

WOMEN'S CAREER SUCCESS: THE CONTRIBUTIONS OF HUMAN CAPITAL,
INDIVIDUAL, ORGANIZATIONAL, AND POWER VARIABLES

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Women are a significant presence in today's workforce; however, few rise to the top management ranks. Therefore, there is a critical need to better understand the factors that facilitate their success. This study examined several variables that may contribute to women's objective (income, span of control, promotions) and subjective (self-reported satisfaction) success. Predictive variables include human capital (training, experience), individual (perception of promotability, motivation for training), organizational (supervisor gender, percentage of male subordinates) and power (extent of supervisory authority) factors. Participants were members of the National Longitudinal Surveys Young Women cohort, conducted by the Bureau of Labor Statistics. Data were analyzed through simultaneous multiple regression analysis, and the results indicated that education was significantly related to income for all women. For women in management positions, their degree of supervisory power was also predictive of higher income, yet negatively associated with job satisfaction. Further, their span of control was positively influenced by the amount of time they spent in on-the-job training. The implications for women's career advancement, study limitations, and future research possibilities are also discussed.

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INTRODUCTION

Women have been entering the U.S. labor market in increasing numbers over the past 50 years. In 2005, women comprised 59% of the workforce (U. S. Census Bureau, 2007), and it is no longer unusual to find women in every occupation, even those that have traditionally been dominated by men. Often, however, women tend to be clustered in lower-level jobs (Cassirer & Reskin, 2000) with little authority and low pay (Morrison & von Glinow, 1990), segregated into traditionally female occupations (Maume, 1999), or funneled into staff jobs that are less likely than line positions to lead to advancement (Kirchmeyer, 1998). Previously, it was taken for granted that once women comprised a large proportion of the workforce and gained sufficient experience, their representation in top management ranks would increase accordingly (Tharenou, 1999). However, this assumption has not been realized. In fact, research has shown that for every 10% increase in the number of females in an occupation, the rate of entry into management for women is reduced by 6% (Maume, 1999). In the U.S., women's careers often stall at the middle management level, despite their ambitions to advance further (Tharenou, 1999). Women comprise approximately half of the first line supervisor positions, but a very small percentage of top-level management jobs (Atwater, Brett, Waldman, DiMare, & Hayden, 2004; Nelton, 1995). Fewer than 5% of senior executives are women (Agars, 2004; Lyness & Thompson, 1997; Tharenou, 1999). The "glass ceiling" typically becomes a barrier for women at the point of entry into top management, thus partially explaining their limited representation in the upper ranks of organizations (Maume, 2004; Powell & Butterfield, 1994).

Despite these issues, it is clear that women are making inroads and that many could be considered successful in their jobs and careers. However, career success is a complex concept and the literature has not provided a clear, complete definition of it (Poole, Langan-Fox, &

Omodei, 1993). Moreover, it may mean different things to different people. For an individual, career success may consist of a unique assortment of tangible and intangible factors that are personally meaningful. Further, an individual's assessment of what constitutes "success" may stem from a highly subjective comparison of actual outcomes against personal expectations. What one person may see as an enjoyable, productive achievement another may view as an unfulfilling failure. For these reasons, it is clear that one aspect of career or work success is subjective. This study will use archival data to examine ways human capital, individual characteristics, organizational factors, and degree of supervisory authority contribute to women's success in the workplace.

The measures associated with career success can be classified as objective or subjective. Objective measures are those that are quantifiable (e.g., salary, number of promotions, number of supervisees) or descriptive of the individual's status in the organization (e.g., pay grade, title, increase in job responsibilities). Thus, objective measures are concrete, specific, measurable, and can be easily observed by others (Wayne, Liden, Kraimer, & Graf, 1999). On the other hand, subjective indices are intangible, as they cannot be readily measured or identified by observers. They are based on factors that are intrinsically important to an employee, such as individual interests, job stability, and work challenges (Poole et al., 1993), and they involve an individual's sense of accomplishment, enjoyment, and job satisfaction (Judge, Cable, Boudreau, & Bretz, 1995).

Most workers would include a compensation- or status-related variable in their personal definitions of career success. These would likely include yearly income, level of responsibility, or position in the organizational hierarchy. This is consistent with a traditional view of success, which equates money and status to achievement, especially when viewed from another person's

perspective. When other people have no knowledge of an individual's satisfaction level or personal standards for achievement, their judgments about the individual's success are typically based on metrics that are easily recognizable (Jaskolka, Beyer, & Trice, 1985). These visible accomplishments include variables such as salary (Gattiker & Larwood, 1989; Judge et al., 1995; Metz, 2004; Seibert, Crant, & Kraimer, 1999; Stroh, Brett, & Reilly, 1992), number of promotions (Gattiker & Larwood, 1989; Goldberg, Finkelstein, Perry, & Konrad, 2004), salary progression (Wayne et al., 1999), management level (Eddleston, Baldrige, & Veiga, 2004; Melamed, 1996), increase in job responsibilities (Sturges, 1999), and span of control (Lyness & Thompson, 1997). Salary, in particular, can be especially problematic for women, as they earn 74% of similarly credentialed men with equivalent backgrounds (Goldberg et al., 2004; U.S. Census Bureau, 2003). Further, even when women have equal skills, education, and experience, they receive lower returns in the form of pay and promotions (Kirchmeyer, 1998; Sagas & Cunningham, 2004; Stroh et al., 1992; Tharenou et al., 1994). Although women may have followed the traditional male model for success and possess "all the right stuff" (Stroh et al., 1992), they continue to be financially disadvantaged and find themselves plateaued in their careers. Nevertheless, salary is still a measuring stick that is often used to differentiate among levels of success for women. Most theories of career success use objective success measures as criteria (Poole et al., 1993).

At the same time, there is also increasing evidence that workers themselves judge their success by measures other than money or organizational status (Gattiker & Larwood, 1988) and that external, objective factors alone do not fully explain managers' feelings of accomplishment (Gattiker & Larwood, 1988, 1990; Poole et al., 1993; Sturges, 1999). In particular, women and older managers appear to define career success for themselves in non-conventional ways (Powell

& Mainiero, 1992). Further, in Sturges' investigation and interviews with successful managers (1999), a minority of individuals (19.4%) viewed success in a traditional way by basing their feelings of success on tangible, external factors, while the remainder gave more weight to intangible, internal criteria such as achievement, accomplishment, influence, and personal recognition. When individuals evaluate their own success, the criteria are often more subjective and linked to personal satisfaction with their jobs (Gattiker & Larwood, 1989; Judge et al, 1995). For example, Kirchmeyer (1998) found that even though women earned smaller salaries than men, they perceived their careers to be equally as successful. Similarly, women rated themselves as being just as successful as men despite their lower salaries, lesser career experience, and reduced expectations (Keys, 1985).

Women's self-perceptions of success do not necessarily depend on external achievements. Though individuals – both men and women – may hold positions of importance and be compensated highly for their work, they may not feel satisfied with their accomplishments (Judge et al., 1995; Korman, 1981; Seibert et al., 1999). Alternatively, they may derive strong personal satisfaction from their work, despite holding low-status positions, having little authority, or receiving low salaries. Women in particular may find satisfaction through other sources such as their interpersonal relationships at work (Eddleston et al., 2004). Traditional, objective measures of success may not be as important to women as to men because women may have lower expectations due to their inferior position within the organizational power structure (Kantner, 1977). Women have also been found to attach less importance to promotions than men, be less likely to desire a promotion, and express fewer aspirations for advancing to top organizational positions (Cassirer & Reskin, 2000). Similarly, other research

suggests women may focus on lateral moves and place greater emphasis on the socio-emotional sources of career success than on objective, visible accomplishments (Eddleston et al., 2004).

To non-managerial women, job security, especially with a company that provides good benefits and schedule flexibility to accommodate family responsibilities can constitute career success (Hite & McDonald, 2003). Employees often look for more than just money in their jobs; they also seek out interesting challenges (Asplund, 1988; Sturges, 1999), opportunities for personal development (Henning & Jordan, 1978; Nicholson & West, 1988; Sturges, 1999), feelings of accomplishment, competence, and achievement (Sturges, 1999), job security (Hite & McDonald, 2003), balance (Powell & Mainiero, 1993; Sturges, 1999), and enjoyment (Sturges, 1999). Some studies suggest that subjective factors are even more important than objective ones (Poole et al., 1993; Powell & Mainiero, 1993; Sturges, 1999), and managers themselves view success as both objective and subjective (Gattiker & Larwood, 1988, 1990; Peluchette, 1993; Sturges, 1999). Therefore, subjective measures are important success criteria, and both objective and subjective measures are useful in understanding the factors that underlie career success for women. (Melamed, 1995; Schneer & Reitman, 1997).

Despite numerous investigations into the predictors of career success, few consistent conclusions can be drawn. Previous efforts to understand the factors that lead to women's career achievements and satisfaction have identified multiple predictors, often with conflicting results. Researchers have investigated demographic variables (Gattiker & Larwood, 1988, 1989; Judge et al., 1995), educational variables (Judge et al., 1995; Tharenou, Lattimer, & Conroy, 1994), influence behaviors (Judge & Bretz, 1994), and non-work responsibilities (Cassirer & Reskin, 2000; Daley, 1996; Ivarsson & Ekehammer, 2001; Kirchmeyer, 1998; Ragins & Sundstrom, 1989; Tharenou et al., 1994). Others have pointed to interpersonal factors such as networking

(Daley, 1996; Kirchmeyer, 1998; Sagas & Cunningham, 2004; Tharenou et al., 1994), the acquisition of social capital (Metz & Tharenou, 2001), and the quality of supervisor/subordinate relationships (Wayne et al., 1999). Still others have focused on organizational determinants including gender composition of the workforce (Cassirer & Reskin, 2000), selection and training practices (Tharenou et al., 1994), work environment (Tharenou & Conroy, 1994; Tharenou et al., 1994), and an individual's location in the organizational opportunity structure (Cassirer & Reskin, 2000; Kantner, 1977). In addition, career success has been proposed to derive from individual, dispositional variables such as ambition (Cannings & Montmarquette, 1991; Howard & Bray, 1988; Tharenou, 1997), self-confidence (Bass, 1990; Ragins & Sundstrom, 1989; Tharenou et al., 1994), motivation (Eddleston et al., 2004), proactivity (Seibert et al., 1999), and masculinity (Ivarsson & Ekehammer, 2001) as well as from individual career choices (Daley, 1996; Melamed, 1995) and career-related beliefs (Eddleston et al., 2004). Within this broad spectrum of individual, organizational, and demographic variables, a variety of factors both singly and in combination have been found to relate positively to measures of success. One way to organize variables that may contribute to women's success is to categorize them as human capital, individual, organizational, and power variables.

Human Capital Factors

Existing career success models contain a broad range of variables that are proposed to predict career success. Most models are multi-factorial and consist of a combination of personal, situational, motivational, and experiential elements. Many models have human capital theory at their core. In human capital theory, an employee's value to the organization is determined by the individual's set of relevant skills, knowledge, and experiences (Becker, 1993; Judge et al., 1995;

Keaveny & Inderrieden, 1999; Metz, 2004; Metz & Tharenou, 2001; Sagas & Cunningham, 2004; Stroh et al., 1992). Individuals are assumed to make personal decisions about how to invest their own capital in knowledge-building activities, and the cumulative effect of these choices influences the likelihood of career success. Therefore, those who make high investments in their own capital receive dividends in the form of higher salaries, greater job options, and enhanced probability of success.

In previous studies, human capital variables explained more variance in women's advancement at all organizational levels than any other factors (Lyness & Thompson, 1997) and have predicted career satisfaction (Judge et al., 1995; Sagas & Cunningham, 2004), management progression (Hurley & Sonnenfeld, 1998; Judge et al., 1995), promotions (Sagas & Cunningham, 2004; Seibert et al., 1999) and salary (Tharenou & Conroy, 1994; Veum, 1996). Education, a primary means of acquiring human capital, has been shown to predict salary and career advancement in numerous studies (Hurley & Sonnenfeld, 1998; Judge et al., 1995; Kirchmeyer, 1998; Melamed, 1995). Education has also been positively associated with managerial career success (Gattiker & Larwood, 1988, 1990; Hurley & Sonnenfeld, 1998; Judge et al., 1995). It provides the knowledge, skills, and credibility needed for performance in higher-level positions (Tharenou et al., 1994) and was found to be positively related to the likelihood of being selected for top management positions (Hurley & Sonnenfeld, 1998) and predictive of salary progression (Stroh et al., 1992).

To address educational gaps, on-the-job training is a venue through which employees can accumulate human capital and acquire the additional skills, knowledge, and competencies necessary to fulfill their current responsibilities and prepare for future advancement. Training and development provides employees with the specific knowledge needed to develop the

expertise that helps establish credibility (Ragins & Sundstrom, 1989). For women in particular, training provides a needed venue to develop management skills, as they may not have had sufficient opportunities to supervise others or participate in growth activities (Tharenou et al., 1994). Developmental job assignments are a frequent source of on-the-job training and are important in preparing people for upper-level positions (Ohlott, Ruderman, & McCauley, 1994). Thus, training can help women develop a skill base that is reasonably equivalent to that of men (Daley, 1996). Further, Tharenou and colleagues (1994) found that the primary factor influencing women's advancement in organizations was their immediate development situation. This included opportunities for training, as lack of training has been related to lower wages for women (Olsen & Sexton, 1996). Overall, the more an organization emphasizes employee development, the more likely it is to have women in top management jobs (Goodman, Fields, & Blum, 2003).

However, women sometimes have limited access to training. Kantner (1977) found that the more male the organizational hierarchy, the fewer the opportunities for women to partake in training activities. Because training is typically organization-sponsored, companies have a financial stake in ensuring their investments produce maximum returns. Therefore, organizations may invest more heavily in individuals who have shown sufficient organizational commitment through length of employment and who are not likely to leave the workforce before the company's investment can be recouped (Keaveny & Inderrieden, 1999; Veum, 1996). Because women often have interrupted career paths, they may not establish sufficient commitment and tenure in order to qualify for extensive on-the-job training from the company's perspective. Yet, training is especially important when careers are interrupted because it enables employees to more quickly re-establish their value to the organization (Schneer & Reitman, 1990, 1995).

Through its role as an opportunity for accumulating additional human capital, training benefits workers at all levels of the organization, clerical employees as well as managers (Landau & Hammer, 1986).

In general, human capital enhancement is a recognized path that is likely to contribute to women's career success. Through various methods of skill attainment and knowledge acquisition, such as formal education and on-the-job training, women can increase the value of their human capital and thus their value to the organization, resulting in higher levels of success.

Individual Factors

Many models also propose that individual factors play an important role in achieving success (Eddleston et al., 2004; Ivarsson & Ekehammer, 2001; Judge et al., 1995; Kirchmeyer, 1998; Metz, 2004; Ragins & Sundstrom, 1989; Seibert et al., 1999; Tharenou et al., 1994). One such variable is the willingness to take charge of career development and seek opportunities that will enhance advancement potential. Proactive people initiate action rather than react to the actions of others, preferring to change unfavorable circumstances instead of adapting to them (Seibert et al., 1999). Proactive individuals have been found to exhibit several behaviors that enhance their career success. They actively manage their careers by seeking specific job-relevant information, soliciting sponsorship and career support from powerful individuals, engaging in career planning activities, and persisting to overcome career obstacles (Ashford & Black, 1996; Bateman & Crant, 1993; Morrison, 1993; Seibert et al., 1999). Seibert and colleagues (1999) found that proactive personality was significantly and positively related to current salary, number of promotions, and career satisfaction. Eby, Butts, and Lockwood (2003) also identified a proactive personality as an important predictor of career success, perhaps because proactive

individuals are more likely to engage in career management activities and to pursue self-improvement opportunities such as building additional skills (Seibert et al., 1999).

Women in particular may need to be more proactive about seeking out the developmental assignments that they need (Lyness & Thompson, 2000), as they may not always be automatically provided with the training and skill-building assignments necessary for advancement (Eddleston et al., 2004; Seibert et al., 1999). Employers can be reluctant to provide training for those they see as unlikely to stay with the organization (Keaveny & Inderieden, 1999), and women, because of their often-interrupted careers, frequently fall into this category. Therefore, women may not be able to take advantage of available training and development activities unless they take the initiative to aggressively seek these out and demonstrate self-motivation for training.

Although training is important to career success, people may not engage in it willingly, as they may see it as an irrelevant, unnecessary distraction from their existing job duties. Because some organizations mandate a certain number of hours of training per year, training is not necessarily voluntary and may be viewed by employees as a “have to” rather than a “want to” activity. It has also been found that women are more likely to have to pay for their training than men (Keaveny & Inderieden, 1999; Miller & Mulvey, 1999), which can diminish their enthusiasm for it and contribute to their reluctance to seek it out.

Another individual variable that can potentially impact women’s advancement is confidence that they will be promoted. Personality traits associated with aspiration and ambition may influence one’s career (Tharenou, 1997), and having high promotional aspirations has been found to aid advancement (Tharenou, 2001). If individuals do not see openings above them or a pattern of women receiving promotions, their own aspirations for advancement and belief in their

promotability may suffer. Harlan (1989) found that the effects of opportunity variables on promotion attitudes were significant. Employees who perceived a high level of advancement opportunity also had high expectations for promotion. Kantner (1977) found that employee location in the organization's opportunity structure affected the individual's objective assessment of promotion, which in turn affected the importance the employee attached to being promoted (Cassirer & Reskin, 2000). Women may have lower aspirations for advancement because they do not see sufficient opportunities for promotion (Cassirer & Reskin, 2000). Cassirer and Reskin also found that only a slight majority of women (56%) felt that being promoted was important; a figure that was significantly less than the percentage of men who attached value to a promotion. Having faith in one's abilities and readiness for promotion was also related to advancement (Ragins & Sundstrom, 1989; Tharenou et al., 1994). Individuals who had the most confidence in their abilities and accurately recognized their worth in the marketplace were the most likely to advance in their organizations (Ragins & Sundstrom, 1989), as marketability and confidence have been significantly related to promotions (Eddleston et al., 2004), advancement in organizations (Eddleston et al., 2004; Ragins & Sundstrom, 1989), and likelihood of success (Veiga, 1989). Consequently, individuals who see themselves as highly marketable are more likely to be selected for promotion because the organization recognizes their value and rewards them with promotions in an effort to keep them committed to the organization (Eddleston et al., 2004).

Overall, a woman's career success may in part be determined by her willingness to seek out opportunities to gain new knowledge and skills that will better position her for advancement. Further, her confidence that her efforts will be rewarded with increased promotional opportunities may also contribute to her upward mobility. Thus, self-initiated training and

perception of promotability are individual factors that hold potential as predictors of women's career success.

Organizational Factors

An individual's skills, knowledge, and motivation by themselves cannot fully account for success in an organization. Organizational variables, most particularly the immediate environment within which an employee works, can affect the extent to which an individual is able to acquire skills, demonstrate them, and receive accurate performance evaluations. The gender and immediate relationship characteristics of supervisor-subordinate dyads can influence career success through their impact on performance (Heilman, 2001), promotion opportunities (Powell & Butterfield, 1994), and career support (Tharenou et al., 1994). Because gender bias may influence evaluation of an individual's performance, establishing competence cannot assure women that they will be evaluated objectively or that they will advance to the same organizational level as equivalently performing men (Heilman, 2001). Also, the qualitative results from interviews with high-level women reveal that advancement was considered to be primarily dependent on one's manager rather than on formal organization systems (Liff & Ward, 2001). These research findings suggest that informal relationships are at least as important as formal policies in determining promotions for women.

The gender of women's immediate superiors may affect opportunities for success. Typically, supervisors have authority over performance ratings and recommendations for promotion, so their perceptions of an employee's work quality and potential for advancement are paramount. The results of an employee's performance evaluation can influence future task assignments, training opportunities, developmental programs, promotions, and salary increases

(Bartol, 1999). In addition, evaluations serve as a form of performance feedback, which can enhance or diminish the employee's feelings of capability and confidence and thus influence future performance (Bartol, 1999). Further, research suggests that attitudes toward female managers influence whether a woman's successful performance is attributed to ability or luck (Heilman, 2001; Kirchmeyer, 1998; Terborg, 1977), and women in high-level, stereotypically male positions may receive prejudicial evaluations because their status is incompatible with their gender (Eagly, Makhijani, & Klonsky, 1992). Especially at top management levels, performance criteria are often vague, as management responsibilities are not easy to quantify and measure. Therefore, there is more room for personal biases and subjectivity in performance rating and subsequent promotion decisions (Heilman, 2001; Tsui & Gutek, 1984). Overall, leaders play a critical role in the career success of their subordinates through the development of high-quality relationships, mentoring, career sponsorship, and accurate evaluation of the subordinate's promotability (Wayne et al., 1999). Consequently, a male or female boss' gender-related attitudes about women as managers can have an effect on the mentoring and support for advancement they provide to women subordinates.

Having a female as a manager may be an advantage for women. Women supervisors assist female subordinates by serving as role models and examples of expected organizational behavior (Daley, 1996). Because opposite-gender supervisor/subordinate dyads eliminate the similarity-attraction factor, having a female manager allows women to enjoy the benefits of "similar to me" relationships that generate support for advancement (Tharenou, 2001). Yet, female managers can also be a detriment. Male supervisors are often more connected to key social networks within the organization (Daley, 1996) and provide opportunities for women to benefit from heterogeneous networks (Daley, 1996; Ibarra, 1993, 1995) that are not accessible

through female supervisors. Women supervisors may hinder career progress for both men and women because they are frequently excluded from the informal social networks in organizations that influence promotions and advancement and are thus unable to assist their subordinates (Daley, 1996). Successful female executives report that help from above was critical to getting ahead in an organization (Morrison, 1992; Tharenou, 1999) and men typically hold the highest positions of influence and authority. Thus, women with female superiors may not receive sufficient top-level guidance.

Females in management positions may not be viewed favorably by males, who comprise the bulk of higher-level positions. Interviews with female executives revealed that male executives were not comfortable being supervised by or supervising women (Catalyst, 1992, 1996; Ragins et al., 1998; Tharenou, 1999). Despite research showing that men and women perform equivalently in leadership roles, male senior leaders often perceive that women are not as effective as men are and are especially deficient in problem-solving skills (Catalyst, 2005).

Managers typically prefer to select individuals who closely resemble themselves to advance (Bielby & Bielby, 1992; Cassirer & Reskin, 2000; Kantner, 1977; Kirchmeyer, 1998; Maume, 2004). In a male-dominated corporate hierarchy, this approach minimizes the perceived risks of introducing someone “different” into the organization’s authority chain who may not conform to accepted practices and values (Bielby & Bielby, 1992; Cassirer & Reskin, 2000). Similarity may also affect the level of management support and encouragement for the individual’s advancement (Tharenou, 2001). The presence of a male organizational hierarchy negatively affects women’s advancement into low- and mid-management positions because of their greater interpersonal support for similar others (Tharenou, 2001). Multiple studies have found that the less “male” a managerial hierarchy is, the more women advance in management

(Konrad & Pfeffer, 1991; Pfeffer, Davis-Blake, & Julius, 1995; Tharenou, 2001; Tharenou & Conroy, 1994).

Studies of same- and opposite-sex superior/subordinate dyads have produced inconsistent results. Some have found no differences related to the sex of the rater (Landy & Farr, 1980; Peters, O'Connor, Weekley, Pooyan, Frank, & Erenkrantz, 1984; Pulakos, white, Oppler, & Borman, 1989) or the ratee (Eagly et al, 1992; Powell & Butterfield, 1982; Terborg, 1977; Tsui & Gutek, 1984). Others have found that opposite-gender dyads result in lower ratings for subordinates than same-sex dyads (Tsui & O'Reilly, 1989) and that demographic differences (including gender) between superiors and subordinates may have significant effects on performance evaluations (Tsui & O'Reilly, 1989). Still other results suggest that same-sex combinations do not produce higher evaluations for the individual being rated (Pulakos et al., 1989) and that supervisors do not give higher ratings to employees of their own gender (Mobley, 1982). The results of some studies demonstrate that women are rated higher than men in terms of their performance (Mobley, 1982; Peters et al., 1984; Powell & Butterfield, 1994), while others reflect a tendency to rate male subordinates more positively (Butterfield & Grinnell, 1999; Eagly, Karau, & Makhijani, 1995; Eagly, Makhijani, & Kinsky, 1992). These inconsistencies may arise from lab vs. field studies (Bartol, 1999) and from situational variables that need to be taken into account (Tsui & Gutek, 1984).

The gender composition of a female manager's subordinate group may also affect evaluations of her performance, perceptions of leadership, and consequently opportunities for advancement. For a woman in a leadership role, success in an organization is contingent on how effectively she manages the people who work for her. Her performance as a manager of others is

likely to be part of the criteria used as evidence of her suitability for promotion. If her team does not achieve the appropriate business results, her opportunities for promotion will be limited.

Research has identified some factors that may influence how well a female manager works with her team based on its gender composition. A primary obstacle is the stereotypical perceptions some individuals hold regarding women in management roles. A female in a traditionally “male” position violates some assumptions about gender and status (Ridgeway, 2001) and produces incongruity between the behaviors expected from a woman and the behaviors expected from a manager (Melamed, 1995). Supervisory authority is still seen as a gendered concept by some people; for example, women are not perceived to be able to work the long hours required of managers (Maume, 2004). Consequently, it may be difficult for subordinates – especially males – to accept women as supervisors (Melamed, 1995). Further, when women supervisors assert their authority, they may encounter resistance and negative reactions from their subordinates (Ridgeway, 2001). Other studies have found that women who speak out assertively with their ideas are perceived to be less well liked, less trustworthy, and to have less influence over men (Carli, 1990; Ridgeway, 2001), which limits their ability to manage others most effectively.

Other research points to the ratio of male and female subordinates as a factor in their ratings of their supervisors. Eagly and colleagues (1995) found that the higher the proportion of men among the raters, the more the raters favored male supervisors over female supervisors. Similar results were obtained by Butterfield and Grinnell (1999), who also found that male subordinates were least supportive of female supervisors who used an authoritarian style. Sackett, DuBois, & Noe (1991) found that performance ratings for female leaders were significantly lower than ratings for male leaders when women made up less than 20% of the

raters. Further, female leaders' ratings continued to lag behind men's until the proportion of women in the rating group exceeded 50%. Men, especially those in non-managerial positions, have shown a preference for male leaders (Eagly et al., 1992), while female subordinates have been shown to give higher performance ratings to female supervisors (Butterfield & Grinnell, 1999) This is consistent with the results reported by Stevens and DeNisi (1980), which indicate that women's attitudes toward female managers were significantly more positive than were men's attitudes. A Catalyst study (2005) found that senior managers who reported to a female tended to hold more stereotypical views of women leaders than those who had a male superior. Further, employees who worked in a traditionally masculine occupation and reported to a female supervisor had highly negative perceptions of women leaders, especially regarding their problem-solving capabilities (Catalyst, 2005). Thus, the gender composition of a female manager's group of direct reports may influence their perceptions of her performance.

Although a woman's skills, knowledge, and motivation are important individual factors that can determine her success, structural factors in the organizational environment may either inhibit or facilitate her advancement. If gender bias exists, either among her superiors or subordinates, promotional opportunities may be limited. Likewise, "similar to me" relationships with female superiors and favorable perceptions of her management style by female subordinates may enhance her chances of success.

Power Factors

Supervisory authority is an example of workplace power (Elliott & Smith, 2004) that can lead to further advancement (Maume, 2004), and the amount of authority a woman has to make decisions about her subordinates may be predictive of her career success. Women may feel more

intrinsic satisfaction with their jobs when they have the power to directly influence their resources and work output, and this level of control may contribute to feelings of accomplishment, achievement, and effectiveness. As operationalized by Elliott and Smith (2004), the legitimate authority that forms the basis of workplace power is established by direct supervision over others, the authority to hire and fire subordinates, and the authority to set their subordinates' pay rates. This builds the management skills that are needed to advance in the organization. Having the power to make decisions and control resources indicates that the job is not management level in title only, but that the individual has management responsibility as well. Thus, women who possess legitimate authority in an organization have established themselves as viable candidates for promotion.

Elliott and Smith (2004) postulate that supervisory authority is tangible evidence of workplace power, and that the "glass ceiling" implies limited access of women to power, control, or status within an organization rather than title or income. Thus, power can be viewed as a separate entity, not specifically tied to a job title, job description, or level in the organization. Quantifying supervisory power through information about the extent of authority an individual has to determine the tasks, pay, and promotional opportunities of subordinates is a more precise way of operationalizing power than reliance on title, level, or other means that do not directly address the freedom of a supervisor to act autonomously on behalf of her direct reports.

Hypotheses and Research Questions

This review of the literature led to two hypotheses and a research question. As noted, success in careers can be assessed objectively using such measures as income, span of control, and promotions. Career success also has subjective components. For example, it is conceivable

that a woman could be in a low-paying job that offers personal and intangible rewards. Thus, it may be that human capital and individual factors differentially contribute to objective and subjective career success. Moreover, the variety of measures of objective success raise the possibility that specific human capital and individual factors contribute differentially, depending on the type of objective success used as an outcome. Unfortunately, the literature is not sufficiently developed to predict which specific factors will make stronger or weaker contributions to the various measures of objective and subjective success, making the hypotheses more general than would be desirable.

H1: Human capital factors (education, years of experience, and on-the-job training) will make positive contributions to women's objective (income, span of control, promotions) and subjective (self-reported job satisfaction) career outcomes.

H2: The power a woman has in the organization will make a positive contribution to objective (income, span of control, promotions) and subjective (self-reported job satisfaction) career success.

RQ: What combination of individual (perception of promotability and initiative for training) and organizational (gender of superior and subordinates) factors best explains the variance in objective (income, span of control, promotions) and subjective (self-reported job satisfaction) career success?

METHOD

Participants

The participants in this study are members of the National Longitudinal Surveys (NLS) Young Women Cohort (N = 2857) who responded to a 2003 survey conducted by the U.S. Department of Labor. Of the 2857 women who were interviewed in 2003, 1392 (48.7%) were interviewed in person and 1326 (46.4%) were interviewed via telephone. Interview method was not available for 139 women (4.9%). The 2857 total interviews represent a response rate of 59% of the living respondents who were initially surveyed in 1967. This is the most recent wave of a longitudinal study that began in 1966 with 5,159 women who were between 14 and 24 years of age.

The Young Women cohort was chosen for this study because they were 50 to 60 years old in 2003, an age that is often associated with peak income and ascension within an organization. To create a sample that was representative of women's experiences in a corporate work environment with established management hierarchies and reasonable opportunities for advancement, only women working full time in private sector organizations were included.

Given these parameters, 743 women met the criteria for participation, and their responses were included in the analyses. Of the participants, 59% were married and 41% were single. The single group included women who had never been married as well as those who had been previously married but were now widowed or divorced. The women worked an average of 39.09 hours per week and their mean pay rate was \$18.97 per hour. From an educational standpoint, their mean level of attainment was 13.64 years, equivalent to roughly 1½ years of formal instruction beyond high school. In terms of job-related education, over the previous two years, the women in the participant group had engaged in an average of 46.87 hours of on-the-job

training. Only 35.39% supervised others, while 64.7% did not. For those who had supervisory responsibility, the mean number of subordinates was 14.45; of these, the mean number of men was 5.78. The majority of respondents reported to a higher-level supervisor (89.1%), while 10.9% did not have anyone supervising their work.

Background

Sponsored by the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor, the NLS began in 1966 as an outgrowth of information collected from the U.S. Census Bureau. Four cohorts were initially established (Mature Women, Young Women, Older Men, and Young Men) to study employment patterns over time. The NLS surveys can be accessed via the internet at www.bls.gov/nls.

The initial Young Women Cohort was selected to represent the civilian, non-institutionalized population of women between the ages of 14 and 24. The first survey was conducted in 1968 with 5,159 (93.2%) of the established pool of 5,533 women completing the initial interview. Survey respondents over the years have had to meet several criteria. These included completion of the first wave of surveys, United States residence at the time of the interview, not institutionalized, and not a member of the military. Over time, some additional criteria for inclusion have varied slightly. For example, respondents were initially dropped if they had missed two consecutive surveys for reasons other than death or refusal to be interviewed. In 1985, attempts were made to locate and accept these individuals back into the sample. Respondents who were not interviewed in 1981 and 1982 were never dropped and continued to remain eligible. Attrition has occurred for a variety of reasons, including death, refusal, and inaccessibility.

Privacy, confidentiality, and informed consent were addressed. Letters sent to eligible individuals explained the purpose, sponsorship, confidentiality procedures, and estimated time commitment, and contained an assurance of privacy protection for sensitive information. Participants were informed that answers would be made available to researchers only after all personal identifiers (e.g., names, addresses, Social Security numbers, and geographic information) were removed. Potential participants were informed that their involvement was voluntary and that there would be no repercussions or consequences if they chose not to participate. An individual's receipt of the advance letter and subsequent agreement to participate in the survey constituted informed consent.

Measures

Outcome Variables

Career success was examined using subjective and objective measures. Subjective career success was assessed by an item asking respondents how they felt about their jobs with their current employer (see Appendix A for all relevant survey questions pertaining to each variable). The 4-point response scale ranged from "like it very much" (coded 1) to "dislike it very much" (coded 4). Thus, a low score indicated greater subjective career success.

Objective career success was measured three ways: income, span of control, and a recent promotion. Because respondents reported their income in different forms, this variable was standardized as an hourly rate of pay calculated by dividing the stated income by the number of hours reported by the respondents to produce that income. The number of individuals supervised comprised the span of control variable. Respondents were also asked whether they had experienced a promotion, demotion, or other type of position change in the previous two years or

since starting their current position, whichever came later. If the response was “yes,” they reported the type of change. These two items were used to indicate whether women had been promoted (coded 1), demoted (coded 2) or experienced a different change (coded 3).

Human Capital Measures

Human capital variables indicating on-the-job training and experience were included as predictors. Respondents reported the number of weeks and hours per week they had spent in on-the-job training courses in the previous two years. The number of weeks was multiplied by the number of hours per week and used to calculate the total hours spent in training. Those reporting no training were coded as zero hours of training. Participants also reported the highest grade of school they had completed. Responses were coded from 0 (no education) to 18 (completed six or more years of college).

Individual Measures

Variables indicating individual characteristics of the participants were women’s perception of promotability and self-initiated training. Women were asked whether they “believe it is possible to get a promotion within the next two years” with a yes/no response option. In addition to the number of hours of training (above), women reported whether they enrolled in a training or educational program because their employer mandated it. Women who reported that their training was employer mandated training were coded 1, and self-initiated training was coded 2. This variable represented a proactive attitude.

Organizational Measures

Gender configuration was used for organizational structure measures. Respondents were asked if they were supervised by a male or female. Women also reported the number of people they supervised and how many of these individuals were male. This variable was reported as a percentage calculated by dividing the number of male supervisees by the total number of people supervised.

Power

Women were assigned a score ranging from 3 to 9 to indicate the amount of power they have in their jobs. Power was calculated from three survey items asking about the amount of authority the respondents had for determining the pay, promotion, and tasks of the individuals who reported to them. Women indicated whether they had full (coded as 1), some (coded as 2) or no (coded as 3) responsibility for deciding each of these items for the individuals they supervise. Summing these three items resulted in a single score for power, with a lower score reflecting a higher level of power.

Data Analysis

To test the hypotheses and research question, a series of regression analyses were conducted. Separate regression equations were run for each of the four dependent variables: income, span of control, promotion, and self-reported satisfaction. H1 was tested with a multiple regression analysis using the human capital factors of education and training as predictor variables. H2 was tested through a simple regression analysis using the calculated power score as the predictor variable. For the RQ, the individual factors of perception of

promotability/motivation for training and the organizational factors of supervisor gender/percentage of male subordinates were predictor variables. Subsequently, the human capital, individual, organizational, and power variables which made a significant contribution to the prediction of objective and subjective career success in the previous equations were the predictor variables for this regression analysis.

RESULTS

The 2003 survey respondents formed an initial pool of 2857 subjects from which the participants in this study were determined. To be included, subjects must have been currently working at the time of the survey in 2003 in a private, not-for-profit organization. Elimination of all participants who did not meet the criteria for inclusion yielded a final subject pool of 743. Regression analyses related to H1, H2, and the RQ were subsequently run on this set of subjects; however, the number of subjects in each analysis group varied according to the group's requirements (e.g., whether or not they had on-the-job training, received a recent promotion, etc.). In each analysis, criterion variables were regressed on the predictor variables using the simultaneous method of entry into the regression equation. The means, standard deviations, and correlations for all study variables are reported in Table 1.

H1 projected that human capital variables (Education and Total Hours Training) would have a positive relationship with objective (Income, Span of Control, Promotion) and subjective (Job Satisfaction) career outcomes. The overall model was significant ($F_{2,86} = 4.689, p < 0.05$, adjusted R square = .077). Examining the beta weights revealed that Total Hours Training did not contribute significantly to the model ($\beta = .003, t = -.025, p = .980$) and that education alone was predictive of income ($\beta = .314, t = 3.062, p = .003$). Further, the human capital variables were not significantly related to the Span of Control, Promotion, or Job Satisfaction variables. Thus, this hypothesis was only partially supported, as illustrated in Table 2 which presents the results of the regression analysis.

Table 1

Means, Standard Deviations, and Correlations of All Variables

Variables	Mean	SD	N	1	2	3	4	5	6	7	8	9	10
1 Hourly Pay Rate	18.97	12.23	679										
2 Span of Control	14.45	27.38	258	.058									
3 Promotion (1= promotion, 2= demotion, 3= other)	1.64	.885	110	.166	.085								
4 Job Satisfaction (1=high satisfaction)	1.74	.730	729	- .107**	-.044	.095							
5 Education (in years)	13.64	2.46	743	.436**	.140*	.213*	-.067						
6 Total Hours Training	46.87	76.45	217	.094	.451**	-.202	-.028	.011					
7 Power Score (lower number = greater power)	6.42	1.55	259	-.156*	-.051	-.187	.180**	.013	.058				
8 Initiative for Training (employer mandated = 1, Other = 2)	.25	.436	232	.051	-.084	-.082	.018	-.133*	-.072	-.116			
9 Perception of Promotion (No = 0, Yes = 1)	.28	.449	718	.008	.036	-.315**	-.113**	.019	.093	.005	-.170**		
10 Supervisor Gender (Male = 1, Female = 2)	1.54	.499	645	-.105*	.019	.057	.027	.002	-.060	.110	.034	.046	
11 Male Subordinate Ratio (Lower number = lower ratio of male subordinates)	.390	.262	151	-.033	- .273**	-.091	.044	-.055	-.062	.158	-.146	.076	-.125

Note: * $p < 0.05$, ** $p < 0.01$

Table 2

Summary of Simultaneous Regression Analysis for Human Capital Variables with Career Outcomes

Income (<i>n</i> = 89)					
Variable	B	SE B	β	<i>t</i>	Sig
Education	253.338	82.732	.314	3.062	.003
Total Hours Training	-.074	2.932	-.003	-.925	.980

Span of Control (<i>n</i> = 41)					
Variable	B	SE B	β	<i>t</i>	Sig
Education	1.944	30.571	.150	.919	.364
Total Hours Training	.060	.122	.081	.493	.625

Promotion (<i>n</i> = 19)					
Variable	B	SE B	β	<i>t</i>	Sig
Education	.037	.096	.093	.379	.710
Total Hours Training	-.002	.002	-.215	-.881	.392

Job Satisfaction (<i>n</i> =94)					
Variable	B	SE B	β	<i>t</i>	Sig
Education	-.004	.037	-.010	-.100	.920
Total Hours Training	.001	.001	.056	.538	.592

H2 projected that an individual's power in the organization would be positively related to objective and subjective career outcomes. Again, this hypothesis was partially supported, as Power Score was significantly related to Income ($F_{1,135} = 6.645, p < 0.05$, adjusted R square = .040) and Span of Control ($F_{1,142} = 6.336, p < 0.05$, adjusted R square = .036), but not to the other career outcome variables (see Table 3 for a detailed description).

Table 3

Summary of Simultaneous Regression Analysis for Power Variable with Career Outcomes

Income ($n = 137$)					
Variable	B	SE B	β	t	Sig
Power Score	-236.246	91.645	-.217	-2.578	.011

Span of Control ($n = 144$)					
Variable	B	SE B	β	t	Sig
Power Score	-2.376	.944	-.207	-2.517	.013

Promotion ($n = 32$)					
Variable	B	SE B	β	t	Sig
Power Score	-.070	.099	-.129	-.711	.483

Job Satisfaction ($n=145$)					
Variable	B	SE B	β	t	Sig
Power Score	.039	.036	.090	1.075	.284

The research question asked what combination of individual and organizational variables would contribute to objective and subjective career outcomes. After analysis, none of the potentially relevant variables (Perception of Promotion, Initiative for Training, Supervisor Gender, Subordinate Gender) proved to be significantly related to the criterion variables (see Table 4 for details of the regression analysis).

Table 4

Summary of Simultaneous Regression Analysis for Individual and Organizational Variables with Career Outcomes

Income (n = 17)					
Variable	B	SE B	β	t	Sig
Individual Variables					
Perception of Promotion	441.410	2063.195	.062	.214	.834
Initiative for Training	4541.987	2503.793	.510	1.814	.095
Organizational Variables					
Supervisor Gender	-1860.337	2250.314	-.250	-.827	.425
Male Subordinate Ratio	-2248.932	3587.154	-.179	-.627	.542
Span of Control (n = 18)					
Variable	B	SE B	β	t	Sig
Individual Variables					
Perception of Promotion	-1.951	14.987	-.041	-.130	.898
Initiative for Training	.223	18.296	.004	.012	.990
Organizational Variables					
Supervisor Gender	-14.846	15.782	-.299	-.941	.364
Male Subordinate Ratio	-29.761	26.026	-.334	-1.143	.273
Promotion (n = 9)					
Variable	B	SE B	β	t	Sig
Individual Variables					
Perception of Promotion	-1.012	.549	-.734	-1.843	.139
Initiative for Training	-1.571	1.160	-.721	-1.354	.247
Organizational Variables					
Supervisor Gender	-.509	.462	-.350	-1.101	.333
Male Subordinate Ratio	.524	1.167	.238	.449	.677
Job Satisfaction (n=18)					
Variable	B	SE B	β	t	Sig
Individual Variables					
Perception of Promotion	.241	.389	.195	.620	.546
Initiative for Training	-.139	.474	-.086	-.293	.774
Organizational Variables					
Supervisor Gender	.232	.409	.182	.567	.581
Male Subordinate Ratio	.377	.675	.165	.559	.586

Extending the research question, the significant variables identified in H1 and H2 were regressed on the career outcome criteria to identify the combination of variables that best

predicted objective and subjective career success. As the Education and Power Score variables had been shown through earlier analyses to be predictive of one or more career outcomes, these variables were used in this analysis. The combination of Education and Power Score was found to be predictive of Income ($F_{2,241} = 17.843, p < 0.01$, adjusted R square = .122). Further, the overall Education and Power Score model was significant ($F_{2,255} = 4.611, p < 0.05$, adjusted R square = .027) with Job Satisfaction; however, only the Power Score made a significant predictive contribution to the model ($\beta = .181, t = 2.939, p = .004$). The results of analyses regressing Span of Control on Education and Power Score ($F_{2,255} = 2.910, p = .056$, adjusted R square = .015) and Promotion ($F_{2,54} = 1.410, p = .253$, adjusted R square = .014) revealed that these variables were not predictive of this career outcome. The results of this analysis are displayed in Table 5.

Table 5

Summary of Simultaneous Regression Analysis for Education and Power Score with Career Outcomes

Income ($n = 244$)					
Variable	B	SE B	β	t	Sig
Education	216.286	40.205	.323	5.380	.000
Power Score	-156.758	58.612	-.161	-2.675	.008

Span of Control ($n = 258$)					
Variable	B	SE B	β	t	Sig
Education	1.666	.734	.141	2.269	.024
Power Score	-.936	1.091	-.053	-.858	.392

Promotion ($n = 57$)					
Variable	B	SE B	β	t	Sig
Education	.043	.046	.124	.918	.363
Power Score	-.093	.076	-.166	-1.229	.224

(table continues)

Table 5 (continued).

Variable	Job Satisfaction (n=145)				
	B	SE B	β	t	Sig
Education	-.016	.019	-.051	-.835	.404
Power Score	.082	.028	.181	2.939	.004

Because women who supervise others and women who do not have supervisory responsibility may represent two subsets of employees with different, goals, expectations, and motivations, separate analyses were conducted on these groups. Survey respondents were split into two groups based on their response to the survey question asking whether or not they supervised others. The resulting subgroups were categorized as Supervise/Not Supervise in further analyses.

The analyses described for H1, H2, and the RQ were replicated separately for these two groups. For the Supervise group, the overall model for human capital variables was significant with Span of Control ($F_{2,94} = 13.643, p < 0.01$, adjusted R square = .208); within this, Total Hours of Training made a significant contribution to the predictive value of the equation ($\beta = .441, t = 4.848, p = .106$), while Education did not ($\beta = .149, t = 1.633, p = .106$). The results of regression analyses using these human capital variables and other career outcome measures were not significant. All results for these analyses are described in Table 6.

Table 6

Summary of Simultaneous Regression Analysis for Human Capital Variables with Career Outcomes for Supervisory Women

Variable	Income (n = 91)				
	B	SE B	β	t	Sig
Education	141.514	78.837	.188	1.795	.076
Total Hours Training	1.426	2.0679	.072	.689	.492

(table continues)

Table 6 (continued).

Span of Control (<i>n</i> = 97)					
Variable	B	SE B	β	<i>t</i>	Sig
Education	2.116	1.296	.149	1.633	.106
Total Hours Training	.169	.035	.441	4.848	.000

Promotion (<i>n</i> = 27)					
Variable	B	SE B	β	<i>t</i>	Sig
Education	.066	.080	.168	.829	.415
Total Hours Training	.000	.001	-.163	-.806	.428

Job Satisfaction (<i>n</i> =97)					
Variable	B	SE B	β	<i>t</i>	Sig
Education	-.013	.030	-.046	-.445	.657
Total Hours Training	.000	.001	-.050	-.481	.632

For women who supervised others, their Power Score was significantly related to Income ($F_{1,242} = 6.047, p < 0.05$, adjusted R square = .020), with more supervisory power associated with higher income. Power Score was also predictive of Job Satisfaction ($F_{1,256} = 8.535, p < 0.01$, adjusted R square = .028). The positive beta weight for this equation ($\beta = .180, t = 2.921, p = .004$) indicated that a higher Power Score was associated with Job Satisfaction. As this item is reverse coded (i.e., a lower Power Score corresponds to greater power to set rules for subordinates), it indicates that the more power a woman held as a supervisor, the less satisfied she was with her job. Power Score was not significantly related to Span of Control or Promotion. Full details of the regression analysis are outlined in Table 7.

Table 7

Summary of Simultaneous Regression Analysis for Power Variable with Career Outcomes for Supervisory Women

Income (n = 91)					
Variable	B	SE B	β	t	Sig
Power Score	-152.203	61.896	-.156	-2.459	.019

Span of Control (n = 97)					
Variable	B	SE B	β	t	Sig
Power Score	-.893	1.100	-.051	-.812	.418

Promotion (n = 27)					
Variable	B	SE B	β	t	Sig
Power Score	-.105	.074	-.187	-1.408	.165

Job Satisfaction (n=97)					
Variable	B	SE B	β	t	Sig
Power Score	.082	.028	.180	2.921	.004

The overall model for individual and organizational variables was also significant with the Span of Control variable for supervisory women ($F_{4,50} = 2.753, p < 0.05$, adjusted R square = .115). Predictor variables included in this equation were Perception of Promotion, Initiative for Training, Supervisor Gender, and Male Subordinate Ratio. The single significant variable in this equation was Male Subordinate Ratio ($\beta = -.400, t = -3.037, p = .004$), indicating the lower the proportion of male subordinates, the larger the female supervisor's span of control. The full results of the regression analysis are displayed in Table 8.

Table 8

Summary of Simultaneous Regression Analysis for Individual and Organizational Variables with Career Outcomes for Supervisory Women

Income (<i>n</i> = 52)					
Variable	B	SE B	β	<i>t</i>	Sig
Individual Variables					
Perception of Promotion	-635.025	644.451	-.147	-.985	.329
Initiative for Training	635.740	744.032	.125	.854	.397
Organizational Variables					
Supervisor Gender	173.061	637.759	.040	.271	.787
Male Subordinate Ratio	1207.132	1154.565	.153	1.046	.301
Span of Control (<i>n</i> = 55)					
Variable	B	SE B	β	<i>t</i>	Sig
Individual Variables					
Perception of Promotion	7.665	10.541	.098	.727	.470
Initiative for Training	-12.225	12.071	-.134	-1.013	.316
Organizational Variables					
Supervisor Gender	2.995	10.316	.039	.290	.773
Male Subordinate Ratio	-58.237	19.179	-.400	-3.037	.004
Promotion (<i>n</i> = 20)					
Variable	B	SE B	β	<i>t</i>	Sig
Individual Variables					
Perception of Promotion	-.606	.449	-.350	-1.350	.197
Initiative for Training	.020	.561	.009	.035	.972
Organizational Variables					
Supervisor Gender	-.087	.493	-.050	-.176	.862
Male Subordinate Ratio	-.514	1.020	-.148	-.504	.621
Job Satisfaction (<i>n</i> =54)					
Variable	B	SE B	β	<i>t</i>	Sig
Individual Variables					
Perception of Promotion	.022	.179	.018	.124	.902
Initiative for Training	-.157	.211	-.109	-.745	.460
Organizational Variables					
Supervisor Gender	.075	.176	.062	.424	.673
Male Subordinate Ratio	.054	.328	.024	.166	.869

Within the subset of women who did not supervise others, the overall human capital variable model (Education and Total Hours Training) was significant with Income ($F_{2,114} =$

18.232, $p < 0.01$, adjusted R square = .229) with Education contributing significantly to the predictive value of the model ($\beta = .483$, $t = 5.920$, $p = .000$). Total Hours Training, however, was not predictive ($\beta = .112$, $t = .112$, $p = .773$). The regression equations for Education and Total Hours Training with Promotion and Job Satisfaction were not significant, nor were the regressions on Perception of Promotion, Initiative for Training, and Supervisor Gender on Income, Promotion, or Job Satisfaction. Because this subgroup of women did not have supervisory authority, a Power Score was not calculated for them and this variable was excluded from the regression equations. Similarly, Span of Control and Male Subordinate Ratio were not relevant for this subgroup and were not considered in the analyses. The complete description of the results of these regression analyses can be found in Tables 9 and 10.

Table 9

Summary of Simultaneous Regression Analysis for Human Capital Variables with Career Outcomes for Non-Supervisory Women

Income ($n = 117$)					
Variable	B	SE B	β	t	Sig
Education	189.743	32.050	.483	5.920	.000
Total Hours Training	1.669	1.219	.112	1.370	.173
Promotion ($n = 15$)					
Variable	B	SE B	β	t	Sig
Education	.128	.083	.394	1.539	.150
Total Hours Training	-.002	.002	-.255	-.997	.338
Job Satisfaction ($n=120$)					
Variable	B	SE B	β	t	Sig
Education	-.002	.030	-.005	-.059	.953
Total Hours Training	-9.1422E5	.001	-.008	-.083	.934

Table 10

Summary of Simultaneous Regression Analysis for Individual and Organizational Variables with Career Outcomes for Non-Supervisory Women

Income (<i>n</i> = 113)					
Variable	B	SE B	β	<i>t</i>	Sig
Individual Variables					
Perception of Promotion	-.33.466	206.124	-.016	-.162	.871
Initiative for Training	160.216	218.495	.071	.733	.465
Organizational Variable					
Supervisor Gender	-213.409	192.225	-.106	-1.110	.269
Promotion (<i>n</i> = 16)					
Variable	B	SE B	β	<i>t</i>	Sig
Individual Variables					
Perception of Promotion	-.625	.932	-.326	-1.231	.026
Initiative for Training	1.375	1.048	.359	1.312	.214
Organizational Variable					
Supervisor Gender	-.125	.508	-.067	-.246	.810
Job Satisfaction (<i>n</i> =117)					
Variable	B	SE B	β	<i>t</i>	Sig
Individual Variables					
Perception of Promotion	-.300	.166	-.169	-1.803	.074
Initiative for Training	.125	.178	.066	.703	.484
Organizational Variable					
Supervisor Gender	-.059	.155	-.035	-.378	.706

DISCUSSION

The purpose of this study was to determine which variables or combination of variables were predictive of women's objective and subjective career success. Of the variables investigated, education, power, on-the-job training, and ratio of male subordinates were found to be significantly related to one or more career success outcomes (income, span of control, and job satisfaction). Each is discussed separately below.

Education

Across all respondents, education had a strong relationship with income, consistent with previous research studies (Judge et al., 1995; Tharenou et al., 1994). In general, as people gain more knowledge through education, their human capital is enhanced as they have greater intellectual capital to contribute to the organization, increasing their value and thus their income. Educational level is a well-established path to career success as measured by income level for all individuals. This has been well documented by research studies as well as through multiple charts, tables, and news reports that contrast the average income of high school graduates with that of college-degreed individuals. For women, their level of education may be particularly important, as this is a success factor with a high payoff that is within their control. Often, women are not able to influence the conditions and variables which have been positively associated with career success. For example, women's perceived competence may be shaped by stereotypical assumptions about women in positions of authority (Ridgeway, 2001). Typically, high-potential candidates for future advancement gain broad experience through challenging assignments that prepare them for higher level positions, yet women are less likely to be offered these types of assignments (Lyness & Thompson, 1997). As a result, they have less familiarity with making

the types of high-risk business decisions inherent in more complex management roles. Further, a well-entrenched tendency in the process of selecting individuals for promotion is for the hiring manager to minimize potential risk by choosing “similar to me” individuals (Elliot & Smith, 2004) whom they perceive as being better fits for the position (Powell & Butterfield, 1994). As the majority of higher level managers are male, women are frequently at a disadvantage when it comes to perceived readiness for upper-level positions. Since education is one aspect of preparation for a successful career that women can directly influence, its importance in their career success is magnified.

The positive contribution of education to income holds true for women in both supervisory and non-supervisory capacities. Thus, women who do not aspire to management positions can also reap benefits from increased educational attainment. This is an important finding, as it illustrates the importance of education for women in support, administrative, individual contributor, and other non-management roles. It suggests that the intellectual capital a woman brings to the organization is rewarded financially, even if she is not on the management track.

On-the-Job Training

There is also a relationship between the amount of on-the-job training of women in supervisory positions and their span of control within the organization. The more hours that women invest in training, the greater number of people they have reporting to them. This may indicate greater commitment to ongoing skill attainment that is consistent with upward mobility within an organization. As an individual progresses in an organization, the skill set necessary to successfully execute their job duties also expands. Individuals at the executive level, for

example, typically are called upon to demonstrate a broader range of leadership competencies than those in entry-level management positions. On-the-job training is often the means through which existing skill gaps can be filled, and the higher one rises in an organization, the greater the scope of competencies they must master.

Power

For women who are in supervisory positions, their power as measured by their freedom to determine the tasks, pay, and promotions of their subordinates is also highly related to their income. Typically, power increases as an individual moves up in an organization, and higher level employees tend to be compensated accordingly. Women who have actual authority, not just titular authority, increase their chances of career success. These women are not managers “in name only;” rather, they are managers who have been given latitude to make job-related decisions for their subordinates. This adds to their experience with making management-level decisions, which in turn enhances their prospects of further advancement.

Women with less autonomy to make decisions regarding their subordinates are often regarded as having less ability to exert influence, not only downward, but also laterally and upward. The ability to influence others is a key component of leadership success that leads to future advancement, as without influence, individuals are not able to inspire others to follow their direction and gain broad commitment to their initiatives.

Conversely, the more power a woman held over her subordinates, the less likely she was to be satisfied with her job. Thus, while power may equate to higher income and responsibilities (objective measures of success), it does not necessarily translate into subjective success as measured by job satisfaction. This is contradictory to what might be expected, as the logical

presumption would be that more power would equate to more control over key aspects of the job and thus to greater satisfaction with it. This is a surprising finding and one that deserves further investigation into contributing factors that were beyond the scope of this study.

Number of Male Subordinates

The fewer male subordinates a woman supervises, the higher her span of control. This is an unexpected finding that could have implications for women's career success as the proportion of males tends to become greater as hierarchical levels increase within an organization. Thus, women may have the most supervisory power if they a) manage mostly women or b) manage lower-level employees. There are several possibilities that may contribute to this finding.

Women may tend to be employed in organizations that have a disproportionately large female workforce. Alternatively, others may work in functional areas that are predominately female, such as Human Resources. Aside from gender, some organizations may restrict the power that any supervisor holds, limiting the supervisor's influence over a subordinate's pay, promotions, and job tasks. If not through organizational directive, supervisory power may also be compromised by a woman's immediate superior who may prefer that all personnel decisions be pushed upward to higher management levels. Overall, women are typically disadvantaged when their supervisory responsibilities are restricted or their subordinates are primarily female or low-level employees, as these circumstances do not provide them with the diversity of management experiences and opportunities for exposure within the organization, especially to social networks dominated by the most powerful men.

Summary and Implications

Based on the results of all analyses, the strongest path to success for women is through education, which holds the highest likelihood of increasing their income. This is consistent with many previous studies (Gattiker & Larwood, 1988; Hurley & Sonnenfeld, 1998; Judge et al., 1995; Tharenou, 1994; Tharenou & Conroy, 1994) and reinforces the importance of education as a means through which women can enhance their human capital and thus expand their opportunities for success. Given that many factors which affect women's success in organizations are beyond their sphere of control, building a larger reserve of knowledge through education is a key means by which they can positively influence their future.

If individual women are in a position to supervise others, the power they hold to make important decisions about their subordinates also plays a significant role in determining their income. Indirectly, this is likely to be reflective of their hierarchical level and amount of influence in the organization. Women in supervisory roles who have the explicit authority to direct the work of the individuals under their purview are better positioned as important contributors to the organization's output and rewarded commensurately. Further, women who are seen as capable of making decisions regarding their subordinates are likely to be perceived as credible managers who can be trusted to handle complex business issues.

At the same time, increased power holds the potential for decreasing a woman's level of job satisfaction. In a typical supervisory role, as power increases, so does responsibility for the work of others. Yet, often there is no corresponding reduction in one's own duties even as supervisory responsibilities are added, and these responsibilities are likely to become more complex in nature as individuals move up through the management ranks. Thus, the greater the amount of power a woman has, the greater her obligations to her subordinates and the more

burdensome her overall workload becomes. Further, power and hierarchical status often reflect not only the value that the organization places on the individual's contributions, but also the expectations that are set for employees in powerful positions. Consequently, the higher one rises in the organization (and the more power one has), the more one is expected to produce in terms of beneficial outcomes for the company. This can add to an individual's level of stress, which negatively impacts job satisfaction.

Diversity in the management ranks is a concern for many organizations, yet women still frequently struggle to advance into powerful positions. Armed with greater information regarding the factors that contribute to women's career success, organizations can help facilitate their advancement through on-the-job training and opportunities to build their supervisory power. Likewise, women can enhance their potential for career success by taking advantage of opportunities to increase their intellectual capital through education and training.

Limitations

This study relied on an existing database of information, which may not reflect the current attitudes or experiences of contemporary women in the workforce. While the database may have been reflective of the general population when initiated in 1968, it may not be equally as representative of the workforce of today within the specified age range. This study also focused only on women in their 50s, thus presumably in the latter stages of their careers. During these individuals' early years in the workplace, women were less well accepted as managers and professionals, and this may have influenced their career ambitions such that they did not set their sights on top levels of management. A subject pool of younger women or one that includes a mix of ages may yield different results.

Specific inquiries were also constrained by the limitations of the survey questions, which may not accurately reflect the specific attributes and attitudes intended in this study. For example, the job satisfaction measure consisted of only one survey question asking how well the participant liked her job. A more thorough measure would contain a larger number of questions targeted toward specific aspects of the woman's satisfaction with her position and her career in general. Respondents may have also had differing perceptions of span of control. The question was asked in the form of "How many people report to you?" without specifying whether this meant direct reports only or the cumulative sum of direct and indirect reports. The difference between the two can be important, as it is the total number of direct and indirect reports that typically reflects higher status in an organization. Without clarification of this measure, it seems likely that it could have been misinterpreted.

Perception of promotability is another variable that was difficult to precisely measure given the existing survey questions. Survey respondents were asked how likely they were to receive a promotion within the next two years. The respondents' answers to this question may not have been shaped solely by their own sense of their market value, but by organizational circumstances beyond their control. Thus, although they may have felt worthy of advancement, they may have also been realistic about the opportunities for a promotion and answered accordingly.

Given the constraints of the existing database, it was also impossible to determine some potentially relevant variables which could be important. For example, it was impossible to accurately determine variables such as race, extent of experience, or tenure with an organization. Information regarding such variables could have added to the value of the analyses, as work experience is an important human capital variable that has been shown to have a positive

relationship with some career outcome measures (Kirchmeyer, 1998; Maume, 2004; Metz & Tharenou, 2001; Tharenou, Lattimer, & Conroy, 1994).

The database also did not allow for tracking of promotions over time; thus, only promotions reported within the previous two years were used as a criterion variable. The women in this study could have reached a point in their careers where they had plateaued, either by choice in anticipation of retirement or from having already reached the highest point they were capable of or aspired to within the organization. A previous study of women in their early 50s found that only 28% had increased their status level within the organization between the ages of 43 and 52 (Roberts & Friend, 1998). Further, when career momentum was measured using objective criteria, women's careers were found to have plateaued during this time. Thus, recent promotions may not be an indicator of career success for women in this age group.

As organizations flatten, promotions occur less frequently and lateral moves become more commonplace. This study did not differentiate between expectations of promotion and aspirations for promotion, which Harlan (1989) described as related, yet distinct measures of upward movement. Although a woman may desire a promotion, her realistic expectation of it may be low. Therefore, she may be highly motivated to advance to higher levels, yet realistically direct her ambition toward moves that are enriching, but lateral, instead.

The study lacked information about an individual's level in the company, which would have been helpful in the understanding of career success. As a result, organizational hierarchy level was not usable as a criterion variable, which might have been an additional meaningful measure of objective career success. Further, knowing an individual's organizational level could also have helped stratify the subject pool more precisely in lieu of grouping all supervisory individuals together for analysis. Often, there are differences among first-line supervisors, mid-

level managers, and executives, although they all have the commonality of supervisory responsibility in their job descriptions. Thus, it could be reasonable to expect that some variables might be more or less predictive for these different groupings.

Despite the large initial subject pool, some final analyses contained very few cases. As participants were whittled into smaller and smaller subgroups (e.g., non-supervisory women who had recently experienced a promotion) and survey responses were invalid or missing on a number of items, there were not enough participants to satisfy accepted practices for regression equations. Thus, some intended analyses were not feasible to conduct and others were run with a less than desirable number of subjects. With a larger base of participants, more significant results might have been achieved using a broader range of variables.

Future Research

Previous research has not fully addressed the impact or contributions of power in the organization as a contributing factor to women's career success. This study revealed that power can play an important role; consequently, it deserves additional investigation. Power may be an impactful determinant of an individual's status and readiness for advancement, and it would be beneficial if this factor was more extensively explored.

Future research could also more fully explore the differences between women in supervisory positions versus those in support or administrative roles. While education is common to both groups as a significant predictor of success, there may be additional, separate factors not considered in this study that make positive contributions to women's success in non-supervisory roles. Also, additional subjective, non-traditional outcome measures of success could be investigated, as most career research focuses on standard criteria such as income, organizational

level, promotions, or span of control, some of which are not relevant for individuals in non-management roles. Further, among individuals who do supervise others, there are potential differences among management levels that might call for different combinations of predictors for each.

As success is a complex concept, a single outcome measure may not be sufficient to define it. Thus, more precise measures of both objective and subjective career success may need to be developed, perhaps taking into account multiple factors rather than relying on a single criterion. For example, a combination of income, organizational level, and span of control might give a more balanced and accurate picture of an individual's objective career success than any of these criteria in isolation.

The predictors of women's career success may also vary across industries, occupational codes, and demographic factors such as age, race, marital status, or number of children. In addition, attitudes toward work in general, financial status, and extent of non-work responsibilities may play a role in determining whether a woman considers herself to have a successful career. Future research might explore these variables in greater depth.

Research suggests that there are relevant factors beyond the scope of this study that may provide important insight into career success. Social capital factors have been positively related to career success outcomes in previous research (Metz & Tharenou, 2001; Tharenou, 2001), and studies which include power, human capital, and social capital factors would be beneficial. A woman's specific management experiences, relationship with her supervisor, and sponsorship from higher level individuals are also key variables that have previously been shown to contribute to success but were not within the scope of this study. Similarly, interpersonal and political dynamics, organizational culture, networking climate, and quality of mentoring by

powerful others may play a role in determining the extent of a woman's success in an organizational environment.

Most individual and organizational variables proposed to be important in the RQ did not subsequently prove to be significant. In part, equations which included these variables (Perception of Promotion, Initiative for Training, Supervisor Gender, and Male Subordinate Ratio) were constrained by a small subject pool, thus limiting their predictive ability. As these variables have separately been shown to be significantly related to career success in past studies, a study with sufficient numbers to support this combination of variables would be beneficial.

As women continue to make inroads into the higher levels of organizational hierarchy, the question of how they can be best prepared for these roles and optimally equip themselves for success becomes increasingly important. Similarly, with the majority of women becoming part of the workforce at some point in their adult lives, helping them to understand their options and forge a career path that is successful outside of a management role deserves equal attention.

APPENDIX

RELEVANT SURVEY QUESTIONS FROM THE NATIONAL LONGITUDINAL SURVEY

Income

RSP-85Q: What is your best estimate of your usual annual earnings before taxes or other deductions?

Span of Control

RSP-97B: About how many people do you supervise?

Promotion

RSP-101D2: Since Start Date/Date of Last Interview, have you experienced a promotion, demotion, or any other type of position change?

RSP-101D3: Was this a promotion, demotion, or another type of position change?

Job Satisfaction

RSP-153: How do you feel about your job? Do you like it very much (1), like it fairly well (2), dislike it somewhat (3), dislike it very much (4)?

On-the-job training

EAT-18: Since Date of Last Interview, how many weeks have you spent in on-the-job training courses?

EAT-19: How many hours per week did/do you spend in this training?

Education

EAT-5: What is the highest grade of regular school you have completed?

Perception of Promotability

RSP-101D8: Do you believe it is possible for you to get another promotion within the next two years?

Self-Initiated Training

EAT-25: Did you enroll in this training or educational program because your employer required it?

Gender of Supervisor

RSP-99A: Did someone supervise your work?

RSP-99B: Was that person a male or female?

Gender of Subordinates

RSP-97A: Do you supervise the work of other employees?

RSP-97C: How many of these people are male?

Power Score

RSP-98A: How much responsibility do you have for deciding the pay of the people you supervise?

RSP-98A1: How much responsibility do you have for deciding the promotions of the people you supervise?

RSP-98B: How much responsibility do you have for deciding the specific tasks or jobs to be done by the people you supervise?

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