NEGATIVE AFFECTIVITY, CONSCIENTIOUSNESS AND JOB SCOPE (A CASE OF IT AND TELECOM INDUSTRY)

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ABSTRACT: *Based on a sample of 350 employees in the telecommunication and telecommunication, we obtained empirical evidence suggesting that while individuals high on conscientiousness tended to react more positively to job scope, individuals high on negative affinity tended to react less positively. Job scope was defined as the extent to which a job required the jobholder to be mentally and physically involved to get it done effectively. Typically, a job characterized by a high job scope would be non-repetitive, would need a great deal of independent thought/action and training, would entail the job holder to keep track of his/her progress, and others. The affirmative results obtained in regard of the moderating roles of personality factors in the present study suggested that job design researchers should further explore individuals' personality differences in response to job scope.*

KEY WORDS: *conscientiousness; negative affectivity; job scope; job characteristics*

JEL CLASSIFICATION: *M12*

1. INTRODUCTION

Research has suggested that job scope may exert contrasting effects on employees' psychological states (e.g., Xie &Johns, 1995; French, Caplan, & Harrison, 1982; Kahn & Byosiere, 1992; Champoux, 1978, 1980). On the one hand, a high job scope may bring about challenges and a sense of meaningfulness for the jobholder, resulting in higher job satisfaction and lower stress (e.g., Hackman and Oldham, 1975,

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1976, 1980). On the other, a high job scope may entail social and mental demands, information load, and responsibility, resulting in greater job dissatisfaction and greater stress (e.g., French & Caplan, 1973; Schaubroeck & Ganster, 1993; Martin & Wall, 1989). For the purpose of this paper, job scope is conceptualized as the extent to which a job required the jobholder to be mentally and physically involved to get it done effectively. Typically, a job with a high job scope would be non-repetitive, would need a great deal of independent thought/action and training, would entail the job holder to keep track of his/her progress and targets, would require the jobholder to pay constant attention to avoid making mistakes, and would necessitate the job holder to seek references and consultation from others.

If job scope simultaneously impacts on jobholders positively and negatively, then jobholders' responses to it may be dependent on their dispositional sensitivity to these contrasting effects. For example, jobholders who are predisposed to exerting effort and meeting challenges may react more positively to the challenges and demands associated with job scope. Alternatively, jobholders who are predisposed to perceiving and reacting strongly to negative cues may react more negatively to the stressful aspects of a job. In this respect, two of the most researched personality constructs, conscientiousness and negative affectivity, may have direct relevance to the interplay between the individual jobholder and his/her job scope in determining affective outcomes.

More specifically, researchers have found that certain "bandwidth" personality traits, such as conscientiousness, may account for many of the more narrowly defined personality variables examined in the personality literature (Barrick & Mount, 1991; Ones & Viswesvaran, 1996). In particular, individuals high on conscientiousness are characterized by such qualities as high drive and high achievement orientation. They may be more receptive to the challenges and more tolerant of the demands brought about by a high job scope as described above, resulting in greater job satisfaction compared to those low on conscientiousness. To date, however, no research has examined this possibility.

Further, although research has found that negative affectivity may affect individuals' affective states across situations (e.g., Watson & Clark, 1984), the moderating affective effects of negative affectivity with job characteristics have not been firmly established. While some studies have supported the moderating effects of negative affectivity on psychological outcomes (e.g., Brief, Burke, George, Robinson, & Webster, 1988), others have not (e.g., Chen & Spector, 1991). A gap in the research on negative affectivity thus exists, necessitating further empirical investigation.

The present research has three potential contributions to research and practice. First, we sought to examine the moderating affective effects of conscientiousness with job scope. Conscientiousness has been found to be the most efficacious for job performance among the Big-5 personality traits, which have attracted a great deal of attention recently (e.g., Barrick and Mount, 1991; Ones & Viswesvaran, 1996). The affective effects of conscientiousness, however, have not attracted the research attention they deserve. By including conscientiousness in job design research, we hoped the present study would open a new line of inquiry into the affective roles of conscientiousness in organizational behaviour.

Second, as mentioned above, the moderating role of negative affectivity in individuals' affective reactions to job scope awaits confirmation. The present research attempted to harness empirical evidence in the context of the telecommunication and information technology industry in Pakistan. Third, given the diverse and conflicting findings about the affective effects of job scope on individuals gathered thus far, practitioners may be in a fix about how job design can best be utilized to help them design an effective work system.

By delving into the roles of individual differences on such dimensions as negative affectivity and conscientiousness, practitioners should be better able to appreciate the intricacy involved in matching people with jobs, thereby improving their managerial effectiveness.

2. THEORY AND HYPOTHESES

Negative affectivity (NA) refers to an individual's tendency to experience antipathetic emotional states (Watson & Clark, 1984), such as feelings of distress, nervousness, tension, anger, guilt, sadness, and others. NA does not measure a person's psychological health, nor does it prevent a person from feeling happy. Individuals high on NA tend to (but not always) feel dissatisfied across time and situations. They tend to pay more attention to the negative aspects of the world around them and dwell on their mistakes. Additionally, they are more pessimistic about the future (Watson & Clark, 1984). Extant research has demonstrated the negative linkage between NA and jobholders' affective states on the job (e.g., Staw, 1984; Staw & Ross, 1985; Kraiger, Billings & Isen, 1989; Brief, Burke, George, Robinson, & Webster, 1988; Arvey, Bouchard, Segal, & Abraham, 1989; Watson & Pennebaker, 1989; Larsen & Ketelar, 1991; Chen & Spector, 1991; Staw, Bell & Clausen, 1986).

McCrae and Costa (1991) have postulated two mechanisms through which negative affectivity may determine individuals' affective reactions to the work environment. From the instrumental perspective, individuals high on NA may act more negatively towards the work environment, creating more negative responses from bosses, co-workers, subordinates, and others. These negative cues may lower their job satisfaction. From the temperamental perspective, individuals high on NA may be more sensitive and react more strongly to negative events on the job (Eysenck, 1987; McCrae & Costa, 1991; Tellegen, 1985).

Further, Larsen and Ketelar (1991) and Brief, Butcher, and Roberson (1995) have shown that individuals high on NA are less perceptive of and react less strongly to positive events. Extending these theoretical arguments to job scope, we would expect individuals high on NA to exhibit lower job satisfaction because they would experience less of the positive and more of the negative effects of job scope, which include excessive variety (Kahn & Byosiere, 1992), responsibility for others (French & Caplan, 1973), and mental and social demands (Schaubroeck & Ganster, 1993). Individuals high on NA should experience lower job satisfaction also because they are less perceptive of and reactive to the positive aspects of job scope, such as meaningfulness on the job (Hackman & Oldham, 1976, 1980). Negative affectivity should have negative moderating effects on affective reactions to job scope.

In another stream of research, researchers have found that the Big-5 personality dimension of conscientiousness (the other four being extraversion, agreeableness, emotional stability, and openness to experience) may be a valid predictor of performance across a wide variety of conditions (Barrick & Mount, 1991; 1993). Barrick and Mount (1991) have defined a conscientious person as being planful, careful, organized, responsible, purposeful, dependable, hardworking, persistent, and achievement-oriented. Additionally, a conscientious person also has higher expectations and sets higher goals for him/herself (Gellatly, 1996). He/she will tackle complex jobs when the jobs are assigned to him/her.

Barrick and Mount (1991, 1993) have found that conscientiousness is a valid predictor of three types of performance outcomes, namely, training, performance, and such personnel criteria as salary level, turnover, and others (p.8). Other studies have also shown empirical support for the importance of conscientiousness in job performance (Cortina, Doherty, Schmitt, Kaufman, & Smith, 1992). The implications of conscientiousness for affective states on the job, however, are less obvious and no previous studies have addressed them.

French, Rogers, and Cobb (1974) have proposed a person-environment fit model of employee psychological reactions at work. They argue that stress may result from a lack of fit between the jobholder and the job environment in two ways. First, stress may result when the job environment cannot provide sufficient conditions to meet the jobholder's personal needs, values, motives, and goals (supplies-values misfit). Second, stress may also result when job requirements (in terms of workload, time pressures, responsibility, and others) are beyond the capability and adaptability of the jobholder (demands-ability misfit) (Xie & Johns, 1995).

Since conscientiousness is positively associated with volitional efforts and striving for performance, individuals high on conscientiousness are more likely to achieve supplies-values fit as well as demands-ability fit on the job, resulting in greater job satisfaction. Specifically, individuals high on conscientiousness are more predisposed to and in greater need of working hard and achieving results. Their needs and values in favor of meeting challenges on the job should be better served by a job with a high job scope, since a high job scope would entail that they exert greater efforts to meet the greater demands (e.g., responsibility for others, attention to information, and interpersonal interactions). At the same time, previous research has shown that individuals high on conscientiousness are able to outperform their low counterparts by setting higher goals and are more persistent in pursuing results (Barrick, Mount, & Strauss, 1993). These individuals should be better able to handle the demands associated with a high job scope. We thus expect that conscientiousness will have positive moderating effects on individuals' affective reactions to job scope.

- **Hypothesis 1:** *Employees high on negative affectivity will react less positively to a high job scope compared to those low on negative affectivity.*
- **Hypothesis 2:** *Employees high on conscientiousness will react more positively to a high job scope compared to those low on conscientiousness.*

3. METHOD

3.1. Sample and Procedure

Data for the present study were obtained from a field survey on employees in the information technology (IT) industry and Telecom Industry of Pakistan. Since the end of 90's and the start of twenty first century, IT has been on the boom in Pakistan with the profound number of users. The rapidly expanding IT industry has witnessed a strong demand for qualified personnel in recent years. In general, IT employees are engaged in activities that support and serve the information needs of corporate or individual users through electronic means (Neo, 1992; which also contains the details of IT jobs and job families). The Government, in particular, has formulated and implemented the ambitious IT master plan. Similarly in the late 90's another sector which has seen tremendous growth is Telecom Industry with ever large number of mobile users and with companies like Mobilink, UFone, Telenor, Warid and Zong.

The present study is thus timely in helping us gain a better understanding of employees working in these important sectors. Finally, as regard the possibility of the restriction of range problem, we strongly feel that focusing on an industry will partial out many of the confounding factors at the source and provide a stronger test of our hypotheses. These advantages definitely will improve the quality of the present research. We identified potential participants from among full-time employees working in the information technology and telecom industry.

Table 1. No unusual patterns can be identified in the profile.

Profile of Respondents	Variables Percentage (%)
Gender	
Male	74.4
Female	25.6
Age	
Below 20 years	3.7
20-29 years	59.6
30-39 years	29.3
40-49 years	5.3
50 and above	2.1
Educational level	
Under HSSC	13.3
Graduate	67.3
Post graduate	8.34
Others	0.5
Job type	
Systems Development	21.4
Computer Operations	20.7
Sales and Marketing	34.5
R&D	11.7
IT specialist support	11.7

We approached companies for participation support and asked friends, colleagues, university students, family members, and others to help us look for IT employees and Telecom employees. We also asked individuals who had participated in the study to recommend people they knew for this study. A total of 459 questionnaire were distributed to IT as well as telecom employees in sales and services, applications, consulting, and R&D. 370 questionnaires were returned, yielding a response rate of 82%. Twenty questionnaires were incomplete and discarded. The final sample consisted of 350 cases. The questionnaire was written in English. The profile of the respondents is presented in

3.2. Dependent Variable

Job satisfaction was measured with 10 items adapted from the Job Descriptive Index (Sims, Szilagyi, & Keller, 1976) and the Job Diagnostic Survey (Hackman & Oldham, 1975; see also Fried, 1991). On a 5-point scale, respondents were asked to respond to the following aspects of their jobs: the job itself, pay, opportunities for promotion, supervision received, working with co-workers, organizational support, job security, opportunity for personal growth and development, opportunity for intellectual stimulation, and overall job satisfaction (a=.89). We took the average of these items as the final measure for this variable.

3.3. Independent Variables

Negative affectivity was measured with 7 items adapted from the Negative Affectivity Scale (Levin & Stokes, 1989). Respondents gave their answers, on a point scale, to “Things rarely work out the way I want them to”, “When I meet people for the first time I am tense and up tight”, “Whenever someone criticizes me, I think about it for days”,

“Happy endings only occur in the movies and in fairy tales”, “I am not as well liked as most people”, “After an embarrassing experience, I worry about it for a few days”, and “I am not as self-confident as most other people” (a=.94). We took the average of these items as the final measure for this variable. Conscientiousness was measured with 9 bipolar items adapted from Goldberg (1992), Banick and Mount (1991), Cortina et al (1992), and Digman (1990). We asked respondents to respond, on a 7-point scale, to Fussy–Careless, Responsible–Undependable, Scrupulous–Unscrupulous, Persevering–Fickle, Achievement Oriented–Relaxed, Planful–Reckless, Reliable–Unreliable, Thorough–Superficial, and Hardworking–Lazy (a=.93). We took the average of these items as the final measure for this variable. (The scatterplot of the 350 data points on conscientiousness and negative affectivity is available from the first author upon request).

Job scope was operationalized as a person-job interaction constructs (Campbell, 1988). As Campbell (1988) has pointed out, “a job high in the core dimensions can be experienced as boring” (p. 41). Because of individual differences in coping with job demands, job scope should not be construed as a purely objective construct.

Unfortunately, Campbell (1988) did not provide the items we needed to operationalize job scope. We consulted other studies, such as the Job Diagnostic Survey (Hackman & Oldham, 1975) and the Job Descriptive Index (Sims, Szilagyi, & Keller, 1976), for ideas. Ten items were chosen after we sought the views of 10 IT experts regarding the items' clarity and ease of understanding among IT employees in Pakistan. These 10 items were (on a 5-point scale).

"How repetitious are your job duties?"; "How much opportunity is there for independent thought and action on this job?"; "To what extent can you meet the deadline of this job?"; "How much training do you need before you can master your job?"; "How much on-the-job training do you need as you work (on a continual basis)?"; "To what extent must you keep track of the objectives and targets of this job?"; "To what extent are you given well-defined objectives and standards?"; "To what extent are you likely to commit errors on this job?"; "To what extent must you seek references and consultation on this job?"; and "How repetitious are the requirements of your job?" (a=.92). These items reflected jobholders' perception of the mental and physical demands as well as the challenges and meaningfulness of their jobs. We took the average of these items as the final measure for this variable (reverse scored where appropriate).

To establish the discriminant and face validity of job scope vis-à-vis other constructs used in the present research, including negative affectivity, job satisfaction, and conscientiousness, we presented all questionnaire items in random order and asked the 10 systems analysts to sort them into the respective constructs, including a "can't decide" category. Results showed that all questionnaire itenis were correctly classified by the judges, indicating that the questionnaire items were meaningful to them as distinctive measurement items of the constructs. Further, the 10 systems analysts were given job descriptions extracted from the IT job guide (National Computer Board, 1992) and asked to give their job scope ratings on the IT job families. Their ratings were correlated with the job scope ratings given by the 350 respondents on their own jobs. The correlation was .89 ($p<.0001$), indicating that the questionnaire items were not purely subjective to the 350 respondents.

3.4. Control Variables

Variable held constant in order to assess or clarify the relationship between two other variables. Not to be confused with controlled variable which is an alternative term for independent variable. In scientific experimentation, a control variable is one that must not be changed throughout an experiment because it affects the dependent variables and thus affects the outcome of the experiment. For example, in the experimental verification of Boyles law, the temperature must be kept constant. It basically is the thing you keep the same. An example of a controlled variable would be if you have experimented on plants and tested a product on two plants the soil and the pot would be two controlled variables. Controlled variables are influences that could affect the outcome of an experiment, and so are purposely controlled so that they do not impact the experimental results. Where possible, the controlled variable is kept constant. According to ScienceBuddies.org, a controlled variable is the quantity in an

experiment that a scientist keeps the same, to compare or observe differences in the measured or variable portion. Controlled variables are also known as constant.

Several control variables were included in the present study to weed out statistical artifacts that are not theoretically meaningful for the present research. Differences between job families within the IT industry were controlled for with 4 dummy variables, "systems development" (yes=1; no=0), "computer operations" (yes=1; no=0), "sales and marketing" (yes=1; no=0), and "R&D" (yes=1; no=0), with "specialist support" as the default. Gender was a dichotomous variable (male=1; female=0). Educational level was measured on an ordinal scale, with "high school"=1 and "post-graduate degree"=5.

Table 2. Means, Standard Deviations, and Inter-correlations of All Variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
(1)Systems development (yes=1; no=0)	.31	.47											
(2)Computer operations (yes=1; no=0)	.21	.41	**-.35**										
(3)Sales and marketing (yes=1; no=0)	.24	.43	**-.38**	**-.29**									
(4)R&D (yes=1; no=0)	.12	.32	**-.25**	**-.19**	**-.21**								
(5)Gender (male=1; female=0)	.62	.54	-.47	**.21**	**.58**								
(6)Educational level (high school=1;post graduate=5)	3.76	.58	-.69	**.42**	**.56**	**.85**							
(7)Age (less than 20=1; 50 & above=5)	2.43	1.5	-.65	**.25**	**.83**	**.91**	**.43**						
(8)Job scope (low=1; high=5)	3.35	.52	-.18	**.12**	**.28**	**.36**	**.45**	**.49**					
(9)Conscientious ness (low=1; high=7)	5.37	.58	-.52	**.65**	**.38**	**.35**	**.28**	**.59**	**.26**				
(10)Negative affectivity(low=1 ;high=5)	3.15	.21	.25	**.58**	**.65**	**.35**	**.95**	**.25**	**.98**	**.48**			
(11)Job satisfaction (low=1; high=5)	3.38	.85	-.15	**.1**	**.89**	**.25**	**.45**	**.58**	**.25**	**.25**	**69**	**.15**	

Note: Bolded figures are significant at p<.05.

Table 3. Hierarchical Regression Results for The Moderating Effects of Negative Affectivity and Conscientiousness (Unstandardized)

Variables	Baseline Model	Model 1	Model 2	Model 3	Model 4
Systems development (yes=1; no=0)	.04	.06	.07	.08	.03
Computer operations (yes=1; no=0)	-.26t	-.29*	-.30*	-.32*	-.33*
Sales and marketing (yes=1; no=0)	.17	.12	.17	.13	.15
R&D (yes=1; no=0)	.09	.05	.06	.04	.01
Gender (male=1; female=0)	.42****	.45****	.42****	.45****	.44****
Educational level	.14**	.14**	.12*	.13**	.12**
Age (less than 20=1; 50 & above=5)	-.03	-.02	-.02	-.02	-.01
Job scope (low=1; high=5)	.09	.39*	-.47t	-.08	.10
Negative affectivity (low=1; high=5)	-.08*	.26t	-.09*	.20	.05
Conscientiousness (low=1; high=7)	.17****	.17****	-.18	-.09	-.14
Constant	1.78****	.78	3.86***	2.51*	3.17*
Negative affectivity × job scope	-.11**	-.09*	-.15**		
Conscientiousness × job scope	.10*	.07t	.02		
Negative affectivity × conscientiousness × job scope	.02t				
R2	.49	.51	.51	.52	.53
Model F	15.48****	15.24****	14.97****	14.43****	13.80****
R2 change (over and above the Baseline Model)	.02	.02	.03	.04	
F of R2 change	6.90**	5.27*	4.89**	4.37**	

t p<.10 * p<.05 ** p<.01 *** p<.001 **** p<.0001 a Compared with the Baseline Model.

4. RESULTS

We used hierarchical regression analyses to test the moderating (or interactive) effects of negative affectivity and conscientiousness on employees' affective reactions to job scope, controlling for the potential confounding effects of individual demographic and job environmental factors. Table 2 presents the descriptive statistics. Male and better educated respondents earned more and were more satisfied with their jobs than their female counterparts. Older respondents were more satisfied with their jobs than the younger counterparts. Those in systems development and sales and marketing perceived a higher job scope. Conscientiousness was positively associated with job satisfaction, and negative affectivity, negatively. These statistics did not suggest anomalies in the sample.

Table 3 displays the hierarchical results examining the moderating effects of conscientiousness and negative affectivity with job scope on employees' job satisfaction. We first built a baseline model containing all the control variables (including the main effects of negative affectivity and conscientiousness) and subsequently added the interactive terms to detect the incremental moderating effects of conscientiousness and negative affectivity.

Hypothesis 1 was supported in Model 1. The coefficient for the interactive term, "negative affectivity x job scope", was negative and significant ($F=6.90$, $p<.01$). Negative affectivity had negative interactive effects on job satisfaction in response to job scope. In other words, individuals high on negative affectivity tended to experience lower job satisfaction when the job scope was higher compared with those low on

negative affectivity. Hypothesis 2 was supported in Model 2. The interactive term between conscientiousness and job scope was positive and significant ($F=5.27$, $p<.05$). Hence, individuals high on conscientiousness tended to experience greater job satisfaction when the job scope was higher compared with those low on conscientiousness.

Model 3 shows the simultaneous moderating effects of negative affectivity and conscientiousness. Comparing Model 3 with the Baseline Model, we noticed that the simultaneous interactive effects of negative affectivity and conscientiousness were significant ($F=4.89$, $p<.01$). The incremenial change in R2 contributed by the interactive effects of conscientiousness (comparing Model 3 with Model 1) was marginally significant ($F=2.82$, $p<.10$), whereas that contributed by the interactive effects of negative affectivity (comparing Model 3 with Model 2) was significant ($F=4.41$, $p<.05$). Hence, negative affectivity was more significant than conscientiousness in moderating employees' affective reactions to job scope. Although we did not have a priori hypothesis about the three-way interactive effects between negative affectivity, conscientiousness, and job scope, we generated the three-way interactive model to satisfy our curiosity and uncover unexpected systematic patterns, if any. Model 4 in Table 3 shows that the three-way interactive term was marginally positive ($F=3.21$, $p<.10$), suggesting that negative affectivity and conscientiousness might reinforce each other when employees reacted affectively to job scope.

Finally, since curvilinear effects are common in social science research, we should re-run all models in Table 3 to account for the curvilinear effects, if any, of job scope (results not shown in this paper). We added "job-scope squared" and the curvilinear interactive terms into the models displayed in Table 3. All of the curvilinear interactive effects and the curvilinear main effects of job scope were not significant, with the exception of the three-way curvilinear interaction term, which was positive ($F=6.25$, $p<.05$). Thus, we found that conscientiousness, negative affectivity, and job-scope-squared interacted positively in determining employees' affective states at the workplace. However, there was no empirical evidence to suggest that the main effects of job scope were curvilinear.

5. CONCLUSION

The present study extended previous research on the effects of psychological factors on individuals' reactions to job characteristics (e.g., Fried & Ferris, 1987; Hogan & Martell, 1987; Tiegs, Tetrick, & Fried, 1992; Champoux, 1978, 1980, 1992). We hypothesized that two relatively well-researched personality constructs, conscientiousness and negative affectivity, might modify the ways individuals perceived and reacted to the contrasting effects of job scope.

The supportive evidence obtained in favour of the moderating roles of conscientiousness and negative affectivity supported the contention that job scope might bear different patterns of relationship with job satisfaction depending on whether individuals were high or low on conscientiousness and negative affectivity. The results not only furnished the first evidence in favour of the moderating affective role of conscientiousness, but also lent support to the moderating effects of negative

affectivity on individual job outcomes (e.g., Brief, Burke, George, Robinson, & Webster, 1988), in contrast to Chen & Spector (1991).

We tested the moderating roles of conscientiousness and negative affectivity based on the person-environment fit model of stress (French, Rogers, & Cobb, 1974) and the temperamental perspective of negative affectivity (McCrae & Costa, 1991). The supportive evidence obtained above should not be taken to imply that alternative theories or models of job scope should be rejected. Instead, the empirical evidence should be taken as complementary to other more established explanations. For example, the thesis of an optimal level of activation within an individual, which is the basic tenet of activation theory and which has been used to justify a curvilinear relationship between job scope and stress (e.g., Xie & Johns, 1995), could well be a function of the individual's conscientiousness and negative affectivity. In particular, individuals high on conscientiousness may exhibit a higher optimal level compared with the low counterparts, and individuals high on negative affectivity may exhibit a lower optimal level compared with the low counterparts. Future research should ascertain the exact nature and extent of linkages between these personality dimensions and individuals' characteristic levels of activation. (An individual's characteristic level of activation refers to the level of activation at which the individual functions optimally, as suggested by Levi (1972)). One limitation of the present study was the small incremental changes in R2 obtained for the interactive terms.

However, the small figures were in line with previous studies of affective effects of job scope (e.g., Xie & Johns, 1995). Another limitation was the use of a single, cross-section sample. This prevented us from making causal inferences. Third, the use of a self-report, subjective measure of job scope might introduce common method variance in the data. We reduced this possibility by correlating the respondents' self-report job scope scores with job scope scores provided by 10 systems analysts acting as independent judges. The correlation was .89 ($p<.0001$).

Our position was therefore similar to the position taken by Fried and Ferris (1987), who asserted that "it is inappropriate to totally dismiss perceptual and correlational results as simply artifactual in nature" (p. 309).

Finally, since we did not find curvilinear effects of job scope on job satisfaction, our conclusions about the moderating impact of negative affectivity and conscientiousness would only stand in respect of a linear linkage between job scope and job satisfaction. The lack of support for curvilinear effects of job scope on psychological responses in the present research, in contrast to Xie and Johns (1995) and Champoux (1978, 1980, 1992), suggests that future research should look into circumstances and factors that may shape the patterns of the affective effects of job scope. One such factor could be occupational effects: while the present research focused on IT employees, Xie and Johns (1995) studied employees in a variety of industries and Champoux (1978, 1980, 1992), R&D and government employees.

Several other research questions should be investigated in the immediate future. First, given the relevance of negative affectivity and conscientiousness, researchers may want to know whether the three-way interactive effects between these two personality constructs and job scope are positive across situations. Although we did not have theoretical rationale to derive hypotheses about the direction of the three-

way interactive term, the results showed that the three-way interactive effects were positive. Future research should examine and specify the processes through which negative affectivity and conscientiousness may interact and affect job satisfaction. Second, would the results obtained in the present study (i.e., the IT industry in Pakistan) be replicable in other vocations, such as teachers, managers, salespeople, and police officers, as well as in other countries, such as the United States, Canada, Japan, China, and others? Third, would other personality constructs, such as work centrality, also exert moderating effects with job scope on job satisfaction? Finally, can the moderating effects of the two personality traits with job scope be generalized to job performance, absenteeism, and other employee outcomes? In conclusion, the present study has highlighted the importance and relevance of the two personality traits in individuals' reactions to job scope. Future research should look into the roles of other personality traits in this domain.

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