Linking Personality and Knowledge Sharing Behavior: The Moderating Role of Team Work Culture

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Abstract

The purpose of the study is to build up and empirically test the relationship between two personality traits (Extraversion and Openness) and knowledge sharing behavior under the moderating role of team work culture. For this research data were collected from a sample of 315 respondents selected randomly from telecom sector of Pakistan through questionnaires. Data were analyzed using correlation and hierarchical regression. Results highlight that extraversion and openness are significantly positively related with knowledge sharing behavior. Team work culture positively moderates the relationship of extraversion and openness with knowledge sharing behavior. The results of this study will help the telecom companies to enhance the teamwork environment. Managers should do roles sharing and team making according to employees' personality traits.

Keywords: Extraversion; Openness; Knowledge Sharing; Team Work Culture.

Introduction

Knowledge sharing is now a crucial research topic in various management fields (Foss, Husted, &Michailova. 2010; Quigley, Tesluk, Locke, & Bartol. 2007). It has become an essential element of organisational activities. Where an organization participates in

knowledge creation, it must be construed that there are particular organisational activities in effect to convey and impart that knowledge. As a result, the sharing of information has a fundamental role in organisations. Yet, this information sharing does not come about naturally due to particular facets of knowledge, like the cost to duplicate it and its intrinsic ambiguity, which present overwhelming barriers in this process (Yong & Yang. 2012).

Knowledge sharing behaviour is an important course of action giving rise to innovative goods and services, increasing a company's information advantage and in realizing common business goals (Massa and Testa. 2009). Academics perceive knowledge sharing as an organizational advancement that leads to the distribution of original, inventive ideas with the capability to improve performance (Yi, 2009).

Appreciating the knowledge sharing behaviour of workers has significant consequences for organizations (Xue, Bradley, & Liang. 2011). Everyone has different knowledge sharing behaviours. Can these behaviours imposed by personality attributes? Certain individuals have a genuine will to share knowledge with friends, while others are indifferent. Many personal and contextual elements explain these differences. Halder, Roy and Chakraborty (2010) reveal that Personality is a crucial psychological element that influences behaviour .Personality is a key factor that impacts upon a person's behaviour to share information (Teh, Yong, Chong, & Yew. 2011). Previously effect of personality traits has been analyzed with special focus on agreeableness, consciousness and neuroticism. However, there is very limited research found on impact of Extraversion and Openness on knowledge sharing behaviour (McCrae and Costa,

1997) & Raja et al., 2004). Therefore, in this study two personality attributes namely Extraversion and Openness are taken. For knowledge sharing behavior these traits are especially important in Pakistan. People are more extroverts then having the trait of conscientiousness and agreeableness, similarly neuroticism has no impact on knowledge sharing. The research examines that how these two traits play a role in becoming the determinants of knowledge sharing behavior.

Jacobs and Roodt (2011) propose that the teamwork culture in the organization will enable a positive point of view in relation to knowledge sharing. Scholars perceive that when the team members enthusiastically participate in information sharing it will result in the accomplishment of knowledge sharing behaviour in teamwork culture (Lee, Gillespie, Mann, & Wearing. 2010).

There is a lack of research clarifying how individuals share information in business environments. Specifically, a detailed insight into information sharing within teams is required, as team-based design is commonly implemented by current businesses. Therefore this research will aid researchers comprehend how knowledge sharing is affected by the personality traits in the presence of team-related factors.

Along with being a factor in economic advancements, telecommunication technology allows commerce and manufacturing to develop at quicker rate. Concurrently, telecommunication infrastructure can be a reliable marker of economic progress. The telecom industry has increasing opportunities in Pakistan, which makes it appealing for potential investors. Furthermore,

developments in cellular technology have made cell phones available for the average citizen (Abideen & Saleem. 2011).

Following this speedy growth, the requirement for teamwork culture and knowledge sharing behaviour is inevitably rising in telecom sector. There is a continual requirement for the sharing of information and expertise and to increase collective understanding of the personality factors likely to motivate individual attitudes towards the knowledge sharing behaviour in teamwork culture. This study will examine the influence of a team environment on the relationship of personality and knowledge sharing behaviour of individuals.

Literature Review and Hypotheses

Impact of personality traits on knowledge sharing

A variety of elements can influence the level of information sharing within a work environment and within groups. Abstract personality features and different motivational sources have an impact on individuals. Conventional research has considered knowledge sharing in light of the personality traits.

Personality traits serve as a ''latitude and longitude 'for personality research, organizing, harmonizing, and integrating previously disconnected taxonomies and findings (Ozer & Reise, 1994. p. 361).The personality factors make up the various behaviour attributes witnessed within and across organizations (Pie-Lee et al., 2011). Stable personality traits, namely extroversion, and openness positively affect knowledge sharing. Therefore, it may be argued those workers with greater levels of thoughtfulness and diligence are more willing to actively note information with the aim of sharing with team mates, to input this information into knowledge data bases, and to utilise and maintain such data bases (Kurt et al. 2008).

Regarding implied knowledge sharing in particular, personality characteristics also aid human relationships, because self assured workers feel less intimidated by competition. Moreover, workers experiencing low levels of tension are more likely to effectively contribute in situations concerning the communication and attainment of information, which tends to require patience and understanding. (Borges, 2012)

Extraversion

Extroverts are more likely to be social and outgoing *(Besser & Shackelford, 2007)*. Extroverts are emotionally assured and are comfortable when working in a group. They will actively share information with their colleagues to maintain a strong team. (Pie-Lee et al, 2011). Workers who are more extroverted have the tendency to communicate inferred knowledge as a result of their outgoing and lively traits (Borges, 2012). Therefore it is inferred that:

H1: Extroversion has a positive influence on knowledge sharing behavior.

Openness

Openness refers to a high level of inquisitiveness in a person and the positive manner in which a person embraces new ideas. Open people are highly adaptable and creative also. (Thoms, Moore & Scott, 1996). McCrae and Costa (1987) hypothesise that openness is a sign of broad-minded, bold and independent behaviour. Openness refers to creativity, inquisitiveness, tolerance and independence leading towards knowledge sharing behavior. Thus it is proposed that:

H2: Openness has a positive influence on knowledge sharing behavior.

Moderating role of Teamwork Culture

In the current study I shall also research the tempering role that a team environment plays between personal characteristics and information sharing behaviours. The insertion of teamwork culture in the model is motivated by the observation that the atmosphere in a team considerably affects the individuals' point of view, subjective norms and use of technology.

Liang et al. (2010) discovered that an advantageous team atmosphere can create a setting where information sharing is promoted. Organisational team ethos has a great impact on knowledge sharing. Nevertheless, it encompasses many elements, and information sharing may be affected in a positive or negative manner depending on the type of culture (Suppiah & Sandhu, 2011). Workplaces that impose principles and approaches for individual participation in information sharing have a greater chance of realizing success in this area (Jalal et al., 2010).

The researcher notes that the feeling of community aids an organisation to put in place a culture focussing on team work and cooperation, which in turns encourages information sharing. Consequently, it can be argued that such organisational models stimulate greater employee participation in information sharing activities. When referring to the tacit information element, a workplace that appreciates accommodating, loyal, cooperative organisational model with a team focus are more likely to persuade their workers to communicate and impart knowledge in comparison to an organisational model geared towards personal outcomes (Borgs 2012).

In contour with this reasoning, following hypotheses are offered.

H3: Teamwork culture moderates the relationship between extraversion and knowledge sharing behavior such that the relation is stronger for employees who enjoy working in teams and share their knowledge and weaker for those employees who are unable to adjust themselves in teamwork culture.

H4: Teamwork culture moderates the relationship between openness and knowledge sharing behavior such that the relation is stronger for employees who enjoy working in teams and share their knowledge and weaker for those employees who are unable to adjust themselves in teamwork culture.

Conceptual Framework:
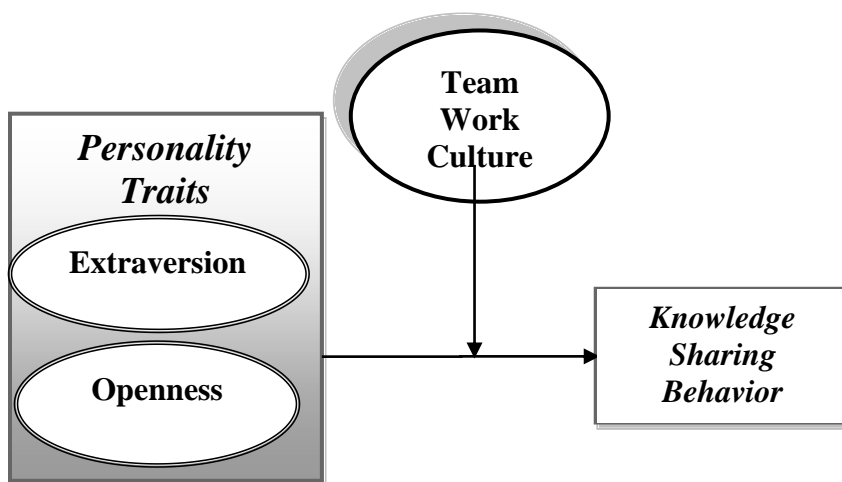
Methodology

Measures

The measurement of personality traits (Extraversion and Openness) are done by means of NEO-FFI. NEO-FFI is an instrument developed by Costa and McCrae (2003) and is a 60-item inventory. It is the edited version of Big Five personality factors and has 12 items to calculate each of the five scales. No of items are

reversed scored in it. 7 items are used in this study for 2 personality traits and their reliability alphas are (.88) and (.83). Five-point scale where "1=Strongly Disagree", "2=Disagree" "3=Neutral", "4=Agree" and "5=Strongly Agree" was used for respondents so that they indicate their feelings by marking these scales.

Teamwork culture is measured by the items developed by Bocket al. (2005); Xue et al. (2004/2005) and Langfred (2004). The chronbach alpha of these items is (.92). The items used for knowledge sharing behavior are constructed by Bock and Kim (2002) and Draft (2001) and chronbach alpha is (.86).The item details are described in the Appendix.

Population

For the examination of the hypothesized linkage between extraversion, openness, teamwork culture and knowledge sharing behavior, the researcher gathered data from telecom sector. Population is comprised of all employees operating in telecom industry of Pakistan (approximately 1200 employees). The companies that the author approached are Ufone, Warid, Zong, Telenor and Mobilink.

Sample size

For the investigation of this research an individual is considered as the part of analysis. The respondents sampled are employees form telecom companies. The collection of primary data has been completed by questionnaires. Questionnaires were disseminated among 310 participants who are working in telecom companies in Islamabad and Rawalpindi.255 questionnaires out of 310 were given back to the researcher. The incomplete and inaccurate

questionnaires were 30.Therefore the remaining 225 questionnaires were complete and usable. Thus 72% is the response rate.

Technique

The technique which was used in the study was Convenience sampling technique. Generally this technique speculates a population which is homogeneous so one person is much similar to the other person. Researcher can access any individual who is available and willing to participate in research.

Results

Correlation

The results of correlation between variables, means and standard deviations are presented in Table 1. From the results it is indicated that extraversion and openness are positively correlated with knowledge sharing behavior. The association between personality traits and knowledge sharing behavior are:

Extraversion and openness(r=0.694, p=0.000).

Therefore developed hypotheses H1 and H2 are accepted.

Table 1:   Correlation, Mean, SD

Variables	1	2	3	4
1.Ext	(.88)			
2.Opn	.69***	(.83)		
3.Tmw	.70***	.76***	(.92)	
4.KS	.69***	.72***	.81***	(.86)
Mean	3.47	3.49	3.55	3.69
SD	1.00	.90	.91	.93

Correlation is significant at the 0.01 level (2-tailed). ***$P \geq 0.001$

Regression Analysis

For the causal linkage between dependent variable, independent variable and moderator, and to test the hypotheses I used regression analysis. In regression analysis independent variables, moderator and

interaction terms of moderator and independent variables were analyzed to check the moderating effect and its hypotheses.

Table 2:   Regression Analysis (*Beta*, *R^2* and $\triangle R^2$)

	Beta	*R^2*	*$\triangle R^2$*
Independent Variables			
Extraversion (Ext)	.368***	.588	
Openness (Opn)	.464***	.588	
			.588***
Moderator			
Teamwork culture (Tmw)	.561***	.701	
			.113***
Interactive Terms			
Tmw × ext	-2.64***	.733	
Tmw × opn	1.91***	.733	
			.038***

In Table 2 regression analyses indicates that extraversion and openness has the positive relation with knowledge sharing behavior. They have significant positive beta's (β=.368, $p \le .001$; β=.464, $p \le .001$) which shows that people with these personality traits have high level knowledge haring.

Therefore hypotheses H1 and H2 regression model explains the percentage of variation in knowledge sharing behavior so the 70% variation in knowledge sharing behavior is explained by the independent variables and moderator.

The contingent or moderating effect is also represented in Table 2.the results of moderation shows that the hypothesis H3 is accepted and it is in expected direction where as hypothesis H4 is not in expected direction. It means that there is negative effect of teamwork culture on the relationship of extraversion and knowledge sharing behavior. This effect will reduce their relationship.

Discussion

The current study aimed to improve the understanding of people regarding knowledge sharing behavior in teamwork culture along with individual dispositions in the telecom sector. It is reported from the findings of the research that the uniqueness in the individual's personality influences the knowledge sharing behavior. It is shown that mainstream of employees have great understanding of knowledge sharing behavior. Majority of employees wanted to have a teamwork culture in their organizations in which knowledge sharing can play an important role in creating learning environment. From the results it is indicated that many employees in the telecom sector of Pakistan are extroverts and openness to experience and they enthusiastically share knowledge. Extraversion and openness are positively related with the knowledge sharing behavior according to the results. Cabrera, Collins, and Selgado (2006) also found that the knowledge sharing is strongly predicted by openness. For the reason that openness is an expression of a individuals' curiosity and uniqueness which in result are in quest of people's insights as a predictors. Hence, it is likely to anticipate that open persons have more expertise. Similarly Extroverts are emotionally assured and are comfortable when working in a group. They will actively share information with their colleagues to maintain a strong team (Pie-Lee et al, 2011). Workers who are more extroverted have the tendency to communicate inferred knowledge as a result of their outgoing and lively traits. (Borges. 2012).

The moderator teamwork culture has the significant positive impact on knowledge sharing behavior. The relationship between the openness and knowledge sharing behavior is strongly influenced by

teamwork culture it means teamwork culture enhance this relationship because the people with high degree of openness to experience work comfortably in team environment share their ideas with others and want them to involve in their innovative ideas. As telecom companies are now developing day by day they need uniqueness in ideas. Therefore when their employees are innovative open to experience them come up with the new ideas and when there is teamwork culture it will b easier for them to achieve their goals. They feel an opportunity in teamwork to fulfill them rather working on them individually.

On the other hand teamwork culture has the negative influence on the relationship of extraversion and knowledge sharing behavior. When we talk about telecom companies they have traditional teamwork cultures and centralized organizational structures in which hierarchy is there and rules and policies are tight. Every employee has to obey the orders of their boss so it is very difficult for extroverts to share knowledge. Another reason is that stress, work load and time constraints limit the knowledge of the people who has this personality trait. They have tough work and meeting to targets on time is more important in these organizations. Extroverts due to these factors don't have time to share their expertise and knowledge with others although they want to.

Managerial Relevance

The present study indicates that personality traits are key components of knowledge sharing behavior. Teamwork culture moderates this relationship. A practical application of these consequences is that through people's screening knowledge sharing could be advanced in firms. Managers and team leaders with high

degree of extraversion and openness tend to share knowledge enthusiastically and voluntarily. As a result management can enhance the teamwork environment and in accordance with personality traits teams are composed and roles are shared among employees. Therefore new ideas and important thoughts are generated in teams which can be communicated. This will increase the performance and productivity of the firm and also the motivation of employees. Another important implication is to designing the teams; manage knowledge sharing and also to assign the different roles in teams. It is essential for the employees operating in telecom companies to adopt these terminologies in order to compete globally. In organizational structures thee variables are also important for managing change.

Limitations and Future Research Directions

Due to time and monetary restrictions, it was not achievable to undertake such detailed research taking into account all variables. Therefore, only telecommunications companies from Rawalpindi and Islamabad were included in the sample. The results indicate that the teamwork culture along with the extroversion is not a good predictor of knowledge sharing in telecom sector. A wider sample would indicate whether this result applies generally. In future, research can look at the practices of companies in other major cities. Some other factors such as gender, age, education and tenure which are demographic determinants could also influence knowledge sharing. Future result can indicate this relationship and also if all personality traits are studied in telecom sector in Pakistan influences are revealed more clearly. Moreover, it is suggested that same model should be tested in other contextual settings to generalize the study results. It would be note worthy if in future comparative study is conducted to

know the effect of personality traits on knowledge sharing behavior among western and eastern cultures.

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Appendix

Dear Respondent!

As a student of MS (HRM) at International Islamic University Islamabad, I am conducting a research on the relation between big five personality factors and knowledge sharing under the moderating role of team work culture. The objective of this questionnaire is to find out this relationship in telecom sector.

This questionnaire will take 10-15 minutes from your busy schedule. Your information will remain confidential. I will be very grateful to you for your cooperation.

Name: _____

Organization: _____

For each of the statement below, Please indicate the extent to which you agree or disagree with the following statements by putting a tick (√) mark in the appropriate box.

The response scale is as follows:

1. **Strongly Disagree**
2. **Disagree**
3. **Neutral**
4. **Agree**
5. **Strongly Agree**

No.	Statement	Scale				
		1	**2**	**3**	**4**	**5**
1.	I really enjoy talking to people.					
2.	I often feel as if I'm bursting with energy.					
3.	I am a cheerful, high-spirited person.					
4.	I am a very active person.					
9.	I am intrigued by the patterns I find in art and nature.					
10.	I often try new and foreign foods.					
11.	I have little interest in speculating on the nature if the universe or the human condition.					
12.	I have a lot of intellectual curiosity.					
13.	I often enjoy playing with theories or abstract ideas.					
14.	My team encourages suggesting ideas for new opportunities.					
15.	My team encourages finding new methods to perform a task.					
16.	I feel I am really a part of my team.					

17.	If I had a chance to do the same work again in a team, I would rather stay in the same team.					
18.	If I had a chance to do the same work again in a team, I would rather join another team.					
19.	We trust one another a lot in my team.					
20.	I know I can count on the other team members.					
21.	I trust all of the other team members.					
22.	I share my job experience with my co-workers.					
23.	I share my expertise at the request of my co-workers.					
24.	I share my ideas about jobs with my co-workers.					
25.	I talk about my tips on jobs with my co-workers.					

Thank you for your precious time and cooperation.