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Noninformation employees perform in jobs characterized by (a) narrowly defined tasks that require minor responsibility; (b) heavy supervision and passive order taking; (c) specific response to a limited number of possible problems with deviations from the norm handled by specialists; (d) task completion is more important than continued improvement of performance; and (e) specific tasks are independent of the purpose in the organization's overall operation (Law et al., 1992).

Research Design and Method

Bergman, 1992).

The purpose of this study was to investigate whether the type of job (i.e., information job versus noninformation job) had an effect on employee work attitudes as rated by their supervisors. In this study, the OWEI, a selfreporting type instrument, was used to record supervisors' responses on the work attitudes of information and noninformation employees. The OWEI is a 50-item instrument developed for measuring affective work attitudes using a 1 to 7 Likert-type scale. It has been found to be a highly reliable instrument that yielded Cronbach's coefficient alpha greater than 0.90 for various populations. In this study, 304 supervisor responses on information employee work attitudes and 277 supervisor responses on noninformation employee work attitudes were used. The number of responses was adequate to conduct a two-group MANOVA according to a prior power analysis (Azam, 2002).

Five test plans were worked out to compare supervisors' perceptions of information and noninformation employee work attitudes. The

The concept of work ethic relates to the desirable work attitudes, values, and habits expected from employees. Good work attitudes are often mentioned as attributes that employers want their employees to have, but these attributes are often hard to find. Even though various programs have attempted to address the problem, employers still complain that they are unable to find a dependable workforce (Hill & Petty, 1995). Studies conducted by Custer and Claiborne (1992, 1995) found that both vocational educators and employers gave more emphasis to employability skills than technical skills and basic skills. Employability skills or positive affective work attitudes are not job specific, but are skills that cut horizontally across all industries and vertically across all jobs from entry level to chief executive officer (Sherer & Eadie, 1987).

In the last three decades, attempts were made to identify affective work competencies and construct instruments to measure ethic/work attitudes (Kazanas, 1978; Beech, Kazanas, Sapco, Sisson, and List, 1978; Petty, Kazanas, and Eastman, 1981; Brauchle, Petty, & Morgan, 1983). Working on this line of research, Petty (as cited in Hill & Petty, 1995) identified 50 work ethic descriptors that in the end became the Occupational Work Ethic Inventory (OWEI).

Using a precursor to the OWEI, Brauchle (1979) studied the relationship between trainee and supervisor perceptions of trainee work attitudes. The results of this study suggested that self-perceptions of trainees' work attitudes did not match the perceptions of their supervisors. Using the OWEI, Minton (1997) found a significant difference between employers' expectations of work ethic and the self-perceived work ethic of secondary school students. In a recent study, Azam (2002) found significant differences between employees' self-perceived work attitudes and their work attitudes as rated by their supervisors. In the same study, significant differences in work attitudes were obtained between information and noninformation employees. However, there appears to be little or no research that focuses specifically on the differences between supervisors' perceptions of work attitudes of information and noninformation employees.

MANOVA tested differences using the 50-item OWEI across the four factors (Ambition, Dependability, Self-Control, and Teamwork). Perceptions of work attitudes between information and noninformation employees were compared when their work attitudes were rated by their supervisors. The factor scores used were based on the above factors and were obtained by factor analyzing the combined responses of information and noninformation employees and their supervisors on the OWEI (Brauchle & Azam, in press). The test plans were designed with different combinations of dependent variables, the presence or absence of univariate outliers, and using transformed or untransformed scores.

The Kolmogorov-Smirnov test with Lillefore's correction was used to test for normality in the distributions. Because effect sizes given by SPSS output on the MANOVAs do not represent multivariate effect sizes, multivariate effect sizes (Mahalonobis Distance) were calculated based on the procedure given by Stevens (2002). Stevens suggested 0.25 as a small, 0.5 as a medium, and greater than 1 as a large effect size. The MANOVA results included commonly used test statistics (i.e., Pillai's trace, Hotelling's trace, Wilk's lambda, and Roy's largest root).

Results

Statistically significant differences were obtained between supervisors' perceptions of information employee and noninformation employee work attitudes in all of the five test plans. Two of the obtained effect sizes (Test Plans 2 & 3) correspond with Stevens' (2002) criteria for small effects. Other effect sizes met the criteria for large effects. The power obtained in each of the five tests was 1.0. The MANOVA results for each test plan yielded the same significance level for each of the four test statistics. In terms of descriptive statistics, the results also show that for 45 of the 50 OWEI items, the means of supervisors' ratings of information employees were higher than those for noninformation employees. In other words, the supervisors rated information employees higher on desirable work attitudes than noninformation employees.

Discussion

This study revealed that supervisors perceive differences in work attitudes between

information and noninformation employees and that the supervisors rate information employees higher than noninformation employees on 45 out of 50 OWEI items. This result supports earlier findings by Azam (2002), who obtained differences in self-perceptions of work attitudes between information and noninformation employees. In that study, information employees rated themselves higher on 26 out of 50 OWEI items. Noninformation employees rated themselves higher on 23 OWEI items. For one item, there was a tie between information and noninformation employees and there may be various reasons for this.

One explanation may be that information employees inherently possess better work attitudes than noninformation employees. The results of this study and the previous study by Azam (2002) imply that this may be the answer because not only do information employees think they have better work attitudes than noninformation employees, but their supervisors

Rater bias might also be a reason for higher work attitude scores of information employees. In a sense, supervisors and information employees can be treated as members of the same group. A basic characteristic of information employees is that they need little supervision. In other words, to some extent, they need to have the qualities of a supervisor, with such employee characteristics as high responsibility, critical thinking, and active individual initiative. In addition, supervisors may be more likely to be have been promoted from the information employee ranks than from the noninformation employee group. Thus, supervisors and information employees are more likely to be similar than supervisors and noninformation employees. Several studies (Duck, 1973; Huston, 1974; Kelley, 1979; Werner & Parmelee, 1979) reported positively biased performance ratings of subordinates by their supervisors when there were similarities between supervisors and subordinates (similarity of opinions, attitudes, and values; compatibility of roles; pastimes; motivation and other personality attributes; reciprocity of liking; socioeconomic status and biosocial attributes such as age, sex, ethnicity, and level of education). This similarity factor might be a reason for supervisors' higher rating of information employees on work attitude attributes.

It is possible that the lower supervisor ratings of noninformation employees on work attitude attributes are related to the nature of work that the noninformation employees perform. Narrowly defined jobs and limited responsibility provide little opportunity to display good work habits and attitudes that may draw attention from a supervisor. In other words, the job environment for noninformation employees probably does not provide much opportunity to display good work habits and attitudes, other than refraining from behavior that slows down production or affects quality.

Another reason for the relatively poor showing of noninformation employees may be that they work at jobs where exceptions (poor quality, product defects, accidents, time off task, inattention, etc.) are more readily visible and quicker to affect production than errors made by information employees. Because many supervisors still use the principle of exception (Certo, 2000), deviations from the norm seem more prominent to them in noninformation employees than information employees. Additionally, noninformation jobs are more likely to have a supervisor close at hand and may, therefore, notice any exception to desired performance. However, further investigation is needed to identify precisely why there is a difference in work attitudes between information and noninformation employees and why information employees are more likely to exhibit better work attitudes

than noninformation employees.

Whatever the reason, it is clear that a new kind of employee, the information employee, is becoming more prominent in the workforce, and these employees are perceived differently by their supervisors than the more traditional noninformation employees. Because information and noninformation employees are different in so many ways, supervisors of the future may need a new skill set to properly manage both groups of workers. Research is needed to shed light on the reasons that supervisors perceive these two groups of workers differently, to determine whether these perceptions are based on real differences between the two types of workers or just the orientation of the supervisors, and to ascertain which skill sets are best used by supervisors in dealing with both groups of employees.

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