRPRM	1	0.256760	0.364662	0.704	0.4974
IMPCARTF	1	-0.00149514	0.181097	-0.008	0.9936

APPENDIX 6

F-TEST TABLES

TABLE A6-1	GENERAL F-TESTS
TABLE A6-2	TOTAL SAMPLE 1
TABLE A6-3	MARRIED SAMPLE 1
TABLE A6-4	TOTAL SAMPLE 2
TABLE A6-5	MARRIED SAMPLE 2
TABLE A6-6	TOTAL SAMPLE 3
TABLE A6-7	MARRIED SAMPLE 3

The F-Test Tables

There are basically two types of tests included on this table. There are the tests across the regression models--that is, are males and females significantly different? The second type of test is between the models (full and personal) and poses the question: are the excluded variables (the Occupation variable) as a group important, above and beyond the other included variables.

For Sample 1:

The test across the full regression model has an F statistic of 4.06, with numerator degrees of freedom 31 and denominator degrees of freedom 303. Looking at an F table, the critical values are 1.51 (for 5%) and 1.76 (for 1%). Thus we can reject the hypothesis that there are no significant differences between males and females at the 1 percent level.

For the personal regression, the F statistic is 2.76, with numerator degrees of freedom 22 and denominator degrees of freedom 321. The critical values are approximately 1.62 and 1.97. Thus again we reject the hypothesis that males and females are the same.

In looking at the total sample, we can test the hypothesis that there is a significant difference between the full and personal regressions. The F statistic for this test is 104.57, with numerator degrees of freedom 9 and denominator degrees of freedom 334. The critical values at the 5% and 1% are 1.91 and 2.48 respectively. Thus, we clearly reject the hypothesis that the occupational variables are not important in explaining differences in earnings across individuals.

We can also test the same hypothesis for the sub-samples of males and females separately. For males, the F statistic is 76.20, with degrees of freedom 9 and 165. The critical value at the 1% level is 2.53, so again we conclude that the occupational variables are important. For females, the F statistic is 41.45, with degrees of freedom 9 and 138. The critical value is 2.55, thus we reject the hypothesis that occupations are not important.

Table A6-1

GENERAL F-TESTS

<u>Models</u>	<u>Significant at 1% level</u>	<u>Significant at 5% level</u>	<u>Not significant</u>
Sample 1			
TFR: TPR	104.57		
TFR(F): TPR(F)	41.45		
TFR(M): TPR(M)	76.20		
MFR: MPR	81.20		
MFR(F): MPR(F)	61.21		
MFR(M): MPR(M)	29.43		
Sample 2			
TFR: TPR	20.45		
TFR(F): TPR(F)	7.66		
TFR(M): TPR(M)	15.93		
MFR: MPR	13.49		
MFR(F): MPR(F)	3.77		
MFR(M): MPR(M)	12.77		
Sample 3			
TFR: TPR			1.93
TFR(F): TPR(F)			0.73
TFR(M): TPR(M)			3.76
MFR: MPR			3.01
MFR(F): MPR(F)			0.93
MFR(M): MPR(M)		5.65	

F-Tests between the male and female regressions for each model yield the following results:

<u>Models</u>	<u>Significant at 1% level</u>	<u>Significant at 5% level</u>	<u>Not significant</u>
Sample 1			
TFR(F): TFR(M)	4.06		
TPR(F): TPR(M)	2.76		
MFR(F): MFR(M)	2.78		
MPR(F): MPR(M)		1.70	
Sample 2			
TFR(F): TFR(M)	3.02		
TPR(F): TPR(M)	3.00		
MFR(F): MFR(M)	2.74		
MPR(F): MPR(M)	2.64		
Sample 3			
TFR(F): TFR(M)	2.06		
TPR(F): TPR(M)	2.06		
MFR(F): MFR(M)		1.62	
MPR(F): MPR(M)			1.54

TABLE A6-2

Total Sample 1: The F-test Table

		Total Regression	F-test n.d.f. d.d.f.	Male Regression	Female Regression
Full Regression	R-sq:	.9141	4.063894	.9463	.8677
	N:	370		199	171
	ESS:	2.179062	31	.89092	.643207
	DF:	334	303	165	138
F-test		104.5730		76.20164	41.45410
	n.d.f.	9		9	9
	d.d.f.	334		165	138
Personal Regression	R-sq:	.672	2.763258	.7232	.5101
	N:	370		199	171
	ESS:	8.3193	22	4.593987	2.400653
	DF:	343	321	174	147

TABLE A6-3

Married Sample 1: The F-test Table

		Total Regression	F-test n.d.f. d.d.f.	Male Regression	Female Regression
Full Regression	R-sq:	.9341	2.783850	.9551	.902
	N:	258		148	110
	ESS:	1.193323	35	.520347	.256882
	DF:	217	182	109	73
F-test		81.20499		61.20945	29.43486
	n.d.f.	9		9	8
	d.d.f.	217		109	73
Personal Regression	R-sq:	.7123	1.699488	.728	.5853
	N:	258		148	110
	ESS:	5.212374	27	3.150176	1.085516
	DF:	226	199	118	81

TABLE A6-4

Total Sample 2: The F-test Table

		Total Regression	F-test n.d.f. d.d.f.	Male Regression	Female Regression
Full Regression	R-sq:	.6281	3.024329	.5703	.4448
	N:	1894		1355	539
	ESS:	92.64466	34	54.07265	33.62536
	DF:	1857	1823	1319	504
F-test		20.44590		15.92940	7.659345
	n.d.f.	10		10	9
	d.d.f.	1857		1319	504
Personal Regression	R-sq:	.5872	2.995311	.5164	.3689
	N:	1894		1355	539
	ESS:	102.845	25	60.60294	38.22444
	DF:	1867	1842	1329	513

TABLE A6-5

Married Sample 2: The F-test Table

		Total Regression	F-test n.d.f. d.d.f.	Male Regression	Female Regression
Full Regression	R-sq:	.6228	2.740779	.5825	.4266
	N:	1507		1162	345
	ESS:	73.77182	39	41.26418	27.36344
	DF:	1465	1426	1121	305
F-test		13.49261		12.76768	3.774718
	n.d.f.	10		10	9
	d.d.f.	1465		1121	305
Personal Regression	R-sq:	.588	2.643014	.5349	.3627
	N:	1507		1162	345
	ESS:	80.56619	30	45.96399	30.41132
	DF:	1475	1445	1131	314

TABLE A6-6

Total Sample 3: The F-test Table

		Total Regression	F-test n.d.f. d.d.f.	Male Regression	Female Regression
Full Regression	R-sq:	.6695	2.064737	.7023	.6389
	N:	255		191	64
	ESS:	23.12104	25	11.72229	6.674345
	DF:	226	201	165	36
F-test		1.934056		3.758240	.7299710
	n.d.f.	2		1	2
	d.d.f.	226		165	36
Personal Regression	R-sq:	.6638	2.057161	.6955	.6242
	N:	255		191	64
	ESS:	23.51676	24	11.98929	6.945016
	DF:	228	204	166	38

TABLE A6-7

Married Sample 3: The F-test Table

		Total Regression	F-test n.d.f. d.d.f.	Male Regression	Female Regression
Full Regression	R-sq:	.7439	1.623350	.7117	.8627
	N:	183		142	41
	ESS:	7.000936	30	4.329949	.637904
	DF:	149	119	111	8
F-test		3.006620		5.649608	.9280707
	n.d.f.	2		1	2
	d.d.f.	149		111	8
Personal Regression	R-sq:	.7336	1.535128	.697	.8308
	N:	183		142	41
	ESS:	7.283475	29	4.550332	.785909
	DF:	151	122	112	10

APPENDIX 7

DETAILED DISCUSSION OF
REGRESSION COEFFICIENTS

For each of the three samples, the regression results will be discussed in the following order:

TFR - total full regression

TPR - total personal regression

TFR(F), TFR(M) - total full regression for females and for males

TPR(F), TPR(M) - total personal regression for females and for males

MFR - married full regression

MPR - married personal regression

MFR(F), MFR(M) - married full regression for females and males

MPR(F), MPR(M) - married personal regression for females and males

Appendix 7 Detailed Discussion of the Regression Results

Sample 1: Large multinational involved in research and development

TFR

*Intercept

The extensive use of dummy variables in all the models has definite implications for the interpretation of the results. In Sample 1, for example, it means that the intercept term can be interpreted as the base earnings of an individual who is single, male, has a high school education, a background in the humanities, entered the firm in operations support, is currently employed either as a technician in operations support or as a computer operator, is in the operations support department, and does not feel that he is discriminated against. The base earnings of a female are the constant plus the coefficient of SEX. In fact, the coefficient of SEX in Sample 1 is negative (-.059) and significant at the 1 percent level indicating an unexplained differential in average earnings of 5.73 percent. To obtain the expected earnings of a given individual, we start with the base and then add or subtract percentage increments indicated by the coefficients on the independent variables for each unit of an attribute that the individual possesses.

*Human capital

For males and females, AGE is positively related to earnings and its coefficient is significant, but the negative and significant coefficient on AGE2 indicates that there are decreasing returns to maturity. The coefficient of FYSERVC and FYSERVC2 are both positive, but not significant. But perhaps because of the strong positive relation between age and earnings, FTLFEX is negatively related to earnings with a signifi-

cant impact. The coefficient of FTLFEX2 is positive and significant. The distinct possibility of multicollinearity between the squared terms makes the interpretation of individual coefficients difficult. (In Appendix 4, for all the samples we examine the impact of these variables together, under some reasonable assumptions.)

The impact of technical and college education on earnings cannot be distinguished from that of high school, but the relative impact of a professional degree--EDPS2--is highly significant and positive. The holder of a professional degree gains an earnings differential of 18 percent over someone with a high school degree. However, because of an anomaly in the data (see table of earnings by education), the high school group is not a stable reference group. There is apparently an individual with extremely high earnings in this group, that due to the small sample (only 6 individuals with a high school degree), tends to dominate the mean earnings. We are therefore using the technical school group as our reference group.

When compared to an individual with a trade school degree, an individual with a professional degree can expect to earn 22 percent more than an otherwise equally qualified individual. An individual with a college degree can expect to earn 3 percent more than this same representative individual. In addition, we can now calculate the expected differential for possessing a high school degree relative to a technical degree, this being 3.31 percent (clearly something unusual is happening with this group and this result is what predicated us to normalize with respect to technical school rather than high school.)

We can also estimate the implied rate of return for a year of advanced education, assuming that a technical degree represents 2 years, a

college degree represents 5 years (standard in Québec), and a professional degree represents 10 years. We obtain two estimates of this rate of return from the model, one based on a comparison of the EDTS2 and EDCS2 coefficients and the EDTS2 and EDPS2 coefficients. These estimates are 1 percent and 2 percent respectively. We should also note that because these estimates should be interpreted as "within occupation" measurements, we would expect the coefficients to change dramatically when we drop the occupational variables (OCC, SDN, and FDN) from the model.

The impacts of the area of concentration are interpreted with respect to the excluded category, ACON1 (humanities). None of the coefficients on the included ACON variables are significant, implying either that most relevant skills are learned on the job or that there is a problem of multicollinearity between education level and area of concentration.

*Occupational segregation

Occupations are categorized both by hierarchical and functional position in the firm. Given the other variables in the model, the fact that the hierarchical OCC variables are significant determinants of earnings indicates either that inefficiency exists in the allocation of jobs within the firm or that our model does not capture all the personal attributes that contribute to vertical mobility. For example, if we could really capture what it is that makes someone a team leader rather than a technician, then hierarchical position per se would be less important as a determinant of earnings. (The same interpretations apply as well to the significance of the functional allocation of jobs discussed immediately below.) The coefficient of OCC1 indicates that an

individual at the managerial level makes 3 percent more than an identically qualified individual would make in computer operations. The coefficient of OCC2 indicates that an individual who is either a programmer or an analyst makes 18 percent more than an identically qualified person in computer operations.

Employees are also classified by functional (or horizontal) departments, within which there are hierarchies of jobs. Except for SDN4 (computer operations) the coefficients on the departmental dummy variables are positive and significant at the 1 percent level, indicating that those in technical support (SDN1) and software development (SDN2) earn significantly more than those in operations support (23 percent and 11 percent respectively.)

*Port of entry

Employees are classified by their first functional department to test whether current earnings are related to port of entry. The coefficients of the first department dummy variables indicate that two departments (technical support and software development) as well as the "not elsewhere classified" department (FJT5) are significantly different from the excluded operations support department. The implied differentials are 8 percent, 7 percent, and 9 percent respectively. Analogous to our discussion of the current hierarchical and functional occupation variables, the port of entry would not be a significant determinant of earnings if there was an efficient allocation of people to their first jobs or if we had included all the attributes that determined both initial job placements and subsequent advancement. Below we drop all the occupational variables in our personal attributes models in order to determine the extent to which the impact of these variables is picked up

by personal attributes included in the model and/or there is an inefficient allocation of people to jobs. Insofar as females are clustered in low-paying departments and occupations, this inefficiency might be attributed to sex discrimination.

*Commitment to the home

The variables reflecting marital status and number of children show no significant impact on earnings in the total sample regression. The coefficient of LFAM, absence from the labour force for family purposes, has a negative sign as expected, but it is not significant. There are two possible reasons for the lack of impact of LFAM. First, the months of service to the firm may compensate for the absence measured by this variable, or second, the firm may not consider past absences for family reasons to be a good predictor of future absences. For example, when females return to work after an absence to have children, the firm may view them as stable rather than unstable employees.

*Commitment to the firm

There are no significant impacts on earnings because of total absence from the company (TOTABFC), number of outside job applications (OSJAP1), or working overtime without pay (WWOP). The coefficient of another indicator of commitment to the firm, CAROT -- the present increase in pay needed to induce one to leave the company is, however, significant. An individual who would require 10 percent more than she or he is currently earning to leave the company earns a 1.5 percent premium compared to an individual who would leave the company with no earnings increment. In line with our hypothesis it can be argued that an individual with the lower supply elasticity to the outside labour market sees his or her future with the firm as better, and this greater

commitment to the firm is reflected in more current motivation to perform resulting in higher current earnings.

***Informal networks**

Informal networks within the firm are measured by an index (INFORM) of both the frequency of contacts with superiors and the quality of these contacts for upward mobility. The index has a highly significant and positive impact.

***Perceived discrimination**

To the last man, males in the sample do not see themselves as the subject of sex discrimination. But, many females do. For the total sample, the relation between the perception of discrimination and earnings is negative, but the coefficient on the perceived discrimination variable is not statistically significant. Holding other factors constant, those who feel discriminated against do not have significantly lower earnings or, presumably lower productivity, than those who do not feel discriminated against.

Another variable (MOTS) used to test this hypothesis is the effect on work motivation, and hence presumably on productivity and earnings, of having people of the same sex in top positions. The variable is constructed as an index that ranges from 0--unimportant--to 2--very important. The coefficient of MOTS is negative and insignificant.

***Early socialization**

Variables--EARSOC and EARDL--are included that measure whether an individual experienced a stereotypical feminine or masculine upbringing in terms of childhood activities and the division of labor in the home among parents. The coefficients of these variables are not statistically significant.

TPR

In the second model, the total personal regression, we drop the occupation (hierarchical and functional) and port-of-entry variables. The correlation between these variables and those that remain in the model means that there is a left out variable bias. This bias, however, is interesting in its own right. To the extent that the left out variables are endogenous, determined in part by the remaining variables in the system, the comparison of the first and second models reveals the indirect effects of the exogenous variables through the channels of occupation and advancement. Thus, we are able to analyze not only direct earnings discrimination, but also the impact of indirect discrimination through occupational segregation, port of entry, and functional or horizontal departments.

*Intercept

The coefficient of SEX (-.087) is more negative than in the earlier model indicating that SEX is correlated with the variables dropped out of the model. This suggests that occupation and ports of entry function as avenues of sex discrimination and in conjunction with earnings discrimination, they account for a total of 8 percent cost for being female.

*Human capital

The coefficients of AGE, AGE2, FTLFEX, FTLFEX2, FYSERV, and FYSERV2 change because of their correlations with the dropped variables, but our interpretations of their impacts are not altered. The coefficient of EDTS2 becomes significant, implying that the expected earnings of an individual with a technical school degree are less than those with a high-school diploma by 15 percent. This anomolous result may well be

caused by the presence of one or more older employees who have attained relatively high earnings but entered the company with high school diplomas. In fact, Table 5-6 indicates that one of the five males with only a high-school degree makes over \$34,000. The coefficient of EDPS2 is higher, most likely because of a correlation between having a professional degree and occupation. It indicates a differential of 56 percent for possessing a professional degree over a high-school diploma. If we compare the coefficients of EDCS2 and EDPS2 with respect to EDTS2 rather than EDHS2, we find that a college degree provides a premium 18 percent and a professional degree 84 percent. We can also calculate the implied rate of return as above, of 6 percent and 8 percent respectively for each additional year of advanced education. In our opinion, this is a more accurate estimate of the value of the degree than the estimate from TSR because it takes into account the indirect effect that the possession of the degree has on occupations.

The coefficient of ACON2, the social sciences concentration, is now negative and significant at the 5 percent level (implying a 6 percent difference) compared to a humanities concentration. This change from TFR is probably because of correlation with the port of entry variable, since one's area of concentration would most likely have the greatest impact in determining one's initial job. This explanation would not hold, however, if a concentration in the humanities were also correlated to roughly the same extent with the same ports of entry as ACON2. The coefficient of ACON3 is positive and significant at the 1 percent level (implying a 10 percent difference) whereas it was insignificant in TFR. This change was expected because, as stated earlier, over the past several years a computer sciences degree has been a necessary prerequi-

site for entry into the programmer and analyst jobs.

***Commitment to the home**

The coefficient of CHILDL is now significant and negative at the 5 percent level, indicating that having children 5 years of age creates a loss of 4 percent per child. This is correlated with the lower-paying occupations or the lower-paying ports of entry. The coefficients of MARITAL and LFAM remain insignificant as in TFR.

***Commitment to the firm**

The coefficient of OSJAPL is negative and now significant at the 1 percent level, indicating that there is a correlation between the lower-paying occupations and the extent to which employees apply for outside jobs. This implies that individuals who apply for outside positions earn 5 percent less than those who do not (although the direction of the causation is not clear). The coefficient of WWOP, is positive and now significant at the 5 percent level, indicating a premium of 2 percent for an individual employee who worked overtime. This result indicates a correlation between the more highly-paying occupations and the extent to which employees do extra unpaid work. The size of the coefficient of CAROT does not change significantly, but is no longer statistically significant.

***Informal networks**

The coefficient of INFORM remains positive and significant, and it triples in magnitude in this regression compared to TFR, indicating that the extent of an individuals network is correlated with his or her occupation.

***Perceived discrimination**

The coefficients of both PERCD and MOTSL are more negative than they

were in TFR but still not significant, implying that perceived discrimination is correlated with lower-paying jobs--not a surprising result given that females tend to be in the lower-paying occupations.

***Early socialization**

The coefficients of EARSOC and EARDL remain insignificant, but the sign of the coefficient of EARDL changes from negative to positive.

TFR(F) and TFR(M)

In TFR and TPR, we have constrained males and females to have the same earnings function with the exception of the intercept (or combined intercept and SEX) term. Since the coefficient of SEX is negative and highly significant in TFR and TPR, the estimation of separate female and male earnings functions is warranted. The R-square statistic is considerably higher for the TFR(M) than for TFR(F), although even in the latter the R-square is quite high with over 87 percent of the variance in earnings being accounted for. In the last part of this chapter, we shall decompose the differences between the two earnings functions into three components, one associated with the difference in female and male coefficients, one associated with the difference in female and male attributes, and the remaining component related to the interaction between the differences in coefficients and mean attributes.

***Human capital**

The coefficient of the age and experience variables are basically the same as in TFR. Most of the company and labour-force experience coefficients are not significant, and there do not appear to be any significant differences between the female and male equations.

No females in the sample had either a professional degree (EDPS2) or

high -school vocational training (ACON4). The fact that the coefficient on EDPS2 in TFR(M) is 0.0969 and in TFR is 0.1634 indicates that the differential for having a professional degree is higher amongst both sexes combined than amongst males only. The negative (but insignificant) signs of the coefficients of EDTS2 and EDCS2 for males appear to be the result of the relatively high salary of at least one of the males with a high school degree as mentioned earlier. Again, in comparison to technical school education, a college degree yields a premium of 3 percent and professional degree a premium of 17 percent for males. By the same token, a female with a college degree earns 4 percent more than an equivalent female (there are no females with professional degrees). The effects of ACON variables for females and males are in the same direction, and do not have significant impacts on earnings.

*Occupational segregation

The coefficients of the hierarchical occupational categories are dramatically different for females and males. In the female equation, they are positive and increasing with the level of responsibility in the firm, but the coefficient of OCC2 is not significant and that of OCC1 is significant at the 5 percent level. In the male equation, the coefficients are both numerically large and statistically significant, indicating that the hierarchical pay differentials are significantly more among males than among females. In particular, males in OCC1 earn 45 percent more than those in the reference group and males in OCC2 earn 28 percent more than those in OCC3. One can postulate that the significance of occupation in the total regression is primarily because of male earnings differentials, and hence that females are discriminated against because they do not receive the same premium for attaining a higher

position in the hierarchy, holding other factors constant. The effects of the second department variables are basically the same for females and males with the exception of SDN1. In this case females receive a premium of 32 percent whereas males only receive 20 percent. When interpreting the preceeding result it is important to remember that the selectivity issue has not been addressed.

***Port of entry**

The highly significant and positive coefficients of FDN1, FDN2, and FDN5 in the female regression indicate that females who entered the company in technical support, software development, and miscellaneous ports of entry have higher current earnings (14 percent, 12 percent and 38 percent respectively). These results support the hypothesis that the particular port of entry is a significant determinant of the earnings possibilities for females. The absence of significant coefficients for males indicates that first functional department is not ultimately important in determining the earnings differentials among males. These results suggest that the promotion opportunities for males are more varied than they are for females, perhaps because males have access to a wider array of (and not just longer) internal job ladders.

***Commitment to the home**

The signs of the MARITAL coefficients are, as expected, different for males and females, but neither is statistically significant. The signs, however, indicate that males who marry are rewarded and females who marry are penalized for marriage in the labour market. The only significant coefficient among the CHILD variables is that for CHIL1, children under 6, in the male equation. It is negative, indicating that the earnings capacities of males who have young children living with

them are hampered. Those who have older children living with them are apparently less hampered. Among females, the hypothesis is supported that the earnings of those with either younger or older children living with them are unaffected. Indeed, the coefficient of CHILD2 is positive (but not significant) for females.

*Commitment to the firm

The coefficient of TOTABFC, total absences from the company, is not significant, but positive, among both females and males, a counter-intuitive result. The coefficient of OSJAP1 is negative and significant for males, but positive and not significant for females. Males who have lower earnings apply for more outside jobs. Perhaps males who do not move quickly up the earnings ladder become pessimistic about their advancement possibilities. Females, in general, might very well be pessimistic in any case, so that no significant differences among females at different earnings levels can be discerned. Although neither coefficient is significant, it is interesting to note that the coefficient of WWOP, working overtime without pay, is positive for males but negative for females. The coefficient of CAROT is significant for females but not for males, although it is positive only for both, indicating the more highly paid employees are more committed to the firm than lower paid employees. The direction of causation is difficult to identify. It may be that because they get higher pay, some employees are more committed to the firm than others rather than vice versa.

*Informal networks

Amongst males, informal contacts have significant positive impacts on earnings. The size of the coefficient indicates that one contact with the personnel department for career advice would increase the

expected earnings of a male by slightly over one percent, while one contact with a top executive for career advice would increase expected earnings by 3.5 percent. Amongst females, the coefficient of INFORM is positive and not significant, indicating that more contacts with superiors get them nowhere in terms of earnings relative to one another. It should be noted that the mean value of INFORM is 1.75 for males and 0.81 for females. Males are on average more involved in informal contacts than females and appear to benefit more from them. This behaviour would be rational given the positive costs of developing informal networks and knowledge of the returns. Therefore we should not conclude that differences in pay based on differences in the informal network in the firm lack a sex bias. It could be argued that even females who do make informal contacts are unable to make use of them, perhaps because of sex biases in promotions or the occupational and departmental location of females in the corporate structure.

*Perceived discrimination

For females, the coefficient of PERCD is negative and not significant. The sign indicates that females who are paid less see themselves as being discriminated against, although it might be argued that the lower earnings are the cause rather than the effect of the feeling of discrimination. The coefficient of MOTSL is negative and significant for females, indicating that females who feel it is important to their own success that there be females in higher positions in the company structure earn less than females who feel it is unimportant.

TPR(F) and TPR(M)

When the regression coefficients and standard errors for TPR(F) and

TPR(M) are compared to the full female and male regressions, the R-square for the female regression has dropped to .510 (from .868) while the R-square for the male regression has dropped to .723 (from .946). Occupation, department, and port-of-entry variables clearly play an important independent role in the determination of earnings. In particular, as is argued more generally in the occupational-segregation literature, the earnings of females may be much more dependent on the jobs to which they are allocated than on their personal attributes, whereas males may have a wider range of intrafirm opportunities open to them that make their personal attributes more relevant to the determination of earnings. That is, females may be allocated to jobs in a discriminatory manner. Alternatively or in addition, there may be significant factors that influence earnings of females that have been omitted from the model. Also, given our emphasis on motivation and incentives, it is possible that some of the included attributes are better measures of the productivity of males than of females.

***Intercept**

Compared to TFR(M), the male intercept decreases while the female intercept increases, causing the differential to become .880. At \$6,843, the female base earnings are roughly two and half times the size of the male base earnings (\$2,839). It is possible that some of the variables, such as humanities concentration, that are implicitly included in the value of the intercept term are more important positive determinants of earnings for males than for females.

***Human capital**

An obvious change here is that the age and years of service variables do not have significant impacts on TPR(F) despite the fact that at

least some of them did have significant impacts in earlier regressions. The coefficients on age and years of full time labour force experience are significant in the male equation.

The coefficient of EDTS2 for males is now negative and significant at the 1 percent level, undoubtedly because the highly paid high-school graduate is also in a higher paying occupation, the effect of which is being picked up by the education variables. The coefficient of EDPS2 is positive and significant, indicating a 40 percent premium for possessing a professional degree when compared to a high-school degree. When comparing a professional degree to a technical degree the premium is 84 percent implying a yearly rate of return to schooling of 8 percent. We can also compare a college degree to a technical degree and estimate the premium to be 25 percent (a rate of return of 8 percent. For the females the premium for a college degree over a technical degree is 14 percent implying a rate of return to education of only 4 percent.

The coefficient of ACON2 for females is now negative and significant at the 5 percent level, implying that females with social-science concentrations are more prevalent in lower-paying occupations and ports of entry than females with humanities concentrations. For males, the coefficient of ACON3, a science concentration, has changed from negative to positive and is now significant at the 1 percent level. The coefficient implies a 15 percent earnings differential for males who have a science degree as opposed to a humanities degree. For females, the coefficient of ACON3 is not statistically significant and implies only a 4 percent differential.

*Commitment to the home

In TPR(M) the coefficient of CHILDL1 is negative and significant at

the 5 percent level. This implies a cost of 5 percent less in earnings for each additional child under the age of 5 years. This coefficient doubles in magnitude from TFR(M), indicating a correlation between the number of young children and the left out variables.

*Commitment to the firm

The coefficient of TOTABFC again has the wrong sign and is not significant. For males, the coefficient of OSJAP1 remains negative and significant at the 1 percent level. For females, it is not significant in either regression, but the sign changes from positive to negative. The coefficient of WWOP is not significant for females. For males this coefficient is positive and significant. For females, the coefficient of CAROT remains positive at the 1 percent level implying that a female who would require a 10 percent increase in her salary to leave the company exhibits commitment to the firm that yields her a 4 percent differential over an equally endowed female who would leave the company for a zero earnings increment.

*Informal networks

For males, the coefficient of INFORM remains positive and significant at the 1 percent level.

*Perceived discrimination

For females, the coefficient of MOTSL has remains negative and is now significant at the 5 percent level.

*Early socialization

In both equations, the coefficients of EARDL are positive, implying that the more traditional the family background the higher the earnings for both males and females. The female coefficient is significant at the 5 percent level, and its magnitude indicates that EARDL could ex-

plain variations in the earnings of females of up to 12 percent.

MFR

***Intercept**

The intercept represents the base earnings (\$5,872) for a married male, with the attributes of the omitted dummy variables and a zero value for the other included variables. The base earnings of a female (\$5,457) are the constant plus the coefficient of sex.

***Human capital**

For males and females together, age is positively related to earnings and significant. The coefficient of AGE2 is negative and significant, indicating decreasing returns to age. However, when considered jointly with FTFLEX2 and FYSERVC2, the sign of the quadratic term becomes positive (see appendix 3). None of the education variables or the ACON variables are significant. The differential rate of return of a professional degree over a technical degree is 17 percent.

***Occupational segregation**

For married individuals in OCC1 and OCC2 the rate of returns for being in these particular occupations are 37 percent and 22 percent respectively. The coefficients of both variables are statistically significant at the 1 percent level.

The coefficients of the technical support (SDN1) and software development (SDN2) departments are also significant at the 1 percent level, indicating that individuals in these departments receive a premium of 20 percent and 9 percent respectively than those in operations support, the reference group.

***Port of entry**

Married employees entering the firm in either FDN1 or FDN2 receive a statistically significant premium of 6 percent and 7 percent respectively over those entering in FDN3.

***Commitment to the home**

The variables representing commitment to the home, CHILD1, CHILD2, and LFAM are not significant in explaining earnings for married individuals. An additional variable, measuring the division of labour in the home (DLHH), has been added to the regression. This variable ranges on a scale from 0 to 300, a higher value indicating that an individual has more of the household duties traditionally done by females. The coefficient is not significant in a sample including both males and females.

***Dominant career**

The central reason for examining a subsample of married employees is to highlight the effects of a dual-career household on the individual's earnings. For this purpose, the following variables have been included: whether or not the individual is willing to relocate to advance the career of the spouse (UMOV); whether a spouse or partner is supportive of the employee having a career (SPSCAR); whether a spouse would be willing to relocate in order to benefit an employee's career (SPMOB); whether the spouse is professional and willing to relocate for the sake of an employee's career (SPSTRPRM); and the importance of the employee's career to the family (IMPCARTF). None of the coefficients of these variables were statistically significant for the married full regression.

***Commitment to the firm**

There are no significant impacts on earnings from TOTABFC, OSJAP1,

and WWOP. The variable CAROT has a coefficient that is positive and significant at the 1 percent level.

***Informal networks**

The coefficient on informal networks is significant at the 1 percent level.

***Perceived discrimination**

The coefficients of PERCD and MOTSl are not significant.

***Early socialization**

For the married sample neither of the coefficients of EARSOC or EARDL are significant.

MPR

***Intercept**

The coefficient on sex is now positive, although not significant. As in the earlier interpretation of the change in this coefficient when moving from the full regression to the personal regression, we can infer that sex is correlated with the left-out variables (OCC, SDN, FDN). In this instance, the change is positive leading one to conclude that males are discriminated against in terms of occupational advancement.

***Human capital**

Again we note that age, years of service, and labour-force experience are significant determinants of earnings. The coefficient of the variable EDTS2 is more negative than in the MFR and is significant at the 5 percent level. As discussed earlier, an anomaly in the data is probably causing the mean income for high-school graduates to be inflated relative to the remainder of the sample, thereby resulting in an underestimate of the coefficients for education. Therefore, we should focus our

attention on the relative rather than the absolute magnitudes of the technical, college, and professional-degree coefficients. An individual with a professional degree earns 70 percent more than an individual with a technical school degree, while someone with a college degree earns 11 percent more (with implied rates of return of 7 percent and 4 percent respectively).

Because of the correlation between entry level positions, occupation and second department and a science degree (ACON3) the magnitude of the coefficient (ACON3) increases by a factor of 10. This coefficient now implies that a recipient of a science degree can expect to earn 14 percent more than an otherwise equally qualified individual with a humanities degree.

*Commitment to the home

The coefficient of the division of labour in the household variable is negative and significant, indicating that an individual who is less constrained by household responsibilities earns more than an individual who is more constrained.

*Dominant career

The only variable supporting this hypothesis is IMPCARTF, the coefficient of which is positive and significant at the 5 percent level, implying a correlation between the left out variables and the importance of the career to the family unit. This finding indicates that individuals in higher-paying occupations are more likely to have the primary career.

*Informal networks

The coefficient of INFORM is positive and significant. As in the total sample, the magnitude of this coefficient increases in going from

the full regression to the personal regression.

MFR(F) and MFR(M)

*Intercept

The higher intercept term for males implies that the base salary for males is 3 times that for females, in part because of the particular attributes associated with the base earnings.

*Human capital

The linear age terms are positive for both sexes, while the quadratics are both negative, implying decreasing returns to maturity for both groups. None of the experience variables are significant determinants of earnings.

None of the coefficients of the ACON or education variables are significant for males or females.

*Occupational segregation

The coefficients of the occupation variables are dramatically different for males than for females. In the female equation, they are positive and increasing with the level of responsibility in the firm, but not significant. In the male equation, the coefficients are both numerically large and statistically significant. This finding indicates that the hierarchical pay differences are greater among males than among females in the same occupations. The premiums among males for being in OCC1 and OCC2 are 52 percent and 36 percent respectively.

The coefficients for SDN1 and SDN2 are significant in both equations. But the returns of employees in SDN1 relative to those in SDN3 are two times larger among married females than among married males. For females, the extra returns for SDN1 and SDN2 relative to SDN3 are 37

percent and 10 percent respectively, while those for males are 17 percent and 7 percent respectively.

***Port of entry**

The highly significant and positive coefficients of FDN1 and FDN2 for the female regression indicate that females who entered the company in technical support or software development had higher current earnings than those who entered in FDN4--computer operations. The premiums for females entering the company in FDN1 and FDN2 are 17 percent and 16 percent respectively. There were no married females in miscellaneous ports of entry. These results support the hypothesis that the particular port of entry is a significant determinant of earnings among married females. As indicated above, the absence of significant coefficients for males indicates that the first functional department is not important in determining earnings differences among married males. The results indicate that the promotion opportunities for males are more varied than they are for females, perhaps because males have access to a wider array (and not just longer) of job ladders.

***Commitment to the home**

There are no significant coefficients supporting this hypothesis.

***Dominant career**

None of the variables are significant determinants of earnings.

***Commitment to the firm**

The coefficient of OSJAP1 is positive and significant at the 1 percent level for females, implying a positive correlation between earnings and applying for outside jobs, a result which is counter-intuitive. CAROT is positive and significant at the 1 percent level for

females, indicating that more highly paid females are more committed to the firm than lower paid females. Again, the direction of causation is more difficult to identify. It may be that because they get higher pay, some females are more committed to the firm than others rather than vice versa.

***Informal networks**

The coefficient of INFORM is significant at the 1 percent level for males.

***Perceived discrimination**

None of the variables is a significant determinant of earnings.

***Early socialization**

None of the variables is significant determinant of earnings.

MPR(F) and MPR(M)

***Intercept**

The difference in the male and female intercept terms is .1854, implying that the base salary for males is 20 percent higher than that for females.

***Human capital**

Most of the coefficients of the age and experience variables are not significant. Comparing the coefficients of college and professional education relative to that of technical school (rather than high school), we find that among males a college degree yields a 24 percent differential (a 7 percent annual rate of return) and a professional degree a 78 percent differential (an annual rate of return of 7 percent). For females the premium for a college degree over a technical degree is 5 percent, implying an annual rate of return of 2 percent.

The ACON3 coefficient is positive and significant at the 1 percent level in both equations. Among males, the differential of applied science over a humanities degree is 14 percent, whereas among females the difference is 12 percent.

*Commitment to the home

For married females the coefficient of the CHILDL1 variable is negative and significant at the 5 percent level, indicating that they earn 7 percent less for each additional child they have under the age of 6. The fact that this coefficient has become larger in magnitude from the MFR(F) implies that there exists a correlation between having young children and being in the lower-paying occupational structure, even after taking into account experience and all the other controls in the equation.

*Commitment to the firm

The coefficient of OSJAP1 is negative and significant for males. Among males applying for outside jobs, each additional outside job application costs the individual 7 percent in earnings (although the causation is not clear). Among females, the coefficient of CAROT is positive and significant at the 5 percent level, indicating that females who are more highly paid tend to be more committed to the firm.

*Informal networks

The coefficient of INFORM is positive and significant among males and females, but larger in magnitude among males.

*Perceived discrimination

The coefficient of PERCD is significant among females at the 5 percent level, implying that those females who feel discriminated against earn 5 percent less than those who do not (although here again the

causation is not clear). The coefficient of MOTSL is significant at the 5 percent level, indicating that married females who consider it important to have someone of the same sex in a top position earn 6 percent less than those who do not.

***Early socialization**

The coefficient of EARDL is positive and significant at the 1 percent level for females, implying that married females who experienced a household with a more traditional division of labour while growing up earn more than those married females who do not. The coefficient of EARSOC is positive and significant for males at 1 percent level, inferring that males who have a more feminine upbringing have higher earnings than those who do not -- indeed a counterintuitive finding.

Sample 2: Large utilities company

TFR

***Intercept**

The intercept term can be interpreted as the base earnings of an individual who is single, male, has a high school education, a background in the humanities, is currently a member of the clerical staff, and does not feel that he is discriminated against. The base earnings of a female are the constant plus the coefficient of SEX. The coefficient of SEX is negative (-.159) and significant at the 1 percent level indicating an unexplained differential in average earnings of 15 percent.

***Human capital**

For males and females, AGE is positively related to earnings and

significant, but the negative and significant coefficient on AGE2 indicates that there are decreasing returns to maturity. The coefficient of FYSERV1 is positive and significant, while the coefficient of FYSERV2 is negative and significant, indicating decreasing returns to years of service with company. The impacts of technical, college, and professional degrees on earnings are all highly significant and positive relative to that of high school. When compared to an individual with a high-school degree, an individual with a ° technical school degree can expect to earn 12 percent more than an otherwise equally qualified individual. An individual with a college degree can expect to earn 15 percent more than this same representative individual, and an individual with a professional degree can earn 32 percent more. The annual rates of return for one year of technical, college, and professional education are 6 percent, 3 percent, and 3 percent respectively.

The impacts of the area of concentration are interpreted with respect to the excluded category, ACON1 (humanities). None of the coefficients of the included ACON variables are significant, implying either that most relevant skills are learned on the job or that there is a problem of multicollinearity between education level and area of concentration.

*Occupational segregation

Occupations have not been organized entirely in hierarchical order as they are for samples 1 and sample 3. The occupational categories included in the regression are: OCC1, management; OCC2, clerical staff; OCC3, engineering staff; OCC4, scientific research staff; OCC5, computer staff; OCC6, secondary service staff; OCC7, financial staff; OCC8, primary services; OCC9, skilled labour; OCC10, public relations; OCC11,

bluecollar supervisors.

The coefficient of OCC1 indicates that an individual at the managerial level makes 26 percent more than an identically qualified individual would make in clerical department (the omitted variable). The coefficient of OCC3 indicates that an individual who is a member of the engineering staff makes 12 percent more than an identically qualified person who is a member of the clerical staff. The coefficient of OCC4 implies that an individual who is a member of the scientific staff earns 12 percent more. The OCC5 coefficient indicates that a member of the computing staff earns 9 percent more. The negative and significant coefficient of OCC6 (secondary services) indicates that an individual in secondary services earns 12 percent less. The positive and significant coefficient of OCC9 indicates that an individual in the skilled labour category earn 12 percent more than an individual in the clerical category. Finally, the positive and significant coefficient of OCC11, bluecollar supervisors, indicates that earn 11 percent more than someone in the clerical group.

*Commitment to the home

CHIL1 and CHIL2 have significant impacts on earnings in TFR. The coefficients of CHIL1 and CHIL2 are both positive and significant at the 1 percent level. The premiums for having an additional child 6 years and under and 6 years of age and up are 3 percent and 2 percent respectively. The coefficient of LFAM, absence from the labour force for family purposes, has a negative sign as expected, but it is not significant.

*Commitment to the firm

There are significant impacts on earnings because of total absence

from the company (TOTABFC), and working overtime without pay (WWOP). The coefficient of TOTABFC is negative and significant at the 1 percent level implying that the more individuals are absent from the company for whatever reasons, the less they earn. The coefficient of WWOP is positive and significant at the 1 percent level, implying that those individuals who work overtime without pay 1 times (the mean in the sample) earn 0.07 percent more than individuals who do no unpaid overtime work.

TPR

*Intercept

The coefficient of SEX (-.186) is more negative than in the earlier model, indicating that SEX is correlated with the variables dropped out of the model. The combined effects of earnings discrimination and occupational segregation account for a differential of 17 percent.

*Human capital

The coefficients of AGE, AGE2, FTLFEX2, FYSERV, and FYSERV2 change very little from TFR, so our interpretations of their impacts are not altered. The only difference to note is that the coefficient of FTLFEX is now significant. The coefficients of the education variables remain positive and significant at the 1 percent level. The premiums for holding these degrees are 12 percent, 19 percent, and 39 percent respectively over an individual with a high school degree. The annual rates of return are 6 percent, 4 percent and 3 percent respectively. The coefficient of ACON3, the sciences concentration, is now positive and significant at the 5 percent level, implying a 9 percent difference compared to a humanities concentration.

*Commitment to the home

The coefficient of the CHILD1 and CHILD2 variables remain significant and positive at the 1 percent level, indicating that having children 5 years of age and under is correlated with the higher-paying occupations. The coefficients of MARITAL and LFAM remain insignificant as in TFR.

*Commitment to the firm

The coefficient of WWOP, working overtime without pay, is positive and still significant at the 1 percent level, indicating a correlation between the more highly paid occupations and the extent to which employees do extra unpaid work.

TFR(F) and TFR(M)

The R-square statistic is considerably higher for TFR(M) at .570 than TFR(F) of .448

*Intercept

The intercept term for males is 9 and for females is 10, implying that the female base earnings are about 35 percent higher than the male base earnings.

*Human capital

The coefficients of the age and experience variables are basically unchanged from TFR. The fact that the coefficients of all the education variables are positive and significant for males at the 1 percent level but only positive and significant for females at the 1 percent level for a professional degree indicates that for males, schooling works to allocate males to hierarchical positions, but that for females, it is only extraordinary credentials that help move them up the company's

career ladders. That is, amongst females, we are unable to distinguish the impact of a technical and college education from that of a high school education. Amongst males, the premium for the degrees are respectively 12 percent, 17 percent, and 35 percent over a male with a high school education. The returns to each additional year of each particular type of education are 6 percent, 3 percent, and 3 percent respectively. For females the premium put on a professional degree is 22 percent more than for an equivalent individual holding a high school degree. The returns to an additional year of professional degree education for females is 2 percent.

*Occupational segregation

Amongst males, the premium for being in OCC1 (management) rather than the clerical department is 19 percent, and for being in OCC3 (engineering) is 6 percent. Although not significant, it is interesting to note that amongst males, those in OCC5 (computer staff), which includes analysts and programmers, earn 4 percent less than equally qualified males in the clerical department. The coefficient of OCC6 (secondary services) is negative and significant at the .1 percent level, indicating that an individual male in this department earns 16 percent less than a male in the clerical department. The coefficients of OCC9 (skilled labour) and OCC11 (bluecollar supervisors) are statistically significant, indicating a positive premium of 8 percent and 7 percent respectively over the reference group.

Amongst all females, the coefficients of OCC1 (management), OCC3 (engineering), OCC4 (scientific research staff), OCC5 (computer staff), OCC7 (finance staff), and OCC9 (skilled labour) are all statistically significant. There are no females in OCC11 (bluecollar supervisors).

The premium over the reference group for being in OCC1 is 41 percent; OCC3, 29 percent; OCC4, 41 percent; OCC5, 21 percent; OCC7, 33 percent; and OCC9, 56 percent.

*Commitment to the home

Amongst females, the coefficients of CHILD1 and CHILD2 are positive, but insignificant. Amongst males, however, these coefficients are positive and significant at the 5 percent level. It may be that males with children are perceived to be more stable employees than males who do not have children or are single, and are rewarded accordingly.

*Commitment to the firm

The coefficient of TOTABFC is significant at the 5 percent level and negative amongst both females and males. The coefficient of WWOP is significant at the 1 percent level and positive amongst males, indicating that males who work overtime without pay (where the mean is 1.37 times) earn 1 percent more as a result.

TPR(F) and TPR(M)

*Human Capital

The coefficients of age and the experience variables are all statistically significant in both TPR(F) and TPR(M). Amongst males we still note the highly significant coefficients of the education variables at the 1 percent level as well as the increasing magnitudes of the coefficients themselves. The premiums for technical school, college, and professional degrees are now 13 percent, 20 percent and 42 percent respectively over the reference group (high school). The returns for an additional year of a technical school degree are 6 percent; for a college degree, 4 percent; and a professional degree, 4 percent.

Amongst the females the coefficient of EDSC2 now becomes significant at the 5 percent level indicating a correlation between a college degree and occupation. Compared to TFR(F), the magnitude of the coefficients triples in TPR(F) for a college degree and doubles for a professional degree. Amongst females the premium for holding a technical school degree is 4 percent; a college degree, 13 percent; and a professional degree, 35 percent. Amongst males, the returns for an additional year of technical school are 2 percent; for a college degree, 2 percent; and a professional degree, 3 percent. Comparing males and females, the greatest difference in returns is for technical school education (although the coefficient of EDTS2 was not significant for females).

*Commitment to the home

In TPR(M), the coefficient of the CHILDL variable is positive and significant at the 5 percent level, while CHILDL2 has a significant impact at the 1 percent level, implying a gain of 2 percent more earnings for every additional child over the age of 6. This coefficient doubles in magnitude from TFR(M), indicating a correlation between the number of older children and the left out occupations.

*Commitment to the firm

The coefficient of TOTABFC is significant for males and females. For males, the coefficient of OSJAP1 becomes negative and significant at the 5 percent level, which indicates that the more outside jobs a male applies for the lower are his earnings. For females, the coefficient of WWOP now becomes positive and significant at the 5 percent level, indicating a correlation between working overtime without pay and the left out occupational variables. For males WWOP remains positive at the 1 percent level, and increases in magnitude.

***Perceived discrimination**

For males, the coefficient of PERCD becomes negative and significant at the 5 percent level, indicating that males who feel they have been discriminated against earn 12 percent less than those males that feel they have not been discriminated against. It is interesting to note, however, that only 0.8 percent of the males (11 males) and 22 percent of the females feel they have been discriminated against.

MFR

***Intercept**

The sex coefficient is $-.1196$ indicating that females earn 11.28 percent less than males, even after controlling for all other variables in the model.

***Human capital**

AGE is positively related to earnings and has a significant impact. The coefficient of AGE2 is negative and significant, indicating decreasing returns to age. The coefficients of years of service with the company are positive at the 1 percent level, while the coefficients of FYSERVC2 are negative at the 1 percent level, indicating decreasing returns to being with the company over time. All of the coefficients of the education variables are significant at the 1 percent level. The premiums for a technical, college, and professional degree over a high school degree are 12 percent, 12 percent, and 31 percent respectively. The rates of return to an additional year of each particular type of education are 6 percent, 2 percent, and 3 percent respectively.

***Occupational segregation**

For married individuals the premiums for being in OCC1, OCC3, OCC4,

OCC5, OCC6, OCC7, OCC8, OCC9, OCC10, and OCC11 are 2 percent, 3 percent, 8 percent, 12percent, -12 percent, 0.3 percent, 5 percent, 9 percent, 2 percent, and 9 percent respectively. Only those individuals in secondary services earn 12 percent less than equally qualified individuals in the clerical department. Among the OCC variables, only OCC7, OCC8, and OCC10 do not have significant impacts, while the coefficients of the rest are significant at the 1 percent level.

*Commitment to the home

CHIL1 and CHIL2 are significant determinants of earnings for married individuals. The returns to having an additional child, 5 and under and 6 years and up are 2 percent and 3 percent respectively. The coefficient of DLHH is negative and significant at the 5 percent level, indicating that those individuals who are less constrained by household duties earn 3 percent more money.

*Commitment to the Firm

There are significant impacts on earnings from TOTABFC (at the 5 percent level) and WWOP (at the 1 percent level).

MPR

*Intercept

The coefficient of sex is still negative, but more so than in the full regression, implying that females are discriminated against in terms of occupational advancement. In moving from the full regression to the personal regression, we can infer that sex is correlated with the left-out occupational variables. At $-.136$, the sex coefficient indicates an unexplained differential of 13 percent.

*Human capital

The age and years of service variables are significant determinants of earnings. The coefficients of the education variables are slightly larger than in the MFR and remain significant at the 1 percent level. The premiums for holding a technical degree, a college degree, and a professional degree over a high school degree are now 12.52 percent 16 percent 39 percent respectively. The annual returns to holding these degrees are 6 percent 3 percent and 3 percent respectively, all increases from the full regression.

Beacuse of the correlation between occupations and a science degree, the coefficient of ACON3 now becomes significant at the 5 percent level, implying that a recipient of a science degree can expect to earn 14 percent more than an otherwise equally qualified individual with a humanities degree.

*Commitment to the home

The coefficient of the CHILD2 variable is now more significant than before in determining earnings amongst marrieds. The coefficient of the division of labour in the household variable is negative and significant.

*Dominant careers

The only variable supporting this hypothesis is IMPCARTF, the coefficient of which is positive and significant at the 5 percent level, indicating that individuals in higher-paying occupations are more likely to have the primary career.

*Commitment to the firm

The coefficient of total absences from the company is still significant and negative at the 5 percent level. WWOP remains significant at

the 1 percent level.

MFR(F) and MFR(M)

*Human capital

The coefficients of the experience variables and the age variables for the males are significant and of the expected sign. For females, however, the signs for full time labour force experience variables change, the linear terms being negative while the quadratic term is positive.

None of the coefficients of the education or ACON variables are significant for females. For married males all the education variables are significant at the 1 percent level. The premiums to holding a technical degree, a college degree, and a professional degree over a high school degree are 13 percent, 14 percent, and 37 percent respectively. The percentage increase in earnings for each additional year of each particular type of education is 6 percent, 3 percent and 3 percent.

*Occupational segregation

Amongst males relative to the reference occupation, the premiums for being in OCC1 is 18 percent, OCC3 7 percent and OCC6 earn 16 percent, OCC9, 5 percent and OCC11, 6 percent. Amongst females, the premiums over the reference group in OCC1, OCC3, OCC4, and OCC5 and OCC9 are 45 percent, 43 percent, 80 percent, 29 percent, and 56 percent respectively over an equally qualified individual in the clerical group. Hierarchical pay differences are, therefore greater among females than among males.

*Commitment to the home

Amongst married males both the coefficients of CHILD1 and CHILD2 are

significant and positive.

*Dominant career

Amongst males, the coefficient of SPSCAR2 is negative and significant at the 5 percent level, while the coefficient of SPMOB is positive and significant at the 5 percent level. Those males whose spouses support their careers earn less than those spouses who do support their careers--a counterintuitive finding. But those males who have spouses who are mobile and support their careers earn 3 percent more than those who have spouses who are not mobile. *Commitment to the firm

WWOP was significant at the 1 percent level and positive in the male equation, indicating that married males who work overtime without pay earn more than those who choose not to.

MPR(F) and MPR(M)

*Human capital

Amongst males, the coefficients of the age and experience variables are significant at the 1 percent level in determining earnings. For females, only years of service with the company have a significant impact. We note a positive and significant at the 5 percent level quadratic sign for full-time labour force experience.

In the MFR(F) none of the education coefficients are significant, whereas EDPS2 (professional education) is now significant at the 1 percent level, indicating a positive correlation between this type of education and the left out occupation variables. Females with a professional education earn 33 percent more than females with a high school education, and have an annual rate of return to their education of 3 percent. We find that amongst males all the education coefficients are

still significant at the 1 percent level but that the magnitude of the coefficients has increased. A technical school degree yields a 14 percent differential (with a 7 percent rate of return), a college degree yields a 18 percent differential (a 3 percent annual rate of return) and a professional degree a 40 percent differential (a 3 percent annual rate of return).

*Commitment to the home

None of the coefficients that test this hypothesis are significant amongst married females. For married males, however, the coefficient of CHILDL1 is no longer significant as it was MFR(M), but now the magnitude of the coefficient of CHILDL2 increases. For every additional child over the age of 6 married males receive an increase in earnings of 3 percent compared to 2 percent in MFR(M).

*Dominant career

None of the coefficients for the female regression are significant. But amongst males, the coefficient of SPMOB is significant, indicating that those males with mobile spouses earn 4 percent more than those males with immobile spouses. The coefficient of IMCARTF, the importance of the career to the family is positive and significant at the 5 percent level. Males who consider their careers to be more important to the household than the careers of their spouses earn 5 percent more than those males who do not.

*Commitment to the firm

The coefficient of OSJAP1 is negative and significant for males. Amongst males applying for outside jobs, each additional outside job application costs the individual 2.69 percent in earnings (although, again, the causation is not clear). The coefficient of WWOP has inc-

reased in magnitiude from the full to the personal male regression and remains positive and significant at the 1 percent level.

***Early socialization**

The coefficient of EARDL is significant and positive at 5 percent level for males, implying that married males who grew up in a household with a more traditional division of labour earn 5.67 percent more than those married males who grew up in a household with a less traditional divisional of labour.

Sample 3: A medium-sized high-tech company

TFR

***Intercept**

The extensive use of dummy variables in the model means that the intercept term can be interpreted as the base earnings of an individual who is single, male, has a high school education, a background in the humanities, is currently a member of the clerical staff, and does not feel that he is discriminated against. The base earnings of a female are the constant plus the coefficient of SEX. In fact, the coefficient of SEX is negative (-.240) and significant at the one percent level, indicating an unexplained differential in average earnings of 21.47 percent.

***Human capital**

For males and females, AGE is positively related to earnings and significant, but the negative and significant coefficient on AGE2 indicates that there are decreasing returns to maturity. The coefficient of FYSERV is positive and significant, while the coefficient of FYSERV2 is negative and significant, indicating decreasing returns to years of

service with the company. The coefficient on the linear term for full time years of labour-force experience is significant and negative, but the quadratic term is not significant.

The impacts on earnings of holding technical and college degrees cannot be distinguished from the returns to high-school education. But an individual with a professional degree earns 32 percent more than one with a high school degree. The annual rate of return for professional education over high school education is 3 percent. The impacts of the areas of concentration are interpreted with respect to the excluded category, ACON1 (humanities). None of the coefficients of the included ACON variables are significant, implying either that most relevant skills are learned on the job or that there is a problem of multicollinearity between education level and area of concentration.

*Occupational segregation

Occupations are categorized by hierarchical position in the firm where OCC1 is a member of scientific staff, engineering staff and computing staff; OCC2, management, administrative and finance personnel; and OCC3, clerical/secretarial staff. The occupational variables are not significant determinants of earnings, indicating that there is an efficient allocation of people to jobs within the firm and that our model captures all the personal attributes that contribute to vertical mobility. There are no males in OCC3, so the male observations in the data set cannot be used to determine the absolute magnitude of the coefficients for OCC1 and OCC2, although they will influence the difference between these coefficients.

*Commitment to the home

CHILD1 and CHILD2 do not have significant impacts on earnings, but

the coefficient of MARITAL is positive and significant at the 1 percent level. An individual who is married earns 28 percent more than someone who is not married.

*Commitment to the firm

The coefficient of WWOP is positive and significant at the 5 percent level. Those individuals who worked overtime without pay 11 times (the sample average) in 1982 earned 6 percent more than an individual who did no unpaid overtime work.

TPR

*Intercept

The coefficient of SEX (-.250) is more negative than in the earlier model indicating that SEX is correlated with the variables dropped out of the model. The coefficient of sex indicates a 22 percent differential of males over females.

*Human capital

The coefficients of AGE, AGE2, FTLFEX, FTLFEX2, FYSERV, and FYSERV2 change very little from TFR, so our interpretations of their impacts are not altered. The only difference to note is that the coefficient of FTLFEX is now significant. The coefficient of the professional education variable remains positive and significant at the 5 percent level. Relative to a high school degree, the premium to professional education is 33 percent and the annual rate of return is 3 percent.

*Commitment to the home

The only significant coefficient (at 1 percent) is MARITAL. A married earns 29 percent more than a single person in the sample.

*Commitment to the firm

The coefficient of WWOP is positive and still significant at the 1 percent level, indicating a correlation between the more high-paying occupations and the extent to which employees do extra unpaid work.

TFR(F) and TFR(M)

*Intercept

The male and female intercept terms are not directly comparable, as the female intercept assumes a base individual in OCC3 whereas the male intercept assumes OCC2. We can, however, adjust to a comparable base by adding the coefficient of OCC2 to the female intercept, which yields a new intercept of 7.2. Comparing intercepts, a female earns 36 percent of the income of a comparable male.

*Human capital

Amongst females, FYSERVC is an important determinant (at the 1 percent level) of earnings. Of all the coefficients of the age and experience variables, the only one that is not significant is FYSERVC2 amongst males. None of the education coefficients are significant amongst females. Amongst males, however, the coefficient of technical education is negative and significant, which implies that amongst technically-trained males earn 27 percent more relative to an equally qualified male with a high school degree.

*Occupational segregation

None of the OCC variables in either of the two equations has a significant impact on earnings.

*Commitment to the home

Amongst males, the coefficient of CHIL2 amongst males is negative

and significant, indicating that for each additional child aged 6 years and up a person earns 7 percent less. The coefficient of MARITAL is positive and significant, indicating that those males who are married earn 19 percent premium to being married.

*Commitment to the firm

The coefficient of WWOP is significant and positive at the 1 percent level amongst males, indicating that males who work overtime without pay 12 times earn 7 percent more than those males who do no unpaid overtime.

TPR(F) and TPR(M)

*Intercept

As a base pay, a female can expect 45 percent of the earnings of a male.

*Human capital

Amongst males, the coefficients of age and the experience variables are all statistically significant, but amongst females, years of service with the company is the only variable with a significant impact on earnings. Amongst males, the coefficient of the technical education variable is negative and significant. Those with technical school degrees earn 27 percent less than high school graduates.

*Commitment to the home

As in TFR(M), the coefficients of CHILD2 is negative and significant at the 5 percent level while the coefficient of MARITAL is positive and significant at the 1 percent level.

*Commitment to the firm

For males, the coefficient of WWOP remains positive at the 1 percent level, increasing in magnitude compared to TFR(M) so that there is

a 9 percent premium for working overtime without pay 11.88 times.

MFR

*Intercept

The coefficient of the SEX coefficient is $-.078$, representing an unexplained male-female earnings differential among marrieds of 7.52 percent.

*Human Capital

The coefficient of professional education is positive and significant at the 5 percent level, implying a premium of 25 percent over the reference group. The coefficient of ACON3 is positive and significant at the 5 percent level, indicating a premium of 21 percent for holding a science degree relative to the holder of a humanities degree--not a surprising finding given that this sample is an R&D company specializing in telecommunications.

*Commitment to the home

CHILD1 and CHILD2 are not significant in explaining earnings for married individuals. The returns to having an additional child 5 years and under and 6 years and over are 2 percent and 3 percent respectively. The coefficient of DLHH is negative and significant at the 1 percent level, indicating that, amongst marrieds, those individuals who do more household work earn 11 percent less in the company.

*Dominant career

Only the coefficient of SPSTRPRM is negative and significant (at the 5 percent level). An employee whose spouse is professional and is willing to relocate for the sake of that employee's job earns less--a very counterintuitive result.

*Commitment to the firm

WWOP has a highly significant impact on earnings. Those who do unpaid overtime 11 times earn 5 percent extra.

MPR

*Intercept

The coefficient of sex has decreased in magnitude to $-.058$, implying that married females can expect to earn 5.64 percent less than married males.

*Human capital

Years of service with the company and years spent full-time in the labour force are significant determinants of earnings. None of the the coefficients of the education variables are significant. Because of the correlation between occupations and a social science degree the coefficient of ACON2 is still significant at the 5 percent level. This coefficient implies that a recipient of a social science degree can expect to earn 27 percent more than someone with a humanities degree.

*Commitment to the home

The coefficient of DLHH is negative and significant, indicating that an individual who is less constrained by household duties earns more.

*Commitment to the firm

The coefficient of WWOP remains significant at the 1 percent level. CAROT is significant although negative at the 5 percent level. An individual who would require 25 percent more than he or she is currently earning to the leave the company earns 5 percent less compared to an

individual who would not leave the company with any earnings increment.

MFR(F) and MFR(M)

*Human capital

Amongst married males the coefficient of the quadratic full time years of service variable for is negative and significant at the 5 percent level indicating decreasing returns to maturity. Amongst females, we note the statistical significance of both experience variables.

None of the coefficients of the education or ACON variables are significant for males or females.

*Occupational segregation

In the male regression, the coefficient of OCC1, interpreted as the premium for being in OCC1 instead of OCC2, is negative and significant. An individual in OCC1 can expect to earn 11 percent less than a comparable individual in OCC2.

For females the OCC variables are not significant, although females in OCC1 can expect to earn 29.36 percent more than in OCC2.

*Commitment to the home

The coefficient of DLHH is negative and significant at the 1% level for males and the 5 percent level for females respectively. For males the means are 68 and 156 for females. Amongst males, the average impact of household work on earnings is a 9 percent reduction, and amongst females, a 37 percent reduction.

*Dominant career

Amongst males, those who had spouses who supported their careers earn less than those whose spouses who do support their careers--a

counterintuitive finding. Amongst males, those who have spouses who are professional and willing to relocate to support their careers, earn less. Amongst females, those whose spouses support their careers tend to earn more than those whose spouses do not.

*Commitment to the firm

The coefficient of WWOP was significant at the 1 percent level and positive in the male equation. Married males who work 12 times overtime without pay earn 7 percent more than those who do not put in any unpaid overtime.

MPR(F) and MPR(M)

*Human capital

Amongst both males and females, the coefficients of the years of full time labour force experience variables are significant at the 5 percent level. In addition, amongst females, the coefficient of FTLFEX is significant at the 5 percent level.

*Commitment to the home

Amongst both males and females, the coefficient of DLHH is negative and significant at the 1 percent level.

*Dominant career

Amongst females, none of the variables have a specific impact on earnings. Amongst males, only the coefficient of SPSTRPRM is significant at the 1 percent level. The negative sign indicates that a male employee who is married to a professional and who is willing to relocate for the sake of the employee's career earns less than a male whose spouse is not a professional and/or not willing to relocate.

*Commitment to the firm

The coefficient of WWOP has increased in magnitude from the first to the second male regression and remains significant at the 1 percent level for both males and females. Amongst females, the coefficient of CAROT is now negative and at the 5 percent level. The less a female employee needs to entice her away from the firm, the higher are her earnings--not what we had expected.

APPENDIX 8

DERIVATIVES FOR AGE AND EXPERIENCE

VARIABLES FOR FULL REGRESSIONS

TABLE A8-1	TOTAL SAMPLE 1
TABLE A8-2	MALE SAMPLE 1
TABLE A8-3	FEMALE SAMPLE 1
TABLE A8-4	TOTAL SAMPLE 2
TABLE A8-5	MALE SAMPLE 2
TABLE A8-6	FEMALE SAMPLE 2
TABLE A8-7	TOTAL SAMPLE 3
TABLE A8-8	MALE SAMPLE 3
TABLE A8-9	FEMALE SAMPLE 3
TABLE A8-10	MARRIED SAMPLE 1
TABLE A8-11	MARRIED SAMPLE 1: MALE
TABLE A8-12	MARRIED SAMPLE 1: FEMALE
TABLE A8-13	MARRIED SAMPLE 2
TABLE A8-14	MARRIED SAMPLE 2: MALE
TABLE A8-15	MARRIED SAMPLE 2: FEMALE
TABLE A8-16	MARRIED SAMPLE 3
TABLE A8-17	MARRIED SAMPLE 3: MALE
TABLE A8-18	MARRIED SAMPLE 3: FEMALE

The Derivatives

In the linear regression, the derivative with respect to one of the variables (in most cases) is simply the regression coefficient. In the case of the AGE, FYSERVC, and FTLFEX variables, the derivative is more complicated. The derivative is a function of the coefficients and the variable itself.

$$Y = B_0 + B_1 * X + B_2 * X_2$$

$$dY/dX = B_1 + 2*B_2 * X$$

We calculate and present these derivatives in the following tables for each regression and sample. It is important to remember that the variables are measured in different units, AGE is in years whereas the experience variables (FYSERVC and FTLFEX) are in months.

We also calculate a total, which is based upon the idea that these three variables are not independent, but in fact move together. More specifically, as an employee grows older s/he gains additional experience (both with the firm and in the labour force). Thus, we need to examine the overall impact of changing these three variables simultaneously. The total at the bottom of each table does this, taking into account the different units, and it represents the impact of increasing age and experience by one year. These numbers are in log-earnings.

Turning to the first total sample full regression, we see that the derivative with respect to AGE is .0117656 (evaluated at the mean.) This means that a person at the age of 31 can expect to earn 1.183 percent more (taking anti-logs) for an additional year of maturity. An additional month of service to the firm (FYSERVC) would increase log-earnings by .0001744, or earnings by 0.017 percent. To estimate the impact of an additional year of service, we can multiply this number by 12. Doing this we find that an additional year of service would increase log earnings by .0020928 (or a 0.209 percent increase in earnings.) Likewise, one can examine the impact of increasing labor force experience (FTLFEX). We find that adding an additional month of experience, we could expect an increase of .00008303 in log-earnings.

We can also add these effects together. We do this in the total row, taking into account the difference in units. We find that a one-year increase in AGE, FYSERVC and FTLFEX (i.e., working for the firm for one additional year) would increase expected log-earnings by .0148547; or increase earnings by 14.96 percent.

Table A8-1

THE DERIVATIVE: TOTAL SAMPLE 1

Total Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	30.77297	.081595	-.001135	.0117656
^b FYSERVC	69.7027	1.312E-4	3.102E-7	1.744E-4
^b FTLFEX	91.55946	-8.33E-4	5.002E-6	9.303E-5
^a TOTAL				.0148547 ^d

Total Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	30.77297	.079395	-.001098	.0118102
^b FYSERVC	69.7027	.0018740	-4.53E-6	.0012434
^b FTLFEX	91.55946	-.002005	9.060E-6	-3.46E-4
^a TOTAL				.0225890 ^d

notes:

a = measured in years
b = measured in months
c = linear + 2 * quadratic * mean
d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-2

THE DERIVATIVE: TOTAL SAMPLE 1

Male Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.68342	.067385	-8.96E-4	.0106235
^b FYSERVC	81.00503	4.809E-4	-1.43E-6	2.407E-4
^b FTLFEX	101.7035	-3.98E-4	3.210E-6	2.554E-4
^a TOTAL				.0166736 ^d

Male Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.68342	.106842	-.001428	.0163732
^b FYSERVC	81.00503	.0018749	-6.53E-6	8.095E-4
^b FTLFEX	101.7035	-.002211	9.671E-6	-2.44E-4
^a TOTAL				.0231642 ^d

notes:

- a = measured in years
- b = measured in months
- c = linear + 2 * quadratic * mean
- d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-3

THE DERIVATIVE: TOTAL SAMPLE 1

Female Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	29.71345	.065229	-10.0E-4	.0058073
^b FYSERVC	56.54971	7.192E-4	8.723E-7	8.179E-4
^b FTLFEX	79.75439	3.245E-4	-2.34E-6	-4.92E-5
^a TOTAL				.0150310 ^d

Female Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	29.71345	.06306	-.001106	-.002661
^b FYSERVC	56.54971	2.129E-5	1.698E-5	.0019415
^b FTLFEX	79.75439	-7.44E-4	2.174E-6	-3.97E-4
^a TOTAL				.0150699 ^d

notes:

a = measured in years

b = measured in months

c = linear + 2 * quadratic * mean

d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-4

THE DERIVATIVE: TOTAL SAMPLE 2

Total Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	35.89063	.02207	-2.42E-4	.0047091
^b FYSERVC	143.9176	.0021456	-3.47E-6	.0011469
^b FTLFEX	180.9578	5.209E-4	-8.87E-7	1.999E-4
^a TOTAL				.0208709 ^d

Total Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	35.89063	.024849	-2.87E-4	.0042671
^b FYSERVC	143.9176	.0021456	-3.03E-6	.0012588
^b FTLFEX	180.9578	7.117E-4	-1.06E-6	3.264E-4
^a TOTAL				.0232093 ^d

notes:

a = measured in years

b = measured in months

c = linear + 2 * quadratic * mean

d = AGE + 12 * FYSERVC + 12 * FTLFEX

THE DERIVATIVE: TOTAL SAMPLE 2

Male Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	37.61697	.021642	-2.06E-4	.0061072
^b FYSERVC	160.1616	.0015900	-2.35E-6	8.372E-4
^b FTLFEX	200.2716	.0010626	-2.15E-6	2.011E-4
^a TOTAL				.0105667 ^d

Male Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	37.61697	.020722	-1.90E-4	.0050291
^b FYSERVC	160.1616	.0016748	-2.25E-6	9.526E-4
^b FTLFEX	200.2716	.0012592	-2.48E-6	2.661E-4
^a TOTAL				.0204535 ^d

notes:

a = measured in years

b = measured in months

c = linear + 2 * quadratic * mean

d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-6

TRE DERIVATIVE: TOTAL SAMPLE 2

Female Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.57885	.02	-2.60E-4	.0031966
^b FYSERVC	103.0316	.0037856	-7.82E-6	.0021735
^b FTLFEX	132.4045	-.001257	3.564E-6	-3.14E-4
^a TOTAL				.0255163 ^d

Female Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.57885	.030965	-4.10E-4	.0050774
^b FYSERVC	103.0316	.0038866	-7.44E-6	.0023517
^b FTLFEX	132.4045	-.001471	4.389E-6	-3.09E-4
^a TOTAL				.0295921 ^d

notes:

- a = measured in years
- b = measured in months
- c = linear + 2 * quadratic * mean
- d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-7

THE DERIVATIVE: TOTAL SAMPLE 3

Total Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at mean)
^a AGE	33.47451	.061072	-7.84E-4	.0005502
^b FYSERVC	74.72549	.0046118	-8.49E-6	.0033436
^b FTLFEX	126.0431	.0022978	-4.17E-6	.0012469
^a TOTAL				.0636441 ^d

Total Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	33.47451	.057543	-7.27E-4	.0008740
^b FYSERVC	74.72549	.0048830	-9.19E-6	.0035091
^b FTLFEX	126.0431	.0025445	-4.75E-6	.0013473
^a TOTAL				.0671514 ^d

notes:

- a = measured in years
- b = measured in months
- c = linear + 2 * quadratic * mean
- d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-8

THE DERIVATIVE: TOTAL SAMPLE 3

Male Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	34.07853	.002085	-9.34E-4	.0184540
^b FYSERVC	81.63351	.0031532	-5.69E-6	.0022247
^b FTLFEX	132.5812	.0032334	-7.08E-6	.0013556
^a TOTAL				.0614179 ^d

Male Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	34.07853	.073615	-8.18E-4	.0178328
^b FYSERVC	81.63351	.0035424	-6.55E-6	.0024733
^b FTLFEX	132.5812	.0035925	-8.00E-6	.0014712
^a TOTAL				.0651660 ^d

notes:

- a = measured in years
- b = measured in months
- c = linear + 2 * quadratic * mean
- d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-9

THE DERIVATIVE: TOTAL SAMPLE 3

Female Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.67180	.069894	-.001097	3.832E-4
^b FYSERVC	54.10933	.030408	-1.56E-4	.0135100
^b FTLFEX	106.5313	-.006233	2.660E-5	-5.66E-4
^a TOTAL				.1557145 ^d

Female Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.67183	.054376	-8.39E-4	.0012061
^b FYSERVC	54.10933	.029206	-1.51E-4	.0129033
^b FTLFEX	106.5313	-.005760	2.531E-5	-3.66E-4
^a TOTAL				.1516556 ^d

notes:

a = measured in years

b = measured in months

c = linear + 2 * quadratic * mean

d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-10

THE DERIVATIVE: MARRIED SAMPLE 1

Total Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.49225	.059248	-7.73E-4	.0105754
^b FYSERVC	74.65116	-3.74E-4	1.966E-6	-8.07E-5
^b FTLFEX	96.21705	-6.01E-4	3.936E-6	1.561E-4
^a TOTAL				.0114802 ^d

Total Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.49225	.08518	-.001200	.0095740
^b FYSERVC	74.65116	.0017457	-5.31E-6	9.529E-4
^b FTLFEX	96.21705	-.002042	1.019E-5	-8.11E-5
^a TOTAL				.0200350 ^d

notes:

a = measured in years

b = measured in months

c = linear + 2 * quadratic * mean

d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-11

THE DERIVATIVE: MARRIED SAMPLE 1

Male Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	32.62162	.05894	-7.65E-4	.0090553
^b FYSERVC	87.39865	3.516E-4	-1.60E-6	7.234E-5
^b FTLFEX	107.8716	-1.45E-4	2.432E-6	3.905E-4
^a TOTAL				^d .0146089

Male Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	32.62162	.108673	-.001501	.0109207
^b FYSERVC	87.39865	.0015941	-6.03E-6	3.912E-4
^b FTLFEX	107.8716	-.001827	1.009E-5	3.504E-4
^a TOTAL				^d .0198196

notes:

- a = measured in years
- b = measured in months
- c = linear + 2 * quadratic * mean
- d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-12

THE DERIVATIVE: MARRIED SAMPLE 1

Female Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	29.97273	.132573	-.002078	.0079895
^b FYSERVC	57.5	.0011188	-6.18E-6	4.079E-4
^b FTLFEX	80.53636	9.965E-5	-4.99E-7	1.945E-5
^a TOTAL				.0131182 ^d

Female Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	29.97273	.124325	-.002054	.0011874
^b FYSERVC	57.5	4.933E-4	5.771E-6	.0011569
^b FTLFEX	80.53636	-1.84E-4	-1.31E-6	-3.94E-4
^a TOTAL				.0103369 ^d

notes:

a = measured in years
b = measured in months
c = linear + 2 * quadratic * mean
d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-13

THE DERIVATIVE: MARRIED SAMPLE 2

Total Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
AGE ^a	36.36542	.018873	-2.07E-4	.0036157
FYSERV ^b	151.3099	.0021915	-3.52E-6	.0011251
FTLFEX ^b	189.5036	3.665E-4	-6.36E-7	1.255E-4
TOTAL ^a				.0188229 ^d

Total Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
AGE ^a	36.36542	.021366	-2.49E-4	.0032674
FYSERV ^b	151.3099	.0022043	-3.09E-6	.0012695
FTLFEX ^b	189.5036	5.557E-4	-9.10E-7	2.109E-4
TOTAL ^a				.0210319 ^d

notes:

a = measured in years
b = measured in months
c = linear + 2 * quadratic * mean
d = AGE + 12 * FYSERV + 12 * FTLFEX

Table A8-14

THE DERIVATIVE: MARRIED SAMPLE 2

Male Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	38.21773	.021263	-2.00E-4	.0059686
^b FYSERVC	166.3597	.0014019	-1.97E-6	7.461E-4
^b FTLFEX	207.2831	6.738E-4	-1.48E-6	6.166E-5
^a TOTAL				.0156613 ^d

Male Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	38.21773	.021525	-2.10E-4	.0055010
^b FYSERVC	166.3597	.0015406	-1.87E-6	9.177E-4
^b FTLFEX	207.2831	8.385E-4	-1.79E-6	9.816E-5
^a TOTAL				.0176915 ^d

notes:

a = measured in years
b = measured in months
c = linear + 2 * quadratic * mean
d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-15

THE DERIVATIVE: MARRIED SAMPLE 2

Female Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.56812	.023783	-3.48E-4	.0017909
^b FYSERVC	100.6203	.0000698	-1.46E-5	.0031404
^b FTLFEX	129.6203	-.002167	5.174E-6	-5.67E-4
^a TOTAL				.0326743 ^d

Female Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	31.56812	.027898	-4.01E-4	.0025862
^b FYSERVC	100.6203	.0056405	-1.21E-5	.0032069
^b FTLFEX	129.6203	-.001999	5.925E-6	-4.63E-4
^a TOTAL				.0355133 ^d

notes:

- a = measured in years
- b = measured in months
- c = linear + 2 * quadratic * mean
- d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-16

THE DERIVATIVE: MARRIED SAMPLE 3

Total Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	35.25683	.028829	-3.64E-4	.0031545
^b FYSERVC	87.15847	.0013322	-4.66E-7	.0012509
^b FTLFEX	147.0492	.0029097	-5.33E-6	.0013413
^a TOTAL				.0342708 ^d

Total Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	35.25003	.027005	-3.01E-4	.0057863
^b FYSERVC	87.15847	.0019170	-2.08E-6	.0015536
^b FTLFEX	147.0492	.0030453	-6.05E-6	.0012654
^a TOTAL				.0396142 ^d

notes:

a = measured in years
b = measured in months
c = linear + 2 * quadratic * mean
d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-17

THE DERIVATIVE: MARRIED SAMPLE 3

Male Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	36.19716	.039902	-5.41E-4	7.078E-4
^b FYSERVC	96.16901	8.050E-4	8.475E-7	9.660E-4
^b FTLFEX	157.7324	.0024342	-4.99E-6	8.588E-4
^a TOTAL				^d .0225238

Male Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	36.19716	.033958	-3.30E-4	.0100506
^b FYSERVC	96.16901	.0015539	-1.46E-6	.0012727
^b FTLFEX	157.7324	.0026430	-5.98E-6	7.559E-4
^a TOTAL				^d .0343944

notes:

a = measured in years
b = measured in months
c = linear + 2 * quadratic * mean
d = AGE + 12 * FYSERVC + 12 * FTLFEX

Table A8-18

THE DERIVATIVE: MARRIED SAMPLE 3

Female Sample: Full Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	32	-.220089	.0032819	-.010045
^b FYSERVC	55.95122	.0013176	4.748E-5	.0066312
^b FTLFEX	110.0488	.025934	-7.73E-5	.0089256
^a TOTAL				^d .1766366

Female Sample: Personal Regression

	Means	Linear Coefficient	Quadratic Coefficient	Derivative ^c (at Mean)
^a AGE	32	-.242598	.0032477	-.034747
^b FYSERVC	55.95122	-.004584	6.524E-5	.0027170
^b FTLFEX	110.0488	.022805	-6.41E-5	.0087044
^a TOTAL				^d .1023104

notes:

a = measured in years
b = measured in months
c = linear + 2 * quadratic * mean
d = AGE + 12 * FYSERVC + 12 * FTLFEX

APPENDIX 9

DECOMPOSITION BY FEMALE AND MALE WEIGHTS

FEMALE

TABLE A9-1	SAMPLE 1	TOTAL FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-2	SAMPLE 1	TOTAL FULL REGRESSION (BY VARIABLE)
TABLE A9-3	SAMPLE 1	TOTAL PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-4	SAMPLE 1	TOTAL PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-5	SAMPLE 1	MARRIED FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-6	SAMPLE 1	MARRIED FULL REGRESSION (BY VARIABLE)
TABLE A9-7	SAMPLE 1	MARRIED PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-8	SAMPLE 1	MARRIED PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-9	SAMPLE 2	TOTAL FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-10	SAMPLE 2	TOTAL FULL REGRESSION (BY VARIABLE)
TABLE A9-11	SAMPLE 2	TOTAL PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-12	SAMPLE 2	TOTAL PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-13	SAMPLE 2	MARRIED FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-14	SAMPLE 2	MARRIED FULL REGRESSION (BY VARIABLE)
TABLE A9-15	SAMPLE 2	MARRIED PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-16	SAMPLE 2	MARRIED PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-17	SAMPLE 3	TOTAL FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-18	SAMPLE 3	TOTAL FULL REGRESSION (BY VARIABLE)
TABLE A9-19	SAMPLE 3	TOTAL PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-20	SAMPLE 3	TOTAL PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-21	SAMPLE 3	MARRIED FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-22	SAMPLE 3	MARRIED FULL REGRESSION (BY VARIABLE)
TABLE A9-23	SAMPLE 3	MARRIED PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-24	SAMPLE 3	MARRIED PERSONAL REGRESSION (BY VARIABLE)

APPENDIX 9

DECOMPOSITION BY FEMALE AND MALE WEIGHTS

MALE

TABLE A9-25	SAMPLE 1	TOTAL FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-26	SAMPLE 1	TOTAL FULL REGRESSION (BY VARIABLE)
TABLE A9-27	SAMPLE 1	TOTAL PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-28	SAMPLE 1	TOTAL PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-29	SAMPLE 2	TOTAL FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-30	SAMPLE 2	TOTAL FULL REGRESSION (BY VARIABLE)
TABLE A9-31	SAMPLE 2	TOTAL PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-32	SAMPLE 2	TOTAL PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-33	SAMPLE 3	TOTAL FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-34	SAMPLE 3	TOTAL FULL REGRESSION (BY VARIABLE)
TABLE A9-35	SAMPLE 3	TOTAL PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-36	SAMPLE 3	TOTAL PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-37	SAMPLE 1	MARRIED FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-38	SAMPLE 1	MARRIED FULL REGRESSION (BY VARIABLE)
TABLE A9-39	SAMPLE 1	MARRIED PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-40	SAMPLE 1	MARRIED PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-41	SAMPLE 2	MARRIED FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-42	SAMPLE 2	MARRIED FULL REGRESSION (BY VARIABLE)
TABLE A9-43	SAMPLE 2	MARRIED PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-44	SAMPLE 2	MARRIED PERSONAL REGRESSION (BY VARIABLE)
TABLE A9-45	SAMPLE 3	MARRIED FULL REGRESSION (BY HYPOTHESIS)
TABLE A9-46	SAMPLE 3	MARRIED FULL REGRESSION (BY VARIABLE)
TABLE A9-47	SAMPLE 3	MARRIED PERSONAL REGRESSION (BY HYPOTHESIS)
TABLE A9-48	SAMPLE 3	MARRIED PERSONAL REGRESSION (BY VARIABLE)

TOTAL FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total
Intercept	-.041162	0	0	-.041162
Human Capital	-.066542	-7.35E-4	-.025677	-.092953
Occupational Segregation	-.061410	-.065942	-.046162	-.175514
Port of Entry	.0276313	-.045330	.0312385	.0135315
Commitment to the Home	.0601925	-.002638	-.049185	.0083692
Commitment to the Firm	.0343379	-.002587	.0051004	.0368517
Informal Network	-.007673	-.001783	-.008034	-.016209
Perceived Discrimination	-.014908	-.006901	.0059309	-.015969
Early Socialization	.1085010	.0032166	-.031561	.0802357
	<u>.0390405</u>	<u>-.122798</u>	<u>-.121149</u>	<u>-.204953</u>

SAMPLE 1

Table A9-2

Female

TOTAL FULL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.041162	0	0	-.041162
AGE	-.064062	-.126499	-.004247	-.196808
AGE2	-.093735	.1409651	-.014683	.0325470
FYSERV	.0134740	-.017588	.0058269	.0017124
FYSERV2	.0094120	-.005121	.0135361	.0178267
FTLFEX	.0575904	-.007123	.0158494	.0663160
FTLFEX2	-.049657	.0166785	-.039531	-.072509
EDTS2	.0124324	-3.93E-4	-.003393	.0086465
EDCS2	.0489925	-6.68E-4	.0015264	.0490505
EDPS2	0	0	-.001460	-.001460
ACON2	-9.76E-4	-6.95E-4	1.932E-4	-.001478
ACON3	-1.34E-5	.0017101	-4.87E-6	.0016919
ACON4	0	0	7.106E-4	7.106E-4
OCC1	-.006628	-.006693	-.021850	-.035171
OCC2	-.065068	-.009334	-.040658	-.115061
SDN1	.0028104	-.038904	.0136114	-.022492
SDN2	.0020174	-.011132	9.293E-4	-.007386
SDN4	.0046592	1.207E-4	-1.94E-4	.0045863
FDN1	.0050631	-.013656	.0099227	.0013298
FDN2	.0202769	-.013660	.0097084	.0163252
FDN4	-7.52E-4	-.003843	2.689E-4	-.004325
FDN5	.0030430	-.014180	.0113386	2.019E-4
MARITAL	-.013175	9.689E-5	-.001986	-.015063
CHILD1	.0073790	.0011453	.0030632	.0116075
CHILD2	.0124963	-2.16E-4	7.086E-4	.0129885
LFAM	.0534917	-.003664	-.050991	-.001164
TOTABFC	.0010422	.0031759	-7.07E-4	.0035115
OSJAP1	.0108577	-.001941	.0046923	.0136091
WNOF	-.006412	.0012419	-.002912	-.008082
CAROT	.0288499	-.005063	.0040269	.0278133
INFORM	-.007673	-.001783	-.008834	-.018289
PERCD	-.005190	-.005190	.0051698	-.005190
MOVS1	-.009719	-.001802	7.411E-4	-.010779
EARSOC	.0761585	.0032543	-.031665	.0477480
EARDL	.0324225	-3.76E-5	1.039E-4	.0324038
	.0390485	-.122798	-.121149	-.204890

SAMPLE 1

Table A9-3
Female

TOTAL PERSONAL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.879594	0	0	.879594
Human Capital	-.903162	-.083343	-6.09E-6	-.907011
Commitment to the Home	.0597928	.0002919	-.041907	.0201841
Commitment to the Firm	.0335523	-1.27E-4	.0019909	.0354103
Informal Network	-.017351	-.009744	-.019977	-.047073
Perceived Discrimination	-.036129	-.016430	.0169122	-.037697
Early Socialization	-.146188	-.023075	.0949402	-.074314
	-.129785	-.126977	.0518813	-.204351

SAMPLE 1

Table A9-4
Female

TOTAL PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.879694	0	0	.879694
AGE	-1.30091	-.124226	-.000249	-1.51139
AGE2	.2895964	.1559097	.0453037	.4908097
FYSERV	-.104820	-5.21E-4	-.045333	-.150671
FYSERV2	.0961528	-.059678	.1332849	.1347598
FTLFEX	.1169700	.0163300	.0321912	.1654912
FTLFEX2	-.067031	-.015473	-.053363	-.135867
EDTS2	.0441341	-.004894	-.012044	.0271960
EDCS2	.0786226	-.001235	.0024496	.0798369
EDPS2	0	0	-.005101	-.005101
ACON2	-.005626	-.002542	.0011140	-.007055
ACON3	-.050246	-.007513	-.018241	-.076000
ACON4	0	0	9.176E-4	9.176E-4
MARITAL	.0069015	-2.78E-4	.0010401	.0076637
CHILD1	-9.15E-4	.0075831	-3.82E-4	.0062857
CHILD2	.0085673	5.969E-5	4.858E-4	.0091128
LFAM	.0452451	9.270E-4	-.043130	.0030420
TOTAEFC	9.893E-4	.0053724	-6.71E-4	.0056911
OSJAP1	.0091340	.0024440	.0039474	.0155254
WWOP	-.014482	-.001467	-.006578	-.022526
CAROT	.0379107	-.006476	.0052917	.0367260
INFORM	-.017351	-.009744	-.019977	-.047073
PERCD	-.015326	-.015326	.0153258	-.015326
MOTS1	-.020804	-.003154	.0015864	-.022371
EARSOC	-.227736	-.022768	.0946868	-.155817
EARDL	.0815481	-3.07E-4	2.614E-4	.0815026
	-.129785	-.126977	.0518613	-.204881

SAMPLE 1

Table A9-5

Female

MARRIED FULL REGRESSION
Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-1.23402			-1.23402
Human Capital	1.106301	.0425010	-.073725	1.077157
Occupational Segregation	-.067933	-.000565	-.079499	-.227990
Port of Entry	.0682449	-.047805	.0317490	.0521095
Commitment to the Home	.0075588	-.014371	-.006898	-.013711
Commitment to the Firm	.0562565	.0075572	-.012452	.0513622
Informal Network	-.008633	.0014517	-.013121	-.020303
Perceived Discrimination	-.019409	-.013311	.0129799	-.019820
Early Socialization	.0024904	.0072017	-.005804	.0038886
Dominant Career	.0157834	-.012549	-9.10E-4	.0023239
	.0085633	-.109390	-.147679	-.249066

SAMPLE 1

Table A9-6
Female

MARRIED FULL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-1.23402	0	0	-1.23402
AGE	2.206982	-.351172	.1950450	2.050856
AGE2	-1.19439	.3677922	-.245124	-1.05172
FYSERV	.0441145	-.033451	.0229335	.0336017
FYSERV2	-.017926	.0435305	-.032280	-.005675
FILFEX	.0197199	-.002729	.0066932	.0236339
FILFEX2	-.025331	.0043362	-.025899	-.046894
EDIS2	.0122171	-8.40E-4	-.005316	.0060607
EDCS2	.0408585	-3.07E-4	.0032471	.0437991
EDPS2	0	0	-4.77E-4	-4.77E-4
ACON2	.0067158	4.944E-4	-.002158	.0050518
ACON3	.0153401	-.005073	.0086262	.0188933
ACON4	0	0	9.785E-4	9.785E-4
OCC1	-.009238	-.006147	-.025094	-.040479
OCC2	-.071749	-.004528	-.005256	-.162533
SDN1	.0043336	-.055091	.0281973	-.022510
SDN2	.0067126	-.015332	.0041565	-.004463
SDN4	.0019575	5.321E-4	-5.03E-4	.0019670
FDN1	.0087453	-.016827	.0172543	.0091724
FDN2	.0315565	-.029734	.0313433	.0331660
FDN4	.0279430	-.001324	-.013468	.0131510
FDN5	0	0	-.003300	-.003300
CHILD1	-.002891	.0033793	-8.59E-4	-3.70E-4
CHILD2	.0050277	6.627E-4	.0019327	.0084230
LFAM	.0361227	-.011226	-.034590	-.009693
DLHM	-.031501	-.007188	.0260185	-.012670
TOTABFC	.0204472	.0122402	-.014101	.0185866
OSJAP1	.0149030	-.001901	.0032224	.0162254
W:OP	-.009357	.0023811	-.006235	-.013211
CAROT	.0302630	-.005163	.0046610	.0297614
INFORM	-.008633	.0014517	-.013121	-.020303
PERCD	-.012447	-.012447	.0124467	-.012447
MOTS1	-.007042	-8.64E-4	5.332E-4	-.007373
EARSOC	.0185121	.0084722	-.007562	.0194225
EARDL	.0639783	-.001270	.0017576	.0644655
UMOV	-.002220	5.528E-4	.0020401	3.728E-4
SPSCAR2	.0190697	-6.42E-4	.0044146	.0228419
SPMOB	-5.33E-4	.0063716	-.006273	-4.35E-4
SPSTRPRM	.0017741	-.003656	.0049188	.0029365
IMPCARTF	-.002307	-.015175	-.005911	-.023393
	<u>.0085633</u>	<u>-.109690</u>	<u>-.147679</u>	<u>-.249006</u>

MARRIED PERSONAL REGRESSION
Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.185424	0	0	-.185424
Human Capital	.1609235	-.016236	-.089515	.0531721
Commitment to the Home	.0748230	-.019503	-.061037	-.005716
Commitment to the Firm	.0565080	-.002804	-.004171	.0495336
Informal Network	-.009148	-.022772	-.013903	-.045823
Perceived Discrimination	-.063119	-.030765	.0299802	-.063904
Early Socialization	-.223336	-.021091	.1540957	-.089322
Dominant Career	.0686715	-.035231	-.014435	.0390064
	-.100102	-.153401	.0015254	-.243978

SAMPLE 1

Table A9-8

Female

MARRIED PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.185424	0	0	-.185424
AGE	.4631386	-.329324	.0409307	.1747455
AGE2	-.502019	.3832916	-.103152	-.222430
FYSEKVC	-.063297	-.014749	-.032913	-.110950
FYSEKVC2	.0494793	-.040637	.0090984	.0979406
FTLFEX	.1323523	.0050282	.0449224	.1823028
FTLFEX2	-.095377	.0113548	-.099049	-.104571
EDTS2	.0715250	-.005094	-.031123	.0353000
EDCS2	.1132155	2.354E-4	.0089975	.1224404
EDPS2	0	0	-.002053	-.002053
ACON2	.0035710	-4.22E-5	-.001143	.0023012
ACON3	-.009566	-.020301	-.005379	-.043245
ACON4	0	0	.0021531	.0021531
CHILD1	-.016655	.0101719	-.004951	-.011435
CHILD2	.0156682	-.031659	.0055279	.0205375
LFAH	-.014225	.0017724	.0130216	.0011609
DLH1	.0090349	-.029768	-.075235	-.015938
TOTABFC	.0138674	.0071764	-.009563	.0114805
OSJAP1	.0144095	-4.67E-5	.0031156	.0174703
WVOP	-.004044	-.004813	-.002695	-.011552
CAROT	.0322755	-.005121	.0049718	.0321267
INFORM	-.009148	-.022772	-.013903	-.045823
PERCD	-.027266	-.027266	.0272657	-.027266
MOTS1	-.035854	-.003499	.0027145	-.036639
EARSOC	-.368715	-.017139	.1506118	-.235242
EAKDL	.1453784	-.003952	.0039939	.1454205
UMOV	.0430105	-.019793	-.039523	-.016305
SPSCAR2	.0350929	.0018978	.0083091	.0460990
SPHOU	-9.44E-4	.0153506	-.011096	.0033115
SPSTRPRM	.0027752	-.004520	.0075381	.0057935
IMPCATF	.0079365	-.020167	.0203360	1.069E-4
	-.100102	-.150401	.0015254	-.248970

TOTAL FULL REGRESSION

Decomposition of Impact (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.3062	0	0	.3062
Human Capital	-.250547	-.107161	-.035013	-.392721
Occupational Segregation	.0535702	-.139157	.0948338	.009247
Commitment to the Home	-.019909	-.021444	1.991E-4	-.041155
Commitment to the Firm	-.015019	-.014925	.0065237	-.023415
Informal Network	.0044428	-.001551	.0015153	.0044073
Perceived Discrimination	4.474E-4	-.006220	-.009291	-.015064
Early Socialization	-.272816	-.037763	.0605905	-.249989
	<u>-.193632</u>	<u>-.328222</u>	<u>.1105635</u>	<u>-.403290</u>

TOTAL FULL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
	.3062	0	0	.3062
AGE	-.051852	-.120762	-.009915	-.182529
AGE2	-.063533	.1167477	-.026139	.0270758
FYSERV	.2262445	-.216084	.1252798	.1354401
FYSERV2	-.093977	.1627786	-.113801	-.045000
FTLFEX	-.307176	.0853368	-.157450	-.379290
FTLFEX2	.1456600	-.102900	.1649899	.2077500
EDTS2	-.023945	-.004549	-.011041	-.039534
EDCS2	-.009854	-.001337	-.003185	-.014377
EDPS2	-.007033	-.017837	-.009299	-.034169
ACON2	-.004028	7.358E-4	-4.23E-4	-.003715
ACON3	-.001329	-.003460	-.001014	-.005803
ACON4	-.059724	-.005831	.0061846	-.059370
OCC1	.0191009	-.046334	.0233960	-.003837
OCC3	.0025045	-.018332	.0138625	-.001965
OCC4	.0017249	-.003695	.0033058	.0013359
OCC5	.0146768	.0077545	-.009339	.0130923
OCC6	.0010863	-.002094	.0049632	.0039551
OCC7	.0050737	-.001646	.0019902	.0054173
OCC8	.0021765	-2.53E-4	1.683E-4	.0020920
OCC9	.0020574	-.072680	.0604136	-.010209
OCC10	.0051692	-.001876	.0024389	.0057325
OCC11	0	0	-.006368	-.006368
MARITAL	-.030531	.0068315	-.010572	-.034271
CHILD1	.0052729	-.008403	.0042293	.0010997
CHILD2	.0040876	-.017376	.0077058	-.005583
LFAM	.0012600	-.002497	-.001164	-.002401
TOTABFC	-.006593	-.008128	.0032319	-.011490
OSJAP1	.0080643	-.001452	.0035780	.0101898
WWOP	7.742E-4	-.006902	.0012343	-.004393
CAROT	-.017264	.0015578	-.001515	-.017222
INFORM	.0044428	-.001551	.0015158	.0044073
PERCD	.0132402	-.003952	-.012709	-.003420
MOTSD	-.012793	-.002268	.0034174	-.011643
MOTS1	-.180780	-.039465	.0633019	-.156943
EARSOC	-.092036	.0017017	-.002711	-.093046
EARDL	-.193632	-.320222	.1185635	-.403290

SAMPLE 2

Table A9-11
Female

TOTAL PERSONAL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * X_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.197544	0	0	.197544
Human Capital	-.065547	-.156759	-.001390	-.223695
Commitment to the Home	-.016153	-.024743	.0014633	-.039431
Commitment to the Firm	-.022987	-.020450	.0095935	-.033844
Informal Network	.0015961	-.001145	5.446E-4	9.942E-4
Perceived Discrimination	.0080796	-.004565	-.019603	-.016088
Early Socialization	-.306855	-.053854	.0719194	-.288790
	-.204323	-.261515	.0625283	-.403310

SAMPLE 2

Table A9-12

Female

TOTAL PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.197544	0	0	.197544
AGE	.3234522	-.186970	.0618485	.1983402
AGE2	-.226045	.1798642	-.092999	-.139180
FYSERV	.2279389	-.221845	.1262457	.1323399
FYSERV2	-.099224	.1549785	-.108345	-.042291
FTLFEX	-.361504	.0998373	-.185297	-.446964
FTLFEX2	.1750625	-.126712	.1982942	.2456443
EDTS2	-.024404	-.004787	-.011253	-.040444
EDCS2	-.005823	-.003505	-.001082	-.011211
EDPS2	-.003217	-.027412	-.004254	-.034383
ACON3	3.789E-4	-3.43E-6	3.893E-5	4.063E-4
ACON3	.0085346	-.012298	.0365163	.0027532
ACON 4	-.090748	-.007906	.0093973	-.089257
MARITAL	-.027160	.0050069	-.009405	-.030958
CHILD1	.0075284	-.009515	.0060385	.0040520
CHILD2	.0020631	-.018242	.0053975	-.009901
LFAM	6.152E-4	-.002591	-5.68E-4	-.002544
TOTABFC	-.013555	-.011958	.0065442	-.018369
OSJAP1	.0113598	-.002575	.0050402	.0138247
WWOP	-1.76E-4	-.007514	-2.81E-4	-.007972
CAROT	-.020616	.0015972	-.001810	-.020828
INFORM	.0015961	-.001146	5.446E-4	9.942E-4
PERCD	.0251824	-.001174	-.024172	-1.63E-4
MOTS1	-.017103	-.003391	.0045687	-.015925
EARSOC	-.213264	-.055217	.0746767	-.193805
EARDL	-.093591	.0013631	-.002757	-.094985
	-.204323	-.261515	.0625283	-.403310

SAMPLE 2

Table A9-13
Female

MARRIED FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.236671	0	0	.236671
Human Capital	-.065505	-.093069	-.043163	-.201737
Occupational Segregation	.0590671	-.148190	.1035061	.0138732
• Commitment to the Home	.0078951	-.071036	.0136551	-.049530
Commitment to the Firm	-.030730	-.021963	.0123347	-.040359
Informal Network	.0050306	-.002412	.0019503	.0045694
Perceived Discrimination	-.003969	-.012612	-9.80E-4	-.022562
Early Socialization	-.377672	-.071897	.0836426	-.365926
Dominant Career	.0355812	.0032173	-.043561	-.004763
	<u>-.130611</u>	<u>-.418010</u>	<u>.1273871</u>	<u>-.420242</u>

SAMPLE 2

Table A9-14
Female

MARRIED FULL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.235671	0	0	.235671
AGE	.0795517	-.156148	.0167570	-.061839
AGE2	-.156704	.1707971	-.072683	-.058670
FYSERV	.4696848	-.399026	.3068647	.3775231
FYSERV2	-.195768	.3555023	-.307352	-.147620
FTLFEX	-.369250	.1603125	-.220039	-.420577
FTLFEX2	.1794530	-.206708	.2561447	.2208990
EDTS2	-.027015	-.003891	-.014760	-.045665
EDCS2	-.011549	8.145E-4	-.006123	-.016858
EDPS2	-.009652	-.012591	-.009771	-.032014
ACQ12	.0022777	-5.91E-4	9.191E-4	.0026055
ACQ13	-5.55E-4	-.004554	-3.33E-4	-.005443
ACQ14	-.026909	-.002986	.0026239	-.027072
OCC1	.0209530	-.053768	.0293334	-.003481
OCC3	.0051218	-.022261	.0181953	.0010565
OCC4	.0029490	-.004694	.0040556	.0023101
OCC5	.0146192	.0102778	-.010062	.0148353
OCC6	.0018809	-.002323	.0046357	.0043992
OCC7	.0030976	-.003755	.0045664	.0039091
OCC8	.0032549	-3.91E-4	2.835E-4	.0031527
OCC9	.0034257	-.008970	.0013156	-.004229
OCC10	.0037789	-.002312	.0024854	.0039525
OCC11	0	0	-.006506	-.006506
CHILD1	.0113812	-.000241	.0052609	.0064010
CHILD2	.0068347	-.023552	.0100557	-.006662
LFAM	.0166092	-.005748	-.016128	-.005266
DLHM	-.026930	-.033545	.0144661	-.046009
TOTABFC	-.016521	-.014433	.0091560	-.021843
OSJAP1	.0072031	-.001260	.0036105	.0095538
WVOP	7.730E-4	-.009604	.0025220	-.006309
CAROT	-.022185	.0033834	-.002954	-.021756
INFORM	.0050300	-.002412	.0019508	.0045694
PERCD	.0060606	-.009031	-.005746	-.008717
MOYS1	-.015030	-.003581	.0047663	-.013844
EARSOC	-.245549	-.074568	.0675116	-.232606
EARDL	-.132122	.0026714	-.003869	-.133320
UMOV	.0264406	.0145945	-.015101	.0259330
SPSCAR2	.0239395	-2.51E-4	-.002022	.0216670
SPJOB	-.010877	.0058523	-.021563	-.026587
SPSTRPM	.0014400	-.002895	.0034767	.0020217
IMPCATF	-.005362	-.014084	-.006352	-.027798
	-.138611	-.418018	.1273871	-.429242

SAMPLE 2

Table A9-15
Female

MARRIED PERSONAL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.251392	0	0	.251392
Human Capital	-.035444	-.158203	-.003056	-.196702
Commitment to the Home	.0072998	-.076666	.0158525	-.053513
Commitment to the Firm	-.031716	-.027936	.0157223	-.043929
Informal Network	.0025836	-.001943	.0010019	.0016421
Perceived Discrimination	-.001398	-.010090	-.009585	-.021173
Early Socialization	-.385943	-.079912	.0870893	-.378766
Dominant Career	.0600990	-.022287	-.026810	.0118012
	-.132326	-.377037	.0601153	-.429249

SAMPLE 2

Table A9-16

Female

MARRIED PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.251392	0	0	.251392
AGE	.2011835	-.185511	.0423780	.0580507
AGE2	-.202303	.1965794	-.093705	-.099500
FYSERV	.4125289	-.370803	.2695223	.3112480
FYSERV2	-.158935	.2953349	-.249613	-.113263
FTLFEX	-.367780	.1552387	-.220358	-.432900
FTLFEX2	.1808825	-.198378	.2581707	.2406755
EDTS2	-.033092	-.002013	-.010080	-.053185
EDCS2	-.009001	-.001814	-.004772	-.015586
EDPS2	-.003722	-.022865	-.003768	-.030355
ACON2	.0038540	-.002195	.0015552	.0032141
ACON3	.0134720	-.015225	.0030882	.0063349
ACON4	-.072400	-.006551	.0076064	-.071425
CHILD1	.0149263	-.008967	.0068995	.0128591
CHILD2	.0073625	-.026230	.0108323	-.008035
LEAF	.0220917	-.003857	-.022228	-.003193
DLPH	-.037881	-.037613	.0203486	-.055145
TOTALFC	-.025457	-.019696	.0141005	-.031044
OSJ4P1	.0110239	-.002710	.0055256	.0138394
WVOP	-5.15E-4	-.008190	-.001679	-.010384
CAROT	-.016768	.0026604	-.002233	-.016340
INFOW	.0025836	-.001943	.0010019	.0016421
PERCD	.0160497	-.005625	-.015218	-.004793
MOTS1	-.017447	-.004465	.0055330	-.016380
EARSOC	-.255114	-.082173	.0909204	-.246357
EARDL	-.130829	.0022615	-.003831	-.132399
UMOV	.0229903	.0122299	-.013131	.0220895
SPSCAR2	.0434506	.0019628	-.003669	.0417441
SPMOE	-.005736	-.006283	-.011371	-.023390
SPSTRFPM	.0012357	-.002686	.0029035	.0015317
IMPCARTF	-.001042	-.027509	-.001023	-.030174
	-.132326	-.377037	.0001153	-.429246

SAMPLE 3

Table A9-17
Female

TOTAL FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-1.01291	0	0	-1.01291
Human Capital	.5509990	.1533541	-.393702	.3105700
Occupational Segregation	-.020094	-.064003	.0370191	.0027223
Commitment to the Home	-.635755	-.009761	.7274069	.0028906
Commitment to the Firm	-.202512	.0029556	-.021430	-.226906
Informal Network	.0131268	-.007269	.0030463	.0130040
Perceived Discrimination	-.054674	-.048639	.0367138	-.066599
Early Socialization	.3913873	.0229490	-.020291	.3940452
	<u>-.576427</u>	<u>.0497072</u>	<u>.4242833</u>	<u>-.502357</u>

SAMPLE 3

Table A9-18

Female

TOTAL FULL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-1.01291	0	0	-1.01291
AGE	-.386112	-.168211	-.029340	-.583662
AGE2	-.175924	.1849579	-.027592	-.018549
FYSLHVC	1.474743	-.836954	.7501661	1.387955
FYSERV2	-.677944	1.230077	-1.23346	-.631327
FTLFEX	-1.00949	.1623748	-.245604	-1.09272
FTLFEX2	.5902772	-.328685	.4164492	.6858413
EDPS2	.1375463	.0224294	-.045369	.1146071
EDCS2	.1803313	-.040061	.0546554	.1940255
EDPS2	.1626439	-.142508	.1604543	.1805303
ACON2	.0011230	.0302408	-7.84E-4	.0305794
ACON3	.0078168	-.147603	.0115423	-.120240
ACON4	.236938	.1375512	-.203901	.1706335
OCC1	.0435286	-.001181	.0239969	.0663445
OCC2	0	0	0	0
"OCC3"	-.063622	-.063622	.0630222	-.063622
MARITAL	-.011763	-.016580	-.001904	-.030327
CHILD1	.0045726	-.003590	.0053114	.0062843
CHILD2	.061062	-.019370	.0361257	.0778172
LEAF	-.689627	.0307793	.6679540	.0291160
TOTAFRC	-.029657	-.001006	8.755E-4	-.029863
OSJAP1	-.018414	.0017942	-.002025	-.018644
WVOP	-.019413	-.010407	-.006722	-.036542
CAROT	-.141028	.0126543	-.013559	-.141933
INFORM	.0131203	-.007269	.0080468	.0139046
PERCD	.006072	.006072	-.006072	.006072
MOTS1	-.000746	-.054711	.0427858	-.072671
EARSOC	.0944822	.0280393	-.025795	.0967269
EARDL	.2969051	-.005090	.0055037	.2973193
	<u>- .976427</u>	<u>.0497872</u>	<u>.4242033</u>	<u>- .502357</u>

SAMPLE 3

Table A9-19
Female

TOTAL PERSONAL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.790497	0	0	-.790497
Human Capital	.3321257	.0979262	-.333325	.0970273
Commitment to the Home	-.623904	-.024735	.7336546	.0849350
Commitment to the Firm	-.213517	-4.98E-4	-.022294	-.235309
Informal Network	.0141048	-.007893	.0006954	.0149010
Perceived Discrimination	-.071430	-.060087	.0475994	-.083916
Early Socialization	.4093304	.0292054	-.027177	.4113587
	<u>-.943787</u>	<u>.0339432</u>	<u>.4074537</u>	<u>-.512390</u>

SAMPLE 3

Table A9-20

Female

TOTAL PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.790497	0	0	-.790497
AGE	-.609335	-.130364	-.046302	-.785999
AGE2	-.022516	.1414948	-.003532	.115470
FYSERV	1.368643	-.803073	.7363677	1.291138
FYSERV2	-.649274	1.234931	-1.18130	-.595509
FTLFEX	-.996284	.1500344	-.243620	-1.089877
FTLFEX2	.5917952	-.313016	.4119372	.6897165
EDTS2	.135970	.0217381	-.045181	.1135335
EXCS2	.1700540	-.036999	.0515498	.1846048
EDFS2	.1593181	-.139297	.1576655	.1761876
ACQX2	-.006690	.0273509	.0046727	.0253333
ACQX3	1.653E-5	-.133316	2.441E-5	-.133275
ACQX4	.168894	.0796895	-.145314	.1032596
MARITAL	.0043691	-.019970	7.370E-4	-.014554
CHILD1	.0047325	-.004033	.0054068	.0053060
CHILD2	.060327	-.018054	.0356908	.0771634
LFA4	-.693412	.0189523	.6917399	.0172793
TOTABFC	-.025939	-.001026	7.657E-4	-.026199
OSJ/P1	-.014091	.0010150	-.001615	-.014591
WJOP	-.019200	-.014797	-.006576	-.040573
CANOT	-.153607	.0143104	-.014769	-.154066
INFORM	.0141048	-.007090	.0006954	.0149018
PERCD	.0091726	.0091726	-.009173	.0091726
MOTS1	-.080603	-.069260	.0567720	-.093091
EARSOC	.1192426	.0344922	-.032555	.1211693
EASOL	.2900870	-.005287	.0053774	.2901784
	-.943787	.0339432	.4074537	-.502391

SAMPLE 3
MARRIED FULL REGRESSION

Table A9-21
Female

Decomposition of Impact (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	3.059581	0	0	3.059581
Human Capital	-1.97296	-.341035	.1284253	-2.185573
Occupational Segregation	.1164397	-.081986	.1016734	.1361268
Commitment to the Home	-.793285	-.759197	.5461513	-1.00633
Commitment to the Firm	-.607260	.1307265	-.144613	-.621355
Informal Network	-.037121	.0503595	-.050670	-.035422
Perceived Discrimination	.0607892	.0546186	-.050616	.0647921
Early Socialization	-.500794	-.120831	.1197391	-.501836
Dominant Career	.7148370	.0183613	-.084659	.6485388
	-.009582	-1.04102	.5592255	-.491379

SAMPLE 3

Table A9-22
Female

MARRIED FULL REGRESSION

Decomposition of Impact (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	3.059561	0	0	3.059561
AGE	-8.31971	.9237530	-1.09123	-8.48719
AGE2	4.092463	-.978301	1.112857	4.227018
FYSERV	.0286804	-.052989	.0206155	-.003693
FYSERV2	.2072866	-.549292	.5394390	.1974032
PTLFEX	2.586123	-1.23663	1.120555	2.470051
PTLFEX2	-1.32179	1.526304	-1.42774	-1.22315
EDTS2	.1802116	.0321907	-.037121	.1752812
EDCS2	.2354646	-.025876	.0251494	.2347370
EDPS2	.1673921	-.224563	.1973628	.1601916
ACON2	.0243052	.0206036	-.013779	.0311901
ACON3	-.100538	.0479354	-.128052	-.180665
ACON4	.2271531	.1756370	-.189675	.2131149
OCC1	.1520818	-.045544	.0652313	.1725689
OCC2	0	0	0	0
"OCC3"	-.036442	-.036442	.0364421	-.036442
CHILD1	-.007154	.0013686	-.009961	-.015747
CHILD2	.0602543	-.042936	.0479960	.0653143
LEAD	-.070072	-.162094	.0707120	-.163054
DLHM	-.775313	-.554735	.4374045	-.892644
TOTALFC	-.135067	.0424291	-.041152	-.134590
OGJAP1	-.039643	.0162059	-.015044	-.038401
WROP	-.199249	.0534238	-.071620	-.217445
CAROT	-.232509	.0186676	-.016997	-.230639
INFORM	-.087121	.0583695	-.056670	-.085422
PERCD	.0238765	.0230765	-.023076	.0238765
MOTS1	.0369128	.0307421	-.026739	.0409156
EARSOC	-.415030	-.115652	.1151502	-.415430
EARDL	-.004956	-.005179	.0045009	-.005545
WROV	-.102014	-.049354	.0776949	-.074473
SPSCAR2	.8114067	.0935740	-.100502	.7964792
SPHQU	-.029074	.0161635	-.034200	-.047119
SPSTRPRG	.0351391	.0008324	-.019020	.0249511
IMPCARTF	1.796E-4	-.050355	2.766E-4	-.050399
	-.009532	-1.04102	.5592255	-.491379

SAMPLE 3
MARRIED PERSONAL REGRESSION

Table A9-23
Female

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	4.299952	0	0	4.299952
Human Capital	-3.31773	-.408321	.1863265	-3.53972
Commitment to the Home	-.233658	-.555747	.2401544	-.549250
Commitment to the Firm	-.558692	.0997451	-.119271	-.578218
Informal Network	-.044284	.0304131	-.028805	-.042676
Perceived Discrimination	-.014505	.0011655	-.003522	-.016861
Early Socialization	-.618273	-.129665	.1345532	-.613385
Dominant Career	.5991635	.0936910	-.143950	.5499045
	.1118754	-.868710	.2654861	-.491356

SAMPLE 3

Table A9-24
Female

MARRIED PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_f$	Attributes Component $b_f * (\bar{X}_f - \bar{X}_m)$	Interaction Component $-(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	4.299952	0	0	4.299952
AGE	-8.84979	1.018228	-1.16070	-8.99232
AGE2	3.922090	-.960038	1.065528	4.027580
FYSELVC	-.343404	.1843443	-.246039	-.405099
FYSERV2	.2964735	-.754699	.7716089	.3133033
FTLFEX	2.218808	-1.08742	.9613909	2.092782
FTLFEX2	-1.05213	1.265427	-1.14727	-.943901
EDTS2	.1007503	.0139942	-.022401	.1003434
EDCS2	.1457084	-.014102	.0155628	.1471691
ELPS2	.1180705	-.133474	.1243529	.1009490
ACQJ2	.0305954	.0236810	-.017345	.0419310
ACQJ3	-.036716	-.044285	-.046768	-.127769
ACQJ4	.1330222	.0330764	-.111743	.1051557
CHIL1	.0115037	-.024436	.0160173	.0030350
CHIL2	.0935188	-.069056	.0744930	.0999555
LFAM	.0955473	-.080297	-.095332	-.080082
DLHI	-.434220	-.302907	.2449760	-.572150
TOTABFC	-.114172	.0363708	-.034501	-.112302
OSJAP1	.0020733	-.001199	7.870E-4	.0016610
WVOP	-.184495	.0434536	-.066317	-.207359
CAROT	-.262098	.0211197	-.019160	-.260139
INFORM	-.044284	.0304131	-.028805	-.042670
PERCD	.0511638	.0511638	-.051164	.0511638
MOTS1	-.065768	-.049998	.0476421	-.060125
EARSOC	-.453331	-.121421	.1256700	-.449580
EARDL	-.164442	-.006244	.0085323	-.163004
U10V	-.024568	-.001342	.0185657	-.007344
SPSCAR2	.6301518	.0737402	-.035334	.6265657
SP106	-.029397	.0133413	-.034509	-.050644
SPSTRPR1	.0311553	.0071004	-.017663	.0205941
INPCARTF	-.016100	8.428E-4	-.024930	-.040267
	<u>.1118754</u>	<u>-.860710</u>	<u>.2654861</u>	<u>-.491356</u>

SAMPLE 1

Table A9-25
Male

TOTAL FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * X_m$	Attributes Component $b_m * (X_f - X_m)$	Interaction Component $(b_f - b_m) * (X_f - X_m)$	Total Impact
Intercept	-.041162			-.041162
Human Capital	-.092216	-.026412	.0256767	-.092953
Occupational Segregation	-.109572	-.114104	.0481620	-.175514
Port of Entry	.0568693	-.014100	-.031239	.0135315
Marriage	-.015160	-.001889	.0019855	-.015063
Commitment to the Home	.0261676	-.049935	.0471994	.0234324
Commitment to the Firm	.0394363	.0025138	-.005100	.0368517
Informal Network	-.016506	-.010617	.0038338	-.018289
Perceived Discrimination	-.008977	-.001060	-.005931	-.015969
Early Socialization	.0770201	-.028344	.0315609	.0802367
	-.082109	-.243947	.1211485	-.204896

SAMPLE 1

Table A9-26

Male

TOTAL FULL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.041162	0	0	-.041162
AGE	-.068309	-.132746	.0042472	-.196808
AGE2	-.108418	.1262820	.0146831	.0325470
FYSERV	.0193009	-.011762	-.005827	.0017124
FYSERV2	.0229481	.0084140	-.013536	.0178267
FTLFEX	.0734397	.0087264	-.015849	.0663169
FTLFLX2	-.0089187	-.022652	.0395309	-.072509
EDTS2	.0090396	-.003786	.0033928	.0086465
EDCS2	.0505189	8.580E-4	-.001526	.0498505
EDPS2	-.001460	-.001460	.0014604	-.001460
ACQ12	-7.82E-4	-5.02E-4	-1.93E-4	-.001470
ACQ13	-1.83E-5	.0017053	4.870E-6	.0016919
ACQ14	7.106E-4	7.106E-4	-7.11E-4	7.106E-4
OCC1	-.028478	-.028543	.0218501	-.035171
OCC2	-.105726	-.049992	.0406580	-.115061
SD11	.0164218	-.025293	-.013611	-.022482
SD12	.0037456	-.010203	-9.28E-4	-.007386
SD14	.0044656	-7.29E-5	1.936E-4	.0045863
FD11	.0149858	-.003733	-.009923	.0013298
FD12	.0299852	-.003952	-.009703	.0163252
FD14	-4.83E-4	-.003574	-2.69E-4	-.004325
FD15	.0143815	-.002841	-.011339	2.019E-4
MARITAL	-.015160	-.001889	.0019855	-.015063
CHILD1	.0104622	.0042285	-.003083	.0116075
CHILD2	.0132049	4.922E-4	-7.09E-4	.0129385
LFAM	.0025005	-.054655	.0509912	-.001164
TOTABFC	3.357E-4	.0024694	7.065E-4	.0035115
OSJAP1	.0155500	.0027514	-.004692	.0136091
WWOP	-.009324	-.001670	.0029123	-.003082
CAROT	.0328768	-.001037	-.004027	.0278133
INFORM	-.016506	-.010617	.0088338	-.018289
PERCD	0	0	-.005190	-.005190
MOTS1	-.008977	-.001060	-7.41E-4	-.010779
EANSOC	.0444937	-.028411	.0316548	.0477480
EARDL	.0325264	6.627E-5	-1.04E-4	.0324808
	-.082100	-.243947	.1211485	-.204098

SAMPLE 1

Table A9-27
Male

TOTAL PERSONAL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.879694	0	0	.879694
Human Capital	-.903168	-.003849	6.089E-6	-.987011
Marriage	.0079416	7.622E-4	-.001040	.0076637
Commitment to the Home	.0098706	-.034457	.0430267	.0184425
Commitment to the Firm	.0355431	.0018640	-.001991	.0354163
Informal Network	-.037329	-.029722	.0199773	-.047073
Perceived Discrimination	-.019217	-.001560	-.016912	-.037697
Early Socialization	-.051239	.0718732	-.094948	-.074314
	-.077904	-.075096	-.051801	-.204891

SAMPLE 1

Table A9-28
Male

TOTAL PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.879694	0	0	.879694
AGE	-1.38716	-.210475	.0362491	-1.51139
AGE2	.3349600	.2012734	-.045364	.4908697
FYSERVC	-.150150	-.045851	.0453300	-.150370
FYSERVC2	.2344377	.0386070	-.138235	.1347598
FTLFEX	.1491612	.0485212	-.032191	.1654912
FTLFEX2	-.120394	-.068836	.0533025	-.135867
EDTS2	.0320890	-.016938	.0120443	.0271960
EDCS2	.0810722	.0012143	-.002450	.0798369
EDPS2	-.005101	-.005101	.0051006	-.005101
ACON2	-.004513	-.001428	-.001114	-.007055
ACON3	-.068487	-.025754	.0182405	-.076000
ACON4	9.176E-4	9.176E-4	-9.18E-4	9.176E-4
MARITAL	.0079416	7.622E-4	-.001040	.0076637
CHILD1	-.001297	.0072000	3.824E-4	.0062057
CHILD2	.0090531	5.455E-4	-4.86E-4	.0091120
LEAM	.0021150	-.042203	.0431301	.0030420
TOTABFC	3.186E-4	.0047018	6.707E-4	.0056911
OSJAP1	.0130814	.0063914	-.003947	.0155254
WWOP	-.021059	-.008044	.0065775	-.022526
CAROT	.0432024	-.001185	-.005292	.0367260
INFORM	-.037329	-.029722	.0199773	-.047073
PERCD	0	0	-.015326	-.015326
MOIS1	-.019217	-.001568	-.001586	-.022371
EARSOC	-.133049	.0719187	-.094687	-.155817
EARDL	.0818095	-4.55E-5	-2.61E-4	.0815026
	-.077904	-.075096	-.051881	-.204881

TOTAL FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.3062	0	0	.3062
Human Capital	-.286361	-.142975	.0358132	-.393522
Occupational Segregation	.1484040	-.044323	-.094634	.0092470
Commitment to the Home	-.019710	-.021245	-1.99E-4	-.041155
Commitment to the Firm	-.002490	-.008396	-.006529	-.023415
Informal Network	.0059587	-3.55E-5	-.001516	.0044273
Perceived Discrimination	-.008844	-.015511	.0092913	-.015064
Early Socialization	-.212226	.0228271	-.000590	-.249989
	<u>-.075060</u>	<u>-.209658</u>	<u>-.118563</u>	<u>-.403280</u>

SAMPLE 2
TOTAL FULL REGRESSION

Table A9-30
Male

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.3062	0	0	.3062
AGE	-.061767	-.130677	.0099146	-.102529
AGE2	-.009672	.0906090	.0261387	.0270753
FYSERV	.3515243	-.090804	-.125200	.1354401
FYSERV2	-.207778	.0499776	.1130010	-.0450000
FTLFEX	-.464626	-.072114	.1574504	-.379290
FTLFEX2	.3106499	.0620900	-.164990	.2077500
EDTS2	-.034936	-.015590	.0110409	-.039534
EDCS2	-.013040	-.004523	.0031854	-.014377
EDPS2	-.016332	-.027136	.0092993	-.034169
ACON2	-.004451	3.130E-4	4.228E-4	-.003715
ACON3	-.002343	-.004475	.0010145	-.005803
ACON4	-.053539	3.541E-4	-.006185	-.059370
OCC1	.0424977	-.022938	-.023397	-.003837
OCC3	.0163670	-.004470	-.013863	-.001965
OCC4	.0050318	-3.89E-4	-.003307	.0013359
OCC5	.0053378	-.001584	.0093390	.0130923
OCC6	.0060495	.0028688	-.004963	.0039551
OCC7	.0070638	3.437E-4	-.001990	.0054173
OCC8	.0023448	-8.46E-5	-1.68E-4	.0020920
OCC9	.0624710	-.012266	-.060414	-.010209
OCC10	.0076081	5.632E-4	-.002439	.0057325
OCC11	-.006368	-.006368	.0063675	-.006368
MARITAL	-.041103	-.003740	.0105717	-.034271
CHILD1	.0095022	-.004173	-.004229	.0010997
CHILD2	.0117934	-.009670	-.007706	-.005503
LFAM	9.657E-5	-.003662	.0011643	-.002401
TOTABFC	-.003302	-.004897	-.003232	-.011490
OSJAP1	.0116423	.0021256	-.003573	.0101896
WOP	.0020085	-.005567	-.001234	-.004093
CAROT	-.018780	4.234E-5	.0015155	-.017222
INFORM	.0059587	-3.55E-5	-.001516	.0044073
PERCD	5.315E-4	-.016660	.0127027	-.003420
MOIS1	-.009375	.0011494	-.003417	-.011643
EARSOC	-.117478	.0238368	-.063302	-.156943
EARSOL	-.094748	-.001010	.0027114	-.093046
	-.075068	-.209658	-.118563	-.403290

SAMPLE 2

Table A9-31

TOTAL PERSONAL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.197544	0	0	.197544
Human Capital	-.066937	-.158143	.0013897	-.223695
Commitment to the Home	-.014690	-.023277	-.001463	-.039430
Commitment to the Firm	-.013394	-.010357	-.002593	-.033844
Informal Network	.0321406	-6.02E-4	-5.45E-4	9.942E-4
Perceived Discrimination	-.011523	-.024168	.0196023	-.016038
Early Socialization	-.234936	.0180652	-.071919	-.288790
	-.141795	-.190987	-.062520	-.403310

SAMPLE 2

Table A9-32

Male

TOTAL PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.197544	0	0	.197544
AGE	.3853106	-.125122	-.061848	.1983402
AGE2	-.319045	.0368650	.0929992	-.139180
FYSERV	.3542345	-.095599	-.126246	.1323099
FYSERV2	-.197269	.0469334	.1080451	-.042291
FTLFEX	-.546801	-.005460	.1852974	-.446964
FTLFEX2	.3733567	.0715823	-.198294	.2466448
EDTS2	-.035657	-.016040	.0112528	-.040444
EDCS2	-.007706	-.005383	.0018824	-.011211
EDPS2	-.007471	-.031666	.0042537	-.034803
ACON2	4.098E-4	3.550E-5	-3.89E-5	4.063E-4
ACON3	.0150509	-.005701	-.006516	.0027532
ACON4	-.001351	.0014912	-.009397	-.009257
MARITAL	-.036565	-.003798	.0094045	-.030958
CHILD1	.0135669	-.003476	-.006038	.0040520
CHILD2	.0082606	-.012044	-.005397	-.009981
LEAM	4.712E-5	-.003159	5.689E-4	-.002544
TOTABFC	-.006911	-.005314	-.006644	-.018869
OSJAP1	.0164000	.0024649	-.005040	.0138247
WROP	-4.58E-4	-.007796	2.813E-4	-.007972
CANOT	-.022425	-2.12E-4	.0018097	-.020028
INFORM	.0021436	-6.02E-4	-5.45E-4	9.942E-4
PERCD	.0010109	-.025346	.0241715	-1.63E-4
MOTS1	-.012534	.0011779	-.004569	-.015925
EARSOC	-.138587	.0194594	-.074677	-.193305
EARDL	-.096348	-.001394	.0027572	-.094985
	-.141795	-.198937	-.002528	-.403310

SAMPLE 3

Table A9-33
Male

TOTAL FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-1.01291	0	0	-1.01291
Human Capital	.1572166	-.240428	.3937824	.3105708
Occupational Segregation	.0675255	.0228159	-.087619	.0027223
Commitment to the Homre	.0916516	.7186460	-.727407	.0828906
Commitment to the Firm	-.229942	-.019475	.0214301	-.220985
Informal Network	.0211736	7.778E-4	-.008047	.0139046
Perceived Discrimination	-.017960	-.011925	-.036714	-.066599
Early Socialization	.3710964	.0026589	.0202909	.3940462
	-.552144	.4740705	-.424203	-.502357

SAMPLE 3

Table A9-34
Male

TOTAL FULL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-1.01291	0	0	-1.01291
AGE	-.415451	-.197551	.0293396	-.583662
AGE2	-.203517	.1573754	.0275925	-.018549
FYSEKVC	2.224909	-.086788	-.750166	1.387955
FYSEKVC2	-1.91140	.0456174	1.233460	-.631327
FTLFEX	-1.25509	-.084229	.2460043	-1.09272
FTLFEX2	1.014726	.0075642	-.416449	.6058413
EDTS2	.0921776	-.022939	.0453686	.1146071
EDCS2	.2349867	.0145942	-.054655	.1949255
EDPS2	.3230982	.0178864	-.160454	.1805303
ACON2	3.387E-4	.0294565	7.843E-4	.0305794
ACON3	.0193595	-.136066	-.011543	-.128249
ACON4	.0330873	-.066349	.2039007	.1706385
OCC1	.0675255	.0228159	-.023997	.0663445
OCC2	0	0	0	0
"OCC3"	0	0	-.063622	-.063622
MARITAL	-.013747	-.018564	.0019342	-.030327
CHILD1	.0098740	.0017118	-.005301	.0062843
CHILD2	.0971677	.0167552	-.036126	.0770172
LFAM	-.001663	.7187433	-.687964	.0291160
TOTABFC	-.028782	-2.11E-4	-8.75E-4	-.029860
OSJAP1	-.020438	-2.30E-4	.0020245	-.018644
WVOP	-.026135	-.017128	.0067217	-.036542
CAROT	-.154587	-9.05E-4	.0135593	-.141933
INFORM	.0211736	7.778E-4	-.008047	.0139046
PERCD	0	0	.006072	.006072
MOTS1	-.017960	-.011925	-.042786	-.072671
EARSOC	.0686875	.0022447	.0257946	.0967269
EARDL	.3024089	4.142E-4	-.005504	.2973193
	-.552144	.4740705	-.424283	-.502357

SAMPLE 3

Table A9-35
Male

TOTAL FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.790497	0	0	-.790497
Human Capital	-8.99E-4	-.235098	.3330246	.0070273
Commitment to the Home	.1096707	.7069497	-.733655	.0849650
Commitment to the Firm	-.235811	-.022792	.0222939	-.236309
Informal Network	.0228002	7.970E-4	-.003695	.0149010
Perceived Discrimination	-.023831	-.012488	-.047599	-.083916
Early Socialization	.3021533	.0020283	.0271771	.4113587
	-.536334	.4413969	-.407454	-.502390

SAMPLE 3

Table A9-36
Male

TOTAL PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.790497	0	0	-.790497
AGE	-.655637	-.177166	.0463017	-.786501
AGE2	-.026048	.1379633	.0035315	.1154470
FYSERV	2.095008	-.097502	-.706368	1.291138
FYSERV2	-1.83057	.0536848	1.181296	-.595589
FTLFEX	-1.23990	-.093585	.2436195	-1.08907
FTLFEX2	1.003732	.0989213	-.411937	.6907165
EDTS2	.0917955	-.023442	.0451805	.1135335
EDCS2	.2216346	.0145510	-.051550	.1846358
EDPS2	.3174846	.0183695	-.157666	.1781876
ACON2	-.002018	.0320236	-.004673	.0253333
ACON3	4.094E-5	-.133292	-2.44E-5	-.133275
ACON4	.0235803	-.065624	.1453137	.1032698
MARITAL	.0051061	-.019233	-7.37E-4	-.014854
CHILD1	.0102193	6.543E-4	-.005487	.0053868
CHILD2	.0960178	.0168364	-.035691	.0771634
LEAM	-.001672	.7106922	-.691740	.0172798
TOTAFPC	-.025173	-2.60E-4	-7.66E-4	-.026199
OSJAP1	-.016306	-6.00E-4	.0016152	-.015291
WROP	-.025955	-.021473	.0066756	-.040753
CAROT	-.168376	-4.58E-4	.0147680	-.154066
INFORM	.0228802	7.970E-4	-.003695	.0149318
PERCD	0	0	.0091726	.0091726
MOTS1	-.023831	-.012438	-.055772	-.093091
EARSOC	.0866881	.0019377	.0325545	.1211803
EARDL	.2954652	9.064E-5	-.005377	.2901704
	-.536334	.4413969	-.407454	-.502390

SAMPLE 1
MARRIED FULL REGRESSION

Table A9-37
Male

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-1.23432			-1.23432
Human Capital	1.034576	-.031144	.0737248	1.077157
Occupational Segregation	-.147432	-.160054	.0794998	-.227988
Port of Entry	.0999944	-.016135	-.031750	.0521095
Commitment to the Home	6.605E-4	-.021269	.0058982	-.013711
Commitment to the Firm	.0438050	-.004894	.0124515	.0513622
Informal Network	-.021754	-.011659	.0131200	-.020303
Perceived Discrimination	.006509	-3.31E-4	-.012930	-.019820
Early Socialization	.0766863	.0013976	.0058041	.0838880
Dominant Career	.0148732	-.013450	9.103E-4	.0023239
	-.139116	-.257509	.1476794	-.249886

SAMPLE 1
MARRIED FULL REGRESSION

Table A9-38
Male

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-1.23402	0	0	-1.23402
AGE	2.402028	-.156126	-.195046	2.050856
AGE2	-1.43951	.1426632	.2451241	-1.05172
FYSERV	.0670530	-.010513	-.022939	.0336017
FYSERV2	-.050206	.0112509	.0322796	-.006675
FTLFEX	.0264132	.0039639	-.006693	.0236839
FTLFEX2	-.051230	-.021563	.0258991	-.045854
EDTS2	.0069010	-.006156	.0053161	.0060607
EDCS2	.0441056	.0029406	-.003247	.0437991
EDPS2	-4.77E-4	-4.77E-4	4.773E-4	-4.77E-4
ACON2	.0045574	-.001664	.0021584	.0050518
ACON3	.0239663	.0035532	-.003626	.0188933
ACON4	9.786E-4	9.786E-4	-9.79E-4	9.786E-4
OCC1	-.034332	-.031240	.0250937	-.040479
OCC2	-.158005	-.090784	.0862563	-.162533
SDN1	.0325806	-.026894	-.028197	-.022510
SDN2	.0108691	-.011176	-.004157	-.004463
SDN4	.0014549	2.950E-5	5.026E-4	.0019070
FDN1	.0259996	4.270E-4	-.017254	.0091724
FDN2	.0628997	.0016095	-.031343	.0331650
FDN4	.0144750	-.014792	.0134630	.0131510
FDN5	-.003380	-.003380	.0033799	-.003380
CHILD1	-.003750	.0025205	8.593E-4	-3.76E-4
CHILD2	.0077604	.0025954	-.001933	.0084230
LFAM	.0015325	-.045816	.0345902	-.009693
DLHH	-.004883	.0194310	-.026619	-.012070
TOTABFC	.0063464	-.001861	.0141008	.0185866
OSJAP1	.0181260	.0013218	-.003222	.0162254
WVOP	-.015592	-.003854	.0062349	-.013211
CAROT	.0349248	-5.02E-4	-.004662	.0297014
INFORM	-.021754	-.011669	.0131208	-.020303
PERCD	0	0	-.012447	-.012447
MOTS1	-.006509	-3.31E-4	-5.33E-4	-.007373
EARSOC	.0109503	9.104E-4	.0075618	.0194225
EARDL	.0657360	4.872E-4	-.001758	.0644055
UMOV	-1.86E-4	.0025929	-.002040	3.720E-4
SPSCAR2	.0234043	.0037722	-.004415	.0228419
SPMOB	-.006806	9.893E-5	.0062727	-4.35E-4
SPSTRPRM	.0065929	.0011624	-.004819	.0029355
IMPCANTE	-.008218	-.021086	.0059111	-.023393
	-1.139116	-.257569	.1476794	-.249006

SAMPLE 1
MARRIED PERSONAL REGRESSION

Table A9-39
Male

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	-.185424	0	0	-.185424
Human Capital	.0714034	-.107751	.0895151	.0531721
Commitment to the Home	.0137862	-.080539	.0610367	-.005716
Commitment to the Firm	.0523372	-.006974	.0041707	.0495335
Informal Network	-.023051	-.036075	.0139032	-.045023
Perceived Discrimination	-.033139	-7.85E-4	-.029980	-.063904
Early Socialization	-.068731	.1335140	-.154506	-.089022
Dominant Career	.0742369	-.049665	.0144340	.0390064
	-.099577	-.140875	-.001525	-.240978

SAMPLE 1 Table A9-40
 MARRIED PERSONAL REGRESSION Male

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * X_m$	Attributes Component $b_m * (X_f - X_m)$	Interaction Component $(b_f - b_m) * (X_f - X_m)$	Total Impact
Intercept	-.105424	0	0	-.105424
AGE	.5040693	-.280393	-.040931	.1747455
AGE2	-.605771	.2801393	.1031523	-.222400
FYSERV	-.096210	-.047552	.0329128	-.110950
FYSERV2	.1385777	.0484613	-.009090	.0979400
FTLFEX	.1772746	.0499505	-.044922	.1823020
FTLFEX2	-.195926	-.037694	.0990489	-.184571
EDTS2	.0404020	-.036217	.0311230	.0353000
EDCS2	.1222130	.0092329	-.003997	.1224404
EDPS2	-.002053	-.002053	.0028534	-.002053
ACON2	.0024234	-.001190	.0011477	.0023012
ACON3	-.014945	-.033680	.0053791	-.043245
ACON4	.0021531	.0021531	-.002153	.0021531
CHILD1	-.021606	.0052204	.0049515	-.011435
CHILD2	.0221961	.0030693	-.005520	.0205375
LFAM	-6.04E-4	.0153940	-.013622	.0011609
DLHM	.0138001	-.105023	.0752347	-.015928
TOTAFEC	.0043042	-.002307	.0095632	.0114005
OSJAP1	.0175251	.0030608	-.003116	.0174703
WVOP	-.006739	-.007507	.0026940	-.011552
CAROT	.0372473	-1.49E-4	-.004972	.0321267
INFORM	-.023051	-.036675	.0139032	-.045823
PERCD	0	0	-.027266	-.027266
MOTS1	-.033139	-7.85E-4	-.002714	-.036039
EARSOC	-.218103	.1334727	-.150612	-.235242
EARDL	.1493723	4.209E-5	-.003994	.1454205
UNOV	.0034873	-.059316	.0395232	-.016305
SPSCAR2	.0442020	.0102070	-.008309	.0450990
SPMOB	-.012039	.0042551	.0110956	.0033115
SPSTRPRM	.0103133	.0030182	-.007530	.0057935
IMPCARIT	.0282734	-.007030	-.020337	1.0069E-4
	-.093577	-.140375	-.001525	-.240976

SAMPLE 2

Table A9-41
Male

MARRIED FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.236671	0	0	.236671
Human Capital	-.113608	-.141232	.0481620	-.206737
Occupational Segregation	.1675952	-.039688	-.108508	.0193992
Commitment to the Home	.0215502	-.057431	-.013655	-.049536
Commitment to the Firm	-.018396	-.009629	-.012335	-.040359
Informal Network	.0069813	-4.61E-4	-.001951	.0045694
Perceived Discrimination	-.009949	-.013592	9.801E-4	-.022562
Early Socialization	-.294029	.0117458	-.083643	-.365926
Dominant Career	-.007980	-.040344	.0435612	-.004763
	-.011224	-.290631	-.127387	-.429242

SAMPLE 2
MARRIED FULL REGRESSION

Table A9-42
Male

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.236671	C	0	.236671
AGE	.0963087	-.141391	-.016757	-.061839
AGE2	-.229467	.0981142	.0726829	-.058670
FYSERV	.7765496	-.092162	-.306855	.3775231
FYSERV2	-.503130	.0481398	.3073625	-.147620
FTLFEX	-.588889	-.052327	.2206393	-.420577
FTLFEX2	.4356076	.0494369	-.256145	.2288990
EDTS2	-.041775	-.018650	.0147598	-.045665
EDCS2	-.017673	-.005309	.0061234	-.016850
EDPS2	-.019423	-.022362	.0097709	-.032014
ACON2	.0031968	3.270E-4	-9.19E-4	.0026055
ACON3	-8.89E-4	-.004888	3.334E-4	-.005443
ACON4	-.024085	-1.62E-4	-.002824	-.027072
OCC1	.0502864	-.024434	-.029333	-.003481
OCC3	.0233171	-.004065	-.018195	.0010565
OCC4	.0070046	-6.39E-4	-.004056	.0023101
OCC5	.0045575	2.161E-4	.0100617	.0148353
OCC6	.0067225	.0025123	-.004836	.0043992
OCC7	.0076041	8.114E-4	-.004500	.0039091
OCC8	.0035434	-1.02E-4	-2.89E-4	.0031527
OCC9	.0647413	-.007655	-.061316	-.004229
OCC10	.0062644	1.736E-4	-.002485	.0039525
OCC11	-.006506	-.006506	.0065000	-.006506
CHILD1	.0166421	-.002980	-.005261	.0084010
CHILD2	.0168904	-.013497	-.010056	-.006662
LFAM	4.816E-4	-.021876	.0161276	-.005266
DLHH	-.012464	-.019079	-.014466	-.046009
TOTABFC	-.007365	-.005327	-.009156	-.021848
OSJAP1	.0108136	.0023507	-.003610	.0095538
WVOP	.0032950	-.007082	-.002522	-.006309
CAROT	-.025139	4.296E-4	.0029538	-.021756
INFORM	.0069813	-4.61E-4	-.001951	.0045694
PERCD	3.142E-4	-.014778	.0057464	-.008717
MOTS1	-.010263	.0011853	-.004766	-.013844
EARSOC	-.158038	.0129434	-.087512	-.232606
EARDL	-.135991	-.001198	.0038690	-.133320
UMOV	.0113393	-5.07E-4	.0151013	.0259330
SPSCAR2	.0219179	-.002272	.0020216	.0216570
SPNOB	-.032439	-.015711	.0215629	-.026587
SPSNPRM	.0049168	5.817E-4	-.003477	.0020217
IMPCARTF	-.013715	-.022436	.0083522	-.027798
	-.011224	-.290631	-.127387	-.429242

SAMPLE 2

Table A9-43

Male

MARRIED PERSONAL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.251392	0	0	.251392
Human Capital	-.038499	-.161259	.0030557	-.195782
Commitment to the Home	.0231523	-.060813	-.015852	-.053513
Commitment to the Firm	-.015993	-.012213	-.015722	-.043929
Informal Network	.0035855	-9.42E-4	-.001032	.0016421
Perceived Discrimination	-.011082	-.019775	.0096846	-.021173
Early Socialization	-.298854	.0071775	-.007089	-.378766
Dominant Career	.0343886	-.049093	.0268104	.0118112
	-.052211	-.296922	-.080115	-.429248

SAMPLE 2

Table A9-44
Male

MARRIED PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	.251392	0	0	.251392
AGE	.2435616	-.143133	-.042378	.0580507
AGE2	-.296088	.1027944	.0937850	-.099509
FYSERV	.6820512	-.101281	-.269522	.3112400
FYSERV2	-.400590	.0457221	.2496126	-.113263
FTLFEX	-.588138	-.065119	.2203580	-.432900
FTLFEX2	.4390532	.0597930	-.258171	.2406755
EDTS2	-.051172	-.020093	.0180801	-.053185
EDCS2	-.013773	-.006587	.0047722	-.015588
EDPS2	-.007491	-.026634	.0037684	-.030356
ACON2	.0054093	-6.40E-4	-.001555	.0032141
ACON3	.0215602	-.007137	-.008088	.0063349
ACON4	-.064874	.0010556	-.007606	-.071425
CHILD1	.0218258	-.002067	-.006900	.0128591
CHILD2	.0181948	-.015397	-.010832	-.003035
LFAM	6.638E-4	-.026004	.0222279	-.003193
DLHI	-.017532	-.017264	-.020349	-.055145
TOTABFC	-.011348	-.005507	-.014109	-.031044
OSJAP1	.0165495	.0028155	-.005526	.0138394
WVOP	-.002194	-.009870	.0016793	-.010304
CAROT	-.019001	4.279E-4	.0022325	-.016340
INFORM	.0035855	-9.42E-4	-.001002	.0016421
PERCD	8.320E-4	-.020843	.0152176	-.004793
MOTS1	-.011914	.0010678	-.005533	-.016300
EARSOC	-.164194	.0087471	-.090920	-.246367
EARDL	-.134660	-.001570	.0038311	-.132399
UMOV	.0098596	-9.01E-4	.0131307	.0220895
SPSCAR2	.0397814	-.001706	.0036692	.0417441
SPRNOB	-.017107	-.017654	.0113713	-.023390
SPSTRPKM	.0042192	2.960E-4	-.002983	.0015317
IMPCARTE	-.032664	-.029132	.0016226	-.030174
	-.052211	-.296922	-.080115	-.429248

SAMPLE 3

Table A9-45
Male

MARRIED FULL REGRESSION

Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	3.059531	0	0	3.059531
Human Capital	-1.84454	-.212664	-.128420	-2.10563
Occupation Segregation	.2181131	.0196871	-.101673	.1361258
Commitment to the Home	-.246934	-.213045	-.546151	-1.00613
Informal Network	-.752081	-.014067	.1448134	-.621355
Perceived Discrimination	-.143792	.0016992	.0566703	-.085422
Early Socialization	.0101735	.0040020	.0506158	.0647921
Dominant Career	-.381055	-.001092	-.119739	-.501886
	.6301786	-.066293	.0046592	.6485399
	.5496439	-.481797	-.559225	-.491379

SAMPLE 3

Table A9-46
Male

MARRIED FULL REGRESSION

Decomposition (bv Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	3.059581	0	0	3.059581
AGE	-9.41094	-.167476	1.091230	-8.48719
AGE2	5.205319	.1345557	-1.11286	4.227018
FYSERV	.0492960	-.032374	-.020616	-.003693
FYSERV2	.7467756	-.009803	-.539489	.1974332
FTLFEX	3.706678	-.116072	-1.12055	2.470051
FTLFEX2	-2.74953	.0986427	1.427741	-1.22315
EDTS2	.1430905	-.004930	.0371211	.1752812
EUCS2	.2606143	-7.27E-4	-.025149	.2347378
EDPS2	.3847549	-.027200	-.197363	.1601916
ACON2	.0105265	.0068850	.0137786	.0311901
ACON3	-.228600	-.080127	.1280622	-.180665
ACON4	.0374780	-.014038	.1896751	.2131149
OCC1	.2181131	.0196871	-.065231	.1725689
OCC2	0	0	0	0
OCC3	0	0	-.036442	-.036442
CHILD1	-.017115	-.003593	.0099612	-.015747
CHILD2	.1002504	.0050599	-.047996	.0653143
LFAM	-1.60E-4	-.092182	-.070712	-.163054
DLHH	-.337909	-.117331	-.437404	-.892644
TOTABFC	-.177019	.0012768	.0411523	-.134590
OSJAP1	-.054687	.0011616	.0150443	-.038481
WWOP	-.270869	-.018196	.0716197	-.217445
CAROT	-.249507	.0016706	.0169970	-.230839
INFORM	-.143792	.0016992	.0566703	-.085422
PEKCD	0	0	.0238765	.0238765
MOTS1	.0101735	.0040028	.0267393	.0409156
EARSOC	-.300688	-5.02E-4	-.115150	-.416340
EARDL	-.080367	-5.90E-4	-.004589	-.085546
UNOV	-.025119	.0283409	-.077695	-.074473
SPSCAR2	.7029046	-.014927	.1085021	.7964792
SPMOL	-.063282	-.018045	.0342034	-.047119
SPSTHPRG	.0152187	-.011063	.0199204	.0240511
INPCART	4.564E-4	-.050576	-2.77E-4	-.050390
	.5496439	-.481797	-.559225	-.491379

SAMPLE 3

Table A9-47
Male

MARRIED PERSONAL REGRESSION
Decomposition (by Hypothesis)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	4.299952	0	0	4.299952
Human Capital	-3.13140	-.221994	-.186327	-3.53972
Commitment to the Home	.0064965	-.315593	-.240154	-.549250
Commitment to the Firm	-.677963	-.019526	.1192710	-.578218
Informal Network	-.073639	.0016077	.0288054	-.042676
Perceived Discrimination	-.018126	-.002356	.0035217	-.016961
Early Socialization	-.483720	.0048884	-.134553	-.613385
Dominant Career	.4552136	-.050259	.1439499	.5489045
	3.3773616	-.603232	-.265486	-.491356

SAMPLE 3

Table A9-48
Male

MARRIED PERSONAL REGRESSION

Decomposition (by Variable)

	Coefficients Component $(b_f - b_m) * \bar{X}_m$	Attributes Component $b_m * (\bar{X}_f - \bar{X}_m)$	Interaction Component $(b_f - b_m) * (\bar{X}_f - \bar{X}_m)$	Total Impact
Intercept	4.299952	0	0	4.299952
AGE	-10.0105	-.142528	1.160756	-8.99232
AGE2	4.986617	.0984390	-1.06653	4.020529
FYSERV	-.590242	-.062495	.2458388	-.405898
FYSERV2	1.068082	.0169099	-.771609	.3133033
FTLFEX	3.180207	-.126026	-.961399	2.092782
FTLFEX2	-2.20941	.1181539	1.147273	-.943981
EDTS2	.0863492	-.003407	.0224010	.1003434
EDCS2	.1612712	.0014608	-.015563	.1471691
EDPS2	.2424234	-.009121	-.124353	.1089490
ACON2	.0132508	.0113364	.0173446	.0419318
ACON3	-.083434	-.091053	.0467678	-.127769
ACON4	.0220793	-.028667	.1117429	.1051557
CHILD1	.0275210	-.008469	-.016017	.0030350
CHILD2	.1680118	.0064367	-.074493	.0999555
LFAH	2.155E-4	-.175629	.0953318	-.080002
DLHH	-.169252	-.137931	-.244976	-.572159
TOTABFC	-.148753	.0017896	.0345812	-.112382
OSJAP1	.0028608	-4.12E-4	-7.87E-4	.0016618
WVOP	-.250813	-.022863	.0663168	-.207359
CAROT	-.201258	.0019597	.0191600	-.260138
INFORM	-.073089	.0016077	.0288054	-.042676
PERCD	0	0	.0511638	.0511638
MOTS1	-.018126	-.002356	-.047642	-.068125
EARSOC	-.328160	.0042503	-.125671	-.449580
EARDL	-.155560	6.382E-4	-.003882	-.163304
UNOV	-.006002	.0172240	-.018566	-.007344
SPSCAR2	.5528175	-.011586	.0853343	.6265657
SPNOB	-.063986	-.021247	.0345886	-.050644
SPSTRPRM	.0134938	-.010562	.0176025	.0205941
IMPCARTF	-.041110	-.024087	.0249302	-.040267
	.3773616	-.603232	-.265436	-.491356

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