

**GENDER DIFFERENCES IN THE INFORMATION  
SYSTEMS MANAGERIAL RANKS: AN  
ASSESSMENT OF DISCRIMINATORY PRACTICES**

by

**Jack J. Baroudi**

Information Systems Department  
Leonard N. Stern School of Business  
New York University  
40 West 4th Street, Tisch Hall Room 624  
New York, New York 10003

and

**Gregory E. Truman**

Information Systems Department  
Leonard N. Stern School of Business  
New York University  
40 West 4th Street, Tisch Hall Room 624  
New York, New York 10003

**January, 1992**

Center for Research on Information Systems  
Information Systems Department  
Leonard N. Stern School of Business  
New York University

**Working Paper Series**

STERN IS-92-5

**Gender Differences in the Information Systems Managerial Ranks:  
An Assessment of Discriminatory Practices**

**Abstract**

This paper examines the extent to which gender discrimination is a force effecting the senior managerial ranks of the information systems (IS) occupation. While the employment trends of women in the IS occupation is encouraging, we present data which suggests that IS is not immune to the problems of gender discrimination. Analyzing data gathered by the Society for Information Management (SIM), we find several serious problems suggestive of discriminatory practices. First, a disproportionate majority of senior IS management is male. Second, women receive lower salaries than men even when controlling for age, education, job level and tenure within the organization.

## 1. INTRODUCTION

On July 2, 1965 the Civil Rights Act of 1964 became effective. This legislative action permeated many areas of American society; one portion of it--Title VII, addressed economic or employment opportunity. Congress included Title VII with the intent of ushering in an era of equitable practice in American businesses, and to provide employment opportunities for peoples of all races, colors, religions, national origins and genders. Since the institution of the Civil Rights Act, and the professed conformance of many business organizations to it through attachment to the "Equal Opportunity Employer" designation, much research has been conducted to assess changing employment patterns in the United States. The objective of this research has been to cultivate an understanding of the nature and degree of these changes, whether they are influenced directly by the Civil Rights Act, indirectly through changing societal attitudes, or in spite of these legislative progressions and societal changes.

This paper continues this research genre, by focusing on the managerial levels<sup>1</sup> of the Information Systems (IS) occupation. The scope of our investigation addresses one dimension in which unequal employment opportunity i.e. discrimination, has been, and perhaps still is, occurring--gender.

---

<sup>1</sup>We focus on the managerial ranks as we believe this will be the group most impacted by discriminatory practices.

### 1.1 Evidence of Discrimination in the IS Field

The prevailing consensus has cast the IS occupation as relatively immune from the serious discrimination patterns found in most other occupations, particularly when contrasted to those patterns found in typically male-dominated occupations such as manufacturing [Simons, 1981]. Encouraging this "consensus", one argument suggests the IS occupation is devoid of discriminatory practices because it emerged after discriminatory practices and sexist attitudes subsided in Western culture [Simons, 1981]. Unfortunately, empirical evidence may suggest the "prevailing consensus" is wrong. For example, though the recent trend in IS employment figures is encouraging (see Table 0) and mirrors patterns occurring in non-IS occupations [Forgionne and Peeters 1982, Veiga 1977, Vaydanoff 1980], in contrasting IS to other business occupations, as of 1988 women accounted for 49.6% of accountants/auditors, 49.1% of personnel/labor relations managers and 42.4% of financial managers, while only 29.5% of computer systems analysts and 32.2% of computer programmers were women [Statistical Abstract of the United States 1990].

\*\*\*\*\*  
\* Insert Table 0 About Here \*  
\*\*\*\*\*

### 1.2 The Nature of Discrimination

The potential for gender discrimination can be classified into two practices: access and treatment discrimination [Levitin et al, 1971]. Access discrimination places non-job-related qualifications

on individuals, such as gender, race, age, and physical appearance among others, which limit or bar their recruitment. Treatment discrimination is manifested in salary, job level and status symbol discrepancies. Treatment discrimination creates divergence in job outcomes between two groups comparable in work experience, education and skills after access occurs.

Table 0 ostensibly indicates discriminatory practices, however further examination may dispel this conclusion. Frenkel (1990) reported that in 1988 32.5% and 26.9% of computer science bachelor's and master's degrees respectively were awarded to women. These figures roughly match the 1988 employment statistics for women programmers and systems analysts. Therefore, if we assume that the hiring for computer programmers and analysts is done largely from colleges and universities, then the pool of new employees selected for access into non-supervisory positions corresponds approximately to the pool of applicants. This data would suggest access discrimination is occurring earlier: either during the socialization process when womens' attitudes about appropriate jobs roles are formed, during the college admissions process, or during the educational process [Frenkel, 1990].

While the data presented above suggests no access discrimination at the entry-level, it provides no information regarding access and treatment discrimination at the supervisory and managerial levels where the organizational literature suggests the greater problems exist [Steinberg and Shapiro, 1982]. This paper will focus, therefore, on discriminatory practices as they

affect the IS managerial ranks. The following section reviews the organizational literature on gender discrimination.

## 2. THEORIES OF DISCRIMINATION

The literature covering gender issues in organizational contexts employs one of three theories. The three theories typically exercised are stereotyping theory [Stewart and Gudykunst 1982, Schein 1973, Rosen and Jerdee 1973, Golembiewski 1977, Steinberg and Shapiro 1982, Bartol and Wortman 1976, Schuler 1975, Rosen and Jerdee 1974], attribution theory [Deaux 1979, Deaux and Farris 1977, Deaux and Emswiller 1974, Taynor and Deaux 1973], and equity theory [Levanthal and Michaels 1971, 1969, Taynor and Deaux 1973]. Terborg and Ilgen (1975) provide an extensive review of studies applying these theoretical approaches to explain various manifestations of gender differences. Brief descriptions of these theories follow.

### 2.1 Stereotyping

Stereotyping theory suggests advancement of women into managerial positions is disrupted by perceived discrepancies between female characteristics i.e. feminine characteristics, and those characteristics believed important for managerial success i.e. masculine characteristics [Terborg and Ilgen 1975]. Feminine characteristics include empathetic, intuitive [Schuler 1975], sympathetic, compassionate, non-aggressive [Rosen and Jerdee 1973], emotional [Steinberg and Shapiro 1982], dependent [Rosen and Jerdee 1973, Steinberg and Shapiro 1982], and an affiliation-orientation

[Schuler 1975, Rosen and Jerdee 1973, Steinberg and Shapiro 1982]. Masculine characteristics include competitive, objective, aggressive, ambitious [Stewart and Gudykunst 1982], powerful, initiatory [Rosen and Jerdee 1973], rational, efficient, tough-minded, stable [Steinberg and Shapiro 1982], and capable of leadership [Stewart and Gudykunst 1982, Steinberg and Shapiro 1982]. It is the rigid application of feminine characteristics to women, and masculine characteristics to men and "the successful manager", that engenders discrimination through stereotyping. As long as individuals maintain these stereotypic attitudes, such as believing women possess less desirable characteristics for managerial positions as cited by Deaux (1979) or beholding management as a "masculine-ethic" [Steinberg and Shapiro 1982], the ability of women to permeate managerial ranks will be limited.

## **2.2 Attribution**

Attribution theory suggests factors related to work success or failure can be attributed to personal factors, classified either as fixed (e.g. intelligence, ability, skill set) or variable (e.g. task difficulty, luck) [Terborg and Ilgen 1975]. When an individual performs as expected, the result is attributed to fixed factors; when an individual performs below or above expectations, the result is attributed to variable factors. Based on the prevailing expectations about women's managerial capability, a female manager's above average performance will be attributed to variable factors e.g. luck, while a male manager's performance will be attributed to fixed factors e.g. ability [Deaux and Emswiller,

1974].

### 2.3 Equity

Equity theory proposes individuals assess their inputs (e.g. education, tenure, age) and outcomes (e.g. pay, job level, promotions), subjectively appraise a ratio of outcomes to inputs, contrast their ratio to a "comparison person's" ratio, and proceedingly base their job satisfaction on perceived equity or inequity between theirs and the comparison person's ratios [Terborg and Ilgen 1975]. Equity will induce a state of satisfaction; inequity will induce dissatisfaction motivating individuals to remove the inequity. In the context of measuring gender differences in managerial ranks, equity theory may suggest advantages, as well as disadvantages, for women. For example Taynor and Deaux (1973) found women were compensated with greater rewards for equal performance, because those with an unfavorable predisposition towards women perceived them as exerting more effort to compensate for fewer qualifications (inputs) at the onset. Alternatively, equity theory may predict serious disadvantages for women, especially in scientific and management positions [Terborg and Ilgen 1975]. As outcomes will be distributed according to inputs in a manner consistent with equity maintenance, a male manager with traditional attitudes towards women will perceive they possess fewer inputs, and thereby allocate fewer outcomes to the female. Considering males dominate managerial positions in most occupations, one might use equity theory to explain the discrepant salary levels between genders across a wide array of occupational

groups [Time of Change 1983].

#### **2.4 Purpose of the Study**

The focus in this paper is to empirically assess the extent of access and treatment discrimination in IS supervision, which is a necessary precursor to alleviating it should it in fact exist. The census information provides no data by gender across hierarchical levels for the IS occupation and almost no empirical studies exist addressing discrimination within the IS managerial ranks. One exception is a survey conducted by Dubnoff and Kraft (1986) which found that women are overrepresented in lower paid IS-related specializations and underrepresented in higher paid IS-related specializations, including management roles. In this paper, we will appraise the extent of the disparity between men and women by assessing IS managerial employment numbers, IS managerial salary levels, job levels and promotional opportunities differentiated by gender. Concomitantly we intend to assess any gender difference in job and career satisfaction. In this paper, while we will be able to show differences between men and women we cannot state conclusively that these differences are a result of discrimination. It is important to note that we are not testing equity or stereotyping theory, but rather are using these theories to help frame our hypotheses.

#### **3. HYPOTHESES**

To determine the extent of access discrimination in the IS managerial ranks we compare the number of IS male and female managers by drawing on stereotyping for theoretical support

(Hypothesis 1). To evaluate treatment discrimination, we investigate differences in salary, job levels and promotional opportunities between genders. As these are considered outcomes within the equity theory framework [Adams 1965], equity and stereotyping are used as theoretical support (Hypotheses 2-4). Finally, career and job satisfaction differences between male and female IS managers are investigated as well (Hypotheses 5a, 5b).

### **3.1 Hypothesis 1**

#### **H.1. A disproportionate<sup>2</sup> majority of IS managers is male.**

The literature regarding sex-role stereotypes and their influence on access discrimination is well summarized by Terborg and Ilgen (1975, p. 354) and provides support for this hypothesis. As they state, "...there seems to exist a stereotype of specific traits which are believed to be essential for administrative (supervisory/managerial) success, and women are seen as not possessing these traits." Since women are perceived to possess predominately feminine traits and the role of supervision or management is perceived to require masculine traits, we predict that fewer women will occupy supervisory or management positions because of this perceived incompatibility.

Our hypothesis is also based in part on empirical evidence as well. Women have not advanced into senior management positions despite increasing representation in the labor force, as indicated

---

<sup>2</sup>It is difficult to define what is meant by disproportionate here. Clearly we do not expect a 50% split. It is left up to the reader to determine whether we have demonstrated a disproportionate number of IS managers are male or not.

in Steinberg and Shapiro's (1982) review. This phenomenon is illustrated in several studies with unequal sample sizes between genders, where the sample was selected at random and from a pool of supervisors or managers<sup>3</sup>. Specific sample distributions by gender (male/female) include 82.5/17.2% (n=99) [Forgionne and Peeters 1982], 85.0/15.0% (n=98) [Rosen and Jerdee 1973], 76.6/23.4% (n=1035) [Mobley 1982], 73.6/26.4% (n=72) [Bartol and Wortman 1976], and 63.3/36.7% (n=49) [Kavanagh and Halpern 1977]. Furthermore, regarding their sample distribution Bartol and Wortman (1976, p.178) state, "...this imbalance in the number of male and female supervisors reflects the reality in this and many organizations". The disproportionate numbers are reflected in the census-based data as well. A study by the U.S. Department of Labor [Time of Change, 1983] shows that women account for only 27.5% of all non-farm managers and administrators.

### 3.2 Hypothesis 2

#### H.2. Women receive lower salaries than men, even when controlling for age, education, job level and tenure within the organization.

Stereotyping and equity theory jointly provide theoretical support for this hypothesis. Because females are viewed as lacking the necessary characteristics for effectively executing supervisory or managerial roles (stereotyping theory), they will be perceived

---

<sup>3</sup> Where sample statistics indicate gender equity, it is generally the result of deliberate research design i.e. matched subjects [Deaux 1979, Saleh and Lalljee 1969, Wexley and Pulakos 1982], or a female-dominated industry [Brief and Oliver 1976] rather than an indication of reduced access discrimination.

as providing fewer inputs and consequently will be awarded lower salaries (equity theory). This hypothesis is also based on empirical evidence. Empirical data from the Department of Labor [Time of Change, 1983] indicate women consistently earn lower wages across all occupational groups, managerial and supervisory included. However, salary has been anticipated or found to covary with job level [Ebeling et al 1979, Weaver 1978, Weaver 1977, Hulin and Smith 1965], age [Ebeling et al 1979, Forgionne and Peeters 1978, Weaver 1978, Hulin and Smith 1965], education [Forgionne and Peeters 1978, Weaver 1978], and tenure within the organization [Hulin and Smith 1965], which the Department of Labor study did not consider. These variables will be controlled in this study.

### 3.3 Hypothesis 3

#### **H.3. Women occupy lower job levels than men, even when controlling for age, education, salary and tenure within the organization.**

Similar to Hypothesis 2, stereotyping and equity theory jointly provide theoretical support for this hypothesis. Because females are viewed as lacking the necessary characteristics for effectively executing supervisory or managerial roles (stereotyping theory), they will be perceived as providing fewer inputs and consequently will occupy lower job levels (equity theory). This hypothesis is consistent with Stewart and Gudykunst's (1982) finding of a significant difference between genders in job level. They controlled for several covariates, including age [Stewart and Gudykunst 1982, Ebeling et al 1979, Schuler 1975, Saleh and Lalljee 1969, Hulin and Smith 1965], education [Stewart and Gudykunst 1982,

Schuler 1975, Saleh and Lalljee 1969], tenure within the organization [Stewart and Gudykunst 1982, Hulin and Smith 1965], and salary [Stewart and Gudykunst 1982, Weaver 1977, Hulin and Smith 1965]. These covariates will be controlled in this study as well.

### **3.4 Hypothesis 4**

**H.4. There is no difference between women and men in terms of their satisfaction with promotional opportunities, when controlling for age, education, job level and tenure within the organization.**

The empirical studies investigating gender differences in promotional opportunities overwhelming find none [Wheeler 1981, Bartol and Wortmen 1976, and Schuler 1975], although some counter evidence exists [Deaux 1979]. We hypothesize, consistent with the majority of studies, that while controlling for age, education [Stewart and Gudykunst 1982, Schuler 1975], tenure within the organization [Stewart and Gudykunst 1982], and job level [Schuler 1975], there will be no difference in satisfaction with promotional opportunities.

### **3.5 Hypothesis 5**

**H.5. There is no difference in overall job (5a) and career (5b) satisfaction between genders, when controlling for age, education, job level, salary and tenure within the organization.**

The majority of empirical studies investigating gender differences in job satisfaction indicate no significant differences when controlling, either statistically or through research design,

for the moderating effects of age, salary, education, job level and tenure within the organization [Weaver 1978, Forgionne and Peeters 1982, Ebeling et al 1979, Weaver 1977, Deaux 1979, Voydanoff 1980, Saleh and Lalljee 1969, Bartol and Wortman 1976, Golembiewski 1977]. Where differences are found, no control over these moderating effects is exerted [Shapiro and Stern 1975, Ebeling et al 1979, Weaver 1977]. Interestingly, those moderating influences which do appear to determine job satisfaction independent of other covariates include age and job level. Weaver (1978) found age has a significant linear effect on job satisfaction; Ebeling et al (1979) and Kavanagh and Halpern (1977) found job level has a significant curvilinear and linear effect on job satisfaction respectively.

#### 4. METHOD

##### 4.1 Sample

We focused on senior level IS management because we believe the ability to detect discriminatory practices will be greatest here. This belief is based on Schein's (1974) framework which conceives of an individual's career progression being filtered through organizational mechanisms, which inhibit or promote career advancement either vertically, horizontally or radially to subsequent stages. Bartol (1978) asserts discriminatory practices will be manifested during hierarchical career movement (transition), which will inhibit advancement to the next stage. As several upward career transitions are necessary to reach high-

level management, it is this select group that will have experienced most career transitions and hence will have had the greatest exposure to potential discriminatory practices. Assuming high-level IS managers have experienced the most transitions, we believe the effect, and thus the effect size, from discriminatory practices would be most pronounced with these senior-level subjects.

Our sample consists of 491 subjects. The data were collected through a 1989 mail survey conducted by the Society of Information Management (SIM) of their membership. 570 questionnaires were returned representing a 32 percent response rate.<sup>4</sup> The sample represents IS executives occupying positions from CEO to manager. The distribution of subjects by industry, company annual revenues, and number of IS employees is given in Table 1. Overall frequency distributions are listed with breakdowns by gender for each variable. To determine if there were any systematic differences or biases in the types of organizations employing men versus women, we tested for differences in industry type, revenues, and organization size by gender. No significant differences were detected even when applying a liberal significance level of .10.

```
*****  
*                                     *  
*      Insert Table 1 About Here      *  
*                                     *  
*****
```

---

<sup>4</sup> The difference of 79 subjects represents the removal of academics and those who did not indicate gender in their survey.

## 4.2 Measures

The variables used for analyses are presented in Table 2 with frequency distributions and medians or means where appropriate. The variables are measured using scales developed in conjunction with SIM. The ordinal variables include age (AGE), annual salary (SALARY), tenure within the organization (ORGYEARS), reporting levels to CEO (RPTLEVEL), job satisfaction (JOBSAT), career satisfaction (CARSAT) and likelihood of career goal achievement (PROMO)<sup>5</sup>. (Note that RPTLEVEL, JOBSAT and CARSAT utilize reversed scales.) Level of education (EDUC) and gender (GENDER) are measured using nominal scales. These variables' scales are shown in Appendix A.

```
*****  
*                                     *  
*      Insert Table 2 About Here      *  
*                                     *  
*****
```

With the exception of the job satisfaction, career satisfaction, and satisfaction with promotional opportunities measures, all questionnaire items were standard demographic information which SIM had been collecting from its members for several years. In all cases these items simply asked the respondent to check off to which category they belong (e.g. "Please indicate your salary range and/or annual cash compensation." "How many years have you been with the organization?") The entire

---

<sup>5</sup> We interpret this variable as an indication of perceived promotional opportunity.

questionnaire was pretested by five SIM members to make certain that all the items (as well as the three new psychometric scales) were clear and meaningful to the population surveyed. No problems were detected during the pre-test and, given the careful development and review of the survey, we believe this provides substantial evidence of the instrument's face validity [Stone 1978].

The job satisfaction, career satisfaction, and promotional opportunity scales asked the respondents for an overall assessment of their job, career and promotional opportunity satisfaction. Such overall assessments have been shown to be robust measures and are recommended by Scarpello and Campbell [1983]. The job satisfaction and career satisfaction measures have also been used and tested previously, [Baroudi 1988], and found to exhibit acceptable psychometric characteristics.

Although we have no reliability data for the career satisfaction, job satisfaction and promotional opportunity measures<sup>6</sup>, it was possible to provide some evidence for the validity of our psychometric scales by testing the extent to which they converge or diverge as expected. For example, it was expected that job satisfaction, career satisfaction and satisfaction with promotional opportunities would all be highly and significantly correlated. As can be seen in table 3a<sup>7</sup>, we in fact found this to

---

<sup>6</sup> We were not permitted to add duplicate or multiple items to provide a test for reliability due to SIM's concern for the length of the questionnaire.

<sup>7</sup> Zero-order correlations with significance levels among the variables are presented in Table 3a (all subjects) and Table 3b (males and females).

be true. This provides some evidence for the convergent validity of the measures. While we cannot make a final claim for the validity of these measures, we believe they are acceptable for use in this first study of gender discrimination in IS.

```
*****  
*                                           *  
*   Insert Tables 3a and 3b About Here   *  
*                                           *  
*****
```

### 4.3 Analysis

Hypothesis 1 was tested using frequency distributions. Hypotheses 2 through 5 were analyzed using multiple regression<sup>8</sup>, because it allows for control of those variables hypothesized to covary with the respective dependent variables. The power of the regression analyses assuming medium effect size and an alpha error level of 5% is over 99.5%, primarily due to the very large sample size [Cohen 1987]. Variables EDUC and GENDER utilizing nominal scales were dummy coded, consequently n-1 dummy variables were created and entered into the regression where n is the number of scale categories. In all instances, GENDER was entered last to assess its effects on the respective dependent variables separate from the effects of the covariates.

---

<sup>8</sup> The scales of some variables (AGE, SALARY, ORGYEARS and RPTLEVEL) were nominalized. Cohen and Cohen (1983, p.253) have shown that the regression model remains robust if the scale intervals are approximately equal.

## 5. RESULTS

The results of our analyses follow and are summarized in Table 4. With the exception of Hypothesis 3, all hypotheses were confirmed.

### **H.1. A disproportionate majority of IS managers is male.**

As indicated in Table 1, there is a disproportionate number of males (441) compared to females (50) within our sample. With an n of 491, the results indicate in our sample that 90% of IS management positions are occupied by men. Clearly, women are either not surviving or not being promoted to the senior IS ranks as rapidly as their male peers. Consequently, hypothesis 1 is supported; the data is suggestive that some evidence of discrimination in the IS managerial ranks is present at least for this sample.

### **H.2. Women receive lower salaries than men, even when controlling for age, education, job level and tenure within the organization.**

The regression analysis showed that gender was significant in explaining variance in salary, even after job level, age, education and tenure within the organization are controlled for. At  $p < .01$ , gender accounted for 1.7% of the salary variance.

Though an  $R^2$  of 1.7% may appear trivial, consideration of the B score<sup>9</sup> and the SALARY scale lends more relevance to the result.

---

<sup>9</sup> The beta is generally not useful for dummy coded variables. (See Cohen and Cohen (1983) p.194.)

The B score for GENDER is .82. Because males were dummy coded as '1' and females as '0', the .82 is interpreted as the average increase in dependent variable raw score units when comparing males to females [Cohen and Cohen 1983]. SALARY's raw score is measured on an ordinal scale; it has ten intervals. Therefore the .82 is interpreted as males on average being 82% higher across scale intervals. We have used the mode of the intervals' range, which is 25,000, as representative of all interval ranges<sup>10</sup>. 82% of 25,000 is 20,500 which indicates that men on average have roughly a 20,500 dollar higher annual salary than do women of comparable job level, age, education and tenure within the organization. This is not a trivial amount. Consequently, hypothesis 2 is supported; evidence suggestive of treatment discrimination regarding pay is present.

**H.3. Women occupy lower job levels than men, even when controlling for age, education, salary and tenure within the organization.**

The results did not support the hypothesis. Job level was not significantly different between genders after controlling for age, education, tenure within the organization and salary; only tenure within the organization accounted for a significant portion of the job level variance at 1.8%.

**H.4. There is no difference between women and men in terms of their satisfaction with promotional opportunities, when controlling for age, education, job level and tenure within the organization.**

---

<sup>10</sup> Calculation of the average scale interval range is preferred. However, the range for the last interval '> 250,000' is infinite which makes calculation of a true scale interval range mean difficult. (See Appendix A).

The hypothesis is supported. There is no significant difference between genders regarding perceived promotional opportunities. All covariates were found to account for a significant amount of promotional opportunity variance.

**H.5. There is no difference in overall job (5a) and career (5b) satisfaction between genders, when controlling for age, education, job level, salary and tenure within the organization.**

The hypothesis is confirmed. Both job and career satisfaction were found not to differ significantly between genders, as evidenced by the F ratio significance scores of .90 and .35 respectively. Only salary (SALARY) and job level (RPTLEVEL) accounted for a significant portion of job and career satisfaction.

## **6. DISCUSSION**

In this section we will first discuss those findings which were not supported and attempt to provide potential explanations for why. Next, we will discuss the findings for which there was support and explore what this may mean. As noted in section 2.4 we are not testing equity or stereotyping theory but have used these theories to develop our hypotheses. The results, we believe, demonstrate that both equity and stereotyping theories are useful avenues for exploring the complex question of gender and discrimination.

### **6.1 Unsupported Findings**

Hypothesis 3 was not supported using RPTLEVEL as the

independent variable, which measures hierarchical level by capturing the number of reporting levels between subjects and respective CEOs. After obtaining insignificant results, we decided to further test this hypothesis using a similar variable--job title (JOBTITLE). The variable employs an ordinal scale and represents the subjects' job title; it correlates with RPTLEVEL at  $r=.20$ ,  $p<.01$ . (See Appendix A for a description of the scale.) We considered using this variable initially, but were uncomfortable with its use as job titles can invoke different meanings for people. The results showed GENDER still remained insignificant in explaining job level variance as measured via job title providing additional evidence that H3 is not valid.

Two plausible explanations could account for this. First, it could be an artifact of the sample such as the SIM database not being representative of the general population of IS managers. Since association with SIM is voluntary, nonrepresentativeness is a possibility. Second, organizations may be using hierarchical level as a method of tokenism; that is, granting advances in the organizational hierarchy without corresponding increases in salary in order to mitigate employee dissatisfaction. Analysis of salary levels between genders for each hierarchical level revealed that womens' salaries are approximately one level below that of men<sup>11</sup>.

---

<sup>11</sup> For one hierarchical level women earned slightly more, however only two women, compared to 81 men, fell into this category.

## **6.2 Supported Findings**

The results of hypothesis 2 revealed that women earn significantly less salary, though the results of hypothesis 5 showed no significant difference in job and career satisfaction. This is intriguing since equity theory would predict that earning less salary for comparable responsibilities (results of hypothesis 3 showed no difference in job level) would lead to less satisfaction. However these combined results are congruent with a pattern identified by Campbell et al (1976). In their study, even though women were found to earn lower salaries this did not appear to decrease their job and career satisfaction. They explained this discrepancy in terms of women's judgements regarding the objective conditions such as salary levels, and subjective evaluations of work such as job satisfaction. Essentially they state that women may be unaware of any incomparable treatment. Given salary levels are not generally discussed among employees, women may be unaware of the salary discrepancy revealed in our analysis.

## **7. Conclusion**

This study has found evidence of two types of potential discriminatory practices: the underrepresentation of women in the senior ranks of IS management, and significant salary differences between female and male IS managers. We cannot conclude from this study however, that the problem of female underrepresentation is the result of overt access discriminatory practices. It is quite

possible that women opt out of the profession as they reach a certain age to assume primary family care responsibilities. We do believe however, that organizations have not been sensitive to the family care needs of either their female or male employees. Most organizational personnel practices were developed and institutionalized in a period when one member of the family worked outside the home and the other assumed primary family care responsibility [Johnston and Packard, 1987]. With the increasing need for both parents to remain gainfully employed, and with the growth in single parent families, such practices and policies do not effectively accommodate the personnel realities of today. Organizations have no choice but to develop new and informed practices which will permit both work and family to productively coexist.

The discrepancy in salary between the male and female IS managers, however, is strong evidence of overt treatment discriminatory practices by organizations. Such discrimination dispels the myth of IS as an occupation free from such unacceptable practices. Beyond the important issue of social justice and the legal liabilities which such practices create, gender discrimination has other potentially adverse consequences for the employing organization. Gender discrimination means that we are permitting non-job-related and non-performance related factors to determine who is promoted and rewarded. We, therefore, may not be promoting the best qualified or most highly skilled workers -- to the detriment of the organization.

The maintenance of such discriminatory practices will become even more onerous once we examine the shifting demographics which are sweeping this country. While men accounted for 57% of the 1985 workforce, the labor market is becoming increasingly feminized [Johnston and Packer, 1987]. Between 1985 and the year 2000, women will account for 64% of the workers entering the job market [Johnston and Packard, 1987]. Organizations that wish to sustain gender discriminatory policies will find a shrinking labor pool from which to recruit. We do not believe that gender discriminatory practices can be maintained in such an environment; consequently, organizations need to carefully examine and review their hiring, promotion, salary, and personnel practices. While examining gender discrimination is difficult and often emotionally charged, such examination is critical to the health and success of both the IS occupation and our increasingly technologically-dependent society.

## Appendix A

### INDUSTRY/VERTICAL MARKET

- 1 - 'MANUFACTURING'
- 2 - 'COMPUTER HW/SW MANUFACTURING'
- 3 - 'FINANCE'
- 4 - 'INSURANCE'
- 5 - 'GOVERNMENT'
- 6 - 'EDUCATION'
- 7 - 'TRANSPORTATION'
- 8 - 'NATURAL RESOURCES/ENERGY'
- 9 - 'CONSULTING'
- 10 - 'UTILITY'
- 11 - 'CONSTRUCTION, MINING'
- 12 - 'SERVICE ORGANIZATION'
- 13 - 'RETAIL/WHOLESALE TRADE'
- 14 - 'PRINTING/PUBLISHING'
- 15 - 'COMMUNICATIONS'
- 16 - 'OTHER'

### COMPANY SIZE IN ANNUAL REVENUES

- 0 - ' N/A'
- 1 - ' < 50 MILLION'
- 2 - ' 50 - 99 MILLION'
- 3 - '100 - 249 MILLION'
- 4 - '250 - 499 MILLION'
- 5 - '500 - 999 MILLION'
- 6 - ' 1 - 3 BILLION'
- 7 - ' 3 - 4.9 BILLION'
- 8 - ' 5 - 9.9 BILLION'
- 9 - ' 10 - 14.9 BILLION'
- 10 - ' 15 - 19 BILLION'
- 11 - ' > 20 BILLION'

### IS DEPARTMENT SIZE IN NUMBER OF EMPLOYEES

- 0 - ' N/A'
- 1 - ' < 50'
- 2 - ' 50 - 199'
- 3 - ' 200 - 399'
- 4 - ' 400 - 999'
- 5 - '1000 - 1,999'
- 6 - ' > 2,000'

ANNUAL SALARY (SALARY)

- 1 - ' < 35,000 '
- 2 - ' 35,000 - 49,999 '
- 3 - ' 50,000 - 74,999 '
- 4 - ' 75,000 - 99,999 '
- 5 - ' 100,000 - 124,999 '
- 6 - ' 125,000 - 149,999 '
- 7 - ' 150,000 - 174,999 '
- 8 - ' 175,000 - 199,999 '
- 9 - ' 200,000 - 249,999 '
- 10 - ' > 250,000 '

TENURE WITHIN THE ORGANIZATION (ORGYEARS)

- 1 - ' < 1 YEAR '
- 2 - ' 1 - 3 YEARS '
- 3 - ' 4 - 7 YEARS '
- 4 - ' 8 - 12 YEARS '
- 5 - ' 13 - 20 YEARS '
- 6 - ' > 20 YEARS '

EDUCATION (EDUC)

- 0 - 'NO EDUCATION'
- 1 - 'BACHELOR DEGREE'
- 2 - 'MASTER DEGREE'
- 3 - 'PHD DEGREE' /

AGE (AGE)

- 1 - ' - 30 '
- 2 - ' 30 - 34 '
- 3 - ' 35 - 39 '
- 4 - ' 40 - 44 '
- 5 - ' 45 - 49 '
- 6 - ' 50 - 54 '
- 7 - ' 55 - 59 '
- 8 - ' > 60 '

JOB LEVEL (RPTLEVEL)

- 0 - 'N/A'
- 1 - '0'
- 2 - '1'
- 3 - '2'
- 4 - '3'
- 5 - '> 3'

CAREER SATISFACTION (CARSAT)

- 1 - 'VERY SATISFIED'
- 2
- 3
- 4
- 5 - 'VERY DISSATISFIED'

JOB SATISFACTION (JOBSAT)

- 1 - 'VERY SATISFIED'
- 2
- 3
- 4
- 5 - 'VERY DISSATISFIED'

LIKELIHOOD OF CAREER GOAL ATTAINMENT (PROMO)

- 1 - 'NOT AT ALL LIKELY'
- 2
- 3
- 4
- 5 - 'VERY LIKELY'

JOB TITLE (JOBTITLE)

- 1 - 'CEO/CHAIRMAN/PRESIDENT'
- 2 - 'PRINCIPAL/PARTNER'
- 3 - 'CIO'
- 4 - 'CORPORATE/EXECUTIVE SENIOR/VP'
- 5 - 'ASSISTANT VP'
- 6 - 'DIRECTOR'
- 7 - 'ASSOCIATE DIRECTOR'
- 8 - 'MANAGER'
- 9 - 'PROFESSOR'
- 10 - 'OTHER'

## References

- Adams, J.S. "Inequity in Social Exchange," In Advances in Experimental Social Psychology, Volume 2, Academic Press, New York, 1965.
- Baroudi, J. "The Dual Career Path, Does It Meet the Needs of IS Personnel?," The Proceedings of the 21st Annual Hawaii International Conference on System Sciences, January 1988.
- Bartol, K.M. "The Sex Structuring of Organizations: A Search for Possible Causes," Academy of Management Review, October 1978, p. 805-815.
- Bartol, K.M. and Wortmen, M.S.Jr. "Sex Effects in Leader Behavior Self-Descriptions and Job Satisfaction," The Journal of Psychology, 94, 1976, p. 177-183.
- Brief, A.P. and Aldag, R.J. "Male-Female Differences in Occupational Attitudes within Minority Groups," Journal of Vocational Behavior, 6, 1975, p. 305-314.
- Brief, A.P. and Oliver, R.L. "Male-Female Differences in Work Attitudes Among Retail Sales Managers," Journal of Applied Psychology, 61:4, 1976, p. 526-528.
- Campbell, A., Converse, P.E. and Rodgers, W.L. The Quality of American Life. Russell Sage, New York, New York. 1976.
- Cohen, J. Statistical Power Analysis for the Behavioral Sciences, Revised Edition. Lawrence Erlbaum Associates. Hillsdale, New Jersey. 1987.
- Cohen, J. and Cohen, P. Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences, 2nd Edition. Lawrence Erlbaum Associates. Hillsdale, New Jersey. 1983.
- Deaux, K. "Self-evaluations of Male and Female Managers," Sex Roles, 5:5, 1979, p. 571-580.
- Deaux, K. and Farris, E. "Attributing Causes for One's Own Performance: The Effects of Sex, Norms and Outcome," Journal of

Research in Personality, 11, 1977, p. 59-72.

Deaux,K. and Emswiller,T. "Explanation of Successful Performance on Sex-linked Tasks: What is Skill for the Male is Luck for the Female," Journal of Personality and Social Psychology, 29, 1974, p. 80-85.

Dubnoff,S. and Kraft,P. "Gender Discrimination in the Computer Industry," Unpublished Working Paper, Department of Sociology, SUNY Binghamton, 1986.

Ebeling,J., King,M. and Rogers,M. "Hierarchical Position in the Work Organization and Job Satisfaction: Findings in National Survey Data," Human Relations, 32:5, 1979, p. 387-393.

Forgionne,G.A. and Peeters,V.E. "Differences in Job Motivation and Satisfaction Among Female and Male Managers," Human Relations, 5:2, 1982, p. 101-118.

Frenkel,K.A. "Women and Computing," Communications of the ACM, 33:11, November 1990, p. 34-46.

Golembiewski,R.T. "Testing Some Stereotypes about the Sexes in Organizations: Differential Satisfaction with Work?," Human Resource Management, Summer 1977, p. 30-32.

Hall,F.S. and Hall,D.T. "Effects of Job Incumbents' Race and Sex on Evaluations of Managerial Performance," Academy of Management Journal, 19:3, September 1976, p. 476-481.

Hulin,C.L. and Smith,P.C. "A Linear Model of Job Satisfaction," Journal of Applied Psychology, 49:3, 1965, p. 209-216.

Johnston, W.B. and Packer, A.H. Workforce 2000, Hudson Institute, Indianapolis, Indiana, 1987.

Kavanagh,M.J. and Halpern,M. "The Impact of Job Level and Sex Differences on the Relationship Between Life and Job Satisfaction," Academy of Management Journal, 20:1, 1977, p. 66-73.

Kraft,P. "Computers and the Automation of Work," Excerpt from Technology and the Transformation of White-Collar Work, Lawrence

Erlbaum Associates, Hillsdale, NJ. 1987.

Leventhal, G.S. and Michaels, J.W. "Locus of Cause and Equity Motivation as Determinants of Reward Allocation," Journal of Personality and Social Psychology, 17, 1971, p. 229-235.

Leventhal, G.S. and Michaels, J.W. "Extending the Equity Model: Perception of Inputs and Allocation of Reward as a Function of Duration and Quantity of Performance," Journal of Personality and Social Psychology, 12, 1969, p. 303-309.

Levitin, T., Quinn, R.P., and Staines, G.L. "Sex discrimination against the American Working Women," American Behavioral Scientist, 15, 1971, p. 238-254.

Mobley, W.H. "Supervisor and Employee Race and Sex Effects on Performance Appraisals: A Field Study of Adverse Impact and Generalizability," Academy of Management Journal, 25:3, 1982, p. 598-606.

Orlikowski, W.J. and Baroudi, J.J. "The Information Systems Profession: Myth or Reality?," Office: Technology and People, 4:1, 1989, p.13-30.

Robinson, G.J. and McIlwee, J.S. "Women in Engineering: A Promise Unfulfilled?," Social Problems, 36:5, September 1989, p. 455-472.

Rosen, B. and Jerdee, T.H. "Sex Stereotyping in the Executive Suite," Harvard Business Review, March-April 1974, p. 45-58.

Rosen, B. and Jerdee, T.H. "The Influence of Sex-Role Stereotypes on Evaluations of Male and Female Supervisory Behavior," Journal of Applied Psychology, 57:1, 1973, p. 44-48.

Saleh, S.D. and Lalljee, M. "Sex and Job Orientation," Personnel Psychology, 22, 1969, p. 465-471.

Schein, V.E. "The Individual, the Organization, and the Career: A Conceptual Scheme," Excerpt from Organizational Psychology, Kolb, D.A., Rubin, I.M. and McIntyre, J.M. Prentice-Hall, Inc., Englewood Cliffs, NJ. 1974.

Schein, V.E. "The Relationship between Sex Role Stereotypes and Requisite Management Characteristics," Journal of Applied Psychology, 57, 1973, p. 95-100.

Schuler, R.S. "Sex, Organizational Level, and Outcome Importance: Where the Differences Are," Personnel Psychology, 28, 1975, p. 365-375.

Shapiro, H.J. and Stern, L.W. "Job Satisfaction: Male and Female, Professional and Non-Professional Workers," Personnel Journal, July 1975, p. 388.

Simons, G.L. Women in Computing. NCC Publications, The National Computing Centre Limited, Manchester, England. 1981.

Statistical Abstract of the United States - 1990, 110th Edition. Bureau of the Census. January, 1990.

Steinberg, R. and Shapiro, S. "Sex Differences in Personality Traits of Female and Male Master of Business Administration Students," Journal of Applied Psychology, 67:3, 1982, p. 306-310.

Stewart, L.P. and Gudykunst, W.B. "Differential Factors Influencing the Hierarchical Level and Number of Promotions of Males and Females Within an Organization," Academy of Management Journal, 25:3, 1982, p. 586-597.

Taynor, J. and Deaux, K. "When Women are More Deserving than Men: Equity, Attribution, and Perceived Sex Differences," Journal of Personality and Social Psychology, 28, 1973, p. 360-367.

Terborg, J.R. "Women in Management: A Research Review," Journal of Applied Psychology, 62, 1977, p. 647-664.

Terborg, J.R. and Ilgen, D.R. "A Theoretical Approach to Sex Discrimination in Traditionally Masculine Occupations," Organizational Behavior and Human Performance, 13, 1975, p. 352-376.

Time of Change: 1983 Handbook on Women Workers. U.S. Department of Labor, Women's Bureau, Bulletin 198. 1983.

Voydanoff, P. "Perceived Job Characteristics and Job Satisfaction Among Men and Women," Psychology of Women Quarterly, 5:2, Winter 1980, p. 177-185.

Veiga, J.F. "Women in Management: An Endangered Species?" MSU Business Topics, 25, 1977, p.31-35.

Weaver, C.N. "Sex Differences in the Determinants of Job Satisfaction," Academy of Management Journal, 21:2, 1978, p. 265-274.

Weaver, C.N. "Relationships Among Pay, Race, Sex, Occupational Prestige, Supervision, Work Autonomy, and Job Satisfaction in a National Sample," Personnel Psychology, 30, 1977, p. 437-445.

Weber, R.E. and Gilchrist, B. "Discrimination in the Employment of Women in the Computer Industry," Communications of the ACM, 18:7, July 1975, p.416-418.

Wexley, K.N. and Pulakos, E.D. "Sex Effects on Performance Ratings in Manager-Subordinate Dyads: A Field Study," Journal of Applied Psychology, 67:4, 1982, p. 433-439.

Wheeler, K.G. "Sex Differences in Perceptions of Desired Rewards, Availability of Rewards, and Abilities in Relation to Occupational Selection," Journal of Occupational Psychology, 54, 1981, p. 141-148.

TABLE 0 - PERCENT FEMALE IN JOB CATEGORY

YEAR	SYSTEMS ANALYSTS	PROGRAMMERS
1970 <sup>a</sup>	14.6%	22.6%
1980 <sup>b</sup>	22.0%	30.0%
1988 <sup>c</sup>	29.5%	32.2%

a - Weber and Gilchrist (1975)

b - Orlikowski and Baroudi (1989)

c - Statistical Abstract of the United States - 1990 (1990)

<b>TABLE 1 - FREQUENCY DISTRIBUTIONS</b>			
	ALL	MALE	FEMALE
	(n=491)	(n=441)	(n=50)
<b>INDUSTRY</b>			
<i>MANUFACTURING</i>	187 (38%)	174 (39%)	13 (26%)
<i>FINANCE</i>	33 ( 7%)	31 ( 7%)	2 ( 4%)
<i>INSURANCE</i>	44 ( 9%)	38 ( 9%)	6 (12%)
<i>GOVERNMENT</i>	16 ( 3%)	12 ( 3%)	4 ( 8%)
<i>EDUCATION</i>	32 ( 7%)	26 ( 6%)	6 (12%)
<i>TRANSPORTATION</i>	12 ( 2%)	10 ( 2%)	2 ( 4%)
<i>NATURAL RESOURCES</i>	18 ( 4%)	18 ( 4%)	0 ( 0%)
<i>CONSULTING</i>	48 (10%)	43 (10%)	5 (10%)
<i>UTILITY</i>	10 ( 2%)	10 ( 2%)	0 ( 0%)
<i>CONSTRUCTION/MINING</i>	2 (<1%)	2 (<1%)	0 ( 0%)
<i>SERVICE</i>	19 ( 4%)	17 ( 4%)	2 ( 4%)
<i>RETAIL/WHOLESALE</i>	25 ( 5%)	22 ( 5%)	3 ( 6%)
<i>PRINTING/PUBLISHING</i>	6 ( 1%)	4 ( 1%)	2 ( 4%)
<i>COMMUNICATIONS</i>	15 ( 3%)	13 ( 3%)	2 ( 4%)
<i>OTHER</i>	24 ( 5%)	21 ( 5%)	3 ( 6%)
<b>ANNUAL REVENUES</b>	<b>ALL</b>	<b>MALE</b>	<b>FEMALE</b>
< 50 MILLION	36 ( 7%)	30 ( 7%)	6 (12%)
50 - 99 MILLION	11 ( 2%)	9 ( 2%)	2 ( 4%)
100 - 249 MILLION	23 ( 5%)	21 ( 5%)	2 ( 4%)
250 - 499 MILLION	50 (10%)	49 (11%)	1 ( 2%)
500 - 999 MILLION	64 (13%)	60 (14%)	4 ( 8%)
1 - 3 BILLION	69 (14%)	66 (15%)	3 ( 6%)
3 - 4.9 BILLION	61 (12%)	56 (13%)	5 (10%)
5 - 9.9 BILLION	48 (10%)	44 (10%)	4 ( 8%)
10 - 14.9 BILLION	16 ( 3%)	15 ( 3%)	1 ( 2%)
15 - 19 BILLION	7 ( 1%)	6 ( 1%)	1 ( 2%)
> 20 BILLION	16 ( 3%)	14 ( 3%)	2 ( 4%)
N/A	28 ( 6%)	19 ( 4%)	9 (18%)
MISSING VALUE	62		

<b>TABLE 1 - FREQUENCY DISTRIBUTIONS</b>			
	<b>ALL</b>	<b>MALE</b>	<b>FEMALE</b>
	<b>(n=491)</b>	<b>(n=441)</b>	<b>(n=50)</b>
<b>MEDIAN SCORE</b>	<b>1-3 BILLION</b>	<b>1-3 BILLION</b>	<b>1-3 BILLION</b>
<b>NUMBER OF IS EMPLOYEES</b>	<b>ALL</b>	<b>MALE</b>	<b>FEMALE</b>
<b>&lt; 50</b>	93 (19%)	83 (19%)	10 (20%)
<b>50 - 199</b>	126 (26%)	118 (27%)	8 (16%)
<b>200 - 399</b>	65 (13%)	60 (14%)	5 (10%)
<b>400 - 999</b>	73 (15%)	64 (15%)	9 (18%)
<b>1,000 - 1,999</b>	32 ( 7%)	29 ( 7%)	3 ( 6%)
<b>&gt; 2,000</b>	48 (10%)	42 (10%)	6 (12%)
<b>N/A</b>	54 (11%)	45 (10%)	9 (18%)
<b>MEDIAN SCORE</b>	<b>50 - 199</b>	<b>50 - 199</b>	<b>50 - 199</b>

TABLE 2 - FREQUENCY DISTRIBUTIONS			
	ALL	MALE	FEMALE
	(n=491)	(n=441)	(n=50)
AGE (AGE)			
< 30	1 (<1%)	1 (<1%)	0 ( 0%)
30 - 34	16 ( 3%)	14 ( 3%)	2 ( 4%)
35 - 39	54 (11%)	42 (10%)	12 (24%)
40 - 44	125 (26%)	104 (24%)	21 (42%)
45 - 49	150 (31%)	140 (32%)	10 (20%)
50 - 54	93 (19%)	89 (20%)	4 ( 8%)
55 - 59	36 ( 7%)	35 ( 8%)	1 ( 2%)
> 60	16 ( 3%)	16 ( 3%)	0 ( 0%)
MEDIAN SCORE	45 - 49	45 - 49	40 - 44
ANNUAL SALARY (SALARY)	ALL	MALE	FEMALE
< 35,000	5 ( 1%)	3 ( 1%)	2 ( 4%)
35,000 < 49,999	10 ( 2%)	7 ( 2%)	3 ( 6%)
50,000 < 74,999	100 (20%)	83 (19%)	17 (34%)
75,000 < 99,999	123 (25%)	109 (25%)	14 (28%)
100,000 < 124,999	101 (20%)	91 (21%)	10 (20%)
125,000 < 149,999	61 (12%)	60 (14%)	1 ( 2%)
150,000 < 174,999	30 ( 6%)	29 ( 7%)	1 ( 2%)
175,000 < 199,999	14 ( 3%)	13 ( 3%)	1 ( 2%)
200,000 < 249,999	16 ( 3%)	15 ( 3%)	1 ( 2%)
> 250,000	19 ( 4%)	19 ( 4%)	0 ( 0%)
MISSING VALUE	12		
MEDIAN SCORE	100,000 - 124,000	100,000 - 124,000	75,000 - 99,999

TABLE 2 - FREQUENCY DISTRIBUTIONS			
	ALL	MALE	FEMALE
	(n=491)	(n=441)	(n=50)
EDUCATION (EDUC)	ALL	MALE	FEMALE
< BACHELOR	28 ( 6%)	27 ( 7%)	1 ( 2%)
BACHELOR	173 (35%)	154 (35%)	19 (38%)
MASTER	249 (51%)	224 (51%)	25 (50%)
Ph.D.	41 ( 8%)	36 ( 8%)	5 (10%)
TENURE WITHIN ORGANIZATION (ORGYEARS)	ALL	MALE	FEMALE
< 1	31 ( 6%)	27 ( 6%)	4 ( 8%)
1 - 3	89 (18%)	79 (18%)	10 (20%)
4 - 7	111 (23%)	98 (22%)	13 (26%)
8 - 12	86 (18%)	73 (17%)	13 (26%)
13 - 20	90 (18%)	82 (19%)	8 (16%)
> 20	84 (17%)	82 (19%)	2 ( 4%)
MEDIAN SCORE	8 - 12	8 - 12	4 - 7
REPORTING LEVELS TO CEO (RPTLEVEL)	ALL	MALE	FEMALE
NONE	76 (15%)	67 (15%)	9 (18%)
1	171 (35%)	156 (35%)	15 (30%)
2	84 (17%)	82 (19%)	2 ( 4%)
3	60 (12%)	55 (13%)	5 (10%)
> 3	45 ( 9%)	36 ( 8%)	9 (18%)
NOT APPLICABLE	55 (11%)	45 (10%)	10 (20%)
MEDIAN SCORE	1	1	1

TABLE 2 - FREQUENCY DISTRIBUTIONS			
	ALL	MALE	FEMALE
	(n=491)	(n=441)	(n=50)
<b>JOB SATISFACTION (JOBSAT)</b>	ALL	MALE	FEMALE
VERY SATISFIED - 1	160 (33%)	142 (32%)	18 (36%)
2	214 (44%)	197 (45%)	17 (34%)
3	59 (12%)	54 (12%)	5 (10%)
4	47 (10%)	38 (9%)	9 (18%)
VERY DISSATISFIED - 5	9 (2%)	9 (2%)	0 (0%)
MISSING VALUE	2		
MEDIAN SCORE	2	2	2
<b>CAREER SATISFACTION (CARSAT)</b>	ALL	MALE	FEMALE
VERY SATISFIED - 1	170 (35%)	155 (35%)	15 (30%)
2	241 (49%)	213 (48%)	28 (56%)
3	50 (10%)	47 (11%)	3 (6%)
4	20 (4%)	18 (4%)	2 (4%)
VERY DISSATISFIED - 5	6 (1%)	6 (1%)	0 (0%)
MISSING VALUE	4		
MEDIAN SCORE	2	2	2
<b>LIKLIHOOD OF CAREER GOAL ACHIEVEMENT (PROMO)</b>	ALL	MALE	FEMALE
NOT AT ALL LIKELY - 1	50 (10%)	41 (9%)	9 (18%)
2	79 (16%)	71 (16%)	8 (16%)
3	70 (14%)	60 (14%)	10 (20%)
4	147 (30%)	135 (31%)	12 (24%)
VERY LIKELY - 5	142 (29%)	132 (30%)	10 (20%)
MISSING	3		
MEDIAN SCORE	4	4	3

TABLE 3A - CORRELATION COEFFICIENTS (ALL SUBJECTS)									
	GENDER	AGE	SALARY	PROMO	RPTLEVEL	JOBSAT	ORGYEARS	CARSAT	EDUC
GENDER	---								
AGE	-.19***	---							
SALARY	-.18***	.29***	---						
PROMO	-.10**	.20***	.18***	---					
RPTLEVEL <sup>1</sup>	-.03	.00	-.04	-.13***	---				
JOBSAT <sup>1</sup>	.02	-.06	-.20***	-.48***	.24***	---			
ORGYEARS	-.10**	.19***	.01	.13***	.14***	.08*	---		
CARSAT <sup>1</sup>	-.02	-.05	-.17***	-.25***	.17***	.49***	.00	---	
EDUC	.03	-.06	-.01	-.07*	-.02	.00	-.19***	.05	---

\*\*\* p<.01  
 \*\* p<.05  
 \* p<.10  
 1 - Reverse Scaled

TABLE 3B - CORRELATION COEFFICIENTS (MALES BELOW/FEMALES ABOVE DIAGONAL)									
	GENDER	AGE	SALARY	PROMO	RPTLEVEL	JOBSAT	ORGYEARS	CARSAT	EDUC
GENDER	---	---	---	---	---	---	---	---	---
AGE	---	---	.28*	.03	-.01	.04	.20	.04	-.12
SALARY	---	.26***	---	.27*	.13	-.17	.01	-.03	-.15
PROMO	---	.20***	.16***	---	-.03	-.39***	.03	-.07	-.07
RPTLEVEL <sup>1</sup>	---	-.01	-.07	-.15***	---	.33**	.27*	.04	-.05
JOBSAT <sup>1</sup>	---	-.07	-.21***	-.49***	.23***	---	.22	.57***	.02
ORGYEARS	---	.20***	.00	.13***	.12***	.07	---	-.25*	-.01
CARSAT <sup>1</sup>	---	-.06	-.19***	-.27***	.18***	.48***	-.01	---	.01
EDUC	---	-.05	-.01	-.07	-.02	.00	-.20***	.05	---

\*\*\* p<.01  
 \*\* p<.05  
 \* p<.10  
 1 - Reverse Scaled

TABLE 4						
VARIABLE	STATISTIC	H: 2	H: 3	H: 4	H: 5a	H: 5b
GENDER	R <sup>2</sup> Change	.017	.000	.004	.000	.002
	F Change	8.71	.22	2.15	.02	.86
	Significance F Change	.00	.64	.14	.90	.36
	B	.82	.10	.29	.02	.12
	Standard Error of B	.28	.22	.20	.15	.13
ORGYEAR	R <sup>2</sup> Change	.001	.018	.009	.003	.000
	F Change	.52	8.44	4.79	1.55	.02
	Significance F Change	.47	.00	.03	.21	.94
	B	-.05	.12	.08	.04	.00
	Standard Error of B	.06	.04	.04	.03	.03
EDUC	R <sup>2</sup> Change	.003	.001	.019	.001	.006
	F Change	.51	.22	3.29	.11	.97
	Significance F Change	.68	.88	.02	.95	.41
	B	NI	NI	NI	NI	NI
	Standard Error of B	NI	NI	NI	NI	NI
AGE	R <sup>2</sup> Change	.082	.000	.039	.003	.002
	F Change	42.52	0	19.77	1.33	.85
	Significance F Change	.00	.96	.00	.25	.36
	B	.39	-.01	.16	0	0
	Standard Error of B	.06	.05	.05	.04	.03

TABLE 4						
VARIABLE	STATISTIC	H: 2	H: 3	H: 4	H: 5a	H: 5b
SALARY	R <sup>2</sup> Change	DV	.001	NA	.04	.029
	F Change		.73		20.11	13.9
	Significance F Change		.39		.00	.000
	B		-.03		-.11	-.08
	Standard Error of B		.04		.02	.02
RPTLEVEL	R <sup>2</sup> Change	.002	DV	.017	.049	.024
	F Change	.804		8.56	25.25	12.06
	Significance F Change	.37		.00	.00	.00
	B	-.05		-.13	.15	.09
	Standard Error of B	.06		.04	.03	.03
PROMO	R <sup>2</sup> Change	NA	NA	DV	NA	NA
	F Change					
	Significance F Change					
	B					
	Standard Error of B					
JOBSAT	R <sup>2</sup> Change	NA	NA	NA	DV	NA
	F Change					
	Significance F Change					
	B					
	Standard Error of B					
CARSAT	R <sup>2</sup> Change	NA	NA	NA	NA	DV
	F Change					
	Significance F Change					
	B					
	Standard Error of B					