

## مشاركة المعرفة والسمات الشخصية

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**ملخص:** يركز المحتوى العلمي المتاح على تأثير التطور التكنولوجي والدعم الإداري والجوانب الفردية - كالثقة والتحفيز - على تبادل المعرفة. تهدف هذه الدراسة إلى معرفة العلاقة المحتملة بين مشاركة المعرفة والسمات الشخصية في دول من الشرق الأوسط. وهي تركز على شخصية الفرد بوصفه عاملاً منفرداً. دُرست السمات الشخصية الخمس المشمولة وفقاً لنظرية العوامل الخمسة الكبرى للشخصية، الانبساطية extraversion، الانسجام agreeableness، يقظة الضمير conscientiousness، العصابية neuroticism، الانفتاح openness. تضمن مقياس مشاركة المعرفة 4 عوامل: (1) موقف فريق العمل تجاه تبادل المعرفة، (2) سلوك المشرف على فريق العمل، (3) الثقافة السائدة في محيط العمل، (4) المواقف الفردية تجاه تبادل المعرفة. أرسلت استبانة إلكترونية إلى 210 مشاركين من شركات مختلفة في ثلاث دول خليجية. أجاب 139 موظفاً عن الاستبانة بنسبة 66%. بينت النتائج أن سمة شخصية الانفتاح ترتبط بقوة بتبادل المعرفة بشكل عام، في حين أن أربع سمات شخصية (الانبساطية، يقظة الضمير، الانسجام، والانفتاح) ترتبط إيجابياً مع موقف فريق العمل تجاه مشاركة المعرفة بشكل أكبر. وبينت النتائج كذلك أن الانفتاح والانسجام يرتبطان بصفة قوية بالمواقف الفردية تجاه مشاركة المعرفة. لم يكن هناك علاقة ذات دلالة بين العصابية ومشاركة المعرفة. تمثل نتائج هذه الدراسة إضافة إلى الإنتاج العلمي في حقل إدارة المعرفة.

**المصطلحات:** إدارة المعرفة، مشاركة المعرفة، سمات الشخصية، الكويت، مجلس التعاون الخليجي، الشرق الأوسط.

## Knowledge Sharing and Personality Traits

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**Abstract:** The aim of this study is to investigate the relationship between personality type and knowledge sharing (KS) in Middle Eastern countries. The existing literature concerning KS has given much attention to the impact of technological development, managerial support, and individual aspects including trust and motivation. This study focuses on one's personality as a distinct factor. The five personality traits covered, according to Big-Five module, include extraversion, agreeableness, conscientiousness, neuroticism, and openness. The KS variables are Workgroup Attitude toward KS, Behaviour of the Supervisor, Business Unit Culture, and individual attitudes toward KS. A web-based survey was administrated to 210 participants who had access to the Internet from three different companies in the Gulf Cooperation Council (GCC). 139 employees responded (66% response rate). The results revealed that the personality trait of Openness correlates strongly with the overall KS, whereas employees who have four personality traits (Extraversion, Conscientiousness, Agreeableness, and Openness) relate positively to a higher work group attitude towards KS. Openness and agreeableness were also significantly related to individual attitudes toward KS. There was no significant relation between neuroticism and overall KS. The results contribute to the existing literature as they offer empirical evidence on the impact of individual characteristics on knowledge sharing, especially studies done in the Middle East, because relatively little work on this topic has been done in a Middle Eastern context.

**Key words:** Knowledge management, Knowledge sharing, Personality traits, Kuwait, Gulf Cooperation Council (GCC), Middle East.

### 1. Introduction

Knowledge is the most important strategic resource in organizational life. Moreover, organizational knowledge is recognized as the most

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significant segment in the business of current organizations. Therefore, Knowledge management is a field that has become increasingly important as the world is moving towards knowledge-based economies. Knowledge sharing (KS) is the fundamental means through which the members of an organization can contribute to knowledge acquisition, innovation, and ultimately an increase in competitiveness. KS allows organizations to exploit and capitalize on knowledge-based resources, build on past experiences, respond quickly to problems that have been encountered before, develop new ideas and insights, and avoid reinventing the wheel or repeating past mistakes (Egbu *et al.*, 2010). Foy (1999) suggested that knowledge sharing facilitated learning as useful ideas, processes, and products were often transferred.

Knowledge sharing can be described as a conscious behavior, which makes knowledge reusable by others (Ismail & Yusof, 2010). The knowledge process has its roots in the behavior of those who are engaged in the exchange of knowledge (Yio-Eih, 2004).

In order to make knowledge sharing more effective, a large number of studies have focused on a better understanding of the motives for sharing and the processes involved in it (Sveiby & Simons, 2002). It is generally understood that individual factors and characteristics such as motivation, value, beliefs, experience, and personality traits have a vital influence on knowledge sharing behavior (Gupta & Govindarajan, 2000; Osterloh & Frey, 2000; Wang & Yang, 2007). Moreover, the literature on knowledge sharing is replete with studies about individual and organizational variables, cultural settings, value systems, and contextual peculiarities. These studies have established useful knowledge sharing perspectives and frameworks.

One critical aspect of knowledge sharing is focused on the role of personality profiles. Personality is a crucial strand for the study of behaviour in psychological literature. The literature on organizational behavior and human resources includes an interdisciplinary examination of personality traits and workplace variables including trust (Mooradian *et al.*, 2006), job performance (Barrick & Mount, 1991), work attitude (Judge *et al.*, 2002), behaviour (Barrick & Mount, 1991), difference in wages (Nyhus & Pons, 2005) and job satisfaction (Judge *et al.*, 2000). A number of studies have also examined selected aspects of knowledge sharing behaviour in relation to personality traits (Jadinet *et al.*, 2013; Aharony, 2011; Ismail & Yusof, 2010). Nonetheless, in comparison with

other countries, relatively little work on this topic has been done in a Middle Eastern context, and specifically in countries that belong to the Gulf Cooperation Council (GCC). Therefore, the current study aims to address the following questions:

- 1 - What is the association between the different Personality traits (Agreeableness, Conscientiousness, Openness, Neuroticism, Extraversion) and overall Knowledge sharing?
- 2 - What is the association between the different Personality traits (Agreeableness, Conscientiousness, Openness, Neuroticism, Extraversion) and the four different dimensions of Knowledge sharing (Employee Attitude (EA), Work Group Support (WGS), Immediate Supervisor (IS). Organizational Culture (OS))?

## **2. Background**

This study deals with the ways in which personality traits and knowledge sharing intersect. The following sections will explain each construct in detail.

### **2.1. Personality Traits**

Personality is a dynamic organization consisting of all of the psychophysical systems that contribute to an individual's feelings, thoughts, and characteristic patterns of behavior (Allport, 1961). The discipline is still in its formative phase despite the large body of literature which has emerged. Psychologists have been attempting to recognize the different traits of personalities and have produced various personality typologies. The vast majority of these theoretical typologies are based on the psychological theories of Freud, Kretschmer, Jung, Horney, and others (Robins *et al.*, 1996).

A mother-daughter team from the 1950s developed the Myers-Briggs Trait Indicator (MBTI) (Nicholson, 2008). Friedman and Rosenman developed Type A-Type B typology in 1959 (Connor, 2002). Also, Weinberger and Schwartz classified personality into six distinct categories in the 1990s (Weinberger & Bartholomew, 1996). Robins *et al.* (1996) stated that Block's (1971) study of Lives through Time was one of the most important experimental works on personality types; Block classified personality into five types. Holland (1959) developed a six-factor model that is best known for its application in vocational interest theory.

Matzler & Mueller (2011) noted that with all this ongoing research on personality types, psychologists have identified five broad traits: extraversion; neuroticism; openness to experience or intellect; agreeableness; and conscientiousness. Moreover, they found these traits to be critical when attempting to understand individual differences regardless of the methods used. Using language or lexical approaches as well as questionnaires that were designed to measure a wide range of individual differences, these researchers primarily supported the Big-Five model since both methods had the same number of factors (Prinzle *et al.*, 2009). Matzler & Mueller (2011) termed this 5-trait model the "Big Five" or "Five-Factor Model" (Digman, 1990; Goldberg, 1993; John, 1990). These five categories are further explained below:

**Agreeableness (A):** According to Furnham *et al.* (2007), agreeableness or sociability refers to friendly and modest behavior. Agreeable individuals are likable, warm, emotionally supportive, and nurturing (Gupta, 2008). Matzler & Renzl (2007) noted that individuals with a high score for this trait are courteous, cooperative, forgiving, generous, and helpful. Moreover, they are sympathetic, altruistic, and enthusiastic when assisting others (Matzler *et al.*, 2008).

**Conscientiousness (C):** Furnham *et al.* (2007) stated that conscientiousness is associated with determination, responsibility, persistence, and efficiency. Individuals who score high in this trait are careful, reliable, self-disciplined, neat, and punctual. Their behavior should include both verbal and nonverbal acknowledgments as well as eye contact (Cuperman & Ickes, 2009). Gupta (2008) pointed out that when working these individuals are thorough, methodical, and take initiative to solve problems. In a work context conscientious employees often attempt to be creative in accomplishing their tasks. They do not give up even in difficult situations (Prinzle *et al.*, 2009). Matzler *et al.* (2008) mentioned that conscientiousness helps to improve organizational citizenship and since knowledge sharing is a trait of organizational citizenship we might say that conscientious employees will be more involved in knowledge sharing activities.

**Openness (O):** Furnham *et al.* (2007) noted that openness-to-experience refers to the preference for novel experiences and ideas, engaging in intellectual activities, and enjoying new experiences. Openness is often correlated with being curious, cultured, imaginative,

intelligent, broad-minded, artistically sensitive, and original (Matzler & Renzl, 2007). Prinzie *et al.* (2009) stated that openness is a crucial factor for goal orientations.

**Neuroticism (N):** Gupta (2008) pointed out that individuals who score high in neuroticism tend to have less control on their impulses, have irrational thoughts, and cope poorly with stress. Neuroticism contrasts with emotional stability for a broad range of negative feelings including irritability, sadness, anxiety, and nervous tension (Benet-Martínez & John, 1998). Neuroticism is associated with experiencing disruptive emotions including depression, anxiety, fear, and anger (Furnham *et al.*, 2007). The opposite of neuroticism is emotional stability (Wang & Yang, 2007).

**Extraversion (E):** According to Prinzie *et al.* (2009), extraversion reflects the intensity and depth of capacity for joy, interpersonal interaction, and activity level. Extraverts are self confident and spontaneous. In contrast, introverts are submissive, private, timid, inhibited, and silent (Gupta, 2008). Matzler & Renzl (2007) stated that those who score high for this trait are often sociable, active, gregarious, talkative, and assertive. Extraverts have both the desire and the social skills necessary to work with others, which is necessary when becoming involved in knowledge sharing activities (Gupta, 2008).

## 2.2. Knowledge Sharing

Knowledge sharing is a conscious behavior that shares knowledge in a way that it becomes reusable by others (Ismail & Yusof, 2010). It involves a set of behaviors that values the exchange of knowledge and helping others (Yio-Eih, 2004). Lin (2007) suggests that knowledge sharing is a social interaction that involves employee exchange of knowledge, skills, and experiences. Knowledge sharing can occur at both the individual and organizational levels. On the individual level this entails communicating with colleagues in an effort to do something better, quicker, or more efficiently. Knowledge sharing at the organizational level is about exchanging experience-based knowledge that exists in the organization and making it available for others in the business. Andriessen (2006) stated that the potential organizational benefits of knowledge sharing include spreading knowledge within the organization, using knowledge to design new products or innovative services, satisfying more customers, or increasing the quality of existing products and services.

Many studies have explored the behavior of knowledge sharing and some have even investigated attitudes toward knowledge sharing (Razi & Karim, 2011). Others have tested knowledge sharing behavior (Yi, 2009) and the enablers and barriers experienced (Husted *et al.*, 2005). Different instruments were used to measure knowledge sharing levels:

Cummings (2004), in his study of work group and knowledge sharing, tested five activities that characterize knowledge sharing and its dimensions in work groups. These activities included general overviews, specific requirements, analytical techniques, progress reports, and project results. The five activities were measured on a 5-point scale (i.e., 1: never, 2: rarely, 3: sometimes, 4: regularly, 5: a lot) whereas Hansen (1999) constructed a 7-point Likert scale questionnaire that measured inter-unit tie weaknesses and non-codified knowledge. Szulanski (1996) analyzed the internal stickiness of knowledge sharing and tested it using best-practice transfers and observations from eight companies. For this purpose he constructed a questionnaire based on four factors: Characteristics of the knowledge transferred; Characteristics of the source of knowledge; Characteristics of the recipient of knowledge; and Characteristics of the context.

Sveiby & Simons (2002) studied employee attitude and organizational culture as influencing factors on knowledge sharing. When designing their instrument they generated 120 items as a first step. After factor analysis and experimental testing they emerged with a twenty-statement questionnaire. The twenty influencing factors were placed into four clusters. One group of questions described the respondent's own attitude, Employee Attitude (EA). The second group of questions described the knowledge sharing behavior of the individual's nearest colleagues, Work Group Support (WGS). This third group of questions described the behaviors of the immediate manager, Immediate Supervisor (IS). Finally, the fourth group of questions considered organizational factors outside of the individual's nearest working environment, Organizational Culture (OS). A 5-point Likert was used for rating each item and a sample of 8277 employees responded to the survey.

### **3. Conceptual Framework and Hypothesis**

When investigating knowledge sharing in organizations, it is always wise to consider the people factor. The following section will lay out the relevant literature for the development of the hypothesis.

### 3.1. Personality Traits and Knowledge Sharing

Teh *et al.* (2011) examined the Big Five Personality (BFP) factors to determine if they supported or inhibited an individual's online knowledge sharing behaviors. They determined that three aspects of the BFP were associated with an individual's attitude towards knowledge sharing behavior. The results showed that the attitude of university students with higher levels of neuroticism and extraversion was more favorable toward knowledge sharing. On the other hand, students who had higher levels of openness were less likely to share online knowledge.

Gupta (2008) also investigated the relationship between knowledge sharing and the BFP. The personality factors used in this study included agreeableness, conscientiousness, neuroticism, extraversion, and openness-to-experience. Those who scored high in the traits of agreeableness and conscientiousness were more involved in knowledge sharing activities. The influence of neuroticism, openness, and extroversion was not found to be significant with respect to knowledge sharing activities.

Ismail and Yusof (2010) studied the correlation between individual factors (trust, awareness, and personality) and the quality of knowledge sharing within Malaysian public agencies. They found that extraverts had a positive interest towards external experience while introverts had a negative orientation. Moreover, they noted that extraverts could interact with others better than introverts could. The researchers found that personality factors and knowledge sharing were indeed positively correlated. The most significant finding was that the major predictor of knowledge sharing was personality followed by trust and awareness.

Wang *et al.* (2007) also examined the relationship between individual qualities (personality type, trust, and aspiration type) and the willingness to share knowledge amongst healthcare workers in Taiwan. The three personality traits included in this study were conscientiousness, extraversion, and neuroticism. They found that the personality traits of conscientiousness and extraversion and three motivation traits (external, internal, and complimenting) were positively associated with knowledge sharing. However, neuroticism and both internal and external motivation were negatively associated with knowledge sharing. This indicates that those individuals with a high level of

conscientiousness and extraversion had stronger ties and engaged more intently with knowledge sharing activities.

Wang & Yang (2007) studied personality and its impact on the intention to share knowledge. Openness and neuroticism did not seem to have a significant relationship with knowledge sharing whereas other personality traits seemed to be more significant. Borges (2013) examined the personality traits and organizational/ environmental factors of sharing tacit knowledge amongst IT professionals. The results were found to be consistent with other studies. Extroverted employees most often led conversations and influenced other team members in discussions and knowledge sharing.

Based on the previous studies, the following primary hypotheses were formulated:

### 3.2. Hypotheses

- H<sub>1</sub>: The Big Five Personality (BFP) Traits are significantly associated with the overall knowledge sharing within organizations.

Five sub-hypotheses were derived from H<sub>1</sub>:

- H<sub>1a</sub>: Agreeableness is positively related to overall knowledge sharing.
- H<sub>1b</sub>: Conscientiousness is positively related to overall knowledge sharing.
- H<sub>1c</sub>: Openness is positively related to overall knowledge sharing.
- H<sub>1d</sub>: Neuroticism is negatively related to overall knowledge sharing.
- H<sub>1e</sub>: Extraversion is positively related to overall knowledge sharing.
- H<sub>2</sub>: The Big Five Personality (BFP) Traits are significantly correlated with four dimensions of knowledge sharing.

Four sub-hypotheses were derived from H<sub>2</sub>:

- H<sub>1a</sub>: The Big Five Personality (BFP) Traits are significantly correlated with the dimension of the work group.
- H<sub>1b</sub>: The Big Five Personality (BFP) Traits are significantly correlated with the dimension of supervision.
- H<sub>1c</sub>: The Big Five Personality (BFP) Traits are significantly correlated with the dimension of the business unit.
- H<sub>1d</sub>: The Big Five Personality (BFP) Traits are significantly correlated with the dimension of the individual attitude.

### 3.3. Model of the Study

Theoretical understandings have led to the formulation of two hypotheses. A test of these hypotheses implies testing the following models:

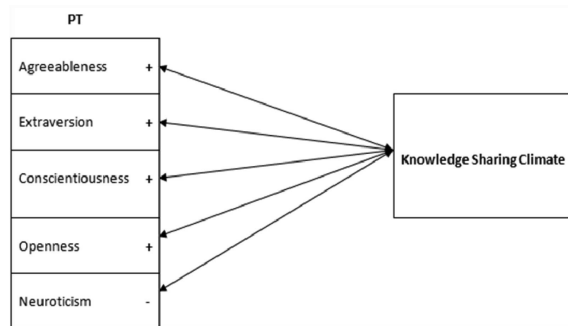


Figure 1: H1

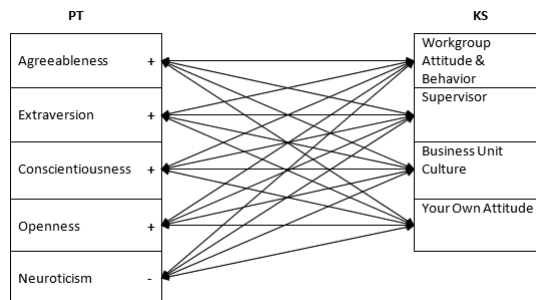


Figure 2: H2

## 4. Methodology

### 4.1. Instrument

A survey research method was used in this study based on many similar studies in the literature (Ismail & Yusof, 2010; Teh *et al.*, 2011; Matzler *et al.*, 2011).

An electronic questionnaire was the tool used to collect the data.

The questionnaire was divided into three main sections. The first was the demographics which contained gender, age, education and

position. These had multiple choice answer selection, of which the respondents had to select the one that best suited them.

The second part was the Personality test. The Big Five Inventory (BFI) was used to examine personality profiles. This standard test has been widely applied in similar research. The BFI has a proven track record for its effective, efficient, easy, prompt, and practical nature. Moreover, it is used in cross-language and cross-cultural research settings including studies conducted in the Middle East (Benet-Martínez & John, 1998). The questions related to personality test were not divided into any particular variables in the questionnaire, but for data analysis these were divided into five variables - Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness. Each of the personality test variables had between 8 to 10 questions. In total there were 44 questions for personality test. The scale used was 5-point Likert scale (1-Strongly Disagree; 2-Disagree; 3-Neither Agree or Disagree; 4-Agree and 5-Strongly Agree) (See Appendix A).

The third part was related to Knowledge Sharing (KS). The overall design of the questions for KS was same as the personality test as it followed a 5-point Likert scale (1- strongly Disagree to 5- Strongly Agree). This study adopted the four-measure scale of Sveiby & Simmons (2002). This instrument measures four dimensions associated with knowledge sharing: (1) workgroup attitude and behavior towards knowledge sharing; (2) KS attitude of the supervisor; (3) unitculture, (4) and the employee attitude towards knowledge sharing. Each dimension consists of five statements (See Appendix A).

#### **4.2. Population, Sample and Data Collection**

Data was collected from a convenient sample of 300 employees from three small-sized private, corporate companies in three different countries in the GCC in January, 2013.

A web-based questionnaire was used to collect the data. Therefore, employees who had no Internet access were excluded from the sample, leaving 210 of those contacted to participate in the study. Professional online survey website, QuestionPro.com was used to design the questionnaire and the website link was emailed to respondents. The researchers informed participants of their objectives, solicited their voluntary participation, and assured confidentiality. The participants were also given a time frame within which they had to complete the questionnaire with a reminder e-mail sent out one week later. A total of 210 questionnaires were received electronically over a few weeks period. 71 of these were answered

incompletely, thus they were invalid for analysis. So the total number of valid questionnaires was 139 with 66% response rate. These were downloaded in MS-Excel format and input into SPSS package.

#### **4.3. Data Reliability**

We used 'Cronbach's alpha' and the 'Kaiser-Meyer-Olkin Bartlett' to test the reliability and validity of the data. The values obtained with respect to personality traits are (.711 and .831) and knowledge sharing are (.911 and .947). Both values are considered significant at (.000). Using these figures we could conduct appropriate correlation tests with confidence

### **5. Data Analysis and Findings**

#### **5.1. Demographics**

Seventy eight percent of the participants were male (108), while about half (47.3% approx. 66 participants) were between the ages of 25-34 and about 38 participants (27.4%) were 45 years and older. We also noted that around 120 of them (86.3%) held either a Bachelor or a Master's degree; many of this group had an MBA. Only 19 (13.6%) of participants had a high school diploma or a 2-3 year diploma from a vocational college as their highest level of education. About 30 of the participants (21.5%) served in managerial or supervisory positions. A large number of 58 (41.7%) served in professional positions including engineering, project management, accounts, and personnel. The remaining one-third served in technical and support positions including secretaries, technicians, purchasers, and others. This profile indicates that the respondents served in both information and knowledge intensive positions and thus their input is reliable for testing the two hypotheses of this study.

#### **5.2. Correlation Testing**

The Pearson correlation coefficient was used to test the two hypotheses of this study.

Table 1 shows the results of testing the first main hypothesis. To refresh, the first hypothesis stated that personality traits are significantly associated with the overall knowledge sharing climate in an organization. The five sub-hypotheses were associated with the five personality traits of extraversion, conscientiousness, agreeableness, neuroticism, and openness.

We found that only one personality trait (openness) was significantly correlated with knowledge sharing at a value of (.191) that was significant at (.008). A criterion of (.05) was used for testing the hypotheses. Thus, this factor was found to be highly significant.

Another trait (agreeableness) had a coefficient value of (.132) that was significant at (.068). Although this value is higher than the criterion, it shows that this relationship is quite close to the point of significance. This result is explained in the next section of discussion.

The three remaining factors (extraversion, conscientiousness, and neuroticism) did not yield any significance, thus implying that the three sub-hypothesis could not be supported. Neuroticism had the smallest coefficient and actually demonstrated an inverse relationship.

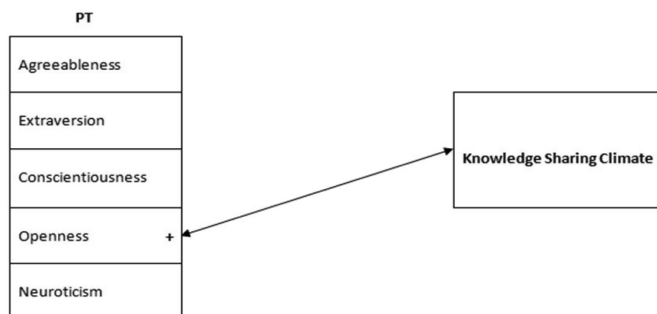
Based on these results, the first hypothesis of this study was only partially supported.

**Table 1**  
**The Correlation between Personality Traits and overall Knowledge Sharing**  
**N = 139**

|                   |                  | <b>Extraver-<br/>sion</b> | <b>Con-<br/>scientious</b> | <b>Agree-<br/>ableness</b> | <b>Neuroti-<br/>cism</b> | <b>Openness</b> |
|-------------------|------------------|---------------------------|----------------------------|----------------------------|--------------------------|-----------------|
| Knowledge Sharing | Correlation      | .090                      | .116                       | .132                       | .015                     | .191**          |
|                   | Sig.<br>2-tailed | .211                      | .108                       | .068                       | .834                     | .008            |

\* Correlation is significant at the 0.05 level (2-tailed).

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



**Figure 3**  
**The Correlation between Personality Traits and overall Knowledge Sharing**

The Second hypothesis stated that personality traits would significantly correlate with four knowledge sharing dimensions. These

found dimensions included the following: workgroup attitude and behavior towards knowledge sharing, the unique features of the supervisor; the unit culture, and the employee attitude towards knowledge sharing. Table 2 shows the correlation results between these four knowledge sharing factors and five personality traits. The four sub-hypotheses that were based on the four knowledge sharing variables present a micro-analysis for the knowledge sharing constructs.

**Table 2**  
**Correlation between Personality Traits and Knowledge Sharing Dimensions**  
**N = 139**

|                                  |                     | Extraversion | Conscientious | Agreeableness | Neuroticism | Openness |
|----------------------------------|---------------------|--------------|---------------|---------------|-------------|----------|
| KS Workgroup Attitude & Behavior | Pearson Correlation | .138*        | .176*         | .196**        | .028        | .225**   |
|                                  | Sig. (2-tailed)     | .055         | .014          | .006          | .704        | .002     |
| KS Supervisor                    | Pearson Correlation |              | .065          | .069          | .005        | .091     |
|                                  | Sig. (2-tailed)     | .626         | .368          | .340          | .941        | .205     |
| KS Business Unit                 | Pearson Correlation | .029         | .083          | .065          | -.004       | .141     |
|                                  | Sig. (2-tailed)     | .686         | .252          | .368          | .962        | .050     |
| KS Own-Attitude                  | Pearson Correlation | .114         | .063          | .152*         | .026        | .190**   |
|                                  | Sig. (2-tailed)     | .115         | .383          | .035          | .719        | .008     |

\* Correlation is significant at the 0.05 level (2-tailed).

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

Four out of the five personality traits were found to be significantly correlated the knowledge sharing dimension of the workgroup. Neuroticism was the only trait that did not exhibit a significant association. Extraversion had a coefficient of (.138) that was significant at (.05). Three

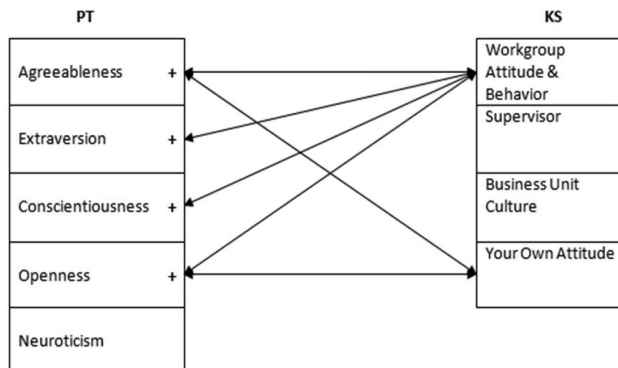
other traits (conscientiousness, agreeableness, and openness) had coefficient scores of (.176), (.196) and (.225) with respective significance scores of (.01), (.006) and (.002). These three were significant according to the (.01) criterion implying a strong relationship.

The knowledge sharing dimensions of the supervisor and the business unit did not show any significant relationship with any of the five personality traits.

Individual attitude, as a dimension of knowledge sharing, had a significant association with two of the five personality traits. These two traits were agreeableness and openness. Their coefficient values were (.152) and (.19) and had significance levels of (.035) and (.008).

The testing of hypothesis 2 revealed significant associations. It was abundantly clear that the personality traits of openness and agreeableness emerged as the most pertinent and valuable for the knowledge sharing dimensions of both workgroup and individual attitude. Moreover, the workgroup's attitude towards knowledge had a significant relationship with four of the five personality traits.

Based on these findings, hypothesis 2 was also partially supported.



**Figure 4**  
Correlation between Personality Traits and Knowledge Sharing Dimensions

## Discussion and conclusion

The results of the study have established that openness as a personality trait is significantly related to an overall climate of knowledge sharing. This indicates that individuals high on openness are also more willing to share their knowledge.

Furnham et al. (2007) noted that openness-to-experience refers to the preference for novel experiences and ideas, engaging in intellectual activities, and enjoying new experiences. Individuals with these characteristics will be more engaged with exchanging knowledge with colleagues and would be more positive about their colleagues and supervisors' knowledge sharing attitudes. They will tend to have also a more positive outlook on the existence of a knowledge sharing culture.

The findings of the present study also revealed a positive association between four dimensions of personality trait (extraversion, conscientiousness, agreeableness, and openness) and one dimension of knowledge sharing (work group attitude towards knowledge sharing). However, openness and agreeableness were the only two traits that were significantly related to another dimension of knowledge sharing (individual's attitude concerning knowledge sharing). The reasons for these results could be that Individuals with high scores in extraversion are more inclined to be sociable (Besser & Shackelford, 2007). Extroverts are most often enthusiastic, energetic, and optimistic. Studies have suggested that extroverts are positively affective and are therefore more likely to have positive emotions and contribute to greater team satisfaction (Barrick *et al.*, 1998). Since extroverts tend to be emotionally positive and are satisfied when working with teams they might also increase knowledge sharing amongst group members to ensure that the team will remain viable.

The other trait associated with knowledge sharing attitudes amongst work groups is conscientiousness. Individuals with high scores for conscientiousness are more dutiful, dependable, reliable, responsible, organised, and hardworking (Barrick and Mount, 1991). In a situation where interdependence and good interpersonal relationships are important success factors, an individual with high scores for conscientiousness is more cooperative with others compared to those who have lower level for conscientiousness (Lepine & Dyne, 2001).

Agreeableness is a trait that we determined is related to both knowledge sharing attitudes amongst the work group as well as the individuals own knowledge sharing attitude. Agreeable individuals have stronger social ties in the workplace. Accordingly, knowledge sharing flourishes highly when employees who have this personality trait deal with each other as a team. Since knowledge sharing is a specific type of

workplace collaboration, based on good relationships with colleagues and supervisors, all the acts are associated with aspects of Agreeableness. Agreeable individuals are eager to help others and tend to cooperate with others rather than compete with them. According to Vries *et al.* (2006), agreeableness has a positive effect on others and can generate stronger emotional attachment and commitment to the relationship.

There was no correlation between knowledge sharing dimensions and neuroticism. The reason maybe that knowledge sharing activities are considered to be more routine activities, while this dimension of personality influence behaviour more in stressful situations.

A practical implication of these results is that organizations could stimulate knowledge sharing through personnel personality tests. Certain tests are employed in the selection process and personality inventories may be used to identify positive behaviours that can make individuals active knowledge workers for sharing and exchange. Openness and agreeableness are two of the many traits that can be applied to the selection and recruitment process. For example, Individuals with high levels of openness were found to be suitable for roles related to acquiring and disseminating knowledge within teams (Matzler *et al.*, 2008). Organizations can use the BFP instrument to assist them in selecting, promoting, and coaching employees. Organizations can then assign individuals with specific and necessary personality traits to suitable positions where their natural beings will flourish. Engaging leaders with high scores in traits that contribute to knowledge sharing may significantly contribute to creating a favourable culture of sharing. In order to increase performance through knowledge sharing, managers must have the necessary “personality intelligence” to understand individual capabilities and differences (Manaf & Marzuki, 2009).

To answer the third question of this study: Are the results of this study similar or different from other studies done in other countries? We found that the trait of openness was related to the overall knowledge sharing and to two knowledge sharing dimensions of (KS attitudes amongst work groups and an individual’s own knowledge sharing attitude). These findings are consistent with the findings of similar study (Ellis *et al.*, 2003). On the other hand, Teh, et al. (2011) argued that individual differences in openness to experience are grounded in our respective cultures. They stated that an article published in Psychological

Science reported that Japanese and Chinese students have lower levels of openness to experience than American and Canadian students (Chen *et al.*, 1995). Accordingly, they hypothesised that there is a negative relationship between openness to experience and the attitude towards knowledge sharing and successfully proved their hypothesis. The findings of this study, which was conducted in three GCC countries, contradicts what Teh, *et al.* (2011) claims. These present findings show that other factors may in fact be the cause of these differences as opposed to one's culture! Many other studies also found a relationship between openness and knowledge sharing (Gupta, 2008; Wang & Yang, 2007; Fang & Liu, 2002; Chang, 2006; Liang *et al.*, 2005; Hsu *et al.*, 2007; Matzler *et al.*, 2011).

Consciousness and Agreeableness consistently emerge as having a positive relationship with knowledge sharing compared with other personality traits (Barrick & Mount, 1991). These results are also consistent with past research carried out by Wang *et al.* (2007), Borges (2013), Matzler *et al.* (2011), and Gupta (2008).

There was no correlation between knowledge sharing dimensions and neuroticism; this finding is consistent with other studies (Gupta, 2008; Wang *et al.*, 2007; Hsu *et al.*, 2007; Wang & Yang, 2007; Borges, 2013). The variation between these studies could be attributed to differences in contexts, methodologies, and sampling. However, this study revealed that a difference in the culture is not a main reason for variation in the results among different countries. This observation leads us to suggest that future research need to control for various external factors in order to address how personality can predict knowledge sharing. In addition, we suggest replicating this study in other settings (ex. education, health, transportation, etc.) in order to verify the findings in the public sector.

Researchers and practitioners both agree that Knowledge management is more than storing information and creating systems and databases. It's a process that requires commitment and willingness from employees to share their knowledge.

The results of this study clearly report that characteristics of the individual's personality (openness, agreeableness, extraversion and conscientiousness) are associated with knowledge sharing.

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## Appendix (A)

### Personality Instrument(Benet-Martínez& John, 1998)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please choose a number for each statement to indicate the extent to which you agree or disagree with that statement.

I see myself as an individual who is...

|                      |                      |                               |                   |                   |
|----------------------|----------------------|-------------------------------|-------------------|-------------------|
| Strongly<br>Disagree | Disagree<br>a Little | Neither Agree<br>nor Disagree | Agree a<br>Little | Strongly<br>Agree |
| 1                    | 2                    | 3                             | 4                 | 5                 |

1. is talkative
2. tends to find fault with others
3. does a thorough job
4. is depressed, blue
5. is original, comes up with new ideas
6. is reserved
7. is helpful and unselfish with others
8. can be somewhat careless
9. is relaxed, handles stress well
10. is curious about many different things
11. is full of energy
12. starts quarrels with others
13. is a reliable worker
14. can be tense
15. is ingenious, a deep thinker
16. generates a lot of enthusiasm
17. has a forgiving nature
18. tends to be disorganized
19. worries a lot
20. has an active imagination
21. tends to be quiet
22. is generally trusting
23. tends to be lazy
24. is emotionally stable, not easily upset
25. is inventive
26. has an assertive personality

27. can be cold and aloof
28. perseveres until the task is finished
29. can be moody
30. values artistic, aesthetic experiences
31. is sometimes shy, inhibited
32. is considerate and kind to almost everyone
33. does things efficiently
34. remains calm in tense situations
35. prefers work that is routine
36. is outgoing, sociable
37. is sometimes rude to others
38. makes plans and follows through with them
39. gets nervous easily
40. likes to reflect, play with ideas
41. has few artistic interests
42. likes to cooperate with others
43. is easily distracted
44. is sophisticated in art, music, or literature

## Appendix (B)

### Knowledge Sharing Climate Instrument (Sveiby & Simmons, 2002).

#### Workgroup Support

When you think about the attitudes and behaviours of those in your nearest work group, how much do you agree/disagree with the following statements? (If you are a manager or executive think of your nearest management colleagues)

| Strongly<br>Disagree                                                                     | Disagree a<br>Little | Neither Agree<br>nor Disagree | Agree a<br>Little | Strongly<br>Agree |
|------------------------------------------------------------------------------------------|----------------------|-------------------------------|-------------------|-------------------|
| 1                                                                                        | 2                    | 3                             | 4                 | 5                 |
| 1. There is much I can learn from colleagues in my workgroup.                            |                      |                               |                   |                   |
| 2. My colleagues contribute to a trusting atmosphere in our workgroup.                   |                      |                               |                   |                   |
| 3. We often share work experiences informally in our workgroup                           |                      |                               |                   |                   |
| 4. We help each other to learn the skills we need in our workgroup.                      |                      |                               |                   |                   |
| 5. We keep all team members up to date with current events (e.g., news) and work trends. |                      |                               |                   |                   |

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**My immediate supervisor(s)...**


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To what extent do you agree with the following? (If you are a manager or executive think of your nearest manager/executive)

**My immediate supervisor(s)...**


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|                                                                                    | Strongly<br>Disagree | Disagree a<br>Little | Neither Agree<br>nor Disagree | Agree a<br>Little | Strongly<br>Agree |
|------------------------------------------------------------------------------------|----------------------|----------------------|-------------------------------|-------------------|-------------------|
|                                                                                    | 1                    | 2                    | 3                             | 4                 | 5                 |
| 1. ...encourages me to come up with innovative solutions to work-related problems. |                      |                      |                               |                   |                   |
| 2. ...organizes regular meetings to share information.                             |                      |                      |                               |                   |                   |
| 3. ...keeps me informed.                                                           |                      |                      |                               |                   |                   |
| 4. ...encourages open communication in my working group.                           |                      |                      |                               |                   |                   |
| 5. ...encourages - by action and not only words - sharing of knowledge.            |                      |                      |                               |                   |                   |

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**Business Unit (Department) Culture outside of my nearest Workgroup**


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When you think about this business unit's culture outside of my immediate work group and the behavior of leaders, how much do you agree/disagree with the following statements?

|                                                                                                           | Strongly<br>Disagree | Disagree a<br>Little | Neither Agree<br>nor Disagree | Agree a<br>Little | Strongly<br>Agree |
|-----------------------------------------------------------------------------------------------------------|----------------------|----------------------|-------------------------------|-------------------|-------------------|
|                                                                                                           | 1                    | 2                    | 3                             | 4                 | 5                 |
| 1. The individuals I report to in the business unit keep me informed.                                     |                      |                      |                               |                   |                   |
| 2. The business unit encourages sharing knowledge in both word and action.                                |                      |                      |                               |                   |                   |
| 3. We are continuously encouraged to bring new knowledge into the business unit.                          |                      |                      |                               |                   |                   |
| 4. We are encouraged to say what we think even if it means disagreeing with the individuals we report to. |                      |                      |                               |                   |                   |
| 5. Open communication is characteristic of the business unit as a whole.                                  |                      |                      |                               |                   |                   |

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**My own Attitude**

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When you think about your own attitude toward sharing knowledge, how much do you agree/disagree with the following statements? Think about the organization in general!

| Strongly<br>Disagree<br>1                                                                                    | Disagree a<br>Little<br>2 | Neither Agree<br>nor Disagree<br>3 | Agree a<br>Little<br>4 | Strongly<br>Agree<br>5 |
|--------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------|------------------------|------------------------|
| 1. I learn a lot from the other staff in this organization.                                                  |                           |                                    |                        |                        |
| 2. In this organization, information sharing has increased my knowledge.                                     |                           |                                    |                        |                        |
| 3. Most of my expertise has developed as a result of working together with colleagues in this organization.  |                           |                                    |                        |                        |
| 4. Sharing information translates to deeper knowledge in this organization.                                  |                           |                                    |                        |                        |
| 5. Combining the knowledge amongst staff has resulted in many new ideas and solutions for this organization. |                           |                                    |                        |                        |

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