

THE RELATION BETWEEN CONSCIENTIOUSNESS, EMPOWERMENT AND PERFORMANCE

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ABSTRACT

This study examined the relationship between conscientiousness, empowerment and job performance among information technology professionals. An Employee Empowerment Questionnaire (EEQ), a Conscientiousness Scale and a Social Desirability Scale were administered to 101 information technology customer service engineers. Managers completed a Performance Evaluation Questionnaire (PEQ) for each customer service engineer. The results indicated a significant relationship between conscientiousness and empowerment. A curvilinear relationship was found between empowerment and performance. The practical and theoretical implications of the findings are discussed.

Key words: Personality, conscientiousness, empowerment, job performance

The changing and evolving global economy has become increasingly competitive (Murtagh, 2006). Many enterprises have realised that the only distinguishing factors of truly outstanding organisations are the attitudes and behaviours of their employees (Forrester, 2000; Tschohl, 1998; Lawler, 1992; Quinn & Speitzer, 1997). In order to enhance organisational productivity and competitiveness, it has become necessary for employees to provide outstanding performance in the face of constantly changing heterogeneous services and the changing needs of customers (Meihem, 2004). Organisations have attempted to achieve a competitive advantage through the implementation of mechanisms that will allow them to select and retain employees who would outperform their competitors (Avis, Kudish & Fortunato, 2002; Brymer, 1991; Lashley, 1999; Meihem, 2004). Research on employee performance has shown that a multitude of situational and dispositional factors could possibly influence an employee's performance (Rothmann & Coetzer, 2003). Situational factors include (but are not limited to) organisational policies and procedures, management practices, autonomy, and teamwork (Liao & Chuang, 2004; Svyantek, Bott, Goodman & Bernal, 2003). Dispositional factors refer to factors or variables that include personality characteristics, needs, attitudes, preferences, cognitive ability, emotional intelligence, and motives (Douglas, Frink & Ferris, 2004; Mount, Barrick & Strauss, 1999; Rothman & Coetzer, 2003). In light of the magnitude of possible situational and dispositional factors that have been shown to influence employee performance, it was decided to explore the relationship between some of the situational and dispositional factors prevalent in current research on employee performance.

One prominent situational factor that has been shown to influence employee performance is employee empowerment. Employee empowerment has been shown to influence performance on both a psychological and organisational level (Bekker & Crous, 1998; Liden, Wayne & Sparrowe, 2000; Randolph, 1995; Sparrowe, 2004; Spreitzer, 1995; Spreitzer, Kizilos & Nason, 1997). The most widely researched dispositional personality factor shown to influence employee performance is conscientiousness (Barrick, Mount & Judge, 2001; Goldberg, 1990; Johnson, 2003; Rosse, Stecher, Miller & Levin, 1998; Wright, Kacmar, McMahan & Deleeuw, 1995). Conscientiousness forms part of the Five-factor model of personality which represents a structure of inter-correlated traits which include neuroticism, extraversion, openness, agreeableness and conscientiousness (McCrae & Costa, 1997).

The effects of empowerment and conscientiousness on employee performance have been researched extensively within the American and European contexts (Rothman & Coetzer, 2003). However, the interrelatedness of empowerment, conscientiousness and employee performance has not yet been thoroughly empirically researched in the South African work context. The South African work context is unique and distinct from other contexts. It can be described as an environment where situational factors are extensively governed by laws like the Labour Relations Act (66 of 1995), and where discrimination of employees on the basis of dispositional factors remains highly controversial (Rothman & Coetzer, 2003). The importance and interrelatedness of employee performance, conscientiousness and empowerment may assist the South African employer in gaining the knowledge needed to become more competitive through heightened employee performance.

Outstanding employee performance has always been a desired outcome for organisations. According to Meihem (2004), employee performance can be seen as one of the most important factors of any successful business. Employers have nevertheless struggled to implement methods and initiatives that will enhance the performance of their existing employees (Avis et al. 2002). In spite of well-intended attempts, many of these initiatives have not led to improved employee performance (Argyris, 1998).

The concept of employee performance has been defined as a multi-dimensional construct (Campbell, McCloy, Oppler & Sager, 1993; Rothmann & Coetzer, 2003). Campbell et al. (1993) defined employee performance as individual behaviours that are related to organisational goals. In addition, employee performance has been conceptualised as an indication of how well employees perform in their jobs, the initiatives they take, their creativity in solving problems and the resourceful way in which they utilise their resources, time and energy (Rothman & Coetzer, 2003; Schepers, 1994).

Employee performance can be broken up into two conceptually distinct components, namely, contextual performance and task performance (Borman & Motowidlo, 1997; Borman & Van Scotter, 1994). Contextual performance is characterised by activities that employees are not necessarily contracted to perform, but which are necessary for the achievement of organisational goals (Svyantek et al. 2003). These activities are

not necessarily assessed by traditional performance appraisal tools. Behaviours associated with contextual performance are discretionary in nature and include volunteering for tasks which are not formally part of the job, demonstrating effort, assisting and cooperating with others, following organisational rules and procedures, or supporting organisational objectives (Beatty, Murphy & Cleveland, 2001; Borman & Van Scotter, 1994; Speier & Frese, 1997).

Task performance refers to employees' performance on specific job-related activities. Task performance differs greatly between jobs and is assessed by means of performance evaluation systems. Behaviours associated with task performance include the transforming of raw materials into goods and services, the distribution of products and the coordination and supervision of activities (Borman & Motowidlo, 1997). Task performance is best predicted by cognitive variables, whereas contextual performance is best predicted by dispositional or personality variables (Beatty, Murphy & Cleveland, 2001; Borman & Van Scotter, 1994; Liao & Chuang, 2004; Van Scotter & Motowidlo, 1996). Against the background of the supporting research, the inference could be made that contextual performance would be predicted by factors inherent to an employee and could form the basis on which successful, productive employees are selected.

Many Industrial Psychologists have researched employees' inherent characteristics with the main purpose of identifying personality characteristics or traits that will predict employee performance (Rothmann & Coetzer, 2003). Svantek et al. (2003) showed that personality is the best predictor of contextual performance and employees who performed effectively in this domain were more likely to behave in a methodical, empathetic manner and be more focused on achievement.

Conscientiousness has proved to be the best trait predictor of contextual performance in the workplace (Barrick & Mount, 1993; Barrick & Mount, 1991; Hogan, Rybicki, Motowidlo & Borman, 1998; Ladd & Henry, 2000; McNeely & Meglino, 1994; Organ 1994). Barrick and Mount (1991) examined the validity of the Big Five personality model for various occupational groups and criterion types. It was found that the importance of conscientiousness could be generalised across most occupational groups and criterion types.

Conscientiousness is defined in various ways (Roberts, Chernyshenko, Stark & Goldberg, 2005). According to Roberts et al. (2005) there is little agreement about the specific facets that make up each of the Big Five traits. Roberts et al. (2005) indicated that a possible reason for this inconsistency may be the relative newness of the Big Five model of personality. Mount and Barrick (1995) attempted to define conscientiousness by separating it into achievement and dependability. Achievement is the ability of an employee to work hard and meet goals, whereas dependability is the interpersonal component of conscientiousness that involves responsibility and dutifulness. Kaplan and Saccuzzo (2001) defined conscientiousness as the degree to which an individual perseveres, is responsible and is organised.

Taylor and de Bruin (2006) provided a South African perspective in defining conscientiousness. They defined it as the degree of effectiveness and efficiency with which an individual plans, organises and carries out tasks (Taylor & de Bruin, 2006). From this perspective, Taylor and de Bruin (2006) identified five facets that make up the construct of conscientiousness. The facets can be identified as order (the tendency to be neat, tidy and methodical); self-discipline (the tendency to start and carry through tasks to their completion); effort (the tendency to set and attain ambitious goals); dutifulness (the tendency to keep

to one's principles, moral obligations and to be reliable and dependable) and prudence (the tendency to check facts and think through tasks and actions). According to Taylor and de Bruin's (2006) definition, an individual with a high level of conscientiousness acts purposefully, displays behaviour that is strong-willed, determined and detail oriented. By contrast, an individual with a low level of conscientiousness displays the tendency to be careless in working towards goals, is lazy and tends to be irresponsible and impulsive.

The conscientiousness – employee performance relationship has shown much potential in explaining employee behaviour. Significant correlations between conscientiousness and employee performance have been found (Barrick & Mount, 1993; Barrick & Mount, 1991; Sackett & Wannek, 1996). It is reasonable to expect that employees who report a high level of conscientiousness will be more likely than employees who report lower levels, to engage in goal-directed, strong-willed and determined behaviour, which employers would evaluate favourably.

Funder (1994) suggests that conscientiousness and its associated behaviours could be influenced by situational factors in the work context. Situational factors in the workplace could hinder or support the display of conscientious behaviours that would, in turn, influence employee performance. The influence of situational factors on personality has been a controversial issue in personality research (Pervin, 1997). This controversy suggests that contextual or situational factors can influence how individuals will act, and as a result an individual's behaviour will not depend on consistent personality characteristics alone.

Most agree that both the person's personality and the situation should be considered when interpreting behaviour (Pervin, 1997). Mischel (1977, as cited in Gellatly & Irving, 2001), suggests that situational factors could be evaluated as being either limiting or supportive of the individual's likelihood to convey personality-related behaviours. Individuals who experience situational factors as constraining would, in all probability, express less trait-associated behaviour. This supports Funder's (1994) suggestion that the display of conscientious behaviour in the work context may be influenced by limiting or supportive situational factors.

In order to further explore the relationship between employee performance, conscientiousness and the influence of situational factors, employee empowerment was identified as one of the prominent situational factors researched in organisational and employee psychology. Employee empowerment and its impact on the work environment have been researched for over 60 years (Nykodym, Simonetti, Nielsen & Welling, 1994). Interest in the influence of employee empowerment on performance began with an interest in worker participation during the 1940s. Empowerment came into its own during the 1980s and was brought to light in the studies of Block (1988). Empirical research has been accumulated on the predictive relationship between employee empowerment and important work-related outcomes (Liden, Wayne & Sparrow, 2000; Spreitzer, 1995; Spreitzer et al. 1997). Empowerment has been empirically shown to affect employee performance (Liden et al., 2000; Spreitzer et al. 1997).

Researchers in the area of empowerment have struggled to define the concept of empowerment. Many have argued that empowerment can only be defined by the specific organisation that wishes to implement it (Argyris, 1998; Honold, 1997). In spite of the controversy surrounding the concept, it is clear that a general theme exists in all definitions of empowerment. Most definitions agree that empowerment is concerned with providing employees with latitude, authority and discretion in task and context-related behaviours (Melhem, 2004).

Liden and Arad (1996) described empowerment in terms of two separate perspectives. Firstly, they viewed empowerment as having a macro perspective which focuses on factors such as organisational structures and policies. This macro perspective was expanded on by others and was conceptualised as the empowerment climate (Quinn & Spreitzer, 1997). The empowerment climate can be defined by organisational structures and policies, team work, information sharing and decision making on an organisational level (Bekker & Crous, 1998; Randolph, 1995).

Key organisational practices associated with the empowerment climate include information sharing, autonomy through boundaries, and team accountability (Randolph, 1995; Seibert, Silver & Randolph, 2004). Information sharing refers to the sharing of potentially sensitive organisational information with employees throughout the organisation. Autonomy through boundaries refers to organisational structures and practices that assist employees in autonomous behaviour, the setting of work goals and procedures and any other area of responsibility. Team accountability implies that teams in organisations are the mechanisms of decision making and performance (Randolph, 1995; Seibert, Silver & Randolph, 2004).

The second view of empowerment, identified by Liden and Arad (1996), is the micro perspective which focuses on empowerment as an intrinsic motivator. It was expanded to create the concept of psychological empowerment (Quinn & Spreitzer, 1997). Psychological empowerment focuses on what an individual needs to feel or experience in order to be an empowered worker (Spreitzer, 1996; Thomas & Velthouse, 1990).

Thomas and Velthouse (1990) conceptualised a model of psychological empowerment, which was later expanded on by Spreitzer (1995). The model suggested that psychological empowerment consists of four cognitions – a sense of meaning, competence, self-determination, and impact. A sense of meaning can be described as the value one places on work; it refers to the meaning or purpose of the fit between the needs of one's work role and one's values, beliefs and behaviours. Competence can be described as an individual's belief in his or her capabilities as an employee; i.e. the skills and abilities necessary to successfully perform performance-related activities. Self-determination can be described as the individual's belief that autonomy or control exists in the way in which tasks and activities are performed. Impact refers to the employee's perception that organisational outcomes can be influenced by their activities and that their contribution can make a difference. Spreitzer (1995) showed that all four of the cognitions contained in the model of psychological empowerment combine to create a single unitary mutually inclusive construct. If any one of the four cognitions is eliminated from the model, overall empowerment will be eliminated.

Seibert, Silver and Randolph (2004) supported a conceptual link between the empowerment climate and psychological empowerment. The empowerment climate influences the employee's experience of empowerment in the organisation. Consequently, psychological empowerment and the empowerment climate cannot be seen as being mutually exclusive, but are interrelated concepts of overall empowerment. Hence, the implication is that an individual cannot perceive an environment as being psychologically empowering if the empowerment climate is limited. If an employee reports a high level of psychological empowerment, an elevated empowerment climate would also exist. As a result, employees who report high levels of empowerment perceive their environment as being autonomous, rich in information, high in team-related practices, a place where a sense of meaning can be derived, where employees have the necessary skills and abilities to perform their roles and tasks and where their contributions make a difference.

The establishment of the combined concept of employee empowerment as an important situational factor in predicting employee performance can easily be reviewed in terms of the original suggestion made by Funder (1994), which indicates that personality traits and their associated behaviours could be influenced by situational factors in the work context. We could, as a result, expect employees who report a high level of conscientiousness and a high level of empowerment to be favourably assessed on performance. This is due to the support provided by the empowering work context (autonomous, rich in information) in facilitating conscientious behaviour, which would result in favourable performance evaluations. If employees report a high level of conscientiousness and a low level of empowerment, the rigid and restricted environment associated with low levels of empowerment would restrain the display of conscientious behaviour, which would lead to a lower performance evaluation by managers. Research conducted on the relationship between conscientiousness, employee performance and autonomy support these evaluations (Barrick & Mount, 1993; Barrick, Mount & Strauss, 1993; Gelattly & Irving, 2001). Researchers have shown that the relationship between conscientiousness and employee performance is influenced by autonomy. Autonomy, as researched in these contexts, relates directly to the definition and description of employee empowerment as an environmental framework in which employees are given more latitude, authority and discretion in behaviour (Gelattly & Irving, 2001).

Funder (1994) further suggested that an employee's task performance—as defined by Borman and Motowidlo (1997)—is susceptible to situational factors. One possible explanation is that organisational policies and procedures, management practices, autonomy and team work (empowerment factors) create the framework in which employees are able to distribute goods, transform raw materials and coordinate or supervise activities (task performance). If the level of empowerment is low and employees perform tasks in a constricted, rigid and dependent environment; task performance amongst employees will be highly regulated, restricted and similar. By contrast, if the level of empowerment is high the organisation is more relaxed, autonomous and less rigid; as a result task performance will be flexible and differential. The level of empowerment would, for that reason, influence an employee's task performance.

According to Gelattly and Irving (2001), empowerment not only influences task performance but is also important in explaining contextual performance. Gelattly and Irving (2001) argue that due to the voluntary and discretionary nature of contextual performance, one would expect some of the roles which employees are expected to perform, to either be facilitated or inhibited by the expression of these discretionary and voluntary behaviours. If an employee reports low levels of empowerment (low autonomy, dependence, rigid work processes and procedures), it is reasonable to expect an emphasis on prescribed roles and tasks and less focus on additional discretionary and voluntary behaviours (contextual behaviours). It is apparent that if an employee reports higher levels of empowerment the employee would attend to a wider range of behaviours including task and context-related activities. The level of empowerment would, as a result, influence both task and contextual performance. Therefore, it could be suggested that the level of empowerment as a combined factor of empowerment climate and psychological empowerment could influence the display of conscientious behaviour, which would, in turn, influence the employee's performance. In light of this, the researchers hypothesised that *employees who report high levels of empowerment and high levels of conscientiousness would receive more favourable performance ratings.*

The proposed interrelatedness between conscientiousness, empowerment, and employee performance suggests that social desirability could possibly influence these relations. Due to the fact that employees' self-report information can

easily be faked or distorted, it could be seen as a possible influencing factor in the relationship between conscientiousness and empowerment (Rothman & Coetzer, 2003). Due to this possibility it is hypothesised that *empowerment is positively related to conscientiousness, and that this would not be influenced by social desirability.*

The interrelatedness and reciprocal nature of the relationship between conscientiousness, empowerment, and employee performance brought us to empirically evaluate the mutual and exclusive relationships between these constructs. The purpose of the study was to evaluate the relationship between employee performance, conscientiousness and empowerment in a South African context.

METHOD

Participants

The research was conducted within a service delivery-focused Information Technology environment. The participants were 101 customer service engineers of diverse ages, educational backgrounds and work experience. The participants were representative of customer service engineers employed in Information Technology Customer Support Services within the South African banking sector. The participants were drawn from various geographic locations throughout South Africa, for instance towns or cities like Cape Town, Port Elizabeth, East London, Pretoria, Polokwane, Durban, Johannesburg, Bloemfontein, Kimberley, Upington, Bethlehem, Welkom, Klerksdorp, Rustenburg, Nelspruit and Middelburg). Nine direct managers also participated in an aspect of the study.

Participants were asked to indicate their language preference. The responses were as follows: 33% were English; 55% Afrikaans; 1% Pedi; 2% Xhosa; 1% Northern Sotho; 1% South Sotho; 2% Tswana; 3% Zulu, and 3% of the population's home language was not defined by the list provided. Only 5% of the participants were woman. This corresponds with the gender ratio within the Information Technology environment. The average age of the respondents was 30.98 years with a standard deviation of 7.94 years.

Measuring instruments

Three separate measuring instruments were used. The Employee Empowerment Questionnaire (EEQ) and the Conscientiousness Scale of the Basic Traits Inventory were administered to all customer engineers. A biographical information questionnaire requesting age, years of service and language preference was included. The Performance Evaluation Questionnaire (PEQ) was completed by the nine identified direct managers of the sample, as well as their immediate superiors.

The *Employee Empowerment Questionnaire (EEQ)* was constructed by Cloete, Crous and Schepers (2002). This tool was developed from a questionnaire originally created by Scott and Jaffe (1992). The EEQ measures a combined concept of empowerment, which includes the empowerment climate and psychological empowerment. The dimensions assessed are: Clarity of purpose, morale, fairness, recognition, teamwork, participation, communication, and healthy environment. The Employee Empowerment Questionnaire (EEQ) consists of 90 items that measure the employee's self-reported level of empowerment within the organisation. The questionnaire uses a four-point scale in order to allow for a varied response rate—from very unfavourable to extremely favourable. In a factor analysis done by Cloete et al. (2002) the EEQ only loaded on one factor of empowerment, which represents a combined view of psychological empowerment and the empowerment climate. The scores obtained in this study may be described as reliable (Cronbach's $\alpha = 0.98$).

The *Performance Evaluation Questionnaire* was developed by Schepers (1994). According to Schepers (1994) work performance is a function of knowledge and technical management ability; it includes social intelligence, leadership skills, persistence, conceptual skills and healthy human relationships. This questionnaire includes the assessment of task and contextual performance. According to Schepers (1994) technical knowledge or task performance plays a bigger role in lower job levels than in higher job levels and the conceptual performance component plays a bigger role in higher job levels than lower job levels. The questionnaire is designed to be completed by employees' direct managers or supervisors.

The Performance Evaluation Questionnaire consists of 30 items that cover three identified categories, namely work accomplishment, creativity, and management ability. The questionnaire uses a nine-point scale which allows for a varied response rate – from “not at all” to “very well”. Due to the fact that most of the employees were not in managerial positions only the 20 items relating to work accomplishment and creativity were administered. The performance evaluation questionnaire was utilised to obtain a management perception of employee performance which would include both task and contextual performance. The scores obtained in this study may be described as reliable (Cronbach's $\alpha = 0.97$).

The *Conscientiousness Scale* of the Basic Traits Inventory was used to measure the customer service engineer's conscientiousness personality trait. The Basic Traits Inventory, developed by Taylor (2004), is a cross-culturally valid Five Factor model personality inventory for the South African population. The inventory consists of 173 items that are grouped according to their respective facets namely extraversion, neuroticism, openness to experience, agreeableness and conscientiousness. Items are rated on a five-point Likert scale, with a response range varying from “strongly disagree” to “strongly agree”.

The Basic Traits Inventory's Conscientiousness scale consists of 41 items which include items that measure the following facets of conscientiousness: Effort in setting and attaining goals; the tendency to keep everything neat and tidy (order); the tendency to keep to own principles, moral obligations and reliability (dutifulness); the tendency to think issues through carefully and check facts (prudence) and the ability to start a task and carry it through to its completion (self-discipline) (Taylor, 2004). The scores obtained in this study may be described as reliable (Cronbach's $\alpha = 0.94$).

Social Desirability was measured with a 11-item scale, which is a short form of the Marlow Crowne Scale. The reliability of the scores obtained in this study may be described as sufficiently reliable for research purposes (Cronbach's $\alpha = 0.69$).

Procedure

The EEQ and Conscientiousness scales were distributed to the entire sample of customer service engineers and to nine of their immediate managers. The two questionnaires were distributed by means of the organisation's intranet mailing service, and were completed by participants in various locations at different times. The completed questionnaires were returned via the organisation's internal mailing system. The Performance Evaluation questionnaire was also distributed through the internal mailing system to the nine managerial participants for the supervisory evaluation of each of the customer service engineers.

RESULTS

The descriptive statistics and correlations of the performance, empowerment, conscientiousness and social desirability scales are given in Table 1.

TABLE 1
CORRELATIONS AND DESCRIPTIVE STATISTICS OF THE PERFORMANCE,
EMPOWERMENT AND SOCIAL DESIRABILITY SCALES

CORRELATIONS				
	Performance	Empowerment	Conscientiousness	Social Desirability
Performance	1.000			
Empowerment	-0.065	1.000		
Conscientiousness	0.038	0.435**	1.000	
Social Desirability	-0.134	0.356**	0.481**	1.000
DESCRIPTIVE STATISTICS				
Mean	136.91	433.07	161.91	17.47
Standard Deviation	22.93	64.395	17.824	4.72
Cronbach Alfa	0.968	0.981	0.944	0.687

**Correlation is significant at the 0.01 level (2-tailed)

Inspection of Table 1 shows a non-significant and essentially zero correlation between performance and empowerment ($r = -0.065, p = 0.524$). The correlation between conscientiousness and performance is also non-significant ($r = 0.038, p = 0.643$). Similarly the correlation between social desirability and performance is also non-significant ($r = 0.134, p = 0.186$). Conscientiousness and empowerment, however, are significantly correlated ($r = 0.435, p < 0.001$), with approximately 19% shared variance ($r^2 = 0.189$). Social desirability and empowerment are also significantly correlated ($r = 0.356, p < 0.001$) with approximately 13% shared variance ($r^2 = 0.127$). Finally, social desirability and conscientiousness are also significantly correlated ($r = 0.481, p < 0.001$), with approximately 23% shared variance ($r^2 = 0.23$). The correlation between empowerment and conscientiousness, with the effect of social desirability partialled out, is statistically significant and moderately strong ($r_{\text{partial}} = 0.316, p < 0.002$).

A hierarchical regression analysis was conducted with performance as the dependent variable and social desirability, empowerment and conscientiousness as independent variables. Social desirability was entered as the first step of the analysis, with empowerment and conscientiousness entered as a block in the second step. This procedure was followed to allow an examination of the relations of performance with empowerment and conscientiousness, while controlling for the effects of social desirability.

The first step of the hierarchical analysis showed that social desirability is weakly and non-significantly related to performance [$R^2 = 0.018, F(1,97) = 1.778, p = 0.186$]. Comparisons between steps 1 and 2 of the hierarchical analysis showed that empowerment and conscientiousness did not make a significant contribution to the explanation of performance after controlling for social desirability [$\Delta R^2 = 0.017, F(2,95) = 0.848, p = 0.432$]. With all three independent variables included, the squared multiple correlation was small and non-significant [$R^2 = 0.036, F(2,95) = 1.226, p = 0.304$], suggesting that the linear combination of social desirability, empowerment and conscientiousness explained a small and non-significant portion of the variance in performance (approximately 3.6%).

Failure to establish the hypothesised linear relation between employee performances on the one hand, and empowerment and conscientiousness on the other, led to the exploration of the possibility of curvilinear relations between the variables. The aim at this stage of the analysis was exploration, and

because much statistical power is needed to detect curvilinear relations we relaxed the criterion for statistical significance to $\alpha = 0.10$.

The quadratic terms of empowerment and conscientiousness were added as a third step in the hierarchical multiple regression, which explained an additional 5.1% of the variance in job performance [$\Delta R^2 = 0.051, F(2, 93), p = 0.079$]. Inspection of the regression coefficients at the third step showed that the quadratic term of empowerment made a statistically significant contribution over and above the other variables in the model [$t = -2.256, p = 0.026$], but that the quadratic term of conscientiousness did not make a statistically significant contribution [$t = 0.924, p = 0.358$].

In view of these results we constructed a simplified hierarchical model with empowerment as the only independent variable at the first step of the analysis, and the quadratic term of empowerment added at the second step. Overall, empowerment and its quadratic term explained approximately 4.1% of the variance in job performance, which is statistically non-significant [$R^2 = 0.041, F(2, 96), p = 0.137$]. However, the quadratic term did lead to a statistically significant improvement in the amount of variance explained [$\Delta R^2 = 0.036, F(1, 96), p = 0.06$].

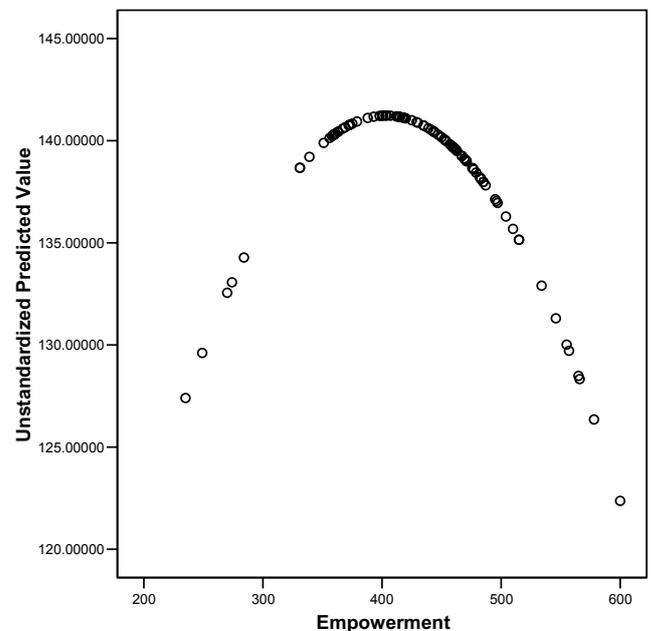


Figure 1: Curvilinear relation of Empowerment and Performance

Figure 1 plots the predicted job performance values against empowerment and clearly shows the curvilinear relation between the variables. It appears that the highest level of job performance is achieved with moderate degrees of empowerment, but that low levels of empowerment and high levels of empowerment are associated with relatively weaker job performance.

DISCUSSION

The relations between empowerment, conscientiousness and employee performance were examined. On the basis of prior empirical findings it was hypothesised that employees who report high levels of conscientiousness and high levels of empowerment would receive more favourable performance ratings. It was further hypothesised

that conscientiousness and empowerment are positively related, and that this correlation is not due to the influence of socially desirability.

The discussion will firstly address the relation between empowerment and conscientiousness. In accordance with the hypothesis, it appears that individuals who are high in conscientiousness report high levels of empowerment, whereas individuals who are low in conscientiousness report low levels of empowerment. Partialling out the influence of socially desirable responding did not alter the relation between conscientiousness and empowerment. Ones, Viswesvaran and Reis (1996), and Barrick and Mount (1996) previously indicated that social desirability has little effect on the predictive validity of any of the Big Five personality traits, which include conscientiousness.

One explanation for the positive relationship between conscientiousness and empowerment may be found by considering the behaviours associated with conscientiousness. Employees who report high levels of conscientiousness may be expected to display behaviours and attitudes such as self-discipline, sustained effort in goal setting and attainment, dutifulness in adhering to moral principles and obligations, and the tendency to think facts through (Barrick et al. 2001; Taylor, 2004). All things being equal, it appears that such employees may be trusted to behave responsibly and in accordance with organisational goals, rules and policies. By contrast, individuals who are low in conscientiousness may not display the desirable behaviours and attitudes listed above and may not be trusted to behave responsibly and in accordance with organisational goals, rules and policies. In addition, individuals who are low in conscientiousness may be more likely to engage in counterproductive behaviours in the workplace (Taylor 2004; Rothman & Coetzer, 2003). Against this background managers may be more likely to create empowering environments for individuals who are high in conscientiousness, than for individuals who are low in conscientiousness.

As regards the first hypothesis, the results showed that neither empowerment nor conscientiousness was significantly related to job performance as rated by employees' supervisors. When combined, the two variables also failed to explain a significant portion of the variance in job performance. Results did, however, show a weak but noticeable curvilinear relation between empowerment and performance.

The non-significant relation between conscientiousness and performance found in this study runs counter to a substantial number of studies and meta-analyses that have established a positive relation between conscientiousness and job performance (Barrick & Mount, 1993; Barrick & Mount, 1991; Sackett & Wannek, 1996). A *post hoc* explanation for the lack of a significant relation between conscientiousness and job performance is that the Information Technology service delivery environment is highly structured and controlled. In such an environment where there are very strict rules and norms in regard to work behaviour there may be little room for a trait such as conscientiousness to manifest in real working behaviour. By contrast, the effects of conscientiousness may manifest more clearly in an environment where individuals have greater latitude and choice in regard to working behaviour (Mischel, 1997; Gellatly & Irving, 2001). For instance, in an environment characterised by an absence of direct supervision one may expect an individual who is high in conscientiousness to adhere to rules and norms to a greater extent than an individual who is low in conscientiousness. By contrast, in an environment with close and strict supervision, employees have little choice in regard to their working behaviours and little difference may be observed between individuals who are high or low in conscientiousness, respectively.

The observed curvilinear relation between empowerment and job performance is of potential interest. However, note that the observed relation was weak and was not hypothesised in advance. Hence, replication of the curvilinear relation is essential. Nonetheless, the finding does suggest that very high levels of empowerment can be as detrimental to job performance as very low levels. Finding the optimal level of empowerment may be a factor that contributes to job performance. This optimal level may interact with personality and working environments, which means that one single optimal level will not apply to all persons and all environments.

Overall, the relations between job performance on the one hand, and empowerment and conscientiousness on the other, appear to be complex, interactive and non-linear. On the basis of our results and theory, it could be speculated that individuals who are high in conscientiousness are likely to prefer structured environments. However, they are also the individuals who are most likely to be "empowered" by managers and supervisors, which may result in them working in less structured environments. This may lead to lowered job satisfaction, but possibly not lowered job performance. By contrast, individuals who are low in conscientiousness are likely to prefer loosely structured environments, but are most likely to be closely supervised by managers and supervisors, which may result in them working in well-structured environments. Moreover, given an environment which is high in empowerment, individuals who are high in conscientiousness may outperform those who are low in conscientiousness even though the latter group may feel more comfortable in that environment. These are issues that may be addressed in further research.

There are many other factors (not included in this study) that may influence the observed relations between empowerment, conscientiousness and performance. One important factor is the nature of the measurement of performance. We relied exclusively on managers' ratings of the participants and it is possible that stronger results may have been obtained if we had also included self-reports and other, more objective measures of performance. Gender is another factor that may moderate the observed relations. In this study the participants were mostly men, but it is possible that the relation between empowerment and performance might differ for men and women. This needs to be examined in future studies.

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