

AN ABSTRACT OF THE THESIS OF

Oksana Drogan for the Master of Science

in Psychology presented on July 31, 2002

Title: Selection Utility at the Organizational Level Measures of Performance

Abstract approved: George B. Yancey

Numerous studies have established the positive impact of using advanced selection methods on individual performance in organizations. The purpose of this study was to investigate whether such selection practices have an effect on organizational performance. It was hypothesized that organizations engaging in more of the advanced selection methods or doing so for longer periods of time will exhibit significantly better earnings, productivity, and market share growth. Data on 122 credit unions were used to test the research hypotheses. Overall, there were no significant relationships between engaging in advanced selection practices and organizational outcomes. Limitations of the study and future research directions are discussed.

SELECTION UTILITY AT THE ORGANIZATIONAL LEVEL MEASURES OF
PERFORMANCE

A Thesis

Presented to

the Department of Psychology and Special Education

EMPORIA STATE UNIVERSITY

In Partial Fulfillment

of the Requirements for the Degree

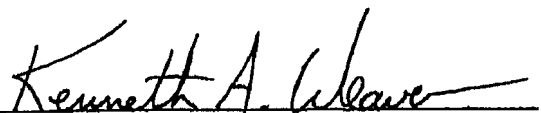
Master of Science

by

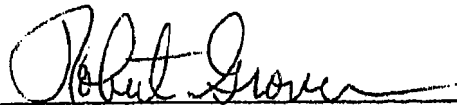
Oksana Drogan

August 2002

Thesis
2002
D



Approved for the Department of
Psychology and Special Education



Approved for the Graduate Council

ACKNOWLEDGEMENTS

I would like to thank my thesis chair, Dr. George Yancey, for his professional guidance and advice. His encouragement was essential to the completion of this project. A sincere thank you goes to my committee members, Dr. Brian Schrader and Dr. Yi-Kai Chen, for their time and helpful suggestions.

My husband and my family also deserve special words of gratitude. Their sacrifice and encouragement made all my accomplishments possible.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vii
CHAPTER	
1 INTRODUCTION	1
Effective Selection Practices	3
Job Analysis	3
Recruiting Sources	5
Validation Studies	7
Structured Interview	9
Cognitive Ability Tests	11
Biographical Information Blanks (BIBs) and Weighted Application Blanks (WABs)	14
Effect of HR Practices on Organizational Level Measures of Performance	16
Relationship Between Effective HR Practices and Organizational Performance: Implications for Researchers and Practitioners	22
Selection Utility at the Organizational Level Measures of Performance: Summary	24
The Present Study	26
Hypotheses	26
2 METHOD	27

Participants	27
Design	27
Instrumentation	28
Survey	28
Cover Letter	29
Procedures	29
3 RESULTS	30
Hypothesis 1	30
Hypothesis 2	32
Hypothesis 3	32
Exploratory Analyses	36
4 DISCUSSION	40
REFERENCES	46
APPENDICES	53
Appendix A: Survey	53
Appendix B: Cover Letter	56

LIST OF TABLES

TABLE		PAGE
1	Descriptive Statistics for Financial Performance Measures	31
2	Mean Differences for Financial Performance Measures	33
3	Correlations Between the Length of Using Each Selection Method and Measures of Financial Performance	35
4	Summary of Regression Analysis for Selection Methods Predicting Three Measures of Financial Performance	37

CHAPTER 1

INTRODUCTION

Even though research in the area of personnel selection has been conducted for most of the 20th century (Schmitt & Chan, 1998), personnel selection issues are becoming more crucial today due to several trends that are evident in today's business environment. Some of these trends include rapid changes in technology, increased reliance on teamwork, and organizations' involvement in global markets. In light of these and other changes, psychology researchers pay special attention to the issue of personnel selection in order to provide organizations with insights on the most effective employee selection methods.

Much personnel selection research has focused on traditional testing issues, such as assessing the reliability and validity of selection tests. Another important issue is the question of utility, which is commonly defined as the practical usefulness of a test (Schmitt & Chan, 1998). A number of researchers have attempted to establish the utility of various selection tests by assessing the economic gain of adopting a valid selection procedure (Brown, 1981; Schmidt, Hunter, Outerbridge & Trattner, 1986; Terborg & Russel, 1988). The traditional venue of research in assessing the economic utility of a selection test has emphasized individual performance as the main criterion (Russell, Terborg, & Powers, 1985; Schmitt & Schneider, 1983). This means that the effectiveness of selection devices is typically determined by measuring the performance of individual workers. For instance, correlating applicants' selection test scores and performance measures, such as supervisory ratings, is a common way to determine whether a selection instrument has utility.

Contemporary research has shown that using more valid tests can result in the improved performance of the typical employee, but does using more valid tests lead to better organizational performance? Intuitively, one would assume so; however, there is little empirical evidence to draw sound conclusions on this issue. Very few researchers have attempted to use the performance of organizations as the criterion of measuring the effectiveness of various personnel selection methods. Several personnel selection researchers have noted this lack of research evidence on the relationship between selection practices and organizational performance and have called for systematic empirical studies investigating this relationship (Schmitt & Schneider, 1983; Terpstra & Rozell, 1993).

Taking into consideration the need for knowledge about the effects of selection practices on organizational performance in the current literature, this study attempted to examine this relationship through conducting survey research. Do companies that use more effective selection procedures tend to exhibit better organizational performance? This is the main question the current research attempted to answer.

Besides adding more knowledge to the existing body of literature on personnel selection, this research would also benefit personnel selection researchers, consultants, and business leaders. Armed with the information about the effect of selection methods on organizational performance, industrial/organizational (I/O) psychologists would be able to effectively communicate to the business leaders the value of adopting more effective selection practices (Johns, 1993; Rauschenberger & Schmidt, 1987). If increasing the quality of selection methods were shown to have a positive impact on

organizational productivity, human resources managers would be provided with a valuable piece of information that they could use to improve organizational effectiveness.

Review of the Literature

Several selection techniques that have been found to be effective in predicting individual performance will be examined in the following section. These methods include the use of job analysis, the use of validation studies for selection techniques employed, investigating the effectiveness of recruiting methods, the use of structured interviews, the use of cognitive and aptitude tests, and the use of biographical application blanks or weighted application blanks. Next, those studies that have attempted to examine the impact of human resources (HR) practices on organizational level measures of performance will be reviewed. Finally, the value of knowledge that personnel researchers may derive from knowing the impact of HR practices at the organizational level will be examined.

Effective Selection Practices

Organizations may use a variety of selection tools to choose their employees. However, not all of these methods have been shown to be effective. The six selection practices described below have been judged very effective based on data provided by academic research literature.

Job analysis. Job analysis is considered the first mandatory step in the process of adopting a new selection method. Contemporary textbooks in I/O psychology view conducting a job analysis as an essential step toward ensuring that a selection tool will be effective (Cascio, 1998; Schmitt & Chan, 1998). In simple terms, job analysis would entail defining the job in question and then discovering what employee behaviors are

necessary to perform the job. One of the important purposes of conducting job analyses is “understanding the organization’s needs as they relate to the selection problem so that the researcher can formulate sound hypotheses about relationships among predictors and criteria” (Society for Industrial and Organizational Psychology, 1987, p. 5).

Conducting job analysis becomes even more important in light of the changing nature of work. Bridges (1994) argues that the traditional well-defined sets of tasks that we have traditionally called jobs are disappearing. He notes that organizations are moving from a structure built of jobs into a field of work needing to be done. This change is partly due to the fast-moving economy in which rigid solutions do not work any more. Such changes call for reorganization of many organizational tasks, including selection and placement of individuals. Bridges offered several questions that companies must answer in order to adapt to the changing economy. One of the questions is whether the work is being done by the right people (Bridges, 1994). This question of fit among work and employees’ skills calls for reexamination of the work itself.

It could be argued that job analysis would be more important in this new business environment, because organizations must determine the new skills and abilities needed in present and future employees in order to successfully select those individuals who will contribute to an organization’s productivity. However, not all researchers would agree with this notion. Some argue that the traditional role of job analysis does not fulfill its original role in the new work situation. For instance, Drucker (1987) criticized job analysis as being inflexible and legalistic, and Sanchez (1994) even proposed that its traditional conception had become obsolete. These arguments go hand in hand with Bridges’ (1994) ideas that flexible and constantly changing fields of work are replacing

traditional jobs. However, other researchers assert that job analysis is not merely useful for a narrow scope of tasks or easily defined duties. They argue that job analysis is a tool to systematically gather data about virtually any kind of work activity (Gatewood & Feild, 1994).

Nelson (1997) agrees that the role of job analysis is becoming more important in organizations. She discussed the role of job analysis in a “boundaryless organization,” which is a term for companies that recognize the limitations inherent in separating people, tasks, and places and emphasize the benefits of moving decisions and talent where they are most needed. This term is similar to Bridges’ (1994) conception of a new, flexible organization. Nelson argues that conducting job analysis would be more important in such boundaryless organizations, where work activities are created and evolve more quickly than in more traditionally structured organizations, where jobs are static for longer time periods. She also proposed that the procedure of job analysis is fully capable of examining both diverse and changing occupations. The task of the person who conducts such job analysis is to select the approach that would be more appropriate for a changing environment.

Recruiting sources. Monitoring the effectiveness of various recruiting sources used in attracting job applicants is considered an effective selection technique. Organizations should benefit from follow-up studies of their recruiting efforts because it has been shown by research that the quality of recruiting sources may differ in various organizational settings. The early literature primarily identified which sources are most effective and what job outcomes they produce, while present-day studies attempt to

uncover the reasons for why some recruiting sources are more effective than others (Rynes, 1991; Wanous & Colella, 1989).

Many early studies suggested that informal recruiting sources, such as word of mouth advertising and self-initiated contacts, are more effective in attracting higher quality applicants than formal recruiting sources, such as newspaper advertisements. Breaugh (1981), for instance, investigated whether various recruiting sources were related to subsequent absenteeism, job performance, and work attitudes in a sample of research scientists. He found that employees recruited through journal/convention advertisement and through self-initiated contacts had lower absenteeism, more superior performance, and higher levels of job involvement and satisfaction compared to those employees who were recruited through college placement offices and newspaper advertisements.

Other researchers have observed similar findings. Saks (1994) found that employees recruited through informal methods had greater job survival in comparison to employees recruited through formal sources of recruitment. Taylor (1994) observed a moderately strong relationship between time with the employer (trucking companies) and recruitment source. He found, for example, that drivers referred by a company employee (an informal source) averaged 9 months longer in tenure than those who had come from driving schools (formal source). Kirnan, Farley, and Geisinger (1989) obtained similar results with a sample of life insurance agents. This group of researchers found differences in applicant quality and newly hired employee survival rate that were in favor of the informal sources. For instance, applicants recruited through informal sources, such as referrals by present employees and self-initiated contacts, were found to be of higher

quality than those who were found through formal recruiting sources, such as newspaper advertisements and employment agencies.

While there seems to be a consensus that informal recruitment sources deliver more superior applicants and eventual employees, there is no clear-cut answer as to why this occurs. Current research has attempted to investigate the reasons that underlie the differences between applicants who are attracted through various recruiting sources. Two popular explanations are the individual difference hypothesis and the realism hypothesis. The individual difference hypothesis suggests that recruiting sources vary in their effectiveness because they target different populations of potential employees who, as a result of that, vary in personality, ability, motivation, or some other unknown attributes (Taylor & Schmidt, 1983; Wanous & Collela, 1989). The realism hypothesis proposes that certain recruiting sources, such as employee referrals, may act as realistic job previews, thereby communicating accurate and detailed information about the job to prospective employees (Hill, 1970).

Researchers are still investigating these two and other hypotheses with the hope to provide an explanation for why different recruitment sources result in different types of applicants (Griffeth, Hom, Lawrence, & Cohen, 1997; Taylor, 1994; Werbel & Landau, 1996). However, in light of the earlier findings it seems reasonable to conclude that organizations would be more effective in attracting higher quality applicants if they investigate the usefulness of the recruiting sources used to locate prospective employees.

Validation studies. Conducting validation studies is considered one of the most important processes in test evaluation. Any organization claiming that a certain selection procedure is able to discriminate between bad and good applicants must provide research

evidence that is based on systematic procedures. This evidence, called validity, supports the appropriateness, meaningfulness, and usefulness of the inferences made from test scores (Society for Industrial and Organizational Psychology, 1987).

Besides theoretical arguments for conducting validation studies for employment tests, several studies have established the financial value of such practice. Utility analyses conducted in diverse organizational settings suggest that validation information and the use of valid selection devices can result in millions of dollars in annual productivity increases. Terborg and Russel (1988) estimated the gains or losses associated with the use of valid tests when hiring entry-level managers or management trainees under typical, best, and worst conditions. Typical conditions included a selection ratio of 50 percent, the cost spent on employment/assessment testing that was average, and 20 per cent turnover rate. The best and worst case scenarios manipulated these variables accordingly. For instance, the best case scenario would include a selection rate of 10 percent, whereas the worst case scenario would include the selection rate of 90 percent. Researchers estimated that valid selection procedures may result in \$4,809 net value of dollar gain per person under typical case scenario by the third year of the person's employment. Under the best employment conditions, the employer would gain an estimated \$26,131 by the third year of operations. In contrast, however, unfavorable employment market conditions (low selection ratio, high turnover rate, and initial high testing cost) were associated with a net loss of \$620 per employee. These estimates suggest that the use of valid selection devices is likely to pay off under typical business conditions (Terborg & Russel, 1988).

Likewise, Brown (1981) analyzed the effect of a valid weighted biographical inventory in a large sample of life insurance agents representing 12 companies. The

results of his study suggest that the validity of this instrument was generalizable across the 12 companies, although up to 38 percent of the observed variance in coefficients was a function of company differences. Nevertheless, it was estimated that when used at its most effective cutoff, the biographical inventory could provide a profit per agent between \$10,007 and \$19,394 above the profit realized when the tool was not used for selection (Brown, 1981).

Instead of relying on theoretical estimates of productivity gains (such as standard linear regression utility equations), Schmidt and his colleagues (Schmidt, Hunter, Outerbridge, & Trattner, 1986) measured those gains empirically for many white-collar jobs in the federal government. They estimated that the use of valid cognitive ability tests (rather than less valid evaluations of education and experience) was associated with an increase in output up to \$600 million for each year that the new employees remained employed by the government. In addition to production gains, the use of valid selection tests was associated with reduction in payroll costs and reduction in the percentage of new hires who were considered poor performers.

Conducting validation studies would be beneficial to organizations. First, it provides justification for the use of selection methods, should those procedures be questioned by applicants or courts. Second, using valid employment tests has been shown to have a positive impact on financial gains associated with hiring better employees.

Structured interviews. It is a rare organization that does not use the interview as a part of the employment process. However, there are several elements that make the interview particularly effective in discriminating among good and bad applicants. In the 80-year history of published research on employment interviewing, few conclusions have

been more widely supported than the idea that structuring the interview enhances its reliability and validity (Campion, Palmer, & Campion, 1997).

A comprehensive review by Campion et al. (1997) identified some of the components of structure associated with the employment interview. These components include basing questions on a job analysis, asking exact same questions of each candidate, limiting prompting and follow-up questions, using better types of questions (such as situational, past behavior, background, and job knowledge questions), employing larger number of questions, and taking detailed notes of applicants' responses.

The effect of note taking on interview validity was examined by Burnett, Fan, Motowidlo, and Degroot (1998). The authors attempted to determine whether note taking contributed to interview effectiveness. Researchers conducted several studies and obtained mixed results. Out of three studies conducted by the researchers, one supported the notion that note taking behavior was related to validity, where voluntary note takers made more valid ratings than those who chose to not take any notes. However, in another study, participants who did not take notes made ratings that were just as valid as those of behavioral note takers. The authors suggested that the process of note taking may help to improve validity, although the validity may be moderated by other factors, such as note takers' personal characteristics.

Conway, Jako and Goodman (1995) investigated the impact of interview structure on validity and interrater reliability by conducting a meta-analysis of 111 interrater reliability coefficients. The results suggested that standardizing questions had a stronger moderating effect on reliability when coefficients were from separate (rather than panel) interviews, and multiple ratings were useful when they were combined mechanically,

rather than subjectively. Structured interviews also had an effect on interview validity: estimates of upper limits of validity were .67 for highly structured interview, .56 for moderately structured interviews, and .34 for interviews with low structure. Based on these and other analyses performed in the study, the following strategies were judged to be effective in strengthening interview reliability and validity: standardizing questions, combining ratings mechanically, using job analysis to create interview questions, and providing interviewer training.

Schmidt and Rader (1999) also obtained support for increased validity of structured interviews. These researchers compared the validity of an empirically constructed structured interview to the validities of more traditional structured interviews. The results of the study suggest that different approaches to construction of structured interviews have comparable validities for job performance. Such results are encouraging because they suggest that the differences in the construction of a structured interview would reflect the particular needs of an organization and will not have a detrimental effect on the validity. The results appear to support the value of structure in the employment interview, regardless of the minor differences in its construction and implementation.

Cognitive ability tests. The usefulness of cognitive ability tests in predicting job performance was established early. Ghiselli (1973) summarized studies on the predictive validity of a variety of aptitude tests, such as tests of intellectual abilities, spatial and mechanical abilities, and perceptual accuracy. The author concluded that aptitude tests are good predictors of job performance in a range of occupations, including managerial positions, clerical occupations, sales jobs, protective occupations (e.g., policemen,

firemen), service positions, trade and craft jobs (e.g., carpenters, electricians), and industrial occupations (e.g., machine operators, manual workers).

Several studies suggest that the role of general cognitive ability is more important than that of prior job knowledge in predicting subsequent job knowledge and training performance in complex occupations (Carretta & Doub, 1998; Ree, Carretta, & Teachout, 1995). After studying training and job performance of a large sample of Air Force officers, these two groups of researchers discovered that ability directly influenced the acquisition of job knowledge, whereas prior job knowledge had almost no influence on subsequent job knowledge. This impact, though, varied by group, being greater for women and African-Americans (Carretta & Doub, 1998). The results of these studies suggest that given competition for resources, testing for cognitive ability may yield greater gains and should take precedence over testing for prior job knowledge.

Cognitive ability measures were proven useful in an assessment center setting. The assessment center is a widely used tool for the selection and development of managers in both small and large organizations. A group of researchers (Spector, Schneider, Vance, & Hezlett, 2000) found that cognitive ability was significantly related to the success in almost all exercises, such as project presentations, leaderless group discussion, role play, and in-basket exercise. Cognitive ability accounted for most of the variance in the leaderless group discussion exercise, while in most other exercises, both cognitive ability and personality measures shared a role.

Vinchur and his colleagues (Vinchur, Schippmann, Switzer, & Roth, 1998) evaluated a number of predictors for performances of sales personnel. They found that cognitive ability measures appeared to predict rating criteria fairly well and objective

sales criteria fairly poorly. Cognitive ability measures showed a validity coefficient of .40 for ratings but a corrected validity of only .04 for the sales criterion. The authors expressed their surprise at the fact that there was such low correlation with objective sales measure and suggested that small sample sizes may have produced unstable results.

A meta-analytic study by Hunter and Hunter (1984) provided strong support for the use of cognitive ability tests in employment. They compared several common selection tests on their validity data and concluded that for entry-level jobs there is no stronger predictor than ability tests, which had a mean validity of .53. Moreover, hiring on ability was also associated with large financial gains. Another meta-analytic estimate of the correlation between cognitive ability tests and measures of job performance (usually supervisors' ratings) placed the mean validity coefficient at .30 (Bobko, Roth, & Potosky, 1999).

One negative aspect of using cognitive ability tests, however, is their adverse impact on minority groups. These tests typically produce a standardized mean difference between African Americans and White applicants of one standard deviation (Hunter & Hunter, 1984). The mean difference between Hispanic and White applicants is somewhat smaller, but nonetheless considered substantial by some researchers (Pulakos & Schmitt, 1996). Sole reliance on cognitive ability testing as a selection tool may thus lead to a disproportionate number of qualified minority applicants being rejected for the job. Given this information, it is often advised that organizations do not use cognitive ability tests alone, but employ them in conjunction with other valid selection instruments (Hunter & Hunter, 1984).

Biographical information blanks (BIBs) and weighted application blanks (WABs).

BIBs and WABs are self-report instruments in which job applicants are asked to provide information about past and present work behavior, successes and failures. Each item in a WAB is scored differently, and weights are assigned according to the predictive power of each item of future job performance. A BIB is similar to a WAB, although items are likely to be in a multiple-choice format (Cascio, 1998).

The usefulness of developing BIBs or WABs for employee selection has been established for a variety of occupations. Allworth and Hesketh (2000), for instance, investigated the utility of biodata information in predicting future job performance in the customer service industry. These researchers compared two approaches of biodata collection – indirect, theory-driven item specification strategy and direct approach that was based heavily on job analysis information. The predictive validity of these two approaches was compared to that of cognitive ability and personality measures in a concurrent validity study using data on employees from a large international hotel. The researchers concluded that the job requirements biodata approach had moderate predictive validity of performance. It also proved superior to the traditional theory-driven biodata approach, as well as cognitive ability and personality measures.

Carefully developed application blanks could be used to select applicants for sales positions. Chung (2001) described the development of a WAB for life insurance sales force. Certain items, such as having positive schooling experience, being employed for at least five years in a sales position, and having a tight social network were indicative of future job success in the sales business. Gable, Hollon, and Dangelo (1992) also found a number of biographical items that were predictive of performance level and future

turnover of sales workers. These researchers discovered, however, that the level of performance acted as a moderating variable in predicting turnover for sales employees. Thus, the recommended items for inclusion on the application blank would be more likely to reduce turnover for high performers and leave the turnover for low performers unaffected.

The military sector could also benefit from devising a WAB for its applicants. A study with a sample of British naval officers (Drakeley, Herriot, & Jones, 1988) revealed that appropriately weighted biodata predicted training performance criteria as well as traditionally used criteria of performance, such as an overall assessment rating of candidates by an interview board or aptitude tests. Moreover, the weighted application items could predict voluntary turnover at a low level when other instruments failed to do so at all.

Based on these studies, it appears that WABs and BIBs could be useful selection tools in a variety of occupations. A survey of meta-analytic studies lends further support to this assertion. Reilly and Chao (1982) reviewed 58 studies that used biographical information as a predictor. The average validity over all criteria and over all occupations was .35. A subsequent meta-analysis of 44 such studies revealed an average validity of .37 (Hunter & Hunter, 1984). Thus, evidence indicates that personal history data collected in the form of BIBs and WABs are predictive of future work behavior.

While some researchers (Cascio, 1998) point out to the care with which assumptions regarding the generalizability of biodata information should be made, others have produced evidence that biodata information can be generalizable to the whole organization or even industry (Carlson, Scullen, Schmidt, Rothstein, & Erwin, 1999;

Harvey-Cook & Taffler, 2000). Overall, the studies suggest that BIBs and WABs can be useful selection devices. Besides having been shown to predict future job performance and turnover, biodata information is also easy to collect. Because most organizations require job candidates to fill out application blanks, the costs involved in collecting some additional items are minimal (Reilly & Chao, 1982).

Effect of HR Practices on Organizational Level Measures of Performance

Most of the reviewed research on the effectiveness of various selection practices focused on the measurement of performance at the individual level of analysis. That is, it emphasized performance of individual employees as the criterion of relative success of a selection method. Russell and his colleagues pointed out this trend when they eloquently noted that “industrial and organizational psychology is obsessed with the evaluation of personnel functions at the individual level of performance” (Russell, Terborg, & Powers, 1985, p. 849). The assessment of effectiveness of selection methods at the organizational level appears to be largely ignored.

The question of selection utility at the organizational level of analysis is distinct from the question of an organization’s assessment of the merits of personnel selection practices as evident from accumulated evidence of changes in individual performance. This question concerns the relative effectiveness of one organization compared with another as a function of adopting particular selection procedures (Schmitt & Chan, 1998). It seems that with the increased emphasis on intellectual capital as a competitive advantage, the organizational-level utility questions should be of interest to applied personnel psychology researchers.

Some scholars have expressed concerns about this gap in theoretical and empirical knowledge. Schmitt and Schneider (1983) pointed out the lack of research on the contribution of personnel selection to organizational effectiveness criteria and proposed a research agenda. It includes defining the organizational level criteria of importance, surveying organizations and assessing their use of specific selection practices, assessing the surveyed organizations on the various criteria selected, and then correlating the two sets of organizational assessments. Despite Schmitt and Schneider's call for research to assess the relationship between selection practices and organizational level measures of performance, there remains a paucity of empirical research assessing selection utility at the organizational level.

A few studies have examined the effect of HR practices at the organizational level by identifying organizational characteristics that may predict the use of various HR functions. Jackson, Schuler and Rivero (1989) surveyed 267 organizations and obtained support for their hypothesis that personnel practices vary as a function of organizational characteristics, such as industry sector, competitive strategy, manufacturing technology, and organizational structure. For instance, industry sector was found to be predictive of certain performance appraisal and training practices: service organizations were more likely to include client input in the performance appraisal process, to use performance appraisal results for compensation purposes, and to provide training related to employees' current work than were manufacturing organizations. The practice of compensation was related to organizational structure (departmentalization by product vs. departmentalization by function). Companies that were structured according to product

divisions were more likely to offer employee bonuses for company-wide productivity and award stock options to employees (Jackson, Schuler, & Rivero, 1989).

Another study investigated the relation between organizational characteristics and uses of performance appraisal information (Cleveland, Murphy, & Williams, 1989). It was found that organizations of low complexity (consisting of fewer departments or subunits) were more likely to use performance appraisal for within-individuals comparisons and for implementing and evaluating human resources systems in organizations.

Managerial training also seems to be related to company size and industry type (Saari, Johnson, McLaughlin, & Zimmerle, 1988). Larger companies were found to be more likely to use needs assessment for managerial training, utilize formal training programs, and evaluate university programs based on the reputation of the school. Industry type was related to certain types of training: transportation/communication sector reported using job rotation to a greater extent than service industries. Financial companies were more likely than service industries to use university programs for training purposes.

While knowledge of the relationship between organizational characteristics and HR practices is useful, this type of research does not provide many insights regarding the effects of such practices on the organization's overall productivity and profitability. Some systematic work in this area has been done by Huselid and his colleagues (Huselid, 1995; Huselid, Jackson, & Schuler, 1997). In one study, Huselid (1995) attempted to examine the impact of various HR functions, such as extensive recruitment, training, attitude assessment, incentive compensation systems and grievance procedures, among others, on

organizational level outcomes. Specifically, turnover, productivity and corporate financial performance were assessed as possible determinants of HR practices. Based on the results, it was estimated that a one-standard-deviation increase in such practices would result in a relative 7.05 percent decrease in turnover, and, on a per employee basis, \$27,044 more in sales, \$18,641 more in market value and \$3,814 more in profits. These estimates, however, imply a constant level of investment in such practices every year. Nevertheless, the predicted impact of HR management practices on organizational productivity is considerable (Huselid, 1995).

These results were substantiated by another study that intended to examine the relationship between HR management effectiveness and productivity, cash flow, and market value (Huselid, Jackson, & Schuler, 1997). In this investigation, the HR practices were distinguished into strategic and technical. Technical practices include traditional HR practices, such as recruiting, selection, performance appraisal, training, and the administration of compensation and benefits. Strategic HR management involves designing and implementing a set of internally consistent policies and practices that ensure a firm's human capital contributes to the achievement of its business objectives. Examples of strategic HR activities include team-based job designs, flexible workforces, and employee empowerment. From data on 293 firms, it was established that strategic, but not technical, HR management practices were correlated with outcome variables after a variety of potential alternate explanations of the relationships were controlled for. Such results suggest that in order for HR functions to contribute to a company's effectiveness, they must be aligned with the organizations' objectives and business strategy.

Research to assess the relative effectiveness of individual HR functions on a firm's productivity has been undertaken by very few scholars. Russel and his colleagues (Russel, Terborg, & Powers, 1985) pointed out the need for this type of research and conducted a study investigating the relationship between training practices and organizational performance. The ultimate question that researchers wanted to answer was whether investment in training is linked with improved organizational performance. Archival data for 62 retail stores belonging to the same international merchandising organization were collected and analyzed. Both objective and subjective measures of organizational performance were used. Sales volume per employee was the objective assessment of store performance, and store image was utilized as a subjective measure of performance. Training practice was predictive of both measures of store performance. For instance, stores that had a basic training program for sales personnel had high sales volume per employee and a favorable store image. Authors caution that the sample used, due to its small size and limitation to only one industry, may restrict the generalizability of results. However, they also noted that this is probably the only study that directly assessed the impact of training on organizational performance and should serve as a first step toward better understanding of the effect of individual HR practices on organizational level measures of performance (Russel, Terborg, & Powers, 1985).

With regards to the relationship between selection practices and organizational performance, Terpstra and Rozell's (1993) research is credited as perhaps the only systematic study that was done in response to Schmitt and Schneider's (1983) call for this type of research. Terpstra and Rozell surveyed 201 companies in different industries and assessed the extent of use of five selection methods: the use of follow-up studies of

recruiting sources to determine which sources yield greater proportions of high-performing employees, the use of validation studies for the predictors used in selection, the use of structured interviews for selection, the use of cognitive aptitude and ability tests, and the use of BIBs or WABs. The authors wanted to explore whether firms that employed more of these practices would have higher levels of annual profit, profit growth, and sales growth. Results indicated that organizations that engaged in more of the five staffing practices had both significantly higher annual profit and profit growth than those organizations that engaged in fewer practices. The relationship between the number of staffing practices and sales growth was not significant. The relationship between the number of staffing practices used and the measure of overall performance, however, was significant.

Terpstra and Rozell (1993) also hypothesized that while all organizations may benefit from engaging in more effective staffing practices, companies in certain industries may exhibit a stronger relationship between adoption of effective selection practices and organizational performance. Indeed, results supported this assumption. In the service industry, the use of the five staffing practices accounted for a substantial proportion of the variance in each of the three individual measures of performance as well as in the overall performance measure. In the wholesale/retail industry, the use of the five selection practices explained a significant proportion of the variance in annual profit. In the financial industry, the use of the five practices also accounted for a substantial proportion of the variance in the sales growth measure. In contrast, organizations' use of effective selection methods in the manufacturing industry did not explain a significant proportion of the variance in any of the performance measures (Terpstra & Rozell, 1993).

These researchers hypothesized that the latter results may be explained by the fact that the service, retail, and financial industries depend on employees as the primary input or resource, and because fewer constraints on individual levels of performance may exist. In the manufacturing industry, however, human resources represent only one of a number of important inputs. Materials, production technology, and equipment may be equally important resources and may impose constraints on the effects of individual performance efforts (Terpstra & Rozell, 1993).

Terpstra and Rozell (1993) recognized that their research had several limitations. However, they stressed that their study provided some initial data on the possibility of a relationship between the use of effective selection practices and organizational level outcomes. They called for other researchers to do similar studies so both scholars and practitioners would gain better understanding of the relationship between selection practices and organizational performance.

*Relationship Between Effective HR Practices and Organizational Performance:
Implications for Researchers and Practitioners*

The knowledge of the relationship between selection practices and organizational level outcomes may be of value to I/O psychologists. Many of them engage in research with the hope to improve business practices. However, much of this work remains unknown to the mainstream business community. What might account for this state of affairs?

A part of the problem may lie in the way psychologists evaluate their findings. It is no secret that statistically significant findings are a source of much joy in the scholars' circles. However, in the field of I/O psychology, such terms may not mean much to the

audiences that are the target beneficiary of the research findings. As one scholar noted, “like or not, the language of business is dollars, not correlation coefficients” (Cascio, 1982, p. v).

Some researchers have advocated the use of utility analyses in order to encourage business managers to adopt I/O psychology interventions (Cascio, 1982; Rauschenberger & Schmidt, 1987). While many scholars have attempted to evaluate their findings in terms of utility analyses, others argue that such data are not enough to convince managers to adopt certain practices. A couple of researchers even presented controversial findings that the use of analyses advocating the net benefits of a new procedure resulted in reduced support for the procedure (Latham & Whyte, 1994; Whyte & Latham, 1997). While such findings seem discouraging, other psychologists argue that the culprit of the reduced support was not the analyses themselves; rather, it was the way they were communicated to the business managers.

For instance, Rauschenberger and Schmidt (1982) note that much of the psychological research remains unnoticed by the business community “due in large part to the inability of psychologists and other human resource professionals to communicate their research findings in a manner that is clear and credible to organizational decision makers and consistent with typical business conventions” (p. 50). Johns (1993) argues that the way psychologists present their findings may be responsible for the low rate of adoption of advanced personnel practices by organizations. Johns advocated for I/O psychologists to view their interventions as administrative, not technical, interventions. The difference is that technical interventions affect an organization’s products or service in a more direct manner. Administrative interventions, however, are a part of the social

system of an organization and as such are susceptible to many factors that may influence their implementation. Some examples of such factors include organizational politics, government regulations, the decision-making frame of managers, and the nature of the presented theory. If I/O psychologists view their interventions in administrative terms, they are more likely to take into account the social factors that may influence the adoption of the practices they are advocating and communicate their findings in manner that is more sensitive to the organizational context (Johns, 1993).

Expressing research findings in terms of financial gains or losses may be beneficial if the goal of an I/O psychologist is to communicate his or her findings to the business community. As the literature points out, the manner in which these financial gains are expressed is likely to influence managers' decisions, not the figures themselves. Thus, if the present research is successful in finding a positive relationship between effective selection practices and organizational level measures of performance, it may be another type of financial evidence associated with the implementation of such practices. This evidence may constitute the type of data needed to encourage some organizational members to adopt effective selection procedures.

Selection Utility at the Organizational Level Measures of Performance: Summary

Personnel research literature contains an abundance of information on the relative effectiveness of various selection methods. The majority of scholars tend to agree that certain selection practices are more effective in predicting individual performance than others. Examples of such good practices include the use of job analysis, validating all selection tests employed, tracking the effectiveness of various recruiting sources used,

using structured as opposed to unstructured interviews, using cognitive ability tests to select future employees, and using BIBs or WABs in the selection process.

However, most of these selection techniques were judged to be effective when individual performance was used as a criterion. There are very few studies that have attempted to examine the impact of these procedures at the organizational level, even though some researchers specifically called for investigating this relationship (Schmitt & Schneider, 1983).

Some studies have come close to employing organizational levels of measurement by identifying various organizational characteristics, such as industry type, organizational complexity, company size, and organizational structure, that may predict the use of certain HR practices (Cleveland, Murphy, & Williams, 1989; Jackson, Schuler & Rivero, 1989; Saari, Johnson, McLaughlin, & Zimmerle, 1988). Another venue of research in this area includes assessing the impact of adopting various HR practices on the organizational performance (Huselid, 1995; Huselid, Jackson, & Schuler, 1997). Some researchers have attempted to investigate the effect of individual HR practices on organizational effectiveness. For instance, training practices were predictive of higher sales in a sample of retail stores (Russel, Terborg, & Powers, 1985).

In personnel selection, there was only one systematic study investigating the effect of effective selection methods on firm performance (Terpstra & Rozell, 1993). Its results suggested that companies that engaged in more of the effective selection practices exhibited better organizational performance. Some researchers proposed that stressing financial benefits of adopting a psychological intervention may aid practitioners in

encouraging business leaders to implement effective HR practices (Cascio, 1982; Johns, 1993; Rauschenberger & Schmidt, 1987).

The Present Study

This study attempted to fill a gap in theoretical knowledge on the impact of personnel selection practices on organizational level measures of performance. The present study surveyed financial service institutions (credit unions) to determine if organizations using more of effective selection methods show superior organizational performance. The financial services industry was selected because Terpstra and Rozell's (1993) research suggested this type of industry might benefit substantially from adopting advanced personnel selection techniques.

Hypotheses

Based on the insights from the literature, the following hypotheses were investigated:

Hypothesis 1: Organizations that use more of the six selection methods (job analysis, validation studies, investigating the effectiveness of recruiting sources, using structured interviews, cognitive ability tests, and WABs/BIBs) will exhibit significantly better organizational performance.

Hypothesis 2: For each of the six selection methods, organizations that use a particular method will evince significantly better organizational performance than organizations that do not use that particular method.

Hypothesis 3: For each of the six selection methods, organizations that have used the method for a longer period of time will exhibit significantly better organizational performance than organizations that have used the method for a shorter period of time.

CHAPTER 2

METHOD

Participants

Since the literature seems to suggest that the financial services industry is among several that is likely to gain substantial financial benefits from adopting effective selection methods, this industry was chosen for the study. Specifically, the researcher surveyed a sample of credit unions across the U.S. A total of 740 credit unions were selected from the 2001 Callahan and Associates' Credit Union Directory. A nonrandom stratified sample was used to select the participants for the study. The sample was stratified by state. This procedure was chosen to assure that institutions from all states would be represented in the sample. The number of credit unions selected from each state was determined based on their proportional representation of credit unions in the U.S. according to 2001 Callahan and Associates' Credit Union Directory. The sample was drawn from the biggest (by asset size) 50 institutions in each state. This procedure was used to control for the possible confounding variable of size on the results of the study.

Design

It was necessary to determine what types of selection methods credit unions use to select entry-level employees. Therefore, surveys were used to gather that information. Collection of this information took place through mail questionnaires. The respondent (top HR executive) at each institution was asked to identify the name of the organization on the questionnaire. Financial information on each organization was obtained from the web site www.ncua.gov that is available for viewing to the general public at no charge and contains basic financial information on all credit unions.

Each institution was assigned a total selection index based on the number of selection techniques it used. This score was the independent variable for Hypothesis 1. An institution using none of the techniques received a score of 0, while an institution using all six of the techniques received a score of 6. Presence or absence of a specific selection technique in the selection process was the independent variable for Hypothesis 2. Time duration of using a specific selection technique was the independent variable for Hypothesis 3.

The institutions' financial success was measured by three indices of financial performance: net operating expenses to average assets ratio (earnings ratio), members to full-time employees ratio (productivity ratio), and market share growth. All of these variables were collected for the year of 2001. The selected indices of performance were chosen to represent a variety of measures typically used to assess credit unions' economic situation. These measures are referred to as earnings ratio, productivity ratio, and market share growth, respectively, hereafter. The researcher used the same classification names for these measures as the web site from which they were obtained. These indices served as the dependent variables for all hypotheses in the study. When comparing organizations using these indices, those exhibiting a smaller earnings ratio and larger productivity ratio and market share growth were considered more effective financially.

Instrumentation

Survey. A questionnaire was constructed for the study to assess the level of sophistication of selection procedures used by credit unions participating in the study. (Appendix A). On the questionnaire, the respondent at each participating institution was asked to answer basic questions about the common employee selection practices.

To check the validity of the instrument, the researcher conducted pilot testing with a nonrandom sample of six HR managers. One of the managers was from a manufacturing company, while the rest were from credit unions across the U.S. The managers were given the survey and were asked to complete it and provide feedback about the wording of the items. All pilot-testing participants stated that the instrument was easily understood. The major suggestion for improvement was to define some of the terms in the survey (such as *job analysis* and *weighted application blank*).

Cover letter. A cover letter was mailed to the participants along with the survey (Appendix B). The cover letter explained the purpose of the study and provided directions for answering and mailing the questionnaire. The researcher conducted pilot testing of the cover letter by giving it to the same sample of HR managers that received the survey. The participants did not have any suggestions for improvements for the cover letter.

Procedures

After securing the thesis committee's permission to proceed with the study, the researcher submitted the proposal for the research to the Institutional Review Board (IRB) at Emporia State University to obtain the permission to begin the study. After the IRB's permission to proceed with the study was obtained, data collection began.

Returned questionnaires were coded and data were entered into the SPSS software. Financial data on the institutions that returned the surveys were obtained from the web site and entered into SPSS software.

CHAPTER 3

RESULTS

126 HR executives completed and returned the selection practices survey, which resulted in a 17% return rate. Four respondents failed to identify the names of their credit unions and thus were excluded from the analyses because financial data could not be collected on those institutions. Thus, data on 122 organizations were used to test the research hypotheses. The sample of respondents was quite diverse, representing 40 U.S. states. The ten states that did not participate in the study were Alaska, Delaware, Idaho, Louisiana, Mississippi, Nevada, New Hampshire, South Dakota, Utah, and Wyoming.

On average, credit unions used 2.13 of the six effective selection techniques ($SD = 1.4$, range 0 - 5). The percentages of use of each individual method are as follows: (a) structured interviews – 74%, (b) conducting job analysis – 55%, (c) investigating the effectiveness of recruiting sources – 39%, (d) using cognitive ability or aptitude tests – 27%, (e) conducting validation studies – 15%, and (f) using WABs or BIBs – 4%. Descriptive statistics for financial performance measures can be seen in Table 1. There were two outliers in the market share growth measures (the reported numbers were unrealistically high - approximately 20 times higher than the average). These outliers were excluded from all of the analyses because they possibly were a result of data entry error on the web site.

Hypothesis 1

One-tailed Pearson's correlation coefficients were run on the total selection index and the three measures of financial performance. A negative correlation for the earnings ratio and positive correlations for the productivity ratio and market share growth would

Table 1

Descriptive Statistics for Financial Performance Measures

Financial performance measure	Range	<i>M</i>	<i>SD</i>
Earnings	.69 – 6.54	3.62	1.07
Productivity	250 – 991	402	108
Market share growth	-2% – 37%	15%	6%

lend support for this hypothesis. There were no significant results in the expected direction, suggesting that organizations using more of the six selection practices do not exhibit better earnings ($r = .16, p < .04$), productivity ($r = -.18, p < .03$), or market share growth ($r = .03, p < .36$). Such results provide no support for Hypothesis 1.

Hypothesis 2

To examine whether those organizations that use a particular selection method do better financially compared to those organizations that do not engage in a particular selection technique, one-tailed independent sample t tests were employed. Descriptive statistics for this analysis are presented in Table 2. There were no significant differences between the means. This suggests that for each of the six selection methods, companies that employ a particular method do not show significantly better earnings, productivity, or market share growth. Thus, Hypothesis 2 was not supported.

Hypothesis 3

It was hypothesized that usage of a selection technique over time will have a positive effect on financial performance. Pearson's correlation coefficients (one-tailed) were run on the number of years that a particular method was used by the organizations and each of the three dependent measures of performance. For each selection method, only those organizations that were using the method at the time of the survey were included in the analysis. Correlation coefficients for this analysis can be seen in Table 3. The only significant relationship observed was that of the length of time of using validation studies and earnings data ($r = -.64, p < .01$). The relationship was expected to be negative, since a smaller net operating expenses to average assets ratio is indicative of

Table 2

Mean Differences for Financial Performance Measures

Selection method	Do not use method			Use method		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Earnings Ratio						
Job analysis	56	3.64	1.12	66	3.60	1.03
Validation studies	104	3.54	1.05	18	4.07	1.09
Recruiting sources	74	3.39	.98	48	3.98	1.09
Structured interview	32	3.35	1.07	90	3.71	1.05
Cognitive ability tests	89	3.67	1.09	33	3.48	.98
WABs/BIBs	116	3.62	1.06	5	3.62	1.51
Productivity Ratio						
Job analysis	56	414	121	66	393	94
Validation studies	104	410	112	18	355	61
Recruiting sources	74	413	119	48	386	86
Structured interview	32	414	100	90	398	111
Cognitive ability tests	89	405	95	33	394	137
WABs/BIBs	116	404	109	5	369	79

Table 2 (continued)

Selection method	Do not use method			Use method		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
	Market Share Growth					
Job analysis	55	15%	7%	65	15%	6%
Validation studies	103	15%	6%	17	14%	6%
Recruiting sources	74	14%	7%	46	15%	6%
Structured interview	32	14%	7%	88	15%	6%
Cognitive ability tests	87	15%	7%	33	14%	6%
WABs/BIBs	114	15%	6%	5	15%	3%

Table 3

Correlations Between the Length of Using Each Selection Method and Measures of Financial Performance

Selection method	<i>n</i>	Earnings	Productivity	Market share growth
Job analysis	63	-.09	.16	-.19
Validation studies	17	-.64*	.12	-.25
Recruiting sources	45	.04	-.14	-.03
Structured interview	84	-.06	.14	.10
Cognitive ability tests	30	-.13	.28	-.16
WABs/BIBs	5	.26	-.66	-.31

Note. Negative correlations for earnings ratio and positive correlations for productivity ratio and market share growth were proposed by the researcher.

*Correlation is significant at the .01 level (one-tailed).

better financial performance. With only one relationship out of eighteen showing significant association, Hypothesis 3 was not supported.

Exploratory Analyses

A stepwise multiple regression analysis was performed on the three dependent measures to examine how much variance could be explained by the six selection techniques. As can be seen in Table 4, all six selection techniques accounted for 12% of the variance in earnings; five of them (excluding cognitive ability tests) accounted for 4% of the variance in productivity, and four of them (excluding job analysis and WABs/BIBs) accounted for 2% of the variance in the market share growth.

With earnings, only the presence of measures designed to investigate the effectiveness of recruiting sources was a significant predictor. However, this relationship was in the opposite direction than that predicted by the researcher and thus does not provide any additional support for the proposed hypotheses. With productivity, the use of validation studies was the only significant predictor. This relationship was not in the expected; thus, it does not provide any additional support for the proposed hypotheses. None of the predictors were significantly related to the market share growth measure.

Do organizations that include HR executives on their senior management teams exhibit better organizational performance compared to those organizations that do not include HR executives on their senior management teams? This was another exploratory analysis that was of interest to the researcher. It was decided to explore this question in light of some evidence that strategic HR management practices were found to influence organizational outcomes (Huselid, Jackson, & Schuler, 1997). It was assumed that those organizations that include HR executives on the senior management team are more likely

Table 4

Summary of Regression Analysis for Selection Methods Predicting Three Measures of Financial Performance

Selection method	R^2	R^2 change	B	$SE B$	β
Earnings					
1. Recruiting sources	.077	.077	.61	.19	.002*
2. Cognitive ability tests	.092	.016	-.30	.21	-.13
3. Structured interview	.105	.013	.28	.22	.12
4. Validation studies	.112	.007	.29	.29	.09
5. WABs/BIBs	.118	.006	-.42	.48	-.8
6. Job analysis	.123	.005	-.15	.19	-.7
Productivity					
1. Validation studies	.035	.035	-57.91	27.9	-.19*
2. Job analysis	.039	.004	-13.93	19.83	-.05
3. Recruiting sources	.041	.002	-11.39	22.03	-.05
4. WABs/BIBs	.042	.001	-14.38	50.29	-.03
5. Structured interview	.042	.000	-4.71	23.07	-.02

* Significant at the .05 level

Table 4 (continued)

Selection method	R^2	R^2 change	B	$SE B$	β
Market share growth					
1. Structured interview	.008	.008	1.28	1.31	.09
2. Cognitive ability tests	.012	.004	-.86	1.32	-.06
3. Validation studies	.014	.002	-.84	1.76	-.05
4. Recruiting sources	.016	.002	.69	1.34	.05

to engage in such strategic HR management. Independent sample t-tests were used to determine whether there is a difference in organizational performance between those organizations that engage in strategic HR practices and those that do not. Results revealed that the two groups of organizations did not differ on the three measures of financial performance: earnings ($M_{\text{strategic}} = 3.53$, $M_{\text{non-strategic}} = 3.82$, $t = -1.34$, $p < .18$), productivity ($M_{\text{strategic}} = 405$, $M_{\text{non-strategic}} = 394$, $t = .51$, $p < .61$), or market share growth ($M_{\text{strategic}} = 15\%$, $M_{\text{non-strategic}} = 16\%$, $t = -.68$, $p < .49$).

CHAPTER 4

DISCUSSION

This research attempted to investigate whether using sophisticated selection methods, as defined by the academic literature, has any effect on organizational performance. An overview of the literature on employee selection suggested that using advanced selection techniques tends to positively influence individual performance of employees. The question of interest to the researcher, however, was whether using such selection methods will have an effect on organizational outcomes.

Contrary to the proposed hypotheses, the results of this study indicated that there was no significant relationship between using the six effective selection methods and financial performance measures. Those credit unions that adopted more of the six effective selection techniques did not exhibit better earnings, productivity, or market share growth. When compared by individual selection methods, companies that engaged in a specific technique did not show superior organizational outcomes compared to those companies that did not utilize that specific method. Finally, when the length of using a certain method was correlated with all three financial performance measures, with the exception of one selection method, there were no significant relationships. The only significant relationship observed in this research was that of the length of employing validation studies for selection methods and earnings data. Companies that have been validating their selection methods for longer periods of time exhibited better earnings ratios.

The finding regarding the positive relationship between the length of using validation data and earnings measures goes hand in hand with previous research that

demonstrated the usefulness of using valid selection methods in predicting individual performance (Brown, 1981; Terborg & Russel, 1988). The present study suggests that this relationship may extend to the organizational level of measurement. The earnings measure used in this study was the ratio of net operating expenses to average assets. It could be argued that credit unions are able to select better quality employees through using valid selection methods, and those employees are able to either minimize organizations' operating expenses or contribute to the acquisition of assets. While this finding is promising, it should be interpreted very cautiously because the nature of the performed analyses did not allow for any causal conclusions. It may also be argued that successful organizations are more likely to start using sophisticated selection methods, including validating their selection tests.

Overall, however, the results of this study suggest that there is no relationship between utilizing advanced selection methods and financial outcomes at the organizational level of measurement. Such results seem contrary to the existing literature that documented the positive impact of advanced selection practices on individual level of performance (Conway, Jako, & Goodman, 1995; Hunter & Hunter, 1984; Saks, 1994; Schmidt, Hunter, Outerbridge, & Trattner, 1986). If organizations are gaining benefits in the form of superior workers by using good selection techniques, it seemed reasonable to propose that those better employees would be able to contribute in some way to organizational bottom line results. The present study suggests, however, that organizations may not be able to enjoy superior financial outcomes by hiring the best applicants.

In addition, present results seem to refute the findings of the previous studies that established the positive impact of individual HR practices on increased organizational effectiveness. Investment in training was found to influence sales volume in the retail industry (Russel, Terborg, & Powers, 1985) and using advanced selection procedures had a positive relationship with organizational profitability in several other industries (Terpstra & Rozell, 1993). Obtained findings are also surprising in light of the conclusion by Terpstra and Rozell that the benefits of employing effective selection techniques are likely to influence organizational performance of companies in the service and financial industries, and not in some others, such as manufacturing.

If the limitations of the study are disregarded for the moment, then these results suggest that employing effective selection practices does not have an effect on financial performance of organizations in the financial service industry. Even though Terpstra and Rozell (1993) suggested that employees in the financial industry may have fewer constraints on their performance and thus are able to contribute to organizational level outcomes, this research does not support such an assumption. The present study suggests that even if organizations hire the best applicants, employees' efforts to influence bottom line financial performance may be moderated by a number of other variables, such as top management's strategic decisions, location of the company, level of competition, or government regulations, just to name a few. The year of 2001, for example, was marked by a slump in the national economy that was exacerbated by the terrorist attacks of September 11. It is logical to assume that such unfavorable business conditions may have had more effect on the organizational performance of credit unions than the efforts of individual employees.

Implications of the study conducted by Huselid and his colleagues (Huselid, Jackson, & Schuler, 1997) may also be of value in interpreting present findings. These researchers established that not all types of HR procedures were correlated with organizational outcomes. Specifically, strategic HR initiatives (internally consistent policies and practices that ensure a firm's capital contributes to the achievement of business objectives) had more effect on organizational productivity than traditional HR practices, such as recruiting, selection, and training. Such a conclusion seems to be particularly relevant to the findings of the present study. It is possible that increasing the technical sophistication of selection methods is not sufficient to influence bottom line results. It may be more beneficial to design and implement advanced selection methods that are aligned with the overall business objectives of the firm. While the exploratory analyses in this study did not reveal any association between strategic HR management and organizational effectiveness, it is also important to note that the measurement of strategic initiatives was assessed by a single question on the survey, which may not truly assess the level of strategic HR management at surveyed organizations. Thus, future researchers should not only attempt to determine how technically sophisticated the selection practices are, but should also examine whether those practices reflect the strategic orientation of the company's upper management.

It is also possible that the proposed relationship between advanced selection methods and organizational productivity does exist, but the present research failed to detect it due to its limitations. As in any survey research, low response rate may have skewed the available data. The selection instrument in the study was tested on a limited number of participants and the researcher does not have data on its validity or reliability.

The total selection index that was used to test the first hypothesis was quite simple and may not reflect the true extent of sophistication of the selection practices in the surveyed organizations.

Another issue that should be considered is the type of financial indicators chosen as the dependent variables for this type of study. Terpstra and Rozell (1993) used profit margin, average annual growth in profit, and average annual sales growth as financial performance indicators, whereas the researcher of this study chose to use financial performance ratios as dependent variables. It is entirely possible that if the relationship between selection practices and organizational outcomes does exist, it may not show up in all types of financial performance indicators. Some organizational outcomes may be more sensitive to the influence of HR practices. If such measures are chosen for the study, this relationship is more likely to be detected. Future research should explore whether this assertion has any merit.

An additional research venue that should be considered by future researchers is conducting historical or longitudinal research on those organizations that adopt sophisticated selection practices. Comparing companies on certain organizational outcomes, as was done in the present study, may introduce many extraneous variables that the researcher may not be able to control. Conducting longitudinal studies of a limited number of companies before and after they adopt advanced selection methods could allow for a more systematic examination of the linkages between such practices and organizational performance.

At present, it is unclear whether selecting better employees will help organizations improve their overall productivity and profitability. It is the belief of the

researcher that this particular line of research should be explored further. Though not a primary goal of the study, it was found that there is a wide gap between what should be done and what is actually done by the business world with regards to employee selection. For instance, while I/O psychologists continue to stress the importance of job analysis as the first step in any selection study, only half of the surveyed institutions conduct such job analysis. A disappointing 15% of the organizations conduct validation studies, another important step in one's selection procedures. It seems that the value of structured interview has been recognized by the business world, for the majority of the surveyed companies (74%) have adopted such technique. This optimistic number is more of an exception to the rule, however. Overall, while the value of the six selection methods described here has been widely documented, organizations fail to adopt them.

Due to this overwhelming discrepancy between the real and ideal, it is recommended by the researcher that I/O psychologists continue to investigate the effect of adopting advanced selection methods on organizational productivity. If certain industries are more likely to experience financial gains by improving their hiring practices, such knowledge will allow practitioners to better communicate with the business community and educate them about the value of adopting good selection practices.

REFERENCES

- Allworth, E., & Hesketh, B. (2000). Job requirements biodata as a predictor of performance in customer service roles. *International Journal of Selection and Assessment, 8*, 137-147.
- Bobko, P., Roth, P. L., & Potosky, D. (1999). Derivation and implication of a meta-analytic matrix incorporating cognitive ability, alternative predictors, and job performance. *Personnel Psychology, 52*, 561-589.
- Breaugh, J. A. (1981). Relationships between recruiting sources and employee performance, absenteeism, and work attitudes. *Academy of Management Journal, 24*, 142-147.
- Bridges, W. (1994, September 19). The end of the job. *Fortune, 130*, 62-74.
- Brown, S. H. (1981). Validity generalization and situational moderation in the life insurance industry. *Journal of Applied Psychology, 66*, 664-670.
- Burnett, J. R., Fan, C., Motowidlo, S. J., & Degroot, T. (1998). Interview notes and validity. *Personnel Psychology, 51*, 375-396.
- Campion, M. A., Palmer, D. K., & Campion, J. E. (1997). A review of structure in the selection interview. *Personnel Psychology, 50*, 655-702.
- Caretta, T. R., & Doub, T. W. (1998). Group differences in the role of g and prior job knowledge in the acquisition of subsequent job knowledge. *Personality and Individual Differences, 24*, 585-593.
- Carlson, K. D., Scullen, S. E., Schmidt, F. L., Rothstein, H., & Erwin, F. (1999). Generalizable biographical data validity can be achieved without multi-organizational development and keying. *Personnel Psychology, 52*, 731-755.

- Cascio, W. F. (1982). *Costing human resources: The financial impact of behavior in organizations*. New York: Van Nostrand Reinhold.
- Cascio, W. F. (1998). *Applied psychology in human resource management* (5th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Chung, Y. Y. (2001). The validity of biographical inventories for the selection of salespeople. *International Journal of Management*, 18, 323-329.
- Cleveland, J. N., Murphy, K. R., & Williams, R. E. (1989). Multiple uses of performance appraisal: Prevalence and correlates. *Journal of Applied Psychology*, 24, 130-135.
- Conway, J. M., Jako, R. A., & Goodman, D. F. (1995). A meta-analysis of interrater and internal consistency reliability of selection interviews. *Journal of Applied Psychology*, 80, 565-579.
- Drakeley, R. J., Herriot, P., & Jones, A. (1988). Biographical data, training success and turnover. *Journal of Occupational Psychology*, 61, 145-152.
- Drucker, P. E. (1987, August 2). Workers' hands bound by tradition. *Wall Street Journal*, 18.
- Gable, M., Hollon, C., & Dangelo, F. (1992). Increasing the utility of the application blank: Relationship between job application information and subsequent performance and turnover of salespeople. *Journal of Personal Selling and Sales Management*, 12, 39-55.
- Gatewood, R. D., & Field, H. (1994). *Human resource selection* (3rd ed.). Fort Worth: Harcourt Brace.

- Ghiselli, E. E. (1973). The validity of aptitude tests in personnel selection. *Personnel Psychology, 26*, 461-477.
- Griffeth, R. W., Hom, P. W., Fink, L. S., & Cohen, D. J. (1997). Comparative tests of multivariate models of recruiting sources effects. *Journal of Management, 23*, 19-36.
- Harvey-Cook, J. E., & Taffler, R. J. (2000). Biodata in professional entry-level selection: Statistical scoring of common format applications. *Journal of Occupational and Organizational Psychology, 73*, 103-118.
- Hill, R. E. (1970). A new look at employee referrals. *Personnel Journal, 49*, 144-148.
- Hunter, J. E., & Hunter, R. F. (1984). Validity and utility of alternative predictors of job performance. *Psychological Bulletin, 96*, 72-98.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal, 38*, 635-672.
- Huselid, M. A., Jackson, S. E., & Schuler, R. S. (1997). Technical and strategic human resource management effectiveness as determinants of firm performance. *Academy of Management Journal, 40*, 171-188.
- Jackson, S. E., Schuler, R. S., & Rivero, J. C. (1989). Organizational characteristics as predictors of personnel practices. *Personnel Psychology, 42*, 727-786.
- Johns, G. (1993). Constraints on the adoption of psychology-based personnel practices: Lessons from organizational innovation. *Personnel Psychology, 46*, 569-592.

- Kirnan, J. P., Farley, J. A., & Geisinger, K. F. (1989). The relationship between recruiting source, applicant quality, and hire performance: An analysis by sex, ethnicity, and age. *Personnel Psychology, 42*, 293-309.
- Latham, G. P., & Whyte, G. (1994). The futility of utility analysis. *Personnel Psychology, 47*, 31-46.
- Nelson, J. B. (1997). The boundaryless organization: Implications for job analysis, recruitment, and selection. *Human Resource Planning, 20*, 39-49.
- Pulakos, E. D., & Schmitt, N. (1996). An evaluation of two strategies for reducing adverse impact and their effects on criterion-related validity. *Human Performance, 9*, 241-258.
- Rauschenberger, J. M., & Schmidt, F. L. (1987). Measuring the economic impact of human resource programs. *Journal of Business and Psychology, 2*, 50-59.
- Ree, M. J., Carretta, T. R., & Teachout, M. S. (1995). Role of ability and prior job knowledge in complex training performance. *Journal of Applied Psychology, 80*, 721-730.
- Reilly, R. R., & Chao, G. T. (1982). Validity and fairness of some alternative employee selection procedures. *Personnel Psychology, 35*, 1-62.
- Russell, J. S., Terborg, J. R., & Powers, M. L. (1985). Organizational performance and organizational level training and support. *Personnel Psychology, 38*, 849-863.
- Rynes, S. L. (1991). Recruitment, job choice, and post-hire consequences: A call for new research direction. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (pp. 399-444). Palo Alto, CA: Consulting Psychologists Press.

- Saari, L. M., Johnson, T. R., McLaughlin, S. D., & Zimmerle, D. M. (1988). A survey of management training and education practices in U.S. companies. *Personnel Psychology, 41*, 733-745.
- Saks, A. M. (1994). A psychological process investigation for the effects of recruitment source and organization information on job survival. *Journal of Organizational Behavior, 15*, 225-244.
- Sanchez, J. (1994). From documentation to innovation: Reshaping job analysis to meet emerging business needs. *Human Resource Management Review, 4*, 51-74.
- Schmidt, F. L., Hunter, J. E., Outerbridge, A. N., & Trattner, M. H. (1986). The economic impact of job selection methods on size, productivity, and payroll costs of the federal work force: An empirically based demonstration. *Personnel Psychology, 39*, 1-30.
- Schmidt, F. L., & Rader, M. (1999). Exploring the boundary conditions for interview validity: Meta-analytic validity findings for a new interview type. *Personnel Psychology, 52*, 445-464.
- Schmitt, N., & Chan, D. (1998). *Personnel selection: A theoretical approach*. Thousand Oaks, CA: Sage Publications.
- Schmitt, N., & Schneider, B. (1983). Current issues in personnel selection. In K. R. Rowland & G. R. Ferris (Eds.), *Research in personnel and human resources management* (pp. 85-126). Greenwich, CT: JAI.
- Society for Industrial and Organizational Psychology, Inc. (1987). *Principles for the validation and use of personnel selection procedures* (3rd ed.). College Park, MD: Author.

- Spector, P. E., Schneider, J. R., Vance, C. A., & Hezlett, S. A. (2000). The relation of cognitive ability and personality traits to assessment center performance. *Journal of Applied Social Psychology, 30*, 1474-1491.
- Taylor, S. (1994). The relationship between sources of new employees and attitudes toward the job. *Journal of Social Psychology, 134*, 99-113.
- Taylor, M. S., & Schmidt, D. W. (1983). A process oriented investigation of recruitment source effectiveness. *Personnel Psychology, 36*, 343-354.
- Terborg, J. R., & Russel, J. S. (1988). The economic impact of valid employee selection practices under typical, best, and worst case scenarios. In R. S. Schuler, S. A. Youngblood, & V. L. Huber (Eds.), *Readings in personnel and human resources management* (3rd ed., pp. 530-541). St. Paul, MN: West.
- Terpstra, D. E., & Rozell, E. J. (1993). The relationship of staffing practices to organizational level measures of performance. *Personnel Psychology, 46*, 27-48.
- Vinchur, A. J., Schippmann, J. S., Switzer, F. S., & Roth, P. L. (1998). A meta-analytic review of predictors of job performance for salespeople. *Journal of Applied Psychology, 83*, 586-597.
- Wanous, J. P., & Colella, A. (1989). Organizational entry research: Current status and future directions. In G. R. Ferris & K. M. Rowland (Eds.), *Research in personnel and human resources management, Vol. 7* (pp. 59-120). Greenwich, CT: JAI Press.
- Werbel, J. D., & Landau, J. (1996). The effectiveness of different recruitment sources: A mediating variable analysis. *Journal of Applied Psychology, 26*, 1337-1350.

Whyte, G., & Latham, G. (1997). The futility of utility analysis revisited: When even an expert fails. *Personnel Psychology, 50*, 601-610.

Appendix A

Survey

EMPLOYEE SELECTION PRACTICES SURVEY

Complete name of your credit union _____

Where are your headquarters located (city and state)? _____

To whom do you (top HR executive) report? Check one box.

CEO CFO Other (specify job title) _____

The following questions will ask you about the typical methods used to select entry-level employees (such as tellers) at your institution.

1. **Job analysis** is the process of determining work activities and requirements of a certain job through employee interviews or observations. Does your credit union conduct such job analyses for entry-level positions (such as tellers) on a regular basis (every few years)? Check one box.

NO YES —————> If yes, how many years ago did you start conducting such job analysis?

2. Does your institution conduct **validation studies** (collecting evidence to determine whether the selection methods used to hire entry-level employees are able to distinguish among good and bad applicants)? Check one box.

NO YES —————> If yes, for how many years has your credit union been conducting validation studies?

3. Does your credit union collect evidence to determine whether certain **recruiting sources** tend to provide better quality applicants? Check one box.

NO YES —————> If yes, for how many years has your credit union been collecting this evidence?

4. Does your credit union conduct **structured employment interviews** (asking the same questions of all applicants and using some standard procedure to score the responses)? Check one box

NO YES —————> If yes, for how many years has your credit union been using structured interviews?

Please continue on the other side



5. Does your institution use **tests of mental ability** (tests that measure applicants' intelligence or the amount of knowledge they possess) in the selection process of entry-level employees? Check one box.

NO YES →

If yes, for how many years has your credit union been using these tests?

6. Does your institution ask entry-level applicants to fill out a **weighted application blank** (an application form on which certain items are given more weight in the selection process) **OR** a **biographical information blank** (an application on which questions are asked in a multiple-choice format and some items are given more weight)? Check one box.

NO YES →

If yes, for how many years has your credit union been using such application forms?

If you have any comments about this questionnaire or the selection practices at your institution, please write them here.

OPTIONAL:

- Please mark this box if you would like to receive an electronic copy of the results and learn how you can improve the selection process at your institution. Please provide your

Name _____

Your email address _____

What word processing program do you use?

PC Mac Other (specify) _____

Thank you for your participation
Please return the survey in the enclosed envelope to

Oksana Drogan, Dept. of Psychology & Special Education, Emporia State University, Box 4031, 1200 Commercial St., Emporia KS 66801

Appendix B

Cover Letter

Date

Name of credit union

Address

Address

Dear top human resource executive

Many credit unions want to increase the number of loyal members. Some business analysts argue that credit unions could accomplish this task by carefully selecting front-office employees, such as tellers. Hiring friendly tellers may help attract and retain loyal members, which eventually may influence the company's bottom line numbers. How true is this assumption?

Your organization has been carefully selected to participate in a study designed to answer the question whether careful selection of entry-level employees has an impact on credit unions' financial performance. In order to help the researcher with this study, the top human resource executive at your institution is asked to complete the enclosed survey. Because you have been selected as a part of a small number of organizations to study, your participation is extremely important.

Please return the enclosed survey by June 11. It will take you approximately 10 minutes to fill it out. Your participation will help credit unions determine the impact of selection practices on financial performance. By returning the survey, you will also help the researcher satisfy graduation requirements for a master's degree in industrial/organizational psychology.

The results of this research will be kept confidential and will only be used for research purposes at ESU. If you would like to receive a copy of the final report (names of individual institutions will not appear on it) and learn how you can improve your hiring practices, please check "copy of results requested" box on the enclosed survey after completing it. Your participation in this study is completely voluntary, and if you decide not to participate, you will not be subjected to reprimand or any other form of reproach. You agree to participate in this study by completing the enclosed questionnaire.

I would be happy to answer any questions you might have. Feel free to email me at drogan_oksana@stumail.emporia.edu or call me at (620) 340-0102. You can also contact my thesis advisor, Dr. George Yancey, Ph.D., at yanceyge@emporia.edu or (620) 341-5806. Thank you for your assistance.

Sincerely,

Oksana Drogan

PERMISSION TO COPY

I, Oksana Drogan, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential gain will be allowed without written permission of the author.

Oksana Drogan

Signature of author

August 26, 2002

Date

Selection Utility at the Organizational Level
Measures of Performance

Title of Thesis

Kay Cooper

Signature of Graduate Office Staff Member

2002-2003