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Role of Personality in Knowledge Sharing and Knowledge Acquisition Behaviour

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The present study examines the impact of Big Five personality characteristics on knowledge sharing and knowledge acquisition behaviour. The Big Five factors are extraversion, openness, conscientiousness, agreeableness, and neuroticism. A total of 156 management students completed the questionnaire. The results of analysis of variance indicated that individuals high on agreeableness and conscientiousness were more involved in knowledge sharing activities than individuals low on agreeableness and conscientiousness. Individuals high on conscientiousness were more involved in knowledge acquisition activities than individuals low on conscientiousness. There were no significant differences in knowledge sharing and acquisition activities between individuals high and low in extraversion, openness and neuroticism. The Implications of these findings and suggestions for future research are also discussed.

Keywords: Knowledge sharing, Knowledge acquisition, Big Five Personality Characteristics

Knowledge is widely recognized as a critical organizational resource irrespective of economic sector or type of organization (Sveiby 1997; Davenport & Prusak, 1998). Hence managing knowledge is a critical factor in a business' ability to create and maintain distinctive core competencies.

This research examines the impact of personality as an antecedent of knowledge sharing and acquisition activities, two key aspects of knowledge management, in organizations. Knowledge sharing is defined as sharing of task-relevant expertise, ideas, and suggestions with one another. Knowledge acquisition is defined as collecting knowledge from various sources i.e., newspapers, article, training program, and generating new knowledge through experiment with new ways of working, discussion with seniors and colleague etc. This paper is structured as follows: The first section describes the variables of the study. This follows presentation of the research method used in the study and the results of data analysis. The last section presents a discussion of the results and their implications, together with the limitations of this study.

Knowledge Management

The existing knowledge management literature is replete with definitions of knowledge management. According to Brelade and Harman (2001), knowledge management is the acquisition and use of resources to create an environment in which information is accessible to individuals and in which individuals acquire, share and use that information to develop their own knowledge and are encouraged and enabled to apply their knowledge for the benefit of the organization.

Nonaka (1994) describes knowledge as existing in two dimensions: explicit and tacit. Tacit knowledge is deeply rooted in an individual's action and experience, as well as in the ideals, values or emotions he or she embraces. On the other hand, explicit

knowledge can be expressed in codified form and therefore can be diffused throughout an organization in the forms of rules and guidelines (Nonaka, 1994). The effectiveness of knowledge-driven work is directly related to the creation of new knowledge and the sharing of useful existing knowledge through the interaction between tacit and explicit knowledge (Nonaka & Takeuchi, 1995; Sveiby 1997). There seems to be consensus among researchers to treat knowledge management as a process that facilitates knowledge exchange and sharing and establish learning as a continuous process within the organization i.e. knowledge creation and acquisition.

The Big Five-Factor-Model (FFM)

Generally, researchers agree that the Big Five taxonomy is one of the most stable taxonomies in classifying personality traits and it has contributed to a new way of looking at personality (Peabody & Goldberg, 1989).. For example, the taxonomy consistently emerges in different age, sex, cultural, and language groups as well as in longitudinal studies and across different sources such as self and observer ratings (Costa & McCrae, 1992; Digman, 1990). Research demonstrates that the Big Five strongly predicts work behaviour across time, contexts, and cultures-in domestic settings (e.g., Barrick & Mount, 1991). The widespread acceptance of the five-factor model (FFM) of personality as a valid personality framework to use in research has greatly helped in this re-establishment of personality as an important variable in the study of behaviour in the work place.

The five factors extraversion, agreeableness, conscientiousness, openness, and neuroticism-measure dispositional categories under which a variety of specific traits are subsumed. Digman (1990) concluded that the Big Five is a fundamental model for describing personality. Using the Big Five, this study intends to determine whether strong relationships exist between dispositional categories and knowledge sharing and knowledge acquisition.

The following section discusses these Big Five personality characteristics and proposed hypotheses for the relationships of these dimensions with knowledge sharing and knowledge acquisition.

Agreeableness (A):

Agreeableness personality dimension is denoted by individual characteristics such as being helpful, generous, and courteous and is primarily a dimension of interpersonal tendencies. Agreeable individuals are warm, likable, emotionally supportive, and nurturing. In work contexts, agreeable employees show higher levels of interpersonal competence (Witt, Burke, Barrick, & Mount, 2002) and collaborate effectively when joint action is needed (Mount, Barrick, & Stewart, 1998). In contrast, those who are low in agreeableness (disagreeable) are generally cold, oppositional, hostile, and/or antagonistic in their behaviours toward others (Digman, 1990). Caliguiri (2000) found that individuals who were more agreeable dealt with conflict in a collaborative manner and were less competitive. Thus, in an organization or department consisting of individuals rated high on agreeableness, one would expect a high level of cooperation among members. People scoring high on this trait are more likely to help others by suggesting ideas for improvement in the performance of team members' tasks. So it is hypothesized that

H1a – People high in agreeableness will be more involved in knowledge sharing activities.

H1b–People high in agreeableness will be more involved in knowledge acquisition activities.

Conscientiousness (C):

Conscientiousness is denoted by individual attributes such as being neat, punctual, careful, self-disciplined, and reliable. Individuals scoring high on conscientiousness

tend to be achievement-oriented, self-motivated, and task-oriented (Barrick & Mount, 1993). They are also likely to be more committed to the task (Ones & Visweswaran, 1997) and be trusted by others in the organization (Caliguiri, 2000). They are predisposed to take initiative in solving problems and are methodical and thorough in their work (Witt et al., 2002). People who are high in conscientiousness generally perform better at work than those who are low in conscientiousness (Barrick & Mount, 1991). Therefore, conscientiousness people will be more likely to be involved in knowledge sharing and acquisition activities. So:

H2a – People high in conscientiousness will be more involved in knowledge sharing activities.

H2b – People high in conscientiousness will be more involved in knowledge acquisition activities.

Neuroticism (N):

Those who are highly neurotic tend to be self-conscious and high self-monitors. The general tendency to experience negative affects such as fear, sadness, embarrass ment, anger, guilt, and disgust is the core of N domain. Perhaps because disruptive emotions interfere with adaptation, men and women high in N are also prone to have irrational ideas, to be less able to control their impulses, and to cope more poorly than others with stress (Costa & McCrae, 1992). Emotional stability is the opposite pole of neuroticism. People who are high in emotional stability are generally calm and even tempered in the way they cope with daily life (Barrick & Mount, 1991; Ones & Viswesvaran, 1997). Those who are emotionally stable usually do not express much emotion. They tend to be less anxious, depressed, angry, embarrassed, worried and insecure. Thus degree of neuroticism will influence individual's interaction with others, hence

H3a – People high in neuroticism will be less involved in knowledge sharing activities.

H3b – People high in neuroticism will be less involved in knowledge acquisition activities.

Extraversion (E):

People who are high in extraversion are generally sociable, assertive, active, bold, energetic, adventuresome, and expressive (Barrick, Mount, & Piotrowski, 2002). They are self confident, talkative, gregarious, and spontaneous. In contrast, those who are low in extraversion (highly introverted people) are timid, submissive, silent, and inhibited. Extraverts have the social skills and the desire to work with others that may be necessary to be involved in knowledge sharing and acquisition activities. Extraversion is also an indicator of one's assertiveness and confidence (Costa & McCrae, 1992). Individuals who scored low on extraversion tend to be quiet and private, and may feel too timid to engage in a problem-solving conversation with people. It is hypothesized here:

H4a – People high in extraversion will be more involved in knowledge sharing activities.

H4b–People high in extraversion will be more involved in knowledge acquisition activities.

Openness (O):

To date, this dimension is the least understood aspect of personality in the literature on the five-factor model (Digman, 1990). Openness to experience is defined broadly in the literature, including being imaginative, creative, cultured, original, broad-minded, intelligent, and artistically sensitive. Goldberg (1992) indicated that individuals low in openness, are unreflective and imperceptive; therefore, these individuals may not engage in the introspective analysis of self versus others that motivates people to engage in knowledge sharing and knowledge acquisition activities. So it hypothesized:

H5a–People high in openness to experience will be more involved in knowledge

sharing activities.

H5b–People high in openness to experience will be more involved in knowledge acquisition activities.

Method

Participants:

The participants were postgraduate students (N=156) attending a business course on organizational behaviour. The average age of the participant was 22 (SD=4.58) years. Of the participants 86.5 percent were male and 13.5 percent female, 35 percent had work experience and 65 percent were having no work experience. Average work experience of experienced participants was 6.86 (SD =3.97) years.

Instruments:

Knowledge acquisition behaviour - It was measured with six items. Respondents were asked to report how frequently they will be involved in various activities related to knowledge acquisition i.e. reading news and article, attending training program, experiment with new ways of working, discussion with seniors and colleague etc., on five point scale (1-very rarely, 5 – very frequently). The coefficient alpha for the scale was .78.

Knowledge sharing behaviour - It was measured using four items adapted from the work of Lee (2001). Respondents were asked to respond how frequently they will share their knowledge with others in organizations on five-point scale (1-very rarely, 5-very frequently). The coefficient alpha for the scale was .67.

Personality Assessment - The NEO-Five-Factor Inventory (NEO-FFI) developed by Costa and McCrae (1985) was used in the study. This inventory is a short form of the NEO-Personality Inventory. Each of the five factors was measured using 12 items for a total of 60 items. McCrae and Costa (1989) have verified the existence of five independent personality factors with coefficient alphas of .70 or higher for the items measuring each of the factors. A five-point Likert scale was used ranging from (1) Strongly disagree to (5) Strongly agree.

Procedure

Postgraduate students attending a business course on organizational behaviour were asked to participate in the study. First they completed NEO-FFI, and three weeks later they completed knowledge sharing and knowledge acquisition questionnaire in class. The inventories were administered at different times in order to reduce the effects of common method variance.

Results

To examine the impact of personality dimensions on knowledge sharing and knowledge acquisition one way analysis of variance was performed for knowledge sharing and acquisition separately with personality dimension as independent factor and knowledge sharing and knowledge acquisition as dependent factor. Separate ANOVA was performed for each personality dimension. Participants were divided in high, medium and low category on specific dimension by converting raw score into standard score following the NEO-FFI manual (Costa & McCrae, 1985).

Knowledge Sharing and Personality Dimensions

The results of analysis of variance for knowledge sharing and personality dimension indicate significant differences among the persons low, high and medium on 'agreeableness' and 'conscientiousness' for knowledge sharing activities $F(2, 153) = 3.55$, $p<.031$; $F(2,153)=2.67$, $p<.073$, respectively which support stated hypotheses (H1a, H2a). Mean scores indicates that persons high on 'agreeableness' are more involve on knowledge sharing (M= 3.85) than persons low on 'agreeableness (M= 3.55). Persons high on 'conscientiousness' were also reported to be more involved in knowledge sharing activities (M = 3.72) than persons low on 'conscientiousness' (M= 3.50). The impact of 'extroversion', 'openness to experience',

and 'neuroticism' was found to be non-significant for knowledge sharing activities.

Knowledge Acquisition and Personality Dimensions

For knowledge acquisition, only the impact of 'conscientiousness' was significant $F(2, 153) = 3.40$, $p < 0.036$. Persons high on 'conscientiousness' reported to be more involved in knowledge acquisition activities (M=4.19) than persons low in 'conscientiousness' (M= 3.83) and supported the hypothesis (H2b).

Discussion

Many researchers now agree that knowledge management is more than just storage and manipulation of information, but a process that requires the commitment to create and disseminate knowledge through the organization. The present paper identifies role of individual personality on the likelihood of their involvement on knowledge sharing and acquisition activities. The FFM or "Big Five" of personality represents taxonomy to describe the human personality sphere in a parsimonious and comprehensive way.

Extensive empirical research on the Big Five has allowed meta-analytic reviews of the predictive validity of personality relative to job-related outcomes (Barrick &Mount, 1991; Hough, Eaton, Dunnette, Kamp, & McCloy, 1990;). These meta-analyses conclude that conscientiousness consistently predicts outcomes for a wide range of occupational groups and extraversion predicts outcomes for jobs (i.e., managers and sales representatives) where interaction with others is a significant responsibility. In the past research on effect of personality trait on team performance, conscientiousness and agreeableness consistently emerge as important predictors compared to other personality traits which have relatively less support (e.g., Barrick , Stewart, Neubert, & Mount, 1998;).

The findings of present study also establish the significance of conscientiousness and agreeableness for work place behaviour of employees. These indicate that individuals high on agreeableness are more willing to share their knowledge with others which is indication of their altruistic nature. Findings also report that individuals high in conscientiousness are more involve in both knowledge sharing and knowledge acquisition activities. Conscientious individuals tend to focus on attaining goals in a determined and disciplined manner (McCrae & John, 1992); thus these individuals by their nature may do a good job of preparing for mutual problem solving as well as mutually searching for solutions that satisfy both parties (i.e. two individuals, two teams or departments). Thus, conscientiousness people are more likely to share knowledge and acquire new knowledge because they may think it to be the proper thing to do.

There was no significant difference in knowledge sharing and acquisition activities among individuals low or high on extraversion. The reasons may be the use of different means of communications, other than face to face interaction, also facilitate individual involvement in knowledge sharing and knowledge acquisition activities. So this personality dimension is less likely to have direct impact on individual involvement in knowledge sharing and acquisition activities. Neuroticism also found not to be related with knowledge sharing and acquisition behaviour. The reason my be knowledge sharing and acquisition activities are considered to be more routine activities, while this dimensions influence behaviour more in stressful situations.

The findings also indicate no significant difference between individuals high and low on openness for knowledge sharing and acquisition. These findings may be more related to background of participants. This study was conducted in educational settings on management students. Educational settings emphasize more on learning form each others and acquire new knowledge. In

this setting, personality may have less influence. Adler and Weiss (1988) reported that personality will have the most impact in "weak situations". In "strong" situations with more defined roles, rules and contingencies, personality should have less impact. Future research need to replicate this study in corporate setting in order to validate these findings.

This study has certain directions for researchers. It examined the impact of personality on knowledge sharing and knowledge acquisition activities. The earlier studies have established the role of organizational factors (e.g., Davenport & Prusak, 1998; Irmer, 2002; Robertson & O'Malley, 2000). Future research needs to examine the moderating role of organizational factors on the relationship between personality and knowledge sharing and acquisition.

The results of this study may also have some implications for practitioners. Organizations may begin to use Big Five-personality assessment to help make decisions ranging from selection, promotion, and coaching for improvement. With the increase emphasis on knowledge possessed by the employees in an organization is a highly valued intangible strategic asset; organization may give more preference to individuals high in agreeableness and conscientiousness. The coaching could help individuals understand why and how their own personality is associated with a preference for involvement in knowledge sharing and acquisition activities. In addition to increased understanding, this coaching process may help individuals increase their self-acceptance, thus making it possible for individuals to learn the behaviours required for knowledge sharing and acquisition.

This study has a few limitations that need to be mentioned. First of all, the small sample size put constrain on the generalizeability of findings to population. Second, this study was conducted in academic setting. To verify these findings into corporate setting, it needs to be replicated in organization set up. Furthermore, some respondents may have exaggerated their level of knowledge sharing due to social desirability. Moreover, objective measure for knowledge sharing behaviour need to be developed to pursue further investigation of the conceptual model.

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