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Linda Keller Brown's, The Woman Manager in the United States, recently published by the Business and Professional Women's Foundation, represents an important contribution to research in the area of women as business executives. The analysis presents and critiques current literature in the field, explores areas of controversy and suggests aspects needing more research and fresh insights. Topics of interest to researchers and business executives include historical contributions of women to the development of management, current status of women in management, social forces contributing to the change in the situation of women executives, and the social and business impact of a dual career lifestyle.

The book is based on an analysis of over 200 studies and reports, and provides an extensive compilation of statistics and background data. Each of the book's 10 chapters is fully footnoted, and there is an 8 page bibliography as well as a listing of computer data sources of material on women managers.

The tables alone offer a telling indication of growth and change in the area of women managers and points to where improvements have yet to be made.

The goal of the Business and Professional Women's Foundation is to reach a wide number of working women with vital career information such as this. To obtain a copy of The Woman Manager in the United States send $5.50 plus postage to BPW Supply, 11722 Parklawn Drive, Rockville, MD 20852.

(Total cost is $6.85 for the title; include document number NF 3503 when referring to the title)

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Recent Research on Women in Management

by David D. Van Fleet and Julie G. Saurage

With more women entering the work force and with more government and social pressure on businesses to hire women, more women are being hired. If these women are not being used to their full capacities, however, a great deal of inefficiency exists as well as an expensive problem in both human and monetary terms. This article will review recent research done in areas relating to the status of women as managers, derive conclusions based on that review, and develop implications from those for management.

Since Terborg [77] and Brown [8] have reviewed much of the earlier research, this article primarily reviews only pertinent research in the period 1977 to the present (see also Denmark [20], Stead [73], and Biles and Pryatel [7]). Three areas relating to the topic are explored. First, the effect of an applicant's sex and attractiveness on hiring decisions is covered because this has been a "hot" topic since the passage of the 1964 Civil Rights Act. As will be seen, some writers assert that equal opportunity programs have been effective in decreasing discriminatory employment practices while others claim the result is reverse discrimination victimizing those unprotected by such programs. The research reviewed here has utilized various methodologies in assessing if women may still be victims of discrimination in hiring. If sex and/or attractiveness effects are present, management must take action to ensure that the best person, regardless of sex, is hired.

The second topic covered is attitudes toward female managers. Sex role stereotypes that have developed in our society are felt by many to be both oppressive and incorrect. These stereotypes are frequently identified as being the cause of discrimination against women in male dominated occupations. Research done on this topic examines these stereotypes that women face as managers. While some references to research on commitment, tenure, and turnover may be made, this paper does not deal with job commitment and turnover issues. Readers specifically interested in those aspects of the "women in management" issue should see the work of Graddick and Farr [35] and Chusmir [15] as well as that of Smith [72], Mathews, Collins, and Cobbs [52], and Barnes and Jones [2].

The third part of this article looks at perceptions of female leadership ability. There has been an increasing interest regarding the impact of sex on leadership because of the increasing number of women in leadership roles. Perceptions about female leadership ability play an important part in the formation of attitudes concerning women as managers. Such attitudes affect whether a woman is hired for a job and her treatment on the job once hired, just as any stereotypes about any group can affect a group member's employment (see also Golembiewski 1977 [32] and Gordon and Hall [34]). Note that this review deals with *attitudes about women* and not with *women's attitudes* about work and/or jobs. This latter area has been covered by Gomez-Mejia [33], Varca, Shafler, and McCauley [79], Forgionne and Peeters [25], Bartol, Anderson, and Schneier [6], Andrisani and Shapiro [1], as well as earlier by Fuchs [27].

Table 1 represents a composite of the research that is covered in following sections of this article. Readers not interested in research detail could omit this section and turn directly to the conclusions.

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EFFECTS OF SEX AND ATTRACTIVENESS ON HIRING

Research in the 1960's and early 1970's found that women were rated less desirable for management jobs and were extended fewer job offers than men [12]. One explanation for these findings is stereotypes about women managers. Since men have traditionally held management jobs, stereotypes of managers have arisen that describe management positions as having masculine characteristics. This may in turn result in preconceived ideas that women are not good managers. The effect of attractiveness is important since it has been proposed that physical attractiveness exaggerates perceived "gender-related attributes." Some research supported this notion and demonstrated that attractive women are regarded as more feminine than unattractive women, and, because of this, their attractiveness was a liability in achieving management positions [41].

Sex Effects

Heilman [39] used the assumption that stereotypes do exist in employment settings to examine how the proportion of women in an applicant pool could affect personnel selection. Subjects reviewed packets on eight different applicants, only the last of whom was to be evaluated for the job. The percentage of women in each set was 12½, 25, 37½, 50, and 100% respectively. There was a tendency for women to be evaluated more unfavorably when their representation in the applicant pool was minimal. The "focal woman applicant" was in a far worse position when the percentage of women in the

TABLE 1

COMPOSITE OF RESEARCH REVIEWED

Effects of Sex and Attractiveness on Hiring

AUTHOR	SUBJECTS			METHODOLOGY	RESULTS
	male	female	type		
Heilman & Saruwateri (1979)	23	22	undergraduate students	evaluate job applicants for managerial and non-managerial positions	attractiveness was advantageous for males and females in non-man. positions but disadv. for women app. for man. position; no general bias against female hiring.
Cann, Siegfried, & Pearce (1981)	96	148	undergraduate students	evaluate applicants for department man. position	no diff. in overall or indiv. ratings but hiring had bias toward hiring males and attractive males and females, except bias against attractive females in managerial positions.
Cash, Gillen, & Burns (1977)	36	36	personnel consultants	evaluate applicants for masculine, feminine, and neuter type jobs	attractiveness adv. to males and females, except disadv. to females in man. jobs; males recom. for masculine and neuter jobs, women for feminine jobs.
Dipboye, Arvey, & Terpstra (1977)	134	125	undergraduate students	evaluate resumes with photos of applicants	attractiveness adv. to both men and women; males selected more freq. than females; disadv. for highly attractive or unattractive males.
Giles & Feild (1982)	385 172	92	students recruiters	one questionnaire for each group	influence of stereotype great on absence of information.
Heilman (1980)	50	50	MBA students	eval. applic. for a specific man. position, varied % of females in applicant pool	women eval. more unfav. when representation in applicant pool was minimal.
McKenna & Johnson (1981)	48	48	educ. admin. grad. students	subject act as schools admin. & eval. applic. of high school Eng. teacher	males rated higher than females, regardless of selection risk.
McIntyre Moberg, & Posner (1979)	458		potential employers	mailed fictious resumes actual employers	males were preferred over females.
Rosen & Mericle (1979)	57	11	municipal administrators	assume role of dept. mgr. in munic. gov't. and eval. applic. for supervisor, had varying E.E.O. policies	selection decisions nearly identi. for males & females. E.E.O. had an effect on salary, lowest pay for women under strong statement.
Taylor & Ilgen(1981)	63	52	undergraduate students	in-basket exercise	both males and females saw females as better placed in less challenging positions.

Attitudes Toward Female Managers

Mai-Dalton Sullivan (1981)	117	90	undergraduate students	assume role of branch mgr. of lrg. bank. asked to assign tasks to male & female workers	chal. task-men assigned men, women assigned women dull task-both preferred to assign opposite sex.
Cromie (1981)	79	99	variety of workers	postal questionnaire, used 21-pt. WAMS	women had more fav. attit. toward women in mgmt. than men.
Terborg, Peters, Ilgen & Smith (1977)	180	100	employees of distr. co.	21-pt. WAMS	higher educ. women had most fav. attitudes.
Garland & Price (1977)	123		undergraduate students	WAMS & attributions of success/failure of female	success attrib. to hardwork, etc. assoc. with pos. attit. on WAMS. success attrib.to luck, etc. assoc. with negative attit. on WAMS
Stevens & DeNisi (1980)	143	83	upperlevel undergraduates	same as Garland &Price	women had more pos. attit., both men & women attrib. success to hardwork, etc., within male scores had findings like Garland & Price.
Ezell, Odewahn, & Sherman (1980, 1981)	202	158	mgrs. of st. welfare agen.	17 item instrum. with 3 Likert-type scales to measure perception	respondents who had been supervised by women had more pos. attitudes.

Perception About Female Leadership Abilities

Lee & Alvares (1977)	64	65	undergraduate students	partic. in grp. task with a superv., answer questionnaire to eval. supervisor	no sex diff. in description and eval. of behavior, females rate consideration behavior higher than males.
Perry et al. (1977)	127	341	mental hospital employees	2 leadership and 1 job questionnaire	no evidence of different styles by sex.
Wolters & Bell (1977)	100	100	mgrs and students	2 questionnaires	only difference found in values of male and female students.
Petty & Bruning (1980)	438	1944	employees of st. soc. agency	questionnaires to meas. job satis., leaders behav. role stress, & subject's demographics	both male & female leaders consid. pos. correl. with employee satis., no rel. betw. initiating struc. & satis., to support for sex-role congruency hypothesis.
Butterfield & Powell (1981)	372	244	undergraduate bus. studnets	rated initiating str. & consid. styles, read stories about mgrs, using one of the styles, eval. behavior	mgrs. with same style rated diff. according to whether grp perf. was high or low, no sex difference.
Rice, Benders & Vitters (1980)	216		1st yr. cadets	assigned to grps. & eval. leader & causes of leader-grp. performance	strong & neg. bias about causes of perf. in female led grps. among subjects with trad. view of womens' roles.
Jago & Vroom (1982)	182 84 124	79 42 62	managers undergraduates MBA students	experiments using Vroom-Yetton model and ratings	female more likely to choose approximate process but negatively evaluated if autocratic.
Ritchie & Moses (1983)		1097	managers	related assessment center evolutions with middle level positions 7-years later	only one of 14 dimensions different from previous studies of males

pool was 25% or less than when the percentage was above that level. In such near token positions, she was judged as being of lower potential, being less qualified, and was less likely to be recommended for a management position (see also Kanter [45]). Further, if the female manager perceived herself as a "token," she was likely to be dissatisfied and have less commitment to the organization [14].

Heilman and Saruwatri [41], however, found no bias against women in hiring decisions in their research. They cautioned, however, against drawing conclusions based on their findings. They judged that since the researchers were women and the subjects were asked to rate male and female applicants jointly, the subjects may have been alerted to the true intent of the research given the great amount of interest in equal opportunity at the time of the experiment.

McKenna and Johnson [54] looked at the effects of

selection risk on sex discrimination. This is the risk that a manager feels when he or she selects an individual for a job. This risk increases as the job under consideration increases in importance or as the noticeability of failure increases. With more risk, the people selecting the employees become more sensitive to the risk. Undergraduate college students were asked to evaluate an applicant's suitability for a position as a high-school English teacher. This is a female sex-typed position as defined by the proportion of women in the occupation, so one might expect to find that women would be preferred over men. The results indicated that males were rated higher than females regardless of the level of selection risk. Ratings of both males and females were lower under conditions of high selection risk, showing that the raters increased their cautiousness under such conditions. The selection risk effect on sex discrimination in employment decisions was more important than the sex typing of the job. With a high selection risk, women may be discriminated against even in female-oriented occupations.

McIntyre, Moberg, and Posner [53] sent resumes of fictitious applicants to 458 potential employers. The responses to the applicants were analyzed to determine if discrimination appeared to occur. Male write-in applicants were preferred over females. There was even a difference in the amount of time it took the companies to respond to the applicants, an average of 2.6 days longer for the female applicants.

Rosen and Mericle [67] examined previous research on discrimination and concluded that discrimination still existed. They, therefore, directed their research to ways of reducing bias. They explored the influence of organizational fair employment policies on both selection and salary decisions to see how the strong and weak statements affect these decisions. Municipal administrators from a southeastern city were used in the exercise. One set of employment statements was strongly stated to create pressure to hire more women. The other statement merely said that the city was an equal opportunity employer. The administrators reviewed either a male or female applicant and made a recommendation. The employment statements did not influence the selection decision; however, a difference in pay recommendations was found. The lowest starting pay recommendations were for females under the strong affirmative action policy. The highest were for women under the weak affirmative action statement. This may reflect a stronger commitment to retention of women by managers under minimal pressure and a negative reaction to the high pressure.

Dipboye, Arvey, and Terpstra [22] found that the person generally perceived to be the most qualified for a management position was a man. They also found that women were as biased against women as were men. McIntyre, Moberg, and Posner [53] and Taylor and Ilgen [76] also found both women and men to be biased.

Cash, Gillen, and Burns [13] also found sex bias. Respondents perceived males to be more qualified than females, expected them to achieve greater success, and gave them sronger recommendations than women with identical credentials for a masculine job (auto salesperson, receiving clerk). Men were also considered more appropriately placed in neutered jobs than were women. However, unlike McKenna and Johnson [54], they did find that women were favored for feminine jobs. Here sexism constrains both sexes, but there were stronger constraints on women. Cann, Siegfried, and Pearce [12] also found a bias toward hiring males and against hiring females in hiring decisions.

Research on ways to reduce these hiring effects has generally suggested that experience and information may be effective, especially if they increase the awareness of stereotyping [47]. Muchinsky and Harris [58] found that high academic qualifications tended to reduce discriminatory decisions. Taylor and Ilgen [76] found that working with competent females lowers biases. Hall and Hall [36] and Giles and Feild [29] indicated that the influence of stereotypes is greater in the absence of objective information. So more data and more objective information appear to reduce discrimination in hiring.

Attractiveness Effects

Cash, Gillen, and Burns [13] did research with practicing personnel consultants. Six male and six female consultants evaluated male or female applicants of low, high, or unknown attractiveness (no photograph). Neutral, masculine, and feminine jobs were used, and the applicant was evaluated for each of six potential jobs. An "Occupational Assessment Questionnaire" was used for the consultants to indicate their decisions on a 9-point scale. Although the consultants did not get to meet the applicants, they felt quite confident in their ratings (mean of 7.47 on a 9-point scale). There was a physical attractiveness effect on the consultants' decisions. The employment potential of both sexes was perceived to be greater for attractive than for unattractive applicants. Attractive applicants were also judged more qualified for neutral jobs than persons who were unattractive. However, in masculine jobs, attractive females got slightly lower ratings and were less likely to be hired than unattractive females.

Heilman and Saruwatri [41] used college students to analyze four applicants for a job with a large insurance company. All four applicants were equivalently qualified for the job. Two were male and two were female, with one attractive and one unattractive for each sex. Hiring preferences were as follows: male, attractive 43.5%, unattractive 13%; female, attractive 13%, unattractive 30.5%. When a non-managerial job was used. attractive applicants of both sexes were preferred. For men, attractiveness proved to be advantageous for all positions, but for women it was a hindrance in managerial positions.

Cann, Siegfried, and Pearce [12] had college students evaluate applicants for a department store manager position. They found no difference in individual or overall

ratings of the applicants, but hiring decisions did seem to be affected by attractiveness. However, they found a bias toward both attractive males and females. A possible reason for this may be that attractiveness is a hindrance for individuals applying for jobs considered inappropriate for their sex [13].

Dipboye, Arvey, and Terpstra [22] found that college students perceived the most qualified person for management positions to be physically attractive and male. When females were either very attractive or unattractive, there was a bias against hiring them. In general, they found that attractiveness was an advantage to applicants, both male and female, as long as the female was not highly attractive. Dipboye and Wiley [21] also found that moderately aggressive males and females were preferred over passive interviewees.

ATTITUDES TOWARD FEMALE MANAGERS

Research has generally found that, once hired, women find further discrimination. Performance evaluations, promotions, development, and supervision are all areas in which women were found to be discriminated against [50, 59, 65]. Such discrimination can definitely hinder a woman's career development as well as result in a firm's under-utilizing its female employees' abilities. Bartol [3] developed a career stage explanation for fewer women at higher managerial levels and Stewart and Gudykunst [75] have suggested that the career development of males and females is quite different. Further, Heilman [38], Fottler and Bain [26], and Moracco, Wilson, and Floyd [57] have found occupational aspiration differences between men and women.

One consistent finding has been that male and female performance is judged by different criteria [4, 43, 60]. Wiley and Eskilson [82] report that, when similar power strategies are used, what was more positive for males was less positive for females. Calder and Ross [11] reported that male and female supervisors were even expected to perform differently. Further, Schmitt and Hill [69] argue that, even when consensus occurs, it may reflect nothing more than shared stereotypes.

In much of this attitude research, a frequently used analytical instrument has been the "Women as Managers Scale" or WAMS. Developed in 1974 to identify and measure stereotypic attitudes toward women as managers, the goal was to develop a scale that could incorporate many managerial situations and still be psychologically meaningful [78]. The scale usually consists of twenty-one items, ten of which are worded unfavorably toward females. A Likert-type scale of one (strongly disagree) to seven (strongly agree) is used for responses to the items [74].

Mai-Dalton and Sullivan [50] looked at the effect of managers' sex on assignment to a challenging adult task and reasons for the choice. They judged that if women were not assigned challenging jobs to the same extent as men with equivalent qualifications, women would be at a disadvantage from the time they entered a new job. Their subjects were 117 male and 90 female college students and 88 male and 14 female banking executives. The subjects acted as a branch manager of a large commercial bank and were asked to assign tasks to male and female workers with equivalent qualifications. In the challenging task, it was found that men preferred to assign men and women preferred to assign women. The subjects said that they chose members of their own sex for the challenging jobs because they experienced a more rewarding relationship and less conflict with those individuals. Also, the men justified their prejudice on the basis of role stereotyping, claiming that women were competent for the dull task and would be more interested in getting the job done. Participants were aware that they could avoid a sex biased decision by responding with a no preference choice; however, most did not do so. Thus, sex bias did not disappear even though subjects were made aware of it.

Cromie [18], in WAMS research in Northern Ireland, found that men did not as readily accept women managers as women did. Women in secretarial, professional, and managerial positions had more favorable attitudes toward women managers than men in professional and managerial positions. Terborg, et al. [78] used a WAMS in an experiment with 180 male and 100 female full-time employees and found that the women with more formal education (higher salaried) tended to have the most favorable attitudes toward women managers. Age and marital status appeared to have no effect, and salaried employees had more favorable attitudes than wage employees.

Garland and Price [28] also used WAMS. The subjects were asked to consider four causes for the success/failure of women. The success causes were ability, hard work, good luck, and an easy job. Failure causes were lack of ability, lack of hard work, bad luck, and a difficult job. A Likert-type scale was used to indicate the extent to which the above reasons were the cause of success or failure. Internal attributions (ability and hard work) for success were associated with positive attitudes toward women managers. External attributions (good luck and an easy job) were associated with negative attitudes toward women managers. They did not find any association between an individual's attitudes toward women managers and causes given for a female manager's failure. This suggests that people will resist changing their attitudes by integrating any new information in a way that is consistent with their existing attitudes.

Stevens and DeNisi [74] repeated the Garland and Price [28] procedure with both male and female subjects. Women had more positive attitudes toward women in management than did men, but in attributing success or failure, both sexes attributed success to ability, effort, and the nature of the job. Women subjects were, however, more consistent in their responses while the male results

were similar to those of Garland [28]. Heilman and Guzzo [40] also found that success for males was attributed more to ability while that for females more to luck.

Ezell, Odewahn, and Sherman [23, 24] used men and women managers in a state public welfare agency to determine if there were differences in the perception of competence of women as managers, depending on whether a person had been supervised by a woman. They chose a public human service organization because there were more women in management positions in that organization. Respondents who have had women supervisors were significantly more positive than were those with no prior female supervision. Among male respondents, those holding the highest entry level managerial positions had the most positive attitudes toward women managers. Women in middle and lower management positions had the most favorable attitudes among women respondents. Managers in the fifty or older age group had more favorable attitudes than those in the thirty-six to fifty group. Individuals whose professional training was in business or public administration had a substantially lower perception of female managerial ability than those with other training.

PERCEPTIONS ABOUT FEMALE LEADERSHIP ABILITIES

Research concerning the sex of leaders is a fairly recent development. As recently as the early 1970's, there was not a substantial amount of research on the subject. Since then, numerous researchers have found that both men and women tend to believe that females are less suited for leadership positions [70], are less effective in such positions than men [8], or are disposed to assume or not assume leadership positions as a function of sex-role expectations [31]. Males and females are frequently evaluated differently for similar performance [77, 80], and there is also considerable research showing that performance by females is frequently subjectively evaluated less favorably than identical performance by males [44] and that both male and female evaluators show this bias. While mentors are more common for male managers [42], most early research found no general pattern of benavior characterizing male and female leaders [63]. On the other hand, Bartol and Wortman [5] reported that there were fewer differences in leader behavior than stereotypes would suggest. Assessment center predictions have also been essentially the same for males and females [64]. Further, Brown [8] reports that practicing managers frequently judged that there was no difference in the leadership styles of men and women, whereas students often thought that there was. Also, students were found to support female stereotypes more than those who had more work experience [8].

Lee and Alvares [49] used the Leader Behavior Description Questionnaire (LBDQ) and found no differences in the descriptions and evaluations of supervisory style. They judged that these results may have occurred because of the possibility that college students were sensitized to sex discrimination issues or that the fact that real supervisory cases were used may have resulted in a truer reproduction of real world situations. Research with results different from these often use stories rather than real experiences [49].

Petty and Bruning [61] hypothesized that considerate supervisory behavior by female managers would be more positively correlated with the worker's satisfaction than would considerate behavior by male managers with the opposite relationship for initiating structure behavior. This was to test the "sex role congruency hypothesis." The data they gathered did not support this hypothesis. Consideration was strongly correlated with subordinate satisfaction for both male and female leaders for all the subgroups of job classifications used in the study. Although not as strongly, initiating structure was also correlated with satisfaction for both males and females. One reason for these results may have been the fact that there are more women managers in the public welfare agencies sampled than in most business firms. Thus, the workers have had more experience with women managers than most individuals. Also, the agency was in a turbulent state at the time of the study with insufficient funding and public criticism of it. Subordinates' needs for supervisory initiating structuring and consideration may have had more importance than any stereotypes they might have had.

Butterfield and Powell [10] also found that male and female leaders using the same style are rated the same. They found that managers who used the same style were rated differently depending on whether their group's performance was high or low. Performance, but not leader sex, influenced how a person viewed a leader's behavior. Petty, et al. [62] also found similar results. Rice, Bender, and Vitters [63] found that groups with female leaders at West Point performed less effectively than groups with male leaders. However, leader sex accounted for only three percent of the variance in group performance. They also found that there was a strong and negative bias in attributions about the causes of performance in female led groups amoung those followers who had traditional views about the role of women. Those with more liberal views often showed a sex bias favoring female leaders with regard to the attribution of performance.

CONCLUSIONS

Effect of Sex and Attractiveness

A hypothesis that women are discriminated against in hiring decisions has been supported by recent research. The effects of selection risk, percentage of females in the applicant pool, and equal employment statements have been examined. Women were evaluated more unfavorably when their representation in the applicant pool was small. Males were consistently ranked higher than females regardless of selection risk in a female-oriented job; the

inclusion of a selection risk in experiments appears to result in a reversal of the traditional discriminatory view of women and a disregard for sex roles. Differences in equal opportunity statements did not appear to influence hiring but did influence salary recommendations. This body of research on the effects of sex on hiring decisions points out that situational factors in the hiring environment may affect results. Certain variables in hiring situations may lead to a use of stereotypic views instead of the use of more objective rationales.

Research on physical attractiveness suggests that the attractiveness of applicants is a factor in hiring decisions. Although results differ, there appears to be a tendency toward hiring attractive females for jobs considered female oriented. Attractive females, however, are at a disadvantage when being considered for management positions. This supports the idea that the effects of appearance are mediated by perceived differences in the fit between an applicant's attributes and the requirements of the job with negative reactions resulting from perceived incongruencies. Also, other research has found that attractiveness accentuates femininity in women and masculinity in males. This may be why attractive females are not considered suitable for management jobs. Their attractiveness adds to their femininity and thus detracts from their perceived fit in management positions that are usually described in masculine terms.

Attitudes Toward Female Managers

When WAMS was used to measure attitudes toward female managers, the results were fairly consistent: women had more favorable attitudes toward women than did men, and higher educated men and women had more favorable attitudes than did those with less education. But when challenging tasks were involved, both sexes assigned challenging tasks to those of their same sex because of the favorable relationships they judged developed in such situations. Thus, more than just attitudes about women's abilities are involved. Feelings about the relationships that develop on the job were also important in the treatment of women in their jobs. In attributions of success or failure moderated by WAMS scores, those with lower scores attributed success on the job to women having good luck or an easy job while those with higher scores attributed success to hard work and ability. This reinforces the findings of the WAMS score. WAMS appears to be a fairly good test of attitudes toward women in managerial positions.

Perceptions About Female Leadership Abilities

The research reviewed here seems to support the finding that women were generally found to be as effective as men in actual work situations. Descriptions of the behavior of managers using consideration styles and initiating structure styles were sometimes not affected by the sex of managers, although at other times they were.

A Caveat

Many of the research studies reviewed here depend a great deal on "self-report attitude scales" and questionnaires, such as WAMS. These tools need to be refined to ensure that they are measuring the attitudes that they are intended to measure. WAMS is not a fully validated measure, so there is some question about the results obtained with it [16, 17]. Also, the reliability of students may differ from that of managers. The instrument is also treated as though it were unidimensional, while there appears to be more than one dimension involved in most of this research. In most studies there appears to be one dominant dimension and a varying number of minor dimensions. Also, attitudes are easy to fake on WAMS since it is a self-report scale [81]. All this leads to the conclusion that more research is needed to establish the validity and consistency of WAMS, although it looks good at present.

Another problem involves the focus of the designs [81]. Frequently, when differences between the sexes are studied, the results display more variance within each sex than between the sexes. The population used also causes difficulty. Subjects range from college undergraduates to managers to workers. Thus, rival hypotheses often emerge. Also, college students with no work experience have little basis for their views, so they may more readily resort to stereotypes. There needs to be more concern for the characteristics of the samples used in the research [81]. In general, there is a need to increase the validity and consistency of the measuring tools used and to more carefully analyze the situational and subject characteristics in this research.

IMPLICATIONS FOR MANAGEMENT

The research reviewed here confirms that sex discrimination still exists in organizations. With the present emphasis on equal employment, many organizations have had to establish affirmative action programs. However, many such programs have very little success in ending discrimination against women [55, 56, 68, 72]. Glucklich and Povall [30] found that anti-discrimination and equal opportunity were low priority items in many of the organizations that they surveyed. More women have been hired under these programs, but they cannot always perform to their full capacity because of stereotypic views that exist within organizations, especially with regard to their managerial ability. It is uneconomical and inefficient for organizations to hire women (or any subgroup of the labor force) and not to use them to their full capacity. Therefore, programs need to be developed to end the discrimination and allow all employees to work to their full capacities. These programs must be two-fold. First, personnel involved in hiring must be made aware of tendencies to discriminate that those personnel may display. Secondly, programs that reduce discriminatory practices after hiring must be developed.

Hiring Improvements Programs

Sex discrimination could be influenced by situational factors such as the percentage of women in the applicant pool, selection risk, and the employment opportunity

statement. Employment opportunity statements do not appear to have much effect on hiring practices, although they do seem to affect salary recommendations. Managers should discuss the meaning of such statements with those doing the hiring to try to reduce the reactions of those personnel in order to bring about more equitable salary recommendations. Management must also train their personnel staffs to be aware of discriminatory tendencies in hiring and how such tendencies can be overcome. Practice hiring scenarios and exercises can be used to increase the awareness of sex discrimination [66]. When possible, a firm should increase the applicant pool size so that more women will be considered for a position. A larger applicant pool will increase the chances of finding qualified women [37].

In short, a firm's hiring procedures and objectives must be carefully analyzed and developed, personnel must be thoroughly trained, and the applicant pool size must be adequate to meet a firm's objectives. Periodic review of hiring programs and practices will aid in ensuring that these recommendations are implemented, supported, and sustained.

Organizational Programs

Once hired, women often find their career paths blocked by discriminatory practices within the organization, or they experience strong sex-role conflict [15]. Even with the present emphasis on equal opportunity employment, many programs do not have the support of the total organization, let alone top management. To reduce and prevent turnover and/or career stagnation for women and under-utilization of their ability, the first step is to obtain top management acceptance and active support of the objectives of the equal opportunity program. Without the backing of upper management, programs will falter and be allowed to fail. Therefore, the objective of equal opportunity must be a corporate objective.

The second major step is increasing managerial awareness of discrimination. Women managers are often excluded from informal work relationships that arise on the job. This exclusion can result in their not being involved in decision making, which often occurs in informal settings. This exclusion perpetuates individual and role level problems that women managers face [51]. Condescending treatment, the withholding of supervisory support, and absence of encouragement have also been found [66]. This failure to be fully accepted into the work environment can easily detract from a woman manager's effectiveness. The possible consequences are lowered skill use, lowered self image, dysfunctional behaviors, and quitting [23]. A promising approach to ending sex bias is experimental learning workshops, where the individuals learn first-hand how sex biases can influence managerial actions. This approach involves cases and role playing to define problems and suggests ways to eliminate sex bias. In-basket exercises have also been useful in making managers aware of any sex biases that they may have in day-to-day activities. Such workshops involve the participants in solving organizational problems as well as overcoming their own biases [66]. Organizational development and support of mentoring for female managers would also appear useful if not absolutely necessary [42].

Corporate employee evaluation and promotion procedures must also be reviewed. These should be made as objective as possible, so that subjective judgments, which can be influenced by stereotypes, are minimized [9]. The use of behavioral observation scales [48] and assessment centers has been found useful in increasing the objectivity of evaluations [37]. Kay [46] lists the following procedures for integrating women managers into a firm's workforce. These have been found to be productive methods of meeting affirmative action standards and increasing the utilization of women managers' abilities.

a. Use open promotion and transfer policies to make promotional opportunities known to all employees.
b. Make job requirements realistic with no "male bias" or exclusion of women.
c. Use written evaluations of candidate qualifications.
d. Make career counseling available for women employees, particularly those with advanced training, education, and experience.
e. Ensure that the pay of women and men with similar backgrounds is similar, with any differences being attributable to performance only.
f. Ensure that top management supports equal opportunity.

Research comparing the attitudes of individuals who have had experience working with women managers compared with those who have not lends support to the notion that women can be effective managers and leaders. Efforts to end biases may be aided by the fact that more qualified women are entering positions of responsibility and are proving their abilities. Though attitude measuring tools may be weak and the results derived from their use partly questionable, there seems to be enough evidence to demonstrate that some biases do exist. That information alone is enough for management to realize that under-utilization of its workforce may exist. A true commitment to equal opportunity and a managerial awareness of biases will help to create a more equitable work environment for all workers and a more effective organization for managers.

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HOUSEHOLD DATA
ANNUAL AVERAGES

20. Employed civilians by occupation, sex, and age

(In thousands)

Occupation	Total		Men				Women			
	16 years and over		16 years and over		20 years and over		16 years and over		20 years and over	
	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983
Total	99,526	100,834	56,271	56,787	52,891	53,487	43,256	44,047	40,086	41,004
Managerial and professional specialty	23,152	23,592	13,767	13,933	13,677	13,854	9,385	9,659	9,276	9,575
Executive, administrative, and managerial	10,597	10,772	7,217	7,282	7,172	7,252	3,379	3,490	3,339	3,463
Officials and administrators, public administration	(1)	495	(1)	321	(1)	321	(1)	173	(1)	173
Other executive, administrative, and managerial	(1)	7,311	(1)	5,190	(1)	5,165	(1)	2,121	(1)	2,101
Management-related occupations	(1)	2,966	(1)	1,770	(1)	1,766	(1)	1,196	(1)	1,189
Professional specialty	12,555	12,820	6,549	6,651	6,505	6,602	6,006	6,169	5,937	6,112
Engineers	1,557	1,572	1,451	1,482	1,450	1,481	106	91	105	90
Mathematical and computer scientists	528	463	383	326	383	326	145	137	145	137
Natural scientists	340	357	273	284	273	283	67	73	66	73
Health diagnosing occupations	700	735	613	637	614	637	87	98	87	97
Health assessment and treating occupations	1,823	1,900	274	270	273	270	1,549	1,629	1,541	1,626
Teachers, college and university	593	606	383	386	382	385	210	220	207	216
Teachers, except college and university	3,368	3,365	1,008	979	998	969	2,360	2,386	2,339	2,363
Lawyers and judges	630	651	532	548	532	548	97	103	97	103
Other professional specialty occupations	3,015	3,171	1,631	1,739	1,601	1,706	1,384	1,432	1,351	1,407
Technical, sales, and administrative support	30,770	31,265	10,995	11,078	10,481	10,539	19,774	20,187	18,221	18,706
Technicians and related support	3,013	3,053	1,640	1,582	1,615	1,560	1,373	1,471	1,348	1,450
Health technologists and technicians	1,028	1,111	176	174	175	171	852	937	840	925
Engineering and science technicians	1,163	1,024	916	814	898	803	247	210	241	205
Technicians, except health, engineering, and science	822	917	549	593	542	587	274	324	268	320
Sales occupations	11,249	11,818	6,113	6,201	5,813	5,864	5,136	5,617	4,316	4,806
Supervisors and proprietors	2,798	2,958	2,196	2,119	2,184	2,097	602	839	589	824
Sales representatives, finance and business services	1,793	1,853	1,162	1,164	1,156	1,158	631	689	616	673
Sales representatives, commodities, except retail	1,419	1,442	1,203	1,224	1,190	1,216	216	217	204	210
Sales workers, retail and personal services	5,219	5,511	1,546	1,671	1,277	1,372	3,673	3,839	2,893	3,070
Sales-related occupations	20	54	6	22	6	21	14	32	14	30
Administrative support, including clerical	16,507	16,395	3,242	3,295	3,053	3,114	13,266	13,100	12,557	12,449
Supervisors	(1)	676	(1)	315	(1)	314	(1)	361	(1)	358
Computer equipment operators	591	605	216	219	209	209	375	387	361	365
Secretaries, stenographers, and typists	4,843	4,861	74	85	69	77	4,769	4,776	4,524	4,558
Financial records processing	2,438	2,457	237	260	229	255	2,201	2,196	2,136	2,142
Mail and message distributing	800	799	558	547	528	520	242	252	228	240
Other administrative support, including clerical	(1)	6,997	(1)	1,870	(1)	1,739	(1)	5,127	(1)	4,786
Service occupations	13,494	13,857	5,295	5,530	4,381	4,593	8,199	8,326	7,003	7,157
Private household	1,043	980	33	38	21	24	1,010	942	796	715
Protective service	1,609	1,672	1,424	1,457	1,388	1,424	185	215	170	189
Service, except private household and protective	10,842	11,205	3,838	4,035	2,971	3,145	7,004	7,170	6,037	6,253
Food service	4,849	4,860	1,661	1,784	1,068	1,170	3,188	3,077	2,497	2,442
Health service	1,713	1,739	205	188	188	174	1,507	1,551	1,398	1,445
Cleaning and building service	2,595	2,736	1,602	1,674	1,394	1,469	993	1,062	922	981
Personal service	1,685	1,870	369	390	321	332	1,316	1,480	1,220	1,385
Precision production, craft, and repair	11,775	12,328	10,938	11,328	10,608	11,019	838	1,000	811	969
Mechanics and repairers	3,927	4,158	3,811	4,033	3,685	3,929	116	125	111	124
Construction trades	3,957	4,289	3,848	4,210	3,707	4,065	108	79	103	72
Other precision production, craft, and repair	3,892	3,881	3,279	3,085	3,216	3,025	613	795	596	773
Operators, fabricators, and laborers	16,550	16,091	12,094	11,809	10,995	10,762	4,456	4,282	4,237	4,072
Machine operators, assemblers, and inspectors	7,874	7,744	4,603	4,484	4,394	4,287	3,271	3,259	3,152	3,157
Manufacturing industries	6,647	6,517	3,781	3,695	3,640	3,558	2,867	2,822	2,770	2,748
Durable goods	3,736	3,478	2,476	2,355	2,387	2,272	1,260	1,123	1,227	1,099
Nondurable goods	2,912	3,039	1,305	1,340	1,253	1,286	1,607	1,699	1,543	1,650
Nonmanufacturing industries	1,226	1,226	822	790	754	729	404	437	382	408
Transportation and material moving occupations	4,198	4,201	3,874	3,875	3,729	3,752	324	326	312	313
Motor vehicle operators	2,955	2,978	2,680	2,705	2,565	2,610	274	273	263	261
Other transportation and material moving occupations	1,244	1,223	1,194	1,169	1,164	1,142	50	53	49	52
Handlers, equipment cleaners, helpers, and laborers	4,478	4,147	3,617	3,450	2,872	2,722	861	697	774	603
Construction laborers	561	595	543	583	466	514	18	13	16	11
Other handlers, equipment cleaners, helpers, and laborers	3,916	3,551	3,074	2,868	2,407	2,208	842	685	758	592
Farming, forestry, and fishing	3,751	3,700	3,167	3,108	2,734	2,720	584	592	519	524
Farm operators and managers	1,482	1,450	1,306	1,275	1,289	1,260	177	175	175	173
Other farming, forestry, and fishing occupations	2,269	2,250	1,862	1,833	1,446	1,460	407	417	344	351

[1] Data for 1982 are not shown because they do not meet reliability standards for publication.

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21. Employed civilians by occupation, race, and sex

(Percent distribution)

Occupation and race	Total		Men		Women	
	1982	1983	1982	1983	1982	1983
TOTAL						
Total, 16 years and over (thousands)	99,526	100,834	56,271	56,787	43,256	44,047
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Managerial and professional specialty	23.3	23.4	24.5	24.5	21.7	21.9
Executive, administrative, and managerial	10.7	10.7	12.8	12.8	7.8	7.9
Professional specialty	12.6	12.7	11.6	11.7	13.9	14.0
Technical, sales, and administrative support	30.9	31.0	19.5	19.5	45.7	45.8
Technicians and related support	3.0	3.0	2.9	2.8	3.2	3.3
Sales occupations	11.3	11.7	10.9	10.9	11.9	12.8
Administrative support, including clerical	16.6	16.3	5.8	5.8	30.7	29.7
Service occupations	13.6	13.7	9.4	9.7	19.0	18.9
Private household	1.0	1.0	.1	.1	2.3	2.1
Protective service	1.6	1.7	2.5	2.6	.4	.5
Service, except private household and protective	10.9	11.1	6.8	7.1	16.2	16.3
Precision production, craft, and repair	11.8	12.2	19.4	19.9	1.9	2.3
Operators, fabricators, and laborers	16.6	16.0	21.5	20.8	10.3	9.7
Machine operators, assemblers, and inspectors	7.9	7.7	8.2	7.9	7.6	7.4
Transportation and material moving occupations	4.2	4.2	6.9	6.8	.7	.7
Handlers, equipment cleaners, helpers, and laborers	4.5	4.1	6.4	6.1	2.0	1.8
Farming, forestry, and fishing	3.8	3.7	5.6	5.5	1.4	1.3
White						
Total, 16 years and over (thousands)	87,903	88,893	50,287	50,621	37,615	38,272
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Managerial and professional specialty	24.3	24.3	25.6	25.6	22.5	22.6
Executive, administrative, and managerial	11.3	11.3	13.6	13.5	8.3	8.3
Professional specialty	12.9	13.0	12.0	12.1	14.2	14.3
Technical, sales, and administrative support	31.5	31.7	19.9	19.9	47.1	47.2
Technicians and related support	3.0	3.0	2.9	2.8	3.2	3.3
Sales occupations	11.9	12.4	11.5	11.5	12.6	13.5
Administrative support, including clerical	16.6	16.3	5.5	5.6	31.3	30.5
Service occupations	12.3	12.5	8.5	8.8	17.5	17.5
Private household	.8	.8	(1)	.1	1.9	1.7
Protective service	1.6	1.6	2.4	2.4	.4	.5
Service, except private household and protective	10.0	10.1	6.0	6.3	15.2	15.3
Precision production, craft, and repair	12.2	12.6	19.9	20.5	1.9	2.2
Operators, fabricators, and laborers	15.8	15.1	20.4	19.7	9.6	9.0
Machine operators, assemblers, and inspectors	7.5	7.2	7.8	7.6	7.0	6.8
Transportation and material moving occupations	4.1	4.0	6.6	6.5	.7	.7
Handlers, equipment cleaners, helpers, and laborers	4.2	3.9	5.9	5.6	1.9	1.5
Farming, forestry, and fishing	3.9	3.8	5.7	5.5	1.4	1.4
Black						
Total, 16 years and over (thousands)	9,189	9,375	4,637	4,753	4,552	4,622
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Managerial and professional specialty	(2)	14.1	(2)	12.2	15.6	16.1
Executive, administrative, and managerial	(2)	5.4	(2)	5.8	4.4	4.9
Professional specialty	(2)	8.7	(2)	6.4	11.2	11.2
Technical, sales, and administrative support	(2)	25.4	(2)	14.9	36.3	36.2
Technicians and related support	(2)	2.7	(2)	2.0	3.1	3.4
Sales occupations	(2)	6.0	(2)	4.7	6.7	7.3
Administrative support, including clerical	(2)	16.8	(2)	8.2	26.5	25.6
Service occupations	(2)	24.5	(2)	18.5	31.0	30.6
Private household	(2)	2.9	(2)	.2	6.3	5.7
Protective service	(2)	2.4	(2)	4.1	.7	.7
Service, except private household and protective	(2)	19.1	(2)	14.3	24.0	24.2
Precision production, craft, and repair	(2)	9.0	(2)	15.7	1.7	2.1
Operators, fabricators, and laborers	(2)	24.1	(2)	33.5	14.8	14.3
Machine operators, assemblers, and inspectors	(2)	11.5	(2)	11.6	11.1	11.5
Transportation and material moving occupations	(2)	5.8	(2)	10.7	.9	.9
Handlers, equipment cleaners, helpers, and laborers	(2)	6.7	(2)	11.3	2.8	1.9
Farming, forestry, and fishing	(2)	3.0	(2)	5.2	.6	.6

[1] Less than 0.05 percent.

[2] Data for 1982 are not shown because they do not meet reliability standards for publication.

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Rising to the Top: Executive Women in 1983 and Beyond

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A new generation of women executives is coming up through the ranks of American corporations. These women have backgrounds and opportunities which are different from those of women who are already top executives. Based on their study of the characteristics of more than one thousand executive women, the authors pinpoint where women are today and where the female CEOs of the future will come from.

Herman Kahn, the futurist, was once asked how long it would be before 25 percent of the chief executives of the *Fortune 500* companies were women. Kahn replied: "About two thousand years, but make it 10 percent and I'll say within twenty years."[1] Whether or not he was entirely serious, his remark accurately describes the slow but steady progress that women are making into the executive ranks. While the number of females occupying chief executive status in one of the top firms remains virtually nil, their numbers are increasing within management in general and within the upper echelons of the hierarchy in all sizes of industrial and service firms. Between 1972 and 1980, the number of female managers and administrators more than doubled (1,410,000 to 2,852,000), while the number of male managers and administrators increased by only 22 percent (6,621,000 to 8,067,000).[2] Moreover, the executive search firm of Heidrick and Struggles reported that the number of women who

1. Cited by Wyndham Robertson, "The Top Women in Big Business," *Fortune*, July 17, 1978: 59.

2. U.S. Department of Commerce, Bureau of the Census, *Population Profile of the United States: 1980*, Population Characteristics Series P-20, No. 363: 36.

held officer rank at the corporate level in America's largest industrial and nonindustrial firms went up from 325 in 1977 to 497 in 1980, a 53 percent increase.[3]

Still, female representation in the highest executive positions remains very low. A survey by *Fortune* of the top officers and directors (those listed in the proxy statements only) of their 1,300 company population found just 10 women among 6,400 officers and directors (0.16 percent), and this number had not increased from 1973 to 1978.[4] Also, in 1980 Hedrick and Struggles found only one woman officer for each 1.6 nonindustrial firms and each 3.3 industrial firms.[5]

Furthermore, women are often not in a position of great influence even when they are listed as directors. The directors on whom the chairmen rely most heavily are the outside CEOs or other persons with CEO-level experience, which very few women have.[6] Women seem to be chosen to bring to the board the "outsider's" point of view; usually they represent academia, the public sector, the media, the consumer, or minorities, as well as other women. Joan Ganz Cooney, who serves on several boards, says corporations like to get a "twofer" or a "threefer"—someone with a background in more than one "outside" area.[7]

Women officers, too, are often in positions of lesser influence. A survey of corporate-level women officers published by Hedrick and Struggles reported that although

28 percent were at least vice presidents, 51 percent were secretaries or assistant secretaries. More than half of these women officers entered the company in a clerical position and so may not have the training or experience to influence top-level decision making.[8]

It is clear that, at present, women have relatively little power at the top levels in U.S. corporations. This is in part because relatively few women have the managerial, professional, or technical backgrounds to contribute a great deal at the top. But a change seems to be occurring. Women are obtaining more technical training and more business education, especially at the MBA level, and these well-educated women are moving into middle and upper-middle management positions at fairly young ages.[9]

These trends seem to suggest that we will see many more women in positions of greater responsibility in the future. Therefore this study was designed to learn more about these female executives (officers and upper-level managers) by examining their backgrounds (age, education, place of birth, and mobility), and their present positions (titles, industry, size of company). We will examine in detail issues such as how the younger women executives differ from the older in terms of education and position, and whether the opportunities for women are greater in certain industries, or firms of a certain size or geographical region. We anticipate that this study,

3. Heidrick & Struggles, Inc., "Profile of a Woman Officer," 1980: 1.

4. Wyndham Robertson: 59.

5. Heidrick & Struggles, Inc.: 1.

6. Felice N. Schwartz, "From the Boardroom," *Harvard Business Review*, March-April, 1980: 7.

7. Joan Ganz Cooney, "A Woman in the Boardroom," *Harvard Business Review*, January-February, 1978: 78.

8. Heidrick & Struggles, Inc.: 2.

9. "What's Needed to Become a Company Superstar," *Business Week*, September 15, 1980: 146.

which will describe the female executive of 1982, may be used as a benchmark against which the progress of women managers may be measured.

The data for this study were obtained from Volumes 1, 2, and 3 of *Standard and Poor's Register of Corporations, Directors, and Executives*. Volume 2 contains a listing of approximately 70,000 directors and executives. This listing was reviewed, and approximately 1,300 names (1.9 percent) were identified as those of females serving in U.S. firms of all sizes. Those who were serving only as directors were removed from the list, resulting in a sample of 1,262. Names, titles, dates, and places of birth, education, and affiliation were recorded. Volume 1 was the source for information about the individual firms in which they were serving: size, location, and industry. Volume 3 was the source for women added between 1970 and 1981.

Although not all female business executives are included in this register, we believe that the sample is representative in terms of both numbers and positions within the firms' hierarchies.

Entry of Women Speeds Up

In 1970, females represented 2 percent of the new additions to *Standard and Poor's Register*, and remained at or slightly below that figure for the next four years (Figure 1). They exceeded 2 percent in 1975 and have not fallen below that figure since. The rise since 1977 has been particularly significant; the figure has doubled to the present 4.1 percent.

Background

Women who rise to the top tend to have certain characteristics in common.

Age. The female executive tends to be middle-aged or older. Ages range from 25 to 92, with a mean of 52.8 and a median of 55. Only about one out of six is under 40, while more than two-thirds (68.0 percent) are over 50, and one out of eight is 70 or older. Distribution by age group is shown in Table 1.

Birthplace. About 96 percent of the female executives were born in the United States and 4 percent were foreign born. Large urban areas were the birthplaces for a disproportionate number of female executives. While only 29.6 percent of the 1930 population (year of birth for the average female executive) lived in cities with populations of 100,000 or more, 47.3 percent of the female executives were born in such cities. Moreover, 72.6 percent of female executives were born in cities of 25,000 or larger while only 40.1 percent of the population lived in such cities.

The Northeast was the birthplace for nearly four out of ten of the executives, followed by the North Central, South, and West, in that order. Table 2 compares the region of birth with the percentage working in the region and with the 1930 population.

The percentage working in the Northeast almost equals the percentage born in the area, indicating

Figure 1

Percentage of Newly Listed Female Executives, by Year

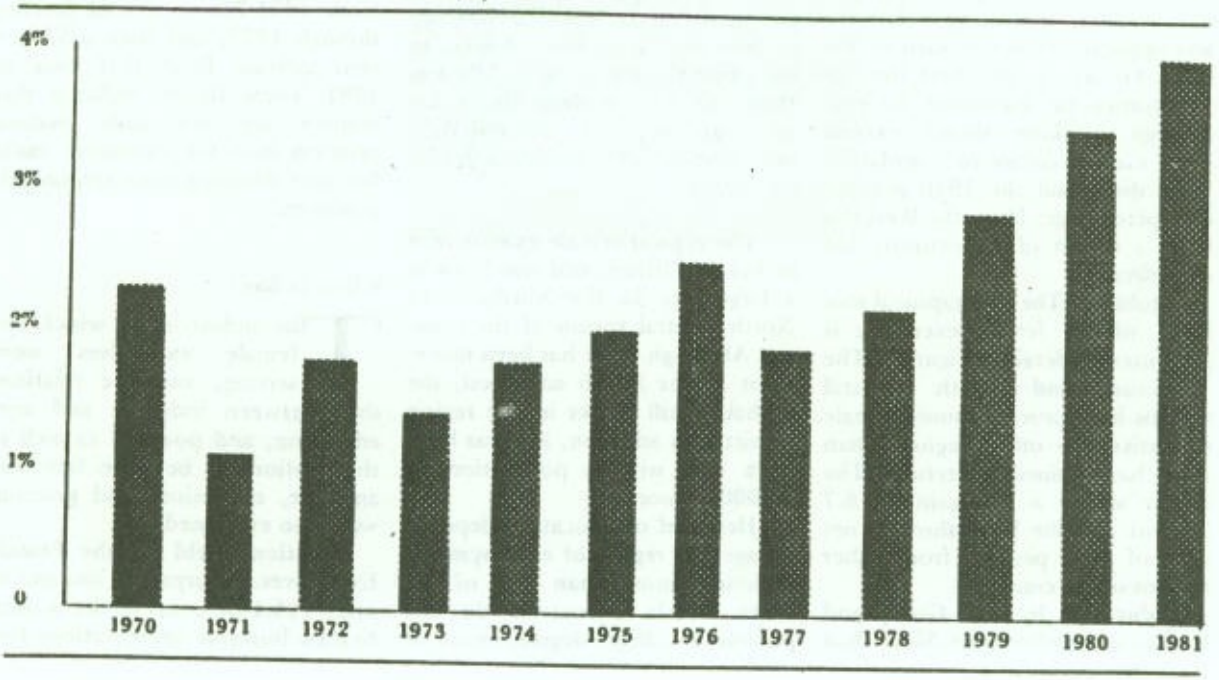


Table 1

Age Distribution of the Female Executives

Age Group	Number	Percentage
Less Than 30	13	1.1
30-39	175	14.4
40-49	201	16.5
50-59	380	31.3
60-69	289	23.8
70 and over	157	12.9
	1,215[a]	100.0

a. Age was available for only 1,215 of the 1,262 female executives.

Table 2

Comparison of Region of Birth with Female Executives Working in Region and with 1930 Population

Census Region	Born in Region (Percentage)	Working in Region (Percentage)	1930 Population (Percentage)
Northeast	38.9	36.8	28.0
North Central	32.0	27.5	31.3
South	20.9	22.3	30.7
West	8.2	13.4	10.0
Totals:	100.0	100.0	100.0

a high level of opportunity for women in this region. Both percentages exceed the percentage of the population living in the area. The percentage of female executives born in the North Central region is approximately equal to the proportion of the population from that area. However, the percentage working in the area is lower, indicating that this region has fed executive talent to other areas. The percentage of women working in the South slightly exceeds the percentage born there, and both proportions are lower than the population percentage for that region, indicating relatively less opportunity for women in this area. Finally, in the West the opportunities (as measured by percentage working there) exceed both the percentage of population born there and the 1930 population percentage. Thus, the West has been a region of opportunity for outsiders.

Mobility. The geographical mobility of the female executive is presented in detail in Figure 2. The Northeast and North Central regions have provided more female executives to other regions than they have gained in return. The South shows a net gain of 6.7 percent and the West shows a net gain of 63.6 percent from other regions of the country.

Education by Age Group and Region of Employment. More than one-third of the female executives have an undergraduate degree and about one in five (18.2 percent) have graduate degrees. The nearly one-half (48.1 percent) who do not have a degree are concentrated in the over-50 age groups, as shown in Table 3.

The younger executives tend to be more highly educated. Of those under 40, three out of four (78 percent) have at least an undergraduate degree and more than one-third (35 percent) have a graduate degree.

Female executives employed in firms in the Northeast are more highly educated than those in the other geographical regions. In the Northeast almost three out of five have at least an undergraduate degree and slightly less than one out of four have a graduate degree. In the other three regions slightly less than half have undergraduate degrees, and in the South and West only one out of eight has a graduate degree.

The typical female executive is in her mid-fifties, and was born in a large city in the Northeast or North Central region of the country. Although there has been movement to the South and West, she probably still works in the region of birth. In addition, she was born in a city with a population of 25,000 or more.

Her level of education depends on age and region of employment. Although more than half of the older female executives do not possess a college degree, most of the younger women do; in the under-40 age group more than one-third also have graduate degrees. Finally, the level of education is greatest among those employed in the Northeast.

Greater Representation in the Executive Suite

The annual "New Individual Additions" section of Volume 3 of *Standard and Poor's Register* provides position titles for newly listed executives. The percentage of newly listed females occupying positions of vice-president or higher has increased as shown in Figure 3. There was a gradual decline in new additions to higher level positions from 1971-73, a general leveling through 1977, and then a 57 percent increase from that time to 1981. These figures indicate that women are not only making progress into the executive ranks but also attaining more responsible positions.

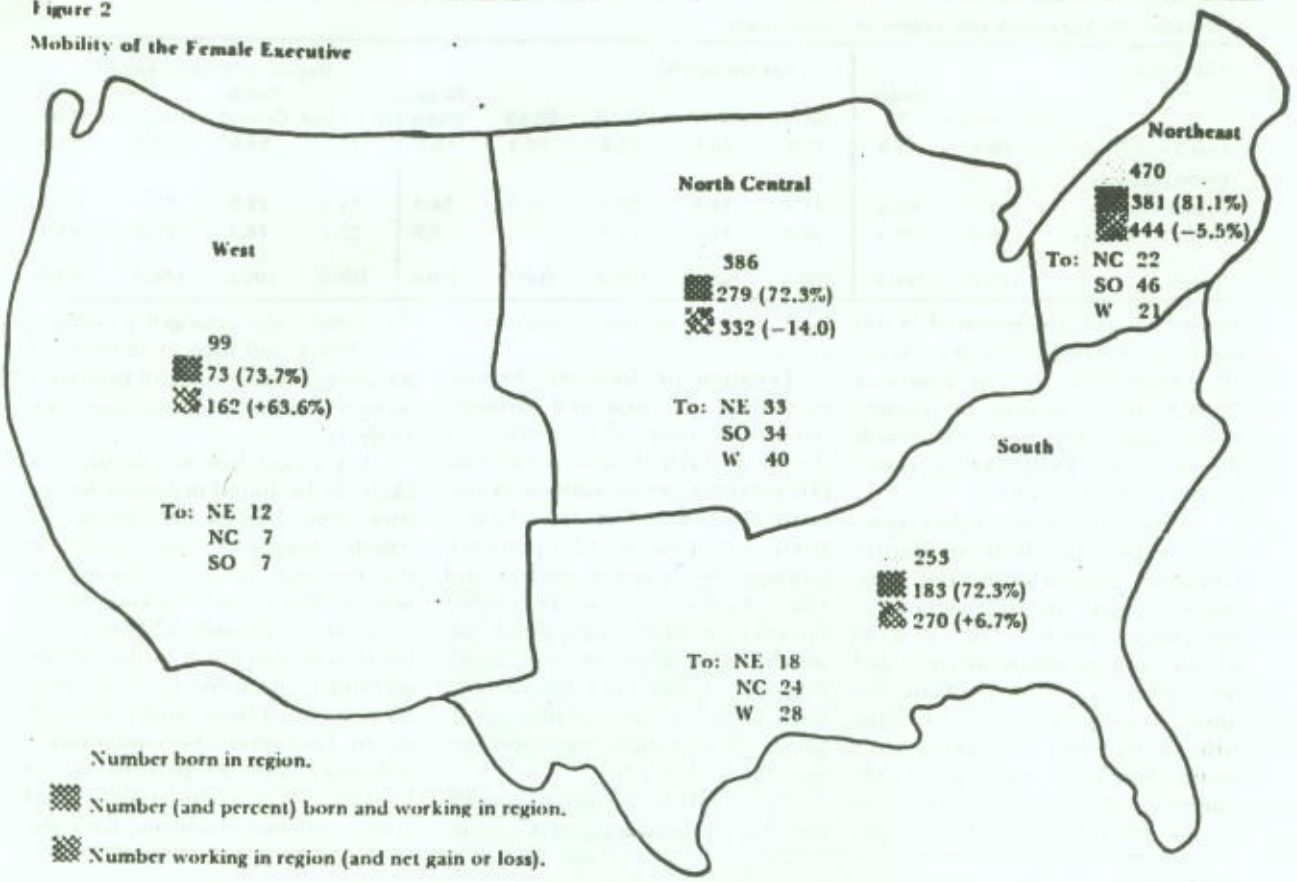
Where Is She?

The industries in which the female executives were serving, and the relationship between industry and age, education, and position as well as the relationship between firm size and age, education, and position were also examined.

Positions Held by the Female Executives. A surprising one out of seven (15.1 percent) of the women headed business organizations (see

Figure 2

Mobility of the Female Executive



To: NE, NC, SO, or W Number born in region who are working in another region.

Table 4); however, these were mostly smaller firms. The sample is fairly evenly divided between those serving in positions titled vice president and higher (49.2 percent) and those serving in what are apparently lower-level positions (50.8 percent). These position titles will be reviewed in more detail when we examine the type, size and location of the firms in which the women are serving.

Relationship Between Position and Age, Region of Birth, and Education. Several background factors were found to be related to the positions held by female executives as shown in Table 5, which reflects age, region of birth, and education by position. Females occupying the top position have a mean age of 63, well above the mean age of 57 of chief executives of the 800 largest industrial and nonindustrial firms,[10] and almost 60 percent are 60 or older. For the next three positons, there was a decline in mean age and then an increase for the lower positions.

Significantly, at the executive vice president, vice president, and manager level, more than four out of ten of the female executives were under 50. Since it is from these three levels that movement upward is most likely to occur and since the average chief executive is appointed at the age of 49, these women are young enough to be considered for top-level positions.[11] In contrast, the large majority (more than 70 percent) of the women in secretary and treasurer positions are over 50 and have probably reached the peak of their careers.

When we compared the position held with the geographical area of birth, we found that the Northeast had the highest percentage of women who held positions as top executives and as secretaries while the North Central

10. James E. Piercy and J. Benjamin Forbes, "Industry Differences in Chief Executive Officers," *MSU Business Topics*, Winter 1981: 27.

11. James E. Piercy and J. Benjamin Forbes: 27.

Table 3

Education By Age Group and Region of Employment

Education		Age Group (%)					Region of Employment			
	Percentage	Under 30	30-39	40-49	50-59	60-69	70 and Older	Northeast	North Central	South	West
Less Than Degree	48.1	15.4	22.9	46.3	52.4	56.1	56.7	41.6	53.0	53.3	53.3
Undergraduate Degree Only	33.7	61.5	41.1	34.8	30.3	31.5	34.4	35.3	28.9	34.1	33.3
Graduate Degree	18.2	23.1	36.0	18.9	17.3	12.4	8.9	23.1	18.1	12.6	13.4
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

region was underrepresented in top positions. Likewise, the percentage of foreign-born in top positions exceeds the 4 percent of foreign-born female executives. The South and West are fairly evenly represented in most positions.

Those occupying higher positions within the firm are better educated. Women in the top three ranks account for 49.2 percent of the sample, but have 56.3 percent of the undergraduate degrees and 65.3 percent of the graduate degrees. Conversely, those with the title of treasurer or secretary account for 31.1 percent of the sample but have only 25.5 percent of the undergraduate degrees and 17.9 percent of the graduate degrees.

Location by Industry. Female executives are employed throughout a wide range of industries. As shown in Table 6, almost one-half (48 percent) are in various manufacturing firms. The next largest group is in banking (12.3 percent), followed by business services and retail trades. The miscellaneous category contains firms which are not listed in *Standard and Poor's Register* or *Dun and Bradstreet's Register of Million Dollar Companies* and which we therefore assumed were small.

Relationship Between Industry and Age, Education and Position. The sample was arranged according to industry and then examined for age group, education, and positions occupied within each industry (see Table 7).

A younger female executive is likely to be found in certain industries. The highest percentage of female executives under 50 are in the financial services, transportation, utilities, and banking industries. Although only 32 percent of the female executives in the sample are under 50 (Table 1), more than 50 percent of those under 50 work in the first three above-mentioned industries and 49 percent are in banking. Wholesale trade, retail trade, and manufacturing have the

Figure 3

Proportion of Newly Listed Female Executives in Upper-Level Positions (Vice-President or Higher), by Year

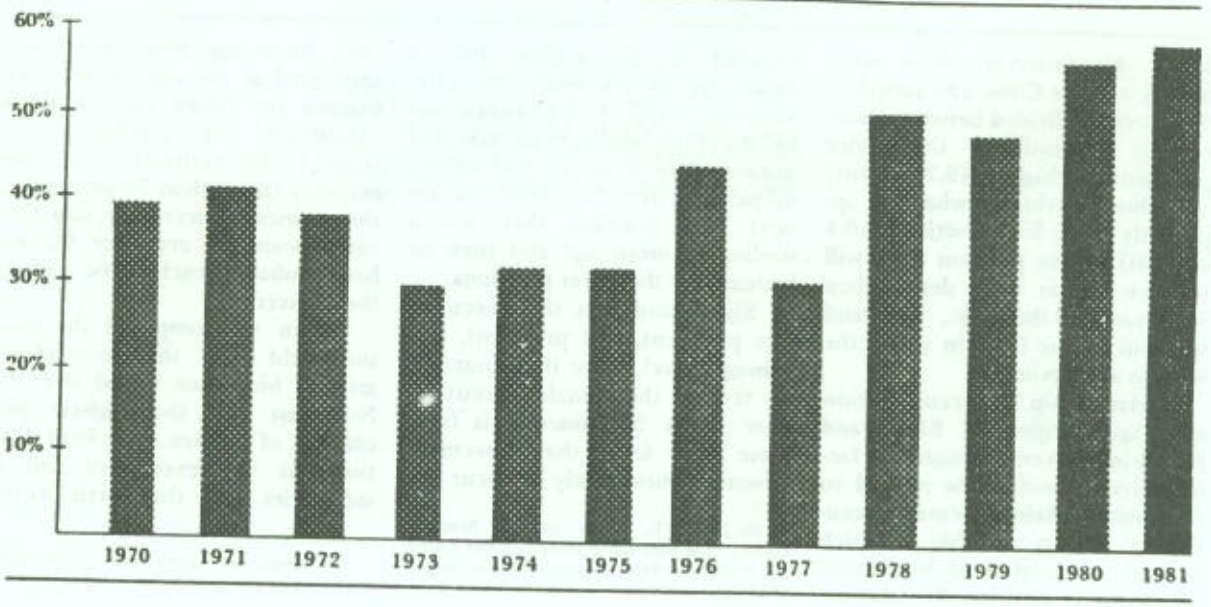


Table 4

The Female Executive By Title

Title	Number	Percentage
President[a]	190	15.1
Executive Vice-President[b]	87	6.9
Vice-President[c]	343	27.2
Manager	114	9.0
Counsel	10	0.8
Secretary and Treasurer	125	9.9
Treasurer	79	6.2
Secretary	314	24.9
Totals	1,262	100.0

a. The title of president as used throughout this report also includes those titled chairman or chief executive officer.

b. The title of executive vice president as used throughout this report also includes those titled first vice president.

c. Includes 43 who are titled vice-president, secretary; and 34 who are titled vice-president, treasurer.

highest percentage of executives over 60.

Likewise, education seems more important in certain industries. Female executives in the utilities, business services, and banking industries are more highly educated; more than 60 percent have at least an undergraduate degree. The highest percentage of graduate degrees are found in the utilities, banking, and financial services industries. Those with the least amount of formal education are in the construction and wholesale industries.

Because of the large number of female executives in the manufacturing industries, this classification was examined in more detail. Among this group, one out of five (20 percent) are in the printing industry, followed by fabricated metal products and machinery, with approximately 15 percent in each. The remaining 50 percent are fairly evenly divided among the nine other industry groups.

Female executives in the top three industries tend to be both younger and more highly educated. The printing industry in particular seems to provide outstanding opportunity for women; more than three out of four occupy positions of manager or higher and one out of four serve as chief executive officer. More than 60 percent have at least an undergraduate degree, and more than 20 percent have graduate degrees.

Banking and financial services have the highest percentage of female executives in upper management positions with three out of four occupying positions of vice president or higher. These are followed by business services and insurance where more than half are in upper management positions. The construction industry ranks lowest with only about one out of five in upper management positions followed by utilities and transportation with about one out of three. In these latter two indus-

Table 6

Industries Represented In Sample Data

Industry	Representation by Type of Firm	Percentage of Total
Construction	32	2.5
Manufacturing	608	48.2
Transportation	27	2.1
Utilities	19	1.5
Wholesale Trades	47	3.7
Retail Trades	69	5.5
Banking	155	12.3
Insurance	58	4.6
Financial Services	32	2.5
Business Services	112	8.9
Miscellaneous	103	8.2
Totals	1,162	100.0

Table 5

Relationship Between Position and Age, Region of Birth, and Education

	Age Group (%)							Total	Geographical Region of Birth (%)					Total	Education (%)			Total
Position	Mean Age	Under 30	30-39	40-49	50-59	60-69	70 and Older	Totals	Northeast	North Central	South	West	Foreign	Totals	Less Than Degree	Undergraduate Degree	Graduate Degree	Totals
President	63	0.0	3.1	8.1	30.0	31.9	26.9	100.0	42.1	25.8	20.8	6.2	5.1	100.0	45.3	34.7	20.0	100.0
Executive Vice President	53	0.0	9.9	27.2	37.0	21.0	4.9	100.0	41.2	22.4	21.4	8.2	6.9	100.1	39.1	35.6	25.3	100.0
Vice President	51	0.9	24.5	17.6	29.7	20.5	6.8	100.0	41.6	22.6	21.7	8.8	5.3	100.0	36.4	39.4	24.2	100.0
Manager	47	4.8	22.9	25.7	25.7	18.1	2.8	100.0	42.9	25.9	16.1	11.6	3.6	100.1	48.2	39.5	12.3	100.0
Counsel	48	0.0	50.0	10.0	20.0	10.0	10.0	100.0	27.3	27.3	9.1	27.3	9.1	100.1	0.0	0.0	100.0	100.0
Secretary and Treasurer	58	0.8	8.1	13.8	35.0	28.5	13.8	100.0	35.1	32.5	24.2	5.7	2.4	99.9	65.6	24.0	10.4	100.0
Treasurer	56	1.3	10.7	16.0	36.0	21.3	14.7	100.0	29.7	28.4	29.7	9.5	2.7	100.0	57.0	32.9	10.1	100.0
Secretary	56	1.0	11.0	16.6	33.3	24.9	13.1	99.9	50.5	23.2	18.6	6.1	1.6	100.0	65.0	25.1	9.9	100.0

"The highest percentage of female executives under 50 are in the financial services, transportation, utilities, and banking industries. . . .Likewise, education seems more important in certain industries."

tries the female executives are concentrated in the secretary and treasurer, treasurer, and secretary roles.

Relationship Between Firm Size and Age, Education and Position. The relationship between the size of the firm, as measured by sales/revenues, and age, education, and position are shown in Table 8. Clearly, smaller firms have a greater percentage of older female executives. Opportunities for younger women (those in their 30's and 40's) seem to be greater in the larger firms. For example, women in their 30's and 40's are more likely to be found in firms with sales of over $100 million, while female executives above 60 are increasingly rare as firm size increases.

While a female may make it to the top with little formal education in the smaller firms, higher education becomes almost mandatory in the largest firms; 89 percent have at least an undergraduate degree in the billion dollar firms.

The positions held, as well as age and education of the female executive, seem to be related to

Table 7

Relationship Between Industry and Age, Education, and Position

	Age Group (%)						Total	Education (%)			Total	Position (%)								Total
Industry	Less Than 30	30-39	40-49	50-59	60-69	70 and Older	Total	Less Than Degree	Undergraduate Degree Only	Graduate Degree	Total	President	Executive Vice-President	Vice-President	Manager	Counsel	Secretary and Treasurer	Treasurer	Secretary	Total
Construction	3.2	22.6	19.4	22.6	19.4	12.9	100.1	61.3	35.5	3.2	100.0	9.4	6.2	6.2	6.2	0.0	21.9	12.5	37.59	9.9
Manufacturing	0.9	8.6	15.1	34.4	26.5	14.6	100.1	53.9	30.6	15.5	100.0	16.6	4.3	21.4	10.7	1.0	11.5	7.6	26.91	00.0
Transportation	4.0	32.0	16.0	28.0	12.0	8.0	100.0	48.1	29.6	22.3	100.0	7.4	0.0	29.6	7.4	3.7	7.4	3.7	40.7	99.9
Utilities	0.0	21.1	31.6	26.3	21.1	0.0	100.1	35.0	30.0	35.0	100.0	0.0	10.5	21.1	10.5	0.0	5.3	0.0	52.61	00.0
Wholesale Trade	0.0	6.7	22.2	26.7	26.7	17.8	100.1	64.6	31.3	4.1	100.0	19.1	6.4	19.1	4.3	0.0	17.0	12.8	21.31	00.0
Retail Trade	1.5	11.8	14.7	29.4	23.5	19.1	100.0	48.6	35.7	15.7	100.0	17.4	10.1	18.8	17.4	0.0	11.6	4.3	20.39	9.9
Banking	0.7	31.4	17.0	24.8	17.6	8.5	100.0	38.7	36.8	24.5	100.0	7.1	9.7	57.4	3.9	0.6	2.6	5.2	13.51	00.0
Financial Services	0.0	21.2	33.3	18.2	18.2	9.1	100.0	41.2	29.4	29.4	100.0	6.3	28.1	40.6	6.3	0.0	3.1	6.3	0.0	
Insurance	1.7	16.7	23.3	38.3	13.3	6.7	100.0	43.3	36.7	20.0	100.0	3.4	8.6	41.4	5.2	1.7	3.4	5.2	31.11	00.0
Business Services	2.8	17.8	17.8	32.7	22.4	6.5	100.0	37.1	43.1	19.8	100.0	12.5	13.4	31.3	8.0	0.9	8.0	0.9	35.01	00.0
Miscellaneous	0.0	50.0	7.1	14.3	7.1	21.4	99.9	37.4	31.3	31.3	100.0	33.0	2.9	15.5	8.7	0.0	12.6	4.9	22.39	9.9

"There seem to be regional differences in opportunities and in the inclination of women to accept these opportunities. . . .Regional differences in socialization of young women, as well as differences in the level of industrialization, are likely to be responsible for these results."

the size of the firm. The percentage of female executives heading firms decreases as the size of the firm increases. Although one out of five female executives serving in firms with sales of less than $5 million is the chief executive, there are none occupying this positions in firms with sales in excess of $1 billion. There is, however, an increase in the percentage of those occupying positions as executive vice president and vice president. In the firms with sales ranging from $5 million to $500 million, most women executives are secretaries. Thus it appears that women are most likely to reach influential positions in the very small and the very large firms.

It appears that the women executives occupy three distinct types of positions. First, there are those in chairman/president/chief executive officer positions. Next, there are the executive vice-presidents, vice-presidents, and managers, and finally, there are the secretary and treasurer positions. A different type of woman is found in each position, they serve in different types of firms, and they probably have different chances for further upward mobility.

The chief executives (15 percent of the sample) tend to be located in the Northeast, are older, fairly well educated, and are likely to heat smaller firms in the wholesale and retail trades, manufacturing, and business services.

The vice-presidents and managers (43 percent of the sample) are also likely to be located in the Northeast but they are younger and more highly educated. They also tend to be employed by the larger firms. A very high proportion of the women in banking, insurance, and financial services are in vice-presidential level positions.

Those in the secretary and treasurer positions are older and less well-educated. They are distributed fairly evenly throughout the coun-

Table 8

Relationship Between Firm Size and Age, Education, and Position

	Age Group (%)						Total	Education (%)			Total	Position (%)								Total
Size of Firm as Measured by Sales/Revenue (millions)	20-29	30-39	40-49	50-59	60-69	70 and Older	Total	Less Than Degree	Undergraduate Degree	Graduate Degree	Total	President	Executive Vice-President	Vice President	Manager	Counsel	Secretary and Treasurer	Treasurer	Secretary	Total
Less Than $5	1.3	7.3	13.9	34.4	27.2	15.9	100.0	64.6	23.2	12.2	100.0	21.0	6.0	27.2	8.4	0.3	11.1	6.8	19.3	100.1
$5-10	1.3	6.5	10.4	26.0	36.4	19.5	100.1	70.0	27.5	2.5	100.0	10.3	5.1	16.7	12.8	0.0	15.4	7.7	32.1	100.1
$10-50	0.0	12.0	17.1	39.4	20.8	10.7	100.0	57.9	33.2	8.9	100.0	11.3	7.2	21.7	10.0	0.9	9.0	5.4	34.4	99.9
$50-100	0.0	16.7	25.0	26.7	23.3	8.4	100.1	52.3	26.9	20.8	100.0	8.6	8.6	19.0	3.4	0.0	12.1	6.9	41.4	100.0
$100-500	1.0	26.5	25.5	27.5	15.7	3.9	100.1	37.4	32.8	29.8	100.0	3.0	9.0	31.0	8.0	3.0	6.0	6.0	34.0	100.0
$500-1,000	3.5	24.1	24.1	31.0	13.8	3.5	100.0	20.0	50.0	30.0	100.0	3.4	6.9	34.5	27.6	3.4	3.5	3.5	17.2	100.0
Greater Than $1,000	1.5	23.5	29.4	32.4	13.2	0.0	100.0	11.0	44.5	44.5	100.0	0.0	12.7	53.5	7.0	4.2	1.4	2.8	18.3	99.9

try but are most likely to be employed by the medium-sized firms.

Although fewer than 2 percent of higher-level business managers are currently women, the percentage of new executive appointees who are females has doubled over the past decade, from 2 to 4 percent. In addition, although many female officers are in the positions of secretary and treasurer (41 percent) the percentage of new appointees at the vice-presidential level or higher has increased from less than 40 percent to 57 percent in the past eleven years. Thus, slow but sure progress is being made by women into the executive suites.

There seem to be regional differences in opportunities and in the inclination of women to accept these opportunities. For example, more women executives were born in the Northeast than one would expect based on population while fewer were born in the South. Regional differences in the socialization of young women, as well as differences in the level of industrialization are likely to be responsible for these results.

Many older females seem to be in dead-end positions as secretary or treasurer. In addition, those women who are in chief executive positions are older and are in smaller firms. However, a significant number of highly educated younger women have reached the vice-presidential level in the larger service-oriented firms. Breakthroughs of women into major chief executive positions are likely to involve this group. Therefore, we would predict that the first female chief executives of major firms will occur in the service industries (banking, insurance, financial services) in the Northeast region of the country. □