

EXPLORING APPLICANT POOL QUANTITY AND QUALITY: THE EFFECTS OF EARLY  
RECRUITMENT PRACTICE STRATEGIES, CORPORATE ADVERTISING, AND FIRM  
REPUTATION

CHRISTOPHER J. COLLINS  
School of Industrial and Labor Relations  
Cornell University  
387 Ives Hall  
Ithaca, NY 14853-3901  
Tel: (607) 255-8859  
Fax: (607) 255-1836  
[cjc53@cornell.edu](mailto:cjc53@cornell.edu)

JIAN HAN  
Guanghua School of Management  
Peking University  
[jh145@cornell.edu](mailto:jh145@cornell.edu)

We would like to thank Susan Taylor, Anne Tsui, and Xiaoping Chen for their helpful comments on earlier versions of this manuscript. We would also like to thank Ann Marie Ryan and our three anonymous reviewers for their insight and helpful suggestions. Finally, we thank the Center for Advanced Human Resource Studies at Cornell University for financial support for the study.

Running Head: Organizational Recruitment Success

Exploring Applicant Pool Quantity and Quality: The Effects of Early Recruitment Practice  
Strategies, Corporate Advertising, and Firm Reputation

ABSTRACT

Drawing on marketing and recruitment theory, we examined relationships between early recruitment practices, organizational factors, and organization-level recruitment outcomes, predicting that low-involvement recruitment practices, high-involvement recruitment practices, corporate advertising, and firm reputation would positively affect the quantity and quality of organizations' applicant pools. We also predicted that corporate advertising and firm reputation would moderate the effects of the two recruitment strategies. Data for 99 organizations collected from multiple sources provided some evidence that early recruitment practices, corporate advertising, and firm reputation each had direct effects on applicant pool quantity and quality. More importantly, we found that low-involvement recruitment practices were more effective for firms with relatively low levels of corporate advertising and firm reputation, whereas high-involvement recruitment practices were more effective for firms with relatively high levels of advertising and reputation.

Despite a current lag in the economy, the war for talent is expected to continue well into the 21<sup>st</sup> century (Michaels, Handfield-Jones, & Axelrod, 2001). In particular, the combined effects of increased demand and smaller supply will increase the competition among organizations over available qualified labor pools (Dohm, 2000). Given this war for talent, organizations that are able to attract larger pools of quality applicants and be more selective in their hiring decisions will increase the effectiveness of their overall staffing systems (Boudreau & Rynes, 1985; Murphy, 1986) and achieve a huge competitive advantage over their rivals (Woodruffe, 1999; Michaels et al., 2001). Barber (1998) defined the first phase of recruitment as the period when a firm uses an array of different practices to attract individuals to apply to the organization. Further, an organization's success in this early stage of recruitment limits the potential value of the recruitment process as a whole, because the effectiveness of later recruitment stages can only maintain or degrade the size and quality of the initial applicant pool (Carlson, Connerley, & Mecham, 2002).

Thus, to help organizations understand how to gain a competitive advantage, it is critical that researchers identify how different organizational actions affect outcomes during this first phase of recruitment. In particular, research that examines independent and dependent variables at the organization-level of analysis is likely to generate better prescriptive advice (Rynes & Barber, 1990; Taylor & Collins, 2000). Unfortunately, little research has empirically tested the effects of organizational activities on organization-level outcomes during the first phase of recruitment (Turban & Cable, 2003). In this research, we seek to contribute to the recruitment literature by investigating factors during the first phase of recruitment that affect the organization-level recruitment outcomes of applicant pool quantity and quality.

While there is little research at the organizational-level, several studies at the individual-level of analysis have identified organizational actions or factors that are likely to be important during the first phase of recruitment. For example, Collins and Stevens (2002) drew on marketing research to identify four broad types of early recruitment activities that were related to job seeker application intentions and decisions. Recruitment researchers have also argued that organizational factors such as corporate advertising (Cable, Aiman-Smith, Mulvey, & Edwards, 2000; Rynes, 1991) and firm reputation (Belt & Paolillo, 1982; Gatewood, Gowan, & Lautenschlager, 1993) are likely to affect job seekers' perceptions of an organization. These studies suggest that early recruitment practices, corporate advertising, and reputation may all affect recruitment outcomes by affecting job seekers' perceptions and application decisions during the first phase of recruitment. However, recruitment researchers have often failed to simultaneously examine the effects of multiple factors even though organizations tend to take various actions to increase the likelihood of building applicant pools (Rynes, 1991). We also seek to contribute to the recruitment literature by simultaneously examining a broad set of recruitment activities and organizational factors to identify those elements that contribute to organization-level recruitment success.

A related point is that recruitment researchers have tended to ignore companies' implementation of different recruitment strategies and the likelihood that their effectiveness may vary with the organizational context in which they are implemented (Rynes & Barber, 1990; Taylor & Collins, 2000). The literature on marketing suggests that advertising strategies vary on the level of involvement, which refers to the extent of effort the targets of strategies need to exert for the strategies to be effective (MacInnis & Jaworski, 1989). Cable and Turban (2001) argued that recruitment practices appear to represent similar strategies. Further, prior exposure to a

company through other organizational factors (i.e., corporate advertising, firm reputation) may limit or enhance the effectiveness of different recruitment strategies (Rynes, Bretz, & Gerhart, 1991). Thus, we make a third contribution to the recruitment literature by identifying recruitment practices that match two recruitment strategies – low-involvement and high-involvement – and by identifying the organizational conditions under which each type is likely to be most effective.

We have organized this paper as follows: First, we draw on theory and findings from recruitment and marketing to identify two early recruitment strategies and to develop hypotheses regarding how these different strategies may affect organization-level recruitment outcomes. We predict that two low-involvement recruitment practices — general recruitment ads and sponsorship — and two high-involvement recruitment practices — detailed recruitment ads and employee endorsements — will be related to the quantity and quality of an applicant pool. Second, we develop hypotheses regarding the effects of corporate advertising and firm reputation on applicant pool quantity and quality. Finally, we examine the interactions of recruitment practices and organizational factors to understand when the different recruitment strategies are likely to be most effective. We draw on marketing research to develop hypotheses regarding how the level of corporate advertising and firm reputation may moderate the effectiveness of low- and high-involvement recruitment strategies.

We tested our hypotheses with data collected from multiple sources for 99 organizations that recruited college students at a major northeastern university during the fall 2002 semester. Although the economy was lagging at this time and unemployment was relatively high, the competition for talent was still high at this university. Indeed, students at this university were still receiving multiple job offers, and many companies were struggling to fill their interview

schedules. Thus, this sample represents a relatively realistic test of the effectiveness of particular organizational actions and factors for creating competitive advantage in the war for talent.

## Theory and Hypotheses

### *Recruitment Strategies and Organization-Level Recruitment Outcomes*

The goal of early recruitment activities is to attract a large pool of qualified applicants to an organization (Barber, 1998). Indeed, some research at the individual level of analysis suggests that early recruitment practices may affect organization-level recruitment outcomes. For example, Collins and Stevens (2002) found that a variety of early recruitment practices were significantly related to job seeker application intentions and decisions through their effects on perceptions of employer brand image. Specifically, Collins and Stevens found that publicity and sponsorship activities affected job seekers' application decisions mainly through general attitudes toward a company whereas word-of-mouth endorsements and advertising affected job seekers' decisions through both general attitudes and perceived job attributes.

Although variation in recruitment strategies was not a focus in the study by Collins and Stevens (2002), their findings suggested that companies may follow different recruitment strategies to attract applicants. Marketing research has also suggested that companies follow different strategies to advertise products and services to consumers. MacInnis and Jaworski (1989) argued that advertisements and marketing activities range from low-involvement to high-involvement in nature. Further, although both low- and high-involvement practices affect consumer purchase intentions and actions, they do so through different avenues (MacInnis, Moorman, & Jaworski, 1991). Cable and Turban (2001) similarly noted that some recruitment

practices are designed to require few search and processing efforts on the part of job seekers, while others require a greater degree of search and processing.

*Low-involvement recruitment strategy.* Marketing research indicates that low-involvement advertisements influence consumers in a manner that requires little or no search and processing effort from the consumers (MacInnis & Jaworski, 1989). Low-involvement advertisements influence consumers by exposing them to a company in an incidental manner (Shapiro, MacInnis, & Heckler, 1997). In other words, they expose individuals to the company while the individual is carrying out some other activity. Further, low-involvement practices normally contain relatively little information and can be processed either subconsciously or with little effort (Aaker, 1996; Petty & Cacioppo, 1986). For example, drug companies have recently begun to use full-page display ads in newspapers and magazines to create initial awareness of new products. These ads typically contain only general images and company logos and are intended to affect customers by creating awareness of and general positive attitudes toward the company and product (Chandy, Tellis, MacInnis, & Thaivanich, 2001). Thus, even though consumers are not actively searching for information about a company that uses a low-involvement strategy, such a strategy has significant effects on consumer behavior and company sales by communicating positive images that can be processed incidentally or subconsciously (MacInnis & Jaworski, 1989; Chandy et al., 2001).

Similarly, companies may seek to attract job applicants through early recruitment practices that represent a low-involvement strategy. General recruitment ads are one example of companies implementing a low-involvement recruitment strategy. Companies are increasingly looking to affect job seekers through general recruitment ads that create awareness of the organizations as employers and convey positive cues to job seekers through logos, pictures, and

visual images that require little processing effort (Martinez, 2000). Recruiters have turned to display ads in newspapers, recruitment posters, and banner ads on Websites to create initial awareness and attraction (Martinez, 2000). A company may positively affect student job seekers' awareness of itself by placing recruitment posters in hallways in college buildings or by placing general ads in a student newspaper. These types of ads may be particularly effective because they can positively affect job seekers awareness even when the job seekers are not searching for information about companies.

A second example of low-involvement recruitment is the use sponsorship to influence job seekers (Collins & Stevens, 2002). For example, companies sponsor scholarships, donate money for naming rights, and so forth to create awareness and to communicate general, positive signals without requiring active search on the part of job seekers (Poe, 2000). Marketing researchers have found that sponsorship is effective because consumers develop positive, general feelings towards the sponsoring company based on their experiences during the sponsored event or activity (Johar & Pham, 1999). Similarly, Collins and Stevens (2002) found that recruitment sponsorship activities positively affected application decisions by increasing student job seekers' general attitudes toward an organization.

Marketing research suggests that "mere exposure" to a company can increase consumers' attraction to it (Mitchell & Olson, 1981). Further, Aaker (1996) argued that the awareness created through advertising serves as a "signal" of a brand and leads individuals to ascribe positive characteristics to brands to which they have had greater exposure. Similarly, research on recruitment suggests that job seekers are more attracted to familiar than to unfamiliar companies (Gatewood et al, 1993; Turban, 2001). Because general recruitment ads and sponsorship activities are designed to increase awareness and create general, positive perceptions

of an organization, we predict that low-involvement practices will significantly increase applicant pool quantity.

Although the link is less clear, we also expect that low-involvement practices will affect the quality of an applicant pool. Previous recruitment research has shown that high-quality student job seekers are more selective in their job choices (Cable & Judge, 1994). Because low-involvement recruitment practices create awareness and may signal the quality of jobs, we expect that higher quality students will be more likely to apply to companies that have used low-involvement practices and will ignore those companies that have not. In contrast, to increase their likelihood of finding a job, lower-quality applicants will likely apply to every company that has posted an interview schedule. Thus, we tentatively predict that low-involvement recruitment practices will increase applicant pool quantity by attracting more high-quality applicants.

Hypothesis 1a: Low-involvement recruitment practices (i.e., general recruitment ads and sponsorship) will be positively related to applicant pool quantity and quality.

*High-involvement recruitment strategy.* Companies can also choose to follow a high-involvement marketing strategy in which they primarily attempt to influence consumers by providing arguments and information about company or product attributes (Aaker, 1996; MacInnis & Jaworski, 1989). High-involvement practices require greater cognitive effort to process than do low-involvement practices because they contain more detailed information or arguments about the attributes of a product (Petty & Cacioppo, 1986). Because of the nature of the information that they convey, high-involvement ads cannot be processed subconsciously or peripherally, as can low-involvement marketing materials (MacInnis & Jaworski, 1989). Therefore, individuals must be motivated to seek out the sources that are useful for conveying

greater amounts of information (Petty & Cacioppo, 1986). For example, drug companies seek to positively influence consumers by providing details about the health benefits and other product information through brochures and websites. However, these forms of influence require a high degree of effort, because consumers must actively seek out and process the information contained in these sources (Chandy et al., 2001). When individuals are motivated to seek and process these arguments and information, high-involvement advertisements positively affect consumer purchasing behavior by creating positive beliefs about company and product attributes (Chandy et al., 2001).

To attract applicants, companies may similarly use early recruitment practices that represent a high-involvement strategy. First, a company can influence student job seekers through detailed recruitment ads that convey positive information about job openings and the company as a whole (Barber, 1998). For example, Rynes and Boudreau (1986) found that companies look to attract applicants through job postings and company brochures that provide detailed information and arguments about company attributes. These recruitment tools cannot affect passive job seekers, but only individuals who actively look for these materials and process the information that they contain. Recruitment research suggests that these detailed recruitment ads have significant, positive effects on application intentions by creating positive beliefs about job attributes and positive attitudes toward a recruiting company (Barber & Roehling, 1993; Gatewood et al., 1993).

A second example of a high-involvement strategy is the use of employee endorsements that provide details about a company, its jobs, and so forth (Collins & Stevens, 2002). One way in which companies air endorsements is to hold events on college campuses at which alumni and interns are encouraged to share their experiences with student job seekers (Poe, 2000).

Companies have turned to this form of recruitment as an interactive way of providing college student job seekers with positive details about their jobs and company characteristics (Poe, 2000). Even though job seekers must be motivated to attend such events and process the volume of information and arguments that are presented, recruitment research suggests that employee endorsements can have powerful effects on application decisions by affecting job seekers' general attitudes and beliefs about job attributes (Collins & Stevens, 2002).

As noted above, both detailed recruitment ads and employee endorsements are likely to affect recruitment outcomes by positively affecting job seekers' beliefs about job and company attributes. Further, after reading positive, detailed information on some job and company characteristics, job seekers may also be more likely to develop positive beliefs regarding other missing dimensions on which they make decisions (Aaker, 1996). Because job seekers are more attracted to jobs that have more positive attributes (Barber, 1998; Rynes, 1991), high-involvement recruitment practices will increase the quantity of the applicant pool.

Because high-involvement practices are likely to communicate detailed information about both the rewards and requirements of a job, these practices should also affect applicant pool quality. Drawing on expectancy theory, Rynes (1991) argued that job seekers will be more likely to apply for a job opening perceived as having high valence (i.e., many positive attributes) and high expectancy (i.e., high obtainability). While high-involvement practices may increase attraction, the detailed information they convey is likely to decrease the expectancy for less-qualified applicants. For example, Mason and Belt (1986) provided evidence that unqualified applicants were less likely to apply when firms provided detailed job specifications. In contrast, job seekers with greater qualifications are likely to have high expectancies and should, therefore, be more likely to apply to firms that have used high-involvement recruitment practices.

Hypothesis 1b: High-involvement recruitment practices (i.e., detailed recruitment ads and employee endorsements) will be positively related to applicant pool quantity and quality.

*Corporate Advertising, Firm Reputation, and Organizational-Level Recruitment Outcomes*

Recruitment researchers have recently begun to explore how organizational factors other than recruitment practices can affect recruitment outcomes during the first phase of recruitment. For example, Cable and Turban (2001) looked to theory and research on marketing brand equity to develop a broad model of how firms influence the decision making of job seekers. In particular, they noted that corporate advertising and firm reputation are likely to affect job seekers by affecting their awareness and perceptions of a company. Below, we look to research from recruitment and marketing to develop hypotheses regarding the effects of these two organizational factors on applicant pool quantity and quality.

*Corporate advertising.* Corporate advertising has been defined as paid messages communicated through different media outlets designed to influence consumers' perceptions of a company and its products and their intentions to purchase the products (Aaker, 1996). Organizations spend a great deal of money on advertising to build strong, favorable images in the minds of consumers (Aaker, 1996), and research has shown that these investments are significantly and positively related both to perceptions of companies and their products (Cobb-Walgren, Ruble, & Donthu, 1995) and to their sales and market shares (Sethuraman & Tellis, 1991). These marketing efforts may also have spillover effects on constituents besides consumers, such as investors (Aaker, 1996), current employees (Aaker, 1996), and job seekers (Cable, et al., 2000; Cable & Turban, 2001).

Research on marketing brand equity suggests that mere exposure to a company through advertising increases consumer attraction (Mitchell & Olson, 1981). Exposure to a company through advertising increases consumers' attraction and willingness to purchase because people like the familiar and do not trust the quality of the unfamiliar. Awareness that is created through advertising signals the quality of a brand and individuals tend to ascribe positive characteristics to brands to which they have had greater exposure (Aaker, 1996). Cable and Turban (2001) argued that these mechanisms, exposure and signaling, carry over to job seekers. Firms can attract applicants by creating greater awareness through corporate advertising, because job seekers are likely to believe that these companies have positive attributes and are attractive as employers. Indeed, there is evidence that job seekers have more positive perceptions of and are more attracted to familiar rather than unfamiliar firms (Gatewood et al., 1993; Turban, 2001).

Although the relationship is less clear than with quantity, we anticipate that corporate advertising may also affect the quality of an applicant pool. As noted above, higher-quality student job seekers are more selective about job opportunities (Cable & Judge, 1994), and they are less likely to waste their time and resources pursuing jobs that are unlikely to provide rewards and opportunities that match their abilities (Rynes, 1991). Further, corporate advertising may affect job seekers by signaling the quality of the employment opportunities, particularly during the first phase of recruitment, when job seekers are likely to have little knowledge of a company as an employer (Cable & Turban, 2001). Thus, higher-quality applicants may be more likely to apply to companies that engage in a high level of corporate advertising because they perceive these companies as likely to have an equally high level of quality job opportunities. In contrast, less-qualified job seekers may be equally likely to apply to companies with high and low use of corporate advertising because these job seekers are trying to increase their chances of

securing jobs. Thus, we tentatively predict that corporate advertising will increase applicant pool quality by attracting more high-quality applicants to apply.

Hypothesis 2: Corporate advertising will be positively related to applicant pool quantity and quality.

*Firm reputation.* As noted above, Cable and Turban (2001) also argued that firm reputation, defined as the public evaluation of overall company appeal as compared to rival companies' appeal, should affect a company's ability to attract applicants. There is mounting evidence that organizational reputation can positively affect recruitment outcomes. Recruitment studies conducted at the individual level of analysis have shown positive and significant relationships between corporate reputation and job seekers' intentions to pursue an organization (e.g., Belt & Paolillo, 1982; Gatewood et al., 1993). More importantly, Turban and Cable (2003) found positive links between firm reputation and organization-level recruitment outcomes.

Drawing on social identity theory, Turban and Cable (2003) argued that firm reputation should have a positive effect on applicant pool quantity. Social identity theory suggests that an individual's self-concept is based partly on membership in social groups (Tajfel, 1982). The social status and attributes associated with a group reflect on and convey information about the group's members (Ashforth & Mael, 1989; Tajfel, 1982). Because individuals can enhance their self-concepts by associating themselves with companies with positive reputations, Turban and Cable (2003) argued that positive organizational reputation will increase the attractiveness of the companies resulting in larger applicant pools. Indeed, they found that firm reputation was significantly related to applicant pool quantity in two separate samples of student job seekers.

Turban and Cable's (2003) findings also support their argument that firm reputation should affect applicant pool quality through its effect on job seeker expectancies. As noted above, following expectancy theory, Rynes (1991) argued that individuals should be more attracted to job openings for which they hold high valence and high expectancies. A good reputation signals the presence of positive attributes and makes a company more attractive, increasing the valence of its job openings for job seekers (Turban & Cable, 2003). In view of their expectancies of receiving job offers, less-qualified job seekers are more likely to apply to companies with fewer positive attributes and less likely to apply to firms with more positive attributes (Rynes, 1991). In contrast, highly qualified applicants are likely to apply for jobs in companies with more positive attributes because they will have high expectancies of receiving an offers (Rynes & Lawler, 1983). Thus, by acting as a signal of job and company attributes, firm reputation should positively affect applicant pool quality.

Hypothesis 3: Organizational reputation will be positively related to applicant pool quantity and quality.

#### *Corporate Advertising and Firm Reputation as Moderators of Recruitment Strategies*

To better understand when recruitment strategies are likely to be most effective, Rynes and Barber (1990) argued it is critical to identify contingency variables. As we argued above, organizational advertising and firm reputation are likely to affect organizational recruitment outcomes by positively affecting job seekers' awareness and signaling the presence of positive attributes. Perhaps more importantly, however, corporate advertising and firm reputation may influence the effectiveness of early recruitment practices. Rynes, Bretz, and Gerhart (1991) found that prior knowledge of a company moderated the effectiveness of recruitment practices.

Similarly, Cable and Turban (2001) argued that prior exposure to a company through corporate advertising or firm reputation might enhance or limit the effectiveness of recruitment practices.

On the basis of associative memory research, Keller (1993) argued that brand awareness is the critical first step in influencing consumer decisions. Awareness creates the first piece of knowledge in the minds of individuals on which other components of brand knowledge (i.e., beliefs about product attributes) can be based (Aaker, 1996; Keller, 1993). Awareness is necessary before other beliefs or perceptions can be formulated. Because individuals have low motivation to seek out information on unfamiliar firms, only low-involvement practices are likely to be successful in developing initial awareness of an organization (MacInnis & Jaworski, 1989; Petty & Cacioppo, 1986). As noted above, low-involvement practices are particularly useful for developing initial awareness because they expose individual consumers or job seekers to a company and create initial awareness and general positive beliefs without requiring active search or processing effort.

Cable and Turban (2001) noted that corporate advertising and firm reputation are effective ways to create initial awareness of a company as an employer. However, in the absence of these organizational factors, firms must use other low-involvement practices to create initial awareness. Therefore, because they create initial awareness and positive, general beliefs about the company, low-involvement recruitment practices are likely to positively affect recruitment outcomes for companies that have created little previous awareness through corporate advertising or firm reputation.

However, once awareness has been achieved, low-involvement practices are unlikely to have significant effects on individuals (Chandy et al., 2001; Petty & Cacioppo, 1986). Similarly,

Cable and Turban (2001) argued that job seekers will ignore low-involvement practices once they have awareness and general, positive perceptions of a company. Specifically, job seekers with existing awareness and beliefs about a brand won't be influenced by low-involvement practices because these practices offer no additional information over what the job seekers already have stored in memory. Therefore, low-involvement recruitment practices will have limited effects for those firms that have already created greater awareness and general, positive beliefs through corporate advertising and firm reputation.

Hypothesis 4a: Corporate advertising and firm reputation will moderate the effects of low-involvement practices in such a way that greater use of these practices will have greater effects on applicant pool quantity and quality when corporate advertising and firm reputation are low rather than high.

As noted above, brand equity researchers have argued that prior awareness is required before individuals can process and store detailed information and beliefs regarding an employer (Aaker, 1996; Keller, 1993). Further, individuals must be motivated to exert the effort required to seek out and process the information contained in high-involvement practices (Petty & Cacioppo, 1986). In view of this research, Cable and Turban (2001) argued that job seekers are unlikely to exert the effort to seek and process the detailed information included in high-involvement recruitment practices unless they already have some awareness of a company. Thus, we expect that high-involvement recruitment practices will have little effect on organizational recruitment outcomes for those companies that have not created initial awareness through corporate advertising and firm reputation.

In contrast, once individuals have initial awareness, then they can begin to develop more complex beliefs and associations (Keller, 1993). Further, when individuals have both awareness and general positive beliefs about a company, they are likely to be motivated to seek out additional detailed information (MacInnis & Jaworski, 1989). Similarly, job seekers will have a greater motivation to seek out high-involvement recruitment practices that provide more information on which they can build more complex understandings of what a company has to offer (Cable & Turban, 2001). Further, based on information processing theory, Vandenberg and Seo (1993) suggested that prior exposure to a company will increase job seekers' abilities to understand and integrate detailed recruitment information. As we argued above, corporate advertising and firm reputation create awareness and general, positive beliefs in the minds of job seekers. Thus, we expect that high-involvement recruitment practices will have their most positive effect on organization-level recruitment outcomes when companies have created initial awareness through corporate advertising and firm reputation.

Hypothesis 4b: Organizational advertising and firm reputation will moderate the effects of high-involvement recruitment practices in such a way that a greater use of these practices will have greater effects on applicant pool quantity and quality when corporate advertising and firm reputation are high rather than low.

### Methods

We carried out this study at a large northeastern university, and we collected data from several sources at different points in time. First, we collected data regarding organizational recruitment practices from staffing managers of firms scheduled to recruit on campus during the fall semester. This survey was completed at the start of that semester after firms had committed

to on-campus recruiting schedules. Second, we collected measures of corporate advertising and organizational reputation through secondary data sources. Third, we collected data on number of applicants, number of interviews, and applicant demographics, including grade point average (GPA) and work experience, through a database provided by the university career services office. Finally, we collected measures of the perceived quality and the percentage of positions filled through a follow-up survey collected six months after the first survey.

### *Sample*

The university career services office provided us with a list of contacts for the 232 companies that had registered to recruit on campus during the 2002/2003 academic year. About one week prior to the start of the fall 2002 semester, we sent a cover letter and survey about the recruitment practices used at this university to the college recruiting or staffing manager at each company. We provided self-addressed business reply envelopes so that the surveys could be returned directly to us, thereby ensuring confidentiality. The final sample of 99 companies represented a response rate of 43 percent. The firms that participated were diverse in size and industry. Data collected through publicly available business databases showed that participating firms did not differ from nonparticipating firms in number of employees ( $t_{232} = 1.619$ , n.s.), annual sales ( $t_{232} = 1.109$ , n.s.), or industry ( $\chi^2 = 1.16$ , n.s.). This evidence suggests that the company sample that we used was representative of the population from which it was drawn.

### *Measures*

*Early recruitment practices.* We followed several steps to identify appropriate measures of early recruitment practices. First, we examined the practitioner literature on early recruitment practices to identify examples of early recruitment practice strategies that matched those in our hypotheses. In addition, we interviewed student job seekers to determine which early

recruitment practices they had been exposed to during their job searches. From these efforts, we identified two low-involvement recruitment practices (general recruitment ads and sponsorships) and two high-involvement recruitment practices (detailed recruitment ads and employee endorsements). Next, we examined the academic literature to identify possible measures of these early recruitment practices. A number of items (e.g., items assessing use of sponsorships) were adapted from Collins and Stevens (2002); however, we had to generate items for those practices not identified in previous studies (e.g., general advertising). We identified a total of 16 items to measure early recruitment practices, and company respondents were asked to rate each item on a scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Because we created a number of new items to measure organizational recruitment practices, we used exploratory factor analysis to provide some initial evidence of validity for our measures. An initial principal components analysis indicated that three of the items did not clearly load on a single component, and these were dropped from further consideration. A second principal components analysis with varimax rotation on the remaining 13 items yielded four components with eigenvalues greater than 1.0 (65.1% of variance explained). All items loaded on components consistent with our a priori expectations (see Table 1 for specific items). Reliability analyses indicated reasonable item convergence: general recruitment ads, three items,  $\alpha = .75$ ; sponsorship, three items,  $\alpha = .75$ ; detailed recruitment ads, four items,  $\alpha = .74$ , and employee endorsements, three items,  $\alpha = .73$ . We formed composites by averaging the ratings for the items associated with each practice.

*Corporate advertising.* Organizations are not required to report their advertising costs as a separate item in their fiscal reporting; therefore, we collected a measure of selling, general, and administrative costs (SG&A) from COMPUSTAT as a proxy for organizational advertising. The

SG&A measure includes advertising costs and is one of the best widely available measure of advertising investment. This data was collected for the fiscal year prior to the start of the fall 2002 semester. Because SG&A is a proxy for marketing and advertising expenditures, we conducted several analyses to provide some evidence of validity.

First, we were able to collect secondary source data on actual advertising expenditures for some of the companies in our sample from a multi-media service database previously used by marketing researchers (e.g., Kamber, 2002) that contains data on advertising expenditures for selected companies. The data summarizes expenditures on ten major types of advertising: consumer magazines, Sunday magazines, newspapers, outdoor, network television, spot television, syndicated television, cable television, network radio and national spot radio. This database is especially relevant because it assesses the amount of spending for advertising likely to be viewed by end consumers and job seekers. We found a significant correlation between SG&A and actual advertising expenditures ( $r = .83$ ,  $n = 45$ ), which suggests that the SG&A measure accurately represented corporate advertising investment.

Second, we argued above that greater investment in corporate advertising should increase student awareness of a company. As part of an extra-credit exercise in a large undergraduate lecture course, students were asked to assess their awareness of companies' products or services. For each company in our sample, 142 respondents responded to a single item, "To what extent are you familiar with the products or services of this company?", using a scale of 1 (strongly disagree) to 5 (strongly agree). We randomized the order of the companies to reduce the chance of bias due to position on the list. We averaged responses across students to create a single awareness measure for each firm and found a significant correlation between awareness and

SG&A ( $r = .72$ ,  $n = 99$ ). Thus, we had evidence that SG&A was significantly related to student awareness of the companies in our sample.

*Firm reputation.* Following Turban and Cable (2003), we used published reputation lists to develop an objective measure of firm reputation. More specifically, we measured firm reputation on the basis of a company's presence on best employer lists from *BusinessWeek* (the "BusinessWeek 50"), *Fortune* ("The 100 Best Companies to Work For"), and *Working Mother* ("100 Best Companies for Working Mothers") for the two years prior to our survey administration. For each publication and year, companies were coded 1 if they were on the list and 0 if they were not. We created a final firm reputation score by adding the scores across publications and years. The possible total score was 6: actual firm reputation scores ranged from 0 to 4, with a mean of 0.59 and standard deviation of 1.15.

*Applicant pool quantity.* We had three measures of applicant pool quantity. Our first measure was the number of applicants, defined as the total number of individuals that applied to a company (Rynes & Barber, 1990). We collected our measure of number of applicants from the career services database that reported the total number of students that submitted resumes to be considered for on-campus interview schedules. The statistics in the career services database were summaries for the fall semester for all of the companies that recruited on campus.

While the overall number of applicants is one indicator of the quantity of an applicant pool, quantity is relative. In particular, the number of applicants is important relative to the number of interviews or positions that the company wants to fill (Rynes & Barber, 1990). To increase the overall utility of their selection systems, firms must increase the number of applicants relative to the number of open positions they need to fill (Boudreau & Rynes, 1985). Therefore, we also measured applicant pool quantity as interview selection ratio, defined as

number of applicants divided by number of interviews a company conducted (Turban and Cable, 2003), using data from the career services database.

Our final measure of quantity was the percentage of positions filled, defined as the number of positions filled relative to the number of positions that were originally open (Rynes & Boudreau, 1986). Rynes and Barber (1990) noted that percentage of positions filled is a common measure of applicant pool quantity. Further, percentage of positions filled is an important measure of quantity, because recruiters are ultimately responsible for filling jobs in an organization (Rynes & Boudreau, 1986). On the second company survey, administered six months after the first survey, participants were asked to divide the number of openings that they had filled in the semester by the number of positions that they had sought to fill then. Note that this measure tapped all the college graduates a company had hired and was not specific to the university described above.

*Applicant pool quality.* We also had three measures of applicant pool quality. A number of applicant characteristics are accepted signals of applicant pool quality (Rynes & Barber, 1990). The average GPA and years of work experience of an applicant pool are two measures that are particularly relevant for measuring recruitment success in a college setting (Turban & Cable, 2003). Through the career services database, we were able to obtain these averages for the students who applied for interviews for 65 of the 99 companies. The measure of GPA was based on a 4.00 scale, and applicant work experience was years of full-time work experience.

While applicant characteristics are useful proxies, they may misrepresent actual applicant pool quality. In fact, applicant pool quality is difficult to measure directly (Rynes & Barber, 1990), and quality standards may vary across companies and positions (Boudreau & Rynes,

1985). Therefore, we also measured quality on the basis of perceptions of the recruitment managers of each company. We defined quality as the managers' beliefs about the ability of the applicant pool to fulfill the needs of their companies. Perceived applicant pool quality was measured with a three-item scale that showed good reliability ( $\alpha = .87$ ): "Overall, the skills of the applicants met our needs," "The candidates who applied for jobs had a level of skills and abilities that met the requirements of the position." and "I think that the applicant pool was high in quality."

### *Control Variables*

To account for other organizational factors that could affect recruitment outcomes, we controlled for company industry and size. Using global SIC codes, we coded companies into five broad categories of firms: consumer products and retail, computers and electronics, financial and investing, consulting, and industrial manufacturing. We controlled for industry differences with effects coding in the regression analyses (industrial manufacturing was the omitted industry). We also controlled for company size by including total company sales and total number of company employees in the first step of all regression analyses.

## Results

Means, standard deviations, and correlations among the variables of interest are presented in Table 2. Several of the bivariate correlations are of particular interest. First, we found a relatively high correlation ( $r = .50$ ) between corporate advertising and firm reputation. Importantly, as noted in the discussion section, this high correlation raised issues of multicollinearity when we simultaneously tested the effects of these variables. Second, the correlations between the two low-involvement and the two high-involvement practices were low

and nonsignificant (correlations ranged from  $-.05$  to  $.17$ ), whereas the correlation between general recruitment ads and sponsorships ( $r = .35, p < .01$ ) and between detailed recruitment ads and employee endorsements ( $r = .54, p < .01$ ) were larger and significant. These correlations suggest that firms are more likely to simultaneously follow either several low-involvement or several high-involvement practices simultaneously than they are to follow a combination of low- and high-involvement practices.

We tested all hypotheses using hierarchical regression analyses in which the control variables (total sales, number of employees, and industry) were always included in step 1. We tested for the direct effects of recruitment and organizational factors in step 2 of the regression equations. Finally, we tested the moderation hypotheses by adding the interaction terms to the regression equations. Because of the high correlation between corporate advertising and firm reputation, we conducted separate analyses to test examine the interactions between recruitment practices and corporate advertising and those between recruitment practices and firm reputation.

In Hypotheses 1–3, we predicted that low-involvement recruitment practices (general recruitment ads and sponsorship), high-involvement recruitment practices (detailed recruitment ads and employee endorsements), corporate advertising, and firm reputation would each significantly affect organization-level recruitment outcomes. As shown in the second set of regression equations for each of the dependent variables, the combined direct effects of these predictors explained a significant amount of variance above that explained by the effects of the control variables for each of the six outcome measures (number of applicants,  $\Delta R^2 = .22, p < .01$ ; interview selection ratio,  $\Delta R^2 = .16, p < .01$ ; percentage of positions filled,  $\Delta R^2 = .14, p < .01$ ; perceived quality,  $\Delta R^2 = .21, p < .01$ ; applicant GPA,  $\Delta R^2 = .20, p < .01$ ; applicant experience,

$\Delta R^2 = .23, p < .01$ ). In addition, we found a number of significant direct relationships between the predictors and the outcome variables.

Overall, we found five significant direct relationships between low-involvement recruitment practices and organizational recruitment outcomes. Specifically, the significant relationships were between general recruitment ads and number of applicants ( $\beta = .25, p < .05$ ), perceived quality ( $\beta = .19, p < .05$ ), and applicant work experience ( $\beta = .28, p < .05$ ); and, we found that sponsorship activities were significantly related to interview selection ratio ( $\beta = .28, p < .01$ ) and applicant GPA ( $\beta = .27, p < .05$ ). Further, we found five significant relationships between high-involvement recruitment practices and organizational recruitment outcomes. We found significant relationships between detailed recruitment ads and both perceived quality ( $\beta = .25, p < .05$ ) and applicant experience ( $\beta = .27, p < .05$ ). In addition, we found that employee endorsements was significantly related to number of applicants ( $\beta = .23, p < .05$ ), percentage of positions filled ( $\beta = .19, p < .05$ ), and applicant GPA ( $\beta = .29, p < .05$ ). Thus, we found mixed support for Hypotheses 1a and 1b: both low-involvement and high-involvement recruitment practices were directly related to multiple measures of applicant pool quantity and quality, but not in a consistent pattern.

We found that corporate advertising was significantly related to two measures of applicant pool quantity (number of applicants,  $\beta = .23, p < .05$ ; percentage of positions filled,  $\beta = .22, p < .05$ ) and all three measures of applicant pool quality (perceived quality,  $\beta = .27, p < .05$ ; applicant GPA,  $\beta = .24, p < .05$ ; applicant experience,  $\beta = .29, p < .05$ ). In contrast, we found that firm reputation was only significantly related to one measure of quantity (number of applicants,  $\beta = .19, p < .05$ ) and one measure of quality (perceived quality,  $\beta = .19, p < .05$ ). Thus, we found strong support for Hypothesis 2 but only weak support for Hypothesis 3: it

appears that there is a strong relationship between corporate advertising and recruitment outcomes, but an unclear relationship between firm reputation and recruitment outcomes.

In Hypothesis 4a, we predicted that low-involvement recruitment practices would have a greater effect on recruitment success when used by firms that were unlikely to have strong presence in the minds of job seekers (that is, the company had low scores on corporate advertising or firm reputation). The change in  $R^2$  was significant for each of the regression steps containing interactions with corporate advertising and for each of the regression steps containing interactions with firm reputation. Further, we found that the interaction of general recruitment ads and corporate advertising was significantly related to three measures of quantity (number of applicants,  $\beta = -.19, p < .05$ ; interview selection ratio,  $\beta = -.26, p < .05$ ; percentage of positions filled,  $\beta = -.21, p < .05$ ) and two measures of quality (applicant GPA,  $\beta = -.25, p < .05$ ; applicant work experience,  $\beta = -.23, p < .05$ ). The interaction of general recruitment ads and firm reputation was also significantly related to two measures of applicant pool quantity (number of applicants,  $\beta = -.20, p < .05$ ; interview selection ratio,  $\beta = -.23, p < .05$ ) and to two measures of quality (perceived quality,  $\beta = -.22, p < .05$ ; applicant GPA,  $\beta = -.29, p < .05$ ).

We found that the interaction of sponsorship activities and corporate advertising was significantly related to all three measures of applicant pool quantity (number of applicants,  $\beta = -.28, p < .05$ ; interview selection ratio,  $\beta = -.27, p < .05$ ; percentage of positions filled,  $\beta = -.24, p < .05$ ) and to one measure of quality (perceived quality,  $\beta = -.26, p < .05$ ). The interaction of sponsorship activities and firm reputation was also significantly related to two measures of quantity (number of applicants,  $\beta = -.22, p < .05$ ; percentage of positions filled,  $\beta = -.31, p < .05$ ) and to two measures of quality (perceived quality,  $\beta = -.20, p < .05$ ; applicant experience,  $\beta = -.23, p < .05$ ). In addition, graphs of the significant interactions (see Figure 1 for an example)

suggested that greater use of low-involvement recruitment practices resulted in better recruitment performance only for companies that were low on advertising investments or firm reputation. Thus, we found strong support for Hypothesis 4a: it appears that the use of low-involvement practices results in higher applicant pool quantity and quality only for those companies that have not already established awareness of themselves through either corporate advertising or firm reputation.

In Hypothesis 4b, we predicted that high-involvement recruitment practices would have greater effects on recruitment outcomes when used by companies job seekers are likely to be very aware of (that is, the companies have high scores on corporate advertising or firm reputation). As noted above, the change in  $R^2$  significant for each regression step that included interaction terms. Further, we found that the interaction between detailed recruitment ads and corporate advertising was significantly related to one measure of quantity (number of applicants,  $\beta = .34, p < .01$ ) and to three measures of quality (perceived quality,  $\beta = .30, p < .05$ ; applicant GPA,  $\beta = .24, p < .05$ ; applicant work experience,  $\beta = .29, p < .05$ ). The interaction between detailed recruitment ads and firm reputation was significantly related to two measures of applicant pool quantity (interview selection ratio,  $\beta = .31, p < .05$ ; percentage of positions filled,  $\beta = .23, p < .05$ ) and all three measures of quality (perceived quality,  $\beta = .25, p < .05$ ; applicant GPA,  $\beta = .23, p < .05$ ; applicant experience,  $\beta = .28, p < .05$ ).

We also found that the interaction of employee endorsements and corporate advertising was significantly related to all three measures of quantity (number of applicants,  $\beta = .29, p < .05$ ; interview ratio,  $\beta = .28, p < .05$ ; percentage of positions filled,  $\beta = .25, p < .05$ ) and all three measures of quality (perceived quality,  $\beta = .22, p < .05$ ; applicant GPA,  $\beta = .33, p < .05$ ; applicant experience,  $\beta = .34, p < .05$ ). We found the same pattern of relationships to hold for

the interaction of employee endorsements and firm reputation (number of applicants,  $\beta = .32, p < .05$ ; interview ratio,  $\beta = .21, p < .05$ ; percentage of positions filled,  $\beta = .24, p < .05$ ; perceived quality,  $\beta = .26, p < .05$ ; applicant GPA,  $\beta = .33, p < .05$ ; applicant experience,  $\beta = .30, p < .05$ ). Graphs of the significant interactions also show that the high use of high-involvement practices led to greater levels of recruitment success when firms spent more on advertising or scored higher on firm reputation (see Figure 2 for an example). Thus, we found strong support for Hypothesis 4b: high-involvement recruitment leads to higher applicant pool quantity and quality only when a company has already established awareness of itself through corporate advertising or firm reputation.

## Discussion

In this study, we set out to better understand how firms can systematically affect organization-level outcomes during the first phase of recruitment. First, we identified two early recruitment strategies that firms may use to attract job seekers: the use of low-involvement recruitment practices and the use of high-involvement recruitment practices. Second, we turned to theory and research from the literatures on recruitment and marketing to develop hypotheses regarding how low-involvement recruitment practices, high-involvement recruitment practices, corporate advertising, and firm reputation would affect applicant pool quantity and quality. Finally, drawing on marketing theory, we developed hypotheses regarding how corporate advertising and firm reputation moderate the relative effectiveness of low- and high-involvement recruitment practices.

Overall, our results supported the notion that multiple organizational practices and factors have direct effects on organization-level recruitment outcomes. We found evidence that, of these

practices and factors, corporate advertising may have the most powerful direct effects on applicant pool quality and quantity. Corporate advertising was the only predictor that had consistently significant direct effects across our measures of quantity and quality. As theories regarding mere exposure and person-organization fit suggest, it is likely that corporate advertising affects organizational recruitment outcomes by increasing job seekers' awareness of an organization as an employer and by creating positive beliefs about the company. Thus, firms that invest in corporate advertising may not only attract more consumers but may also gain a competitive advantage in the war for talent. Because of the importance of this factor, future research should examine the effects of corporate advertising in more detail. For example, researchers should examine if particular corporate advertising media or messages have greater effects than others.

While we found that firm reputation had direct effects on two recruitment outcomes, we were surprised that reputation was not significantly related to more outcome measures. These null findings are particularly interesting given that Turban and Cable (2003) found that a similar measure of reputation was significantly related to a wide range of measures of applicant pool quantity and quality. We found a high correlation between firm reputation and corporate advertising ( $r = .50$ ) and significant correlations between firm reputation and three of the four recruitment practices; therefore, multicollinearity may explain the null findings for firm reputation. In particular, corporate advertising may be a more powerful predictor of organizational recruitment outcomes than is firm reputation. Thus, our findings support Rynes (1991) who argued that failure to assess the effects of multiple practices simultaneously may lead to the overestimation of the effect size of a single practice or organizational factor. Thus, future recruitment research should include careful simultaneous examination of the effects of multiple

actions in an attempt to understand the true effects of any one recruitment practice or organizational factor.

As with firm reputation, we found significant relationships between each of the four recruitment practices and at least one measure of applicant pool quantity and quality. Thus, our study does provide some evidence that both low-involvement and high-involvement recruitment practices have direct effects on organization-level recruitment outcomes. However, it is important to note that only 10 of the 24 possible relationships were significant and that the patterns of these findings were not consistent. As we discuss below, the relationships between the two recruitment practice strategies and organization-level recruitment outcomes form a complex story: not all practices are equally effective for all types of organizations.

On the basis of mere exposure, we argued that low-involvement recruitment practices affect applicant pool quantity and quality by creating initial awareness and signaling the presence of quality job opportunities. Drawing on marketing brand equity and information processing theories, we also argued that low-involvement practices are likely to have low effects for firms that have already created awareness and positive general attitudes in the minds of job seekers. Our results showed that low-involvement practices lead to greater applicant pool quantity and quality in firms that had low, rather than high, scores on corporate advertising and firm reputation. Thus, low-involvement practices can be an effective substitute for the organizational factors that are also likely to create initial awareness and positive attitudes. However, low-involvement practices do not appear to have additive value above the effects of these organizational factors: they do not affect applicant pool quantity or quality when firms already have high ratings on corporate advertising or firm reputation.

On the basis of information processing and expectancy theories, we argued that high-involvement recruitment practices would affect recruitment outcomes by providing job seekers with detailed information about the company and its jobs. Information processing theory also suggests that prior awareness and interest are necessary if individuals are to be motivated to seek and process the information offered by high-involvement practices. As noted above, our findings support our prediction that high-involvement recruitment practices would be most effective for companies that had already established awareness and general, positive beliefs through corporate advertising and firm reputation. In contrast, use of high-involvement practices by those companies that were unlikely to have created initial interest did not lead to gains in applicant pool quantity or quality. Thus, it appears that marketing theories are very useful for explaining how corporate advertising and firm reputation moderate the effects of low- and high-involvement recruitment practices.

However, our findings raise the additional question of whether there are other ways that firms can create initial awareness and interest in order to increase the likelihood of generating competitive advantages through high-involvement recruitment practices. As suggested above, low-involvement recruitment practices are an additional way that firms can create initial awareness and interest. Thus, in the absence of corporate advertising and firm reputation, we would expect that firms could attract larger and more qualified applicant pools by using a combination of low- and high-involvement recruitment practices. Unfortunately, we were unable to accurately test these relationships because our relatively small sample size limited our power to test three-way interactions. In addition, few firms in our sample had low ratings on corporate advertising and firm reputation but high ratings on one low-involvement and one high-involvement recruitment practice. Therefore, future research is needed to explore the combined

effects of low- and high-involvement practices. In addition, future research should also explore the potential moderating effects of other organizational factors that affect awareness of and interest in companies as employers. For example, recruitment researchers may wish to explore the effects of a broader measure of firm reputation (for instance, the reputation of a company as a product or service provider), or the effects of familiarity based on use of a company's products or services, or the effects of negative publicity in the news.

Our findings also raise questions regarding the nature of the effects of using similar types of recruitment practices. Specifically, it seems important to explore the effects on organizational recruitment outcomes when companies simultaneously implement two low-involvement or two high-involvement practices. If the practices act as substitutes then firms should implement only one or the other practice, but if the practices have additive effects then companies should implement both to maximize the effects on applicant pool quantity and quality. In post hoc tests, we did find a number of significant two-way interactions between detailed recruitment and employee endorsements, which suggests that high-involvement practices may have additive effects on applicant pool quantity and quality. In contrast, we did not find any significant two-way interactions between general recruitment ads and sponsorship, suggesting that low-involvement practices may act as substitutes for one another. However, the most appropriate way to explore the combined effects of similar types of recruitment practices would be through a three-way interaction with either corporate advertising or firm reputation because these organizational factors moderate the effectiveness of both low- and high-involvement recruitment practices. We were unable to accurately test three-way interactions given our sample size, therefore, future research is needed to explore the nature of the interactions between similar types of recruitment practices.

It is important to note several limitations of our study. First, it was conducted in a college recruitment setting; therefore, our findings may not generalize to other types of job seekers. It would be particularly interesting to see if these principles might help explain how firms can attract the elusive set of individuals who are currently employed and not actively searching for jobs. Our findings would suggest that companies might be able to use low-involvement recruitment practices, such as banner ads on non-work-related Websites to create initial awareness and interest. However, it is not clear if these low-involvement ads would create enough interest to motivate employed individuals to seek out the kinds of detailed information that might be necessary to convince them to actively pursue employment at other companies. Therefore, future research is needed to explore these relationships with a sample of firms that are recruiting job seekers other than college students.

Second, most of our outcome measures (that is, our measures of applicant pool quantity and quality) were based on data from a single university. Even though our findings regarding quantity and quality are strong at this particular university, they might not reflect the overall success of the sampled organizations' college recruitment efforts. Our measure of the percentage of positions filled, however, was based on recruiters' responses across all college hires. Although the absolute size of the relationships was smaller, the pattern of findings for this dependent variable was similar to the other outcome measures, providing some evidence of generalizability. Still, future research that collects additional data on applicant pool quantity and quality across all college recruitment efforts is needed to verify our findings. Third, it is important to note that we examined only a small set of recruitment outcomes that seemed most related to the first phase of recruitment. Future research should examine the effects of different

recruitment strategies and organizational factors on later indicators of recruitment success, such as the quality, turnover, and the job performance of the candidates who accepted job offers.

Fourth, as noted in the measures section, our measure of corporate advertising was based on SG&A expenses and is only a proxy of actual dollars spent on advertising. Further, this measure does not distinguish between end consumer advertising, which should have spillover effects on job seekers, and business-to-business advertising, which is unlikely to be seen by most job seekers. We did, however, find some evidence that our measure was related to actual advertising expenditures in outlets that should be seen by end consumers and job seekers and to a measure of awareness collected from a separate sample. Despite this evidence, future research should examine other measures of corporate advertising to confirm our findings.

Fifth, the surveys regarding recruitment practices were completed by a single respondent, either a recruitment manager or a staffing manager, and the accuracy of that person's responses was hard to verify. The respondents at each company may not have had access to requested information, or their beliefs about recruitment practices and outcomes may have been biased by their own stake in recruitment. This issue may be mitigated to some extent because we asked the company representative to respond to a specific set of recruitment practices used to recruit a specific set of job seekers from a specific university (Gerhart, Wright, & McMahan, 2000). Future studies should use multiple respondents in each organization surveyed, and when possible, use archival data or documentation of recruitment to verify the accuracy of responses.

Finally, we only examined one aspect of recruitment practices. We looked at the level of involvement expected to be required for job seekers to find and process different recruitment sources. However, there are other aspects of recruitment practices that firms can manipulate to

affect recruitment success. For example, marketing research suggests that organizations also alter the content of advertisement messages to match their intended audience. Specifically, marketing research has shown that a high-involvement advertisement may have differing effects on individuals depending on whether the advertisement contains emotion-based arguments or rational, fact-based arguments (Chandy et al., 2001). We were not able to address this issue with the current data, because we did not measure the actual content of the organizational recruitment practices in our study. Future research should examine if changes in the argument strategy (emotional versus rational) of high-involvement recruitment practices affect organization-level recruitment outcomes.

While the design of the study had several limitations, it is important to note several important strengths. First, we collected data from multiple sources: data on our control, independent, and dependent variables were all from different sources. Thus, we eliminated the possibility of percept-percept bias. Second, we collected the independent and dependent variables at different points in time with a lag of at least three months between them. For example, the data for the recruitment practices measures was collected at the beginning of September; corporate advertising data was collected for the fiscal year prior to September; and the measures of applicant pool quantity and quality were collected at the end of the recruitment cycle. Thus, we have some evidence to suggest causal relationships between our predictors and dependent variables.

### Conclusions

Our paper adds to the literature on recruitment in several ways. First, this study is the first to our knowledge that explores the effects of multiple company factors and practices on

organization-level recruitment outcomes during the first phase of recruitment. Our tests of direct effects suggest that corporate advertising has consistent effects across multiple measures of applicant pool quantity and quality. Further, our results make it clear that recruitment researchers should be cautious in interpreting their results when examining the effects of a single practice or organizational factor. Finally, our findings suggest that corporate advertising and firm reputation moderate the effectiveness of low- and high-involvement recruitment strategies. Specifically, we found that low-involvement recruitment practices were most effective when used by firms that job seekers were unlikely to be aware of. High-involvement early recruitment practices were most effective when used by firms that had created strong awareness and interest through corporate advertising and firm reputation. Thus, our findings suggest that recruitment is not a one-size-fits-all practice; instead, firms must carefully choose their recruitment practices on the basis of other organizational factors.

References

- Aaker, D. A. (1996). *Building Strong Brands*. New York: The Free Press.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14, 20-39.
- Barber, A. E. (1998). *Recruiting Employees: Individual and Organizational Perspectives*. Thousand Oaks, CA: Sage Publications.
- Barber, A. E., & Roehling, M. V. (1993). Job postings and the decision to interview: A verbal protocol analysis. *Journal of Applied Psychology*, 78, 845-856.
- Belt, J. A., & Paolillo, J. G. (1992). The influence of corporate image and specificity of applicant qualifications on response to recruitment advertisement. *Journal of Management*, 8, 105-112.
- Boudreau, J. W., & Rynes, S. L. (1985). Role of recruitment in staffing utility analysis. *Journal of Applied Psychology*, 70, 354-366.
- Cable, D. M., Aiman-Smith, L., Mulvey, P. W., & Edwards, J. R. (2000). The sources and accuracy of job applicants' beliefs about organizational culture. *Academy of Management Journal*, 43, 1076-1085.
- Cable, D. M., & Judge, T. A. (1994). Pay preferences and job search decisions: A person-organization fit perspective. *Personnel Psychology*, 47, 317-348.
- Cable, D. M., & Turban, D. B. (2001). Establishing the dimensions, sources and value of job seekers' employer knowledge during recruitment. In G. R. Ferris (Ed.), *Research in*

*Personnel and Human Resources Management (Vol. 20)*, 115-163. Greenwich, CT: JAI Press.

Carlson, K. D., Connerley, M. L., & Mecham, R. L. (2002). Recruitment evaluation: The case for assessing the quality of applicants attracted. *Personnel Psychology*, 55, 461-490.

Chandy, R. K., Tellis, G. J., MacInnis, D. J., & Thaivanich, P. (2001). What to say when: Advertising appeals in evolving markets. *Journal of Marketing Research*, 38, 399-414.

Cobb-Walgren, C. J., Ruble, C. A., & Donthu, N. (1995). Brand equity, brand preference, and purchase intent. *Journal of Advertising*, 24, 25-41.

Collins, C. J., & Stevens, C. K. (2002). The relationship between early recruitment related activities and the application decisions of new labor-market entrants: A brand equity approach to recruitment. *Journal of Applied Psychology*, 87, 1121-1133.

Dohm, A. (2000). Gauging the labor force effects of retiring baby boomers. *Monthly Labor Report*, 123 (7), 17-25.

Gatewood, R. D., Gowan, M. A., & Lautenschlager, G. J. (1993). Corporate image, recruitment image, and initial job choice decisions. *Academy of Management Journal*, 36, 414-427.

Johar, G. V., & Pham, M. T. (1999). Relatedness, prominence, and constructive sponsor identification. *Journal of Marketing Research*, 36, 299-312.

Kamber, T. (2002). The brand manager's dilemma: Understanding how advertising expenditures affect sales growth during a recession. *Journal of Brand Management*, 10(2), 106-121.

- Keller, K.L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57: 1-30.
- MacInnis, D. J., Moorman, C., & Jaworski, G. J. (1991). Enhancing and measuring consumers' motivation, opportunity, and ability to process brand information. *Journal of Marketing*, 55 (October), 32-53.
- MacInnis, D. J., & Jaworski, B. J. (1989). Information processing from advertisements: Toward and interactive framework. *Journal of Marketing*, 53 (October), 1-23.
- Martinez, M. N. (2000). Winning ways to recruit. *HR Magazine*, 45(6), 56-64.
- Michaels, E., Handfield-Jones, H., Axelrod, B. (2001). *The War for Talent*. Boston, MA: Harvard Business School Press.
- Mitchell, A. A., & Olson, J. C. (1981). Are product attribute beliefs the only mediator of advertising effects on brand attitudes? *Journal of Marketing Research*, 18, 318-332.
- Murphy, K. A. (1986). When your top choice turns you down: Effect of rejected offers on the utility of selection tests. *Psychological Bulletin*, 99, 133-138.
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. New York: Springer.
- Poe, A. C. (2000). Face Value: Snag students early by establishing a long-term personal presence on campus. *HR Magazine*, 45(5), 60-68.
- Rynes, S. L. (1991). Recruitment, job choice, and post-hire consequences. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology (2<sup>nd</sup> Edition)*. Palo Alto, CA: Consulting Psychologists Press.

- Rynes, S. L., & Barber, A. E. (1990). Applicant attraction strategies: An organizational perspective. *Academy of Management Review*, 15, 286-310.
- Rynes, S. L., & Boudreau, J. W. (1986). College recruiting in large organizations: Practice, evaluation, and research implications. *Personnel Psychology*, 39, 729-758.
- Rynes, S. L., Bretz, R. D., & Gerhart, B. (1991). The importance of recruitment in job search: A different way of looking. *Personnel Psychology*, 44, 487-521.
- Rynes, S. L., & Lawler, J. (1983). A policy-capturing investigation of the role of expectancies in decisions to pursue job alternatives. *Journal of Applied Psychology*, 68, 620-631
- Sethuraman, R. & Tellis, G. J. (1991). An analysis of the tradeoff between advertising and pricing. *Journal of Marketing Research*, 31, 160-174.
- Shapiro, S., MacInnis, D. J., & Heckler, S. E. (1997). The effects of incidental ad exposure on the formation of consideration sets. *Journal of Consumer Research*, 24, 94-104.
- Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology*, 33, 1-30.
- Taylor, M. S., & Collins, C. J. (2000). Organizational recruitment: Enhancing the intersection of theory and practice. In C. L. Cooper & E. A. Locke (Eds.), *Industrial and Organizational Psychology: Linking Theory and Practice*, 304-334. Oxford, UK: Blackwell.
- Turban, D. B. (2001). Organizational attractiveness as an employer on college campuses: An examination of the applicant population. *Journal of Vocational Behavior*, 58, 293-312.

Turban, D. B., & Cable D. M. (2003). Firm reputation and applicant pool characteristics.

*Journal of Organizational Behavior*, 24, 733-751.

Vandenberg, R. J., & Seo, J. H. (1993). Placing recruitment effectiveness in perspective: A

cognitive explication of the job-choice and organizational-entry period. *Human Resource*

*Management Review*, 2, 239-273.

Woodruffe, C. (1999). *Winning the Talent War*. New York: Wiley.

Table 1: Principal Components Loadings for Early Recruitment Activities

| Item   | Component<br>1 | Component<br>2 | Component<br>3 | Component<br>5 |
|--|----------------|----------------|----------------|----------------|
| <b>Low –Involvement Recruitment Practices</b>  |                |                |                |                |
| <b>General Recruitment Ads</b>   |                |                |                |                |
| 1. We place ads in student newspapers to communicate information about who we are as an employer.                            | <u>.694</u>    | .109           | -.127          | .019           |
| 2. We send direct mailings to potential candidates to make them aware of job openings at our company.                        | <u>.906</u>    | .116           | -.071          | .161           |
| 3. Our job brochures primarily communicate information about who we are as an employer.                                      | <u>.889</u>    | .045           | -.089          | .071           |
| <b>Sponsorship</b>   |                |                |                |                |
| 4. We fund scholarships for students to complete their education.  | .213           | <u>.748</u>    | -.053          | -.138          |
| 5. We have contributed money to this university in exchange for naming rights (e.g., classrooms, endowed chairs, buildings). | .074           | <u>.739</u>    | .132           | .282           |
| 6. We have donated equipment that students will work on as part of their studies.  | .061           | <u>.698</u>    | .136           | .307           |
| <b>High–Involvement Recruitment Practices</b>  |                |                |                |                |
| <b>Detailed Recruitment Ads</b>  |                |                |                |                |
| 7. Our job brochures primarily communicate details about our jobs.   | .285           | .080           | <u>.844</u>    | .036           |
| 8. We place job postings in career services offices that communicate detailed information about job openings.                | .187           | -.260          | <u>.569</u>    | .382           |
| 9. At campus career fairs, we primarily focus on communicating specific information about job openings.                      | -.375          | .142           | <u>.724</u>    | .094           |
| 10. We conduct campus presentations to communicate specific information about job openings.                                  | -.080          | .150           | <u>.667</u>    | .278           |
| <b>Employee Endorsements</b>   |                |                |                |                |
| 11. We provide a forum for student interns to share their experiences with other students on campus.                         | .181           | .041           | .095           | <u>.769</u>    |
| 12. We encourage recent alums and interns to share their experiences with other students on campus.                          | -.070          | .284           | .149           | <u>.673</u>    |
| 13. We provide internships and co-ops for students.  | .234           | -.112          | -.067          | <u>.662</u>    |
| Eigenvalues  | 1.98           | 2.20           | 1.91           | 2.37           |

Table 2  
 Means, Standard Deviations, Alphas, and Intercorrelations of Study Variables

|                                   | Mean   | SD     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12  |
|-----------------------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 1. General recruitment ads        | 2.67   | 1.29   | (.75) |       |       |       |       |       |       |       |       |       |       |     |
| 2. Sponsorship                    | 2.12   | 1.08   | .35** | (.75) |       |       |       |       |       |       |       |       |       |     |
| 3. Detailed recruitment ads       | 3.56   | .92    | .17   | .08   | (.74) |       |       |       |       |       |       |       |       |     |
| 4. Employee endorsements          | 3.54   | 1.08   | -.05  | -.01  | .54** | (.73) |       |       |       |       |       |       |       |     |
| 5. Corporate advertising†         | 270.54 | 162.92 | -.07  | .22*  | .09   | .29** | ---   |       |       |       |       |       |       |     |
| 6. Firm reputation                | .59    | 1.15   | -.01  | .21*  | .24*  | .23*  | .50** | ---   |       |       |       |       |       |     |
| 7. Number of applicants           | 96.22  | 79.15  | .25*  | .34** | .27*  | .10   | .53** | .42** | ---   |       |       |       |       |     |
| 8. Interview election ratio       | 9.71   | 7.42   | .42** | .28** | .16   | .32*  | .12   | .21*  | .58** | ---   |       |       |       |     |
| 9. Percentage of positions filled | .66    | .23    | .26*  | .25*  | .21*  | .27*  | .21*  | .24*  | .45** | .44** | ---   |       |       |     |
| 10. Perceived quality             | 3.59   | 1.12   | .44** | .40** | .14   | .32** | .21*  | .22*  | .53** | .66** | .61** | ---   |       |     |
| 11. Applicant GPA                 | 3.27   | .29    | .29** | .32** | .30** | .27*  | .19   | .28*  | .44** | .50** | .45** | .68** | ---   |     |
| 12. Applicant work experience     | 2.41   | 1.37   | .33** | .21   | .32** | .24*  | .17   | .23*  | .39** | .36** | .35** | .57** | .49** | --- |

Note. Alpha reliabilities are shown in parentheses along the diagonal. For all scaled measures, 1 = low and 5 = high. n = 99 for all correlations except those with GPA and work experience where n = 65.

\* p < .05, \*\* p < .01. All significance tests are two-tailed.

† data for corporate advertising effort is in millions of dollars

Table 3: Regression Results Predicting Applicant Pool Size

| Independent Variables               | Number of Applicants | Number of Applicants | Number of Applicants | Number of Applicants | Interview Ratio | Interview Ratio | Interview Ratio | Interview Ratio |
|-------------------------------------|----------------------|----------------------|----------------------|----------------------|-----------------|-----------------|-----------------|-----------------|
| Consumer Products/Retail            | .14                  | .13                  | .06                  | .11                  | .18             | .13             | .12             | .17             |
| Computers/electronics               | .09                  | .06                  | .03                  | .04                  | .13             | .10             | .08             | .06             |
| Financial/investing                 | .02                  | -.02                 | -.04                 | .01                  | -.03            | -.07            | -.07            | -.03            |
| Consulting                          | .11                  | .01                  | -.05                 | .03                  | .19             | .10             | .13             | .14             |
| Sales                               | .28**                | -.06                 | -.13                 | -.12                 | -.21            | -.24            | -.31**          | -.33*           |
| Number of Employees                 | .11                  | .16                  | .11                  | .13                  | .29*            | .34**           | .20             | .24*            |
| General recruitment ads             |                      | .25*                 | .26*                 | .23*                 |                 | .11             | .08             | .10             |
| Sponsorship                         |                      | .11                  | .15                  | .10                  |                 | .28**           | .16             | -.02            |
| Detailed recruitment ads            |                      | -.03                 | -.14                 | -.05                 |                 | -.09            | -.15            | -.07            |
| Employee endorsements               |                      | .23*                 | .18                  | .26*                 |                 | .15             | .12             | .11             |
| Corporate advertising               |                      | .23*                 | .21*                 | .25*                 |                 | .15             | .14             | .18             |
| Firm reputation                     |                      | .20*                 | .12                  | .01                  |                 | .15             | .13             | .04             |
| Advertising * general recruitment   |                      |                      | -.19*                |                      |                 |                 | -.26*           |                 |
| Advertising * sponsorship           |                      |                      | -.28*                |                      |                 |                 | -.27*           |                 |
| Advertising * detailed recruitment  |                      |                      | .34**                |                      |                 |                 | .10             |                 |
| Advertising * employee endorsements |                      |                      | .29*                 |                      |                 |                 | .28*            |                 |
| Reputation * general recruitment    |                      |                      |                      | -.20*                |                 |                 |                 | -.23*           |
| Reputation * sponsorship            |                      |                      |                      | -.22*                |                 |                 |                 | -.02            |
| Reputation * detailed recruitment   |                      |                      |                      | .02                  |                 |                 |                 | .31*            |
| Reputation * employee endorsements  |                      |                      |                      | .32*                 |                 |                 |                 | .21*            |
| $\Delta$ Adjusted R <sup>2</sup>    | .13**                | .22**                | .13**                | .11**                | .11**           | .16**           | .10**           | .09*            |
| $\Delta$ F-value                    | 3.70                 | 5.36                 | 5.61                 | 3.82                 | 3.71            | 4.09            | 3.14            | 2.92            |

n = 99

\* p &lt; .05, \*\* p &lt; .01. All significance tests are two-tailed.

Table 4: Regression Results Predicting Perceived Quality and Applicant GPA

| Independent Variables               | %<br>Positions<br>Filled | %<br>Positions<br>Filled | %<br>Positions<br>Filled | %<br>Positions<br>Filled | Perceived<br>Quality | Perceived<br>Quality | Perceived<br>Quality | Perceived<br>Quality |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|----------------------|----------------------|----------------------|
| Consumer Products/Retail            | .20                      | .05                      | -.05                     | .01                      | .13                  | .14                  | .07                  | .12                  |
| Computers/electronics               | .24*                     | .19                      | .04                      | .09                      | .18                  | .04                  | -.01                 | .08                  |
| Financial/investing                 | .19                      | .11                      | .09                      | .04                      | .16                  | .12                  | .07                  | -.01                 |
| Consulting                          | .17                      | .06                      | -.03                     | .01                      | .03                  | .01                  | .02                  | .02                  |
| Sales                               | .08                      | .17                      | .22                      | .19                      | .15                  | .14                  | .18                  | -.08                 |
| Number of Employees                 | -.04                     | .04                      | .01                      | -.03                     | .06                  | -.02                 | -.03                 | .04                  |
| General recruitment ads             |                          | .05                      | .03                      | .01                      |                      | .19*                 | .19*                 | .20                  |
| Sponsorship                         |                          | .18                      | .09                      | -.02                     |                      | -.01                 | .07                  | .10                  |
| Detailed recruitment ads            |                          | -.07                     | -.14                     | -.15                     |                      | .25*                 | .17                  | -.05                 |
| Employee endorsements               |                          | .19*                     | .15                      | .08                      |                      | -.05                 | -.03                 | .16                  |
| Corporate advertising               |                          | .22*                     | -.04                     | .07                      |                      | .27*                 | .11                  | .22*                 |
| Firm reputation                     |                          | .17                      | .07                      | -.01                     |                      | .20*                 | .13                  | .04                  |
| Advertising * general recruitment   |                          |                          |                          | -.21*                    |                      |                      | -.07                 |                      |
| Advertising * sponsorship           |                          |                          |                          | -.24*                    |                      |                      | -.26*                |                      |
| Advertising * detailed recruitment  |                          |                          |                          | .03                      |                      |                      | .30*                 |                      |
| Advertising * employee endorsements |                          |                          |                          | .25*                     |                      |                      | .22*                 |                      |
| Reputation * general recruitment    |                          |                          |                          |                          | -.01                 |                      |                      | -.22*                |
| Reputation * sponsorship            |                          |                          |                          |                          | -.31*                |                      |                      | -.20*                |
| Reputation * detailed recruitment   |                          |                          |                          |                          | .23*                 |                      |                      | .25*                 |
| Reputation * employee endorsements  |                          |                          |                          |                          | .24*                 |                      |                      | .26*                 |
| $\Delta$ Adjusted R <sup>2</sup>    | .05                      | .14**                    | .10**                    | .11**                    | .06                  | .21**                | .11**                | .13**                |
| $\Delta$ F-value                    | 1.88                     | 3.29                     | 3.34                     | 3.89                     | 1.96                 | 5.13                 | 5.61                 | 4.58                 |

n = 99

\* p &lt; .05, \*\* p &lt; .01. All significance tests are two-tailed.

Table 5: Regressions Predicting Work Experience and Percentage of Positions Filled

| Independent Variables               | Applicant<br>GPA | Applicant<br>GPA | Applicant<br>GPA | Applicant<br>GPA | Applicant<br>experience | Applicant<br>experience | Applicant<br>experience | Applicant<br>experience |
|-------------------------------------|------------------|------------------|------------------|------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Consumer Products/Retail            | .10              | .07              | .03              | .11              | .08                     | .02                     | .03                     | .04                     |
| Computers/electronics               | .24              | .05              | .11              | .12              | .15                     | .17                     | .18                     | .18                     |
| Financial/investing                 | .06              | .02              | .03              | .01              | .06                     | .06                     | .08                     | .06                     |
| Consulting                          | .17              | .07              | .04              | .06              | .09                     | .16                     | .17                     | .16                     |
| Sales                               | .21              | .08              | .11              | .27              | .21                     | .14                     | .11                     | .19                     |
| Number of Employees                 | .14              | .08              | .02              | -.02             | .16                     | .16                     | .05                     | .14                     |
| General recruitment ads             |                  | .17              | .19              | .13              |                         | .28*                    | .04                     | .32*                    |
| Sponsorship                         |                  | .27*             | .03              | .21              |                         | -.04                    | -.05                    | -.03                    |
| Detailed recruitment ads            |                  | .14              | .06              | .17              |                         | .27*                    | .16                     | .12                     |
| Employee endorsements               |                  | .29*             | .23              | .16              |                         | .06                     | -.02                    | -.01                    |
| Corporate advertising               |                  | .24*             | .22              | -.33             |                         | .29*                    | .05                     | .15                     |
| Firm reputation                     |                  | .08              | .06              | .19              |                         | .15                     | .18                     | -.03                    |
| Advertising * general recruitment   |                  |                  |                  | -.25*            |                         |                         | -.23*                   |                         |
| Advertising * sponsorship           |                  |                  |                  | -.02             |                         |                         | -.03                    |                         |
| Advertising * detailed recruitment  |                  |                  |                  | .24*             |                         |                         | .29*                    |                         |
| Advertising * employee endorsements |                  |                  |                  | .33*             |                         |                         | .34*                    |                         |
| Reputation * general recruitment    |                  |                  |                  |                  | -.29*                   |                         |                         | -.11                    |
| Reputation * sponsorship            |                  |                  |                  |                  | -.03                    |                         |                         | -.23*                   |
| Reputation * detailed recruitment   |                  |                  |                  |                  | .23*                    |                         |                         | .28*                    |
| Reputation * employee endorsements  |                  |                  |                  |                  | .33*                    |                         |                         | .30*                    |
| $\Delta$ Adjusted R <sup>2</sup>    | .07              | .20**            | .07*             | .10**            | .05                     | .23**                   | .08*                    | .07*                    |
| $\Delta$ F-value                    | 1.62             | 5.02             | 2.78             | 2.54             | 1.62                    | 5.02                    | 2.78                    | 2.54                    |

n = 99 for regressions predicting GPA and work experience where n = 65.

\* p < .05, \*\* p < .01. All significance tests are two-tailed.

Figure 1

Interaction of General Recruitment Ads and Corporate Advertising

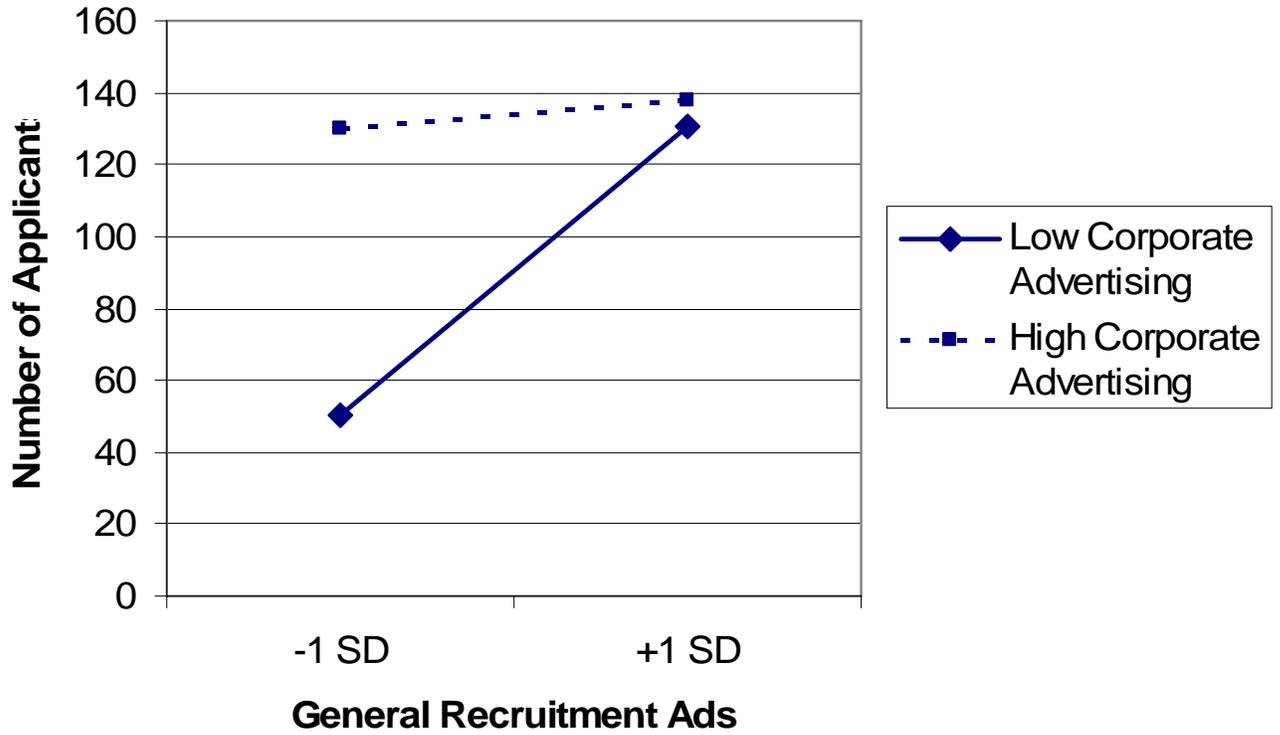


Figure 2

Interaction of Detailed Recruitment Ads and Corporate Advertising

