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Studying Knowledge Sharing Behavior Based on Personality Constructs in Project Oriented Organizations

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Abstract: In today advanced community, knowledge has become a critical economic resource and success factor of organizations. Such attributes as information generation, expansion of technological complexities and knowledge orientation have led into increasingly focus on knowledge management in project-oriented organizations. In many scientific documents, the relationship between knowledge sharing behavior and psychological traits are expressed. Personality is considered as the most important psychological components and predictors of human behavior. Present study is a survey-type with descriptive approach. It is conducted to study the impact of employees' personality on their knowledge sharing behavior. Research data collection tool was an 68-item questionnaire and its sample size was 100 employees in project-oriented organizations. Content validity was determined by scholars while its reliability was calculated by Chronbach's alpha ratio. All data were analyzed by PLS Software package and SEM. Personality constructs were measured by NEO five-factor model. Research findings indicate flexibility and adaptability have no impact on knowledge sharing behavior while, neurosis, extraversion and responsibility impacts on knowledge sharing behavior significantly.

Key words: Knowledge sharing behavior, personality constructs, project-oriented organizations, descriptive, psychological

INTRODUCTION

In research resources, knowledge is seen as the most superior shape of information (Kebede, 2010). Organizations can build competitive advantage if knowledge is managed well (Lakshman, 2009; Birasnav *et al*., 2011). Today, information is transferred and transformed with remarkable and unimaginable velocity (Crawford, 2005). Such big changes have caused that today world is call as digital age. In digital age and information exchange, information plays a vital role in organizational success (Viitala, 2004). In other words, if organizations ignore information critical role, they would lose their competitiveness and strategic advantages against rivals. Lind quist defines project-oriented organizations as those one that focus mot on project aspects than functional aspects in organizational structure and conduct their activities based on project. Concerning the temporary nature, uniqueness, workplace dynamism, mass information generation, non-repetitive and unpredictable operations of project-oriented organizations, the importance of knowledge sharing in today organization seems fully necessary. In current century knowledge-oriented economy, organizations in general and project-oriented organizations in particular cannot guarantee their future without right knowledge management. In these organizations such intangible assets as brand, reputation and know-how of employees are seen as the most important organizational competitive advantages. Knowledge sharing makes employees capable to develop values, skills, competencies and continuance of organizational competitive advantages (Wang and Noe, 2010). Knowledge sharing is also called as voluntarily dispersion of acquired experiences and skills to other people (Law and Ngai, 2008). Knowledge sharing behavior is influenced by two organizational and individual factors (Yang, 2008). In many scientific materials, it is emphasized that knowledge establishment should in individuals' minds rather that human files. However, personal aspects of knowledge management are ignored. Trenton and Crasey believe that knowledge management activities all human performance strengths and weakness (Jafari *et al*., 2013). Today, many growing authors have led their researches toward human factors. They are looking for knowledge sharing process in human perspective rather than technological one. Numerous researches have focused on the fact that knowledge sharing is a prerequisite to develop services, modern technologies and products (Renzl, 2008). Today, knowledge sharing in both individual and organizational

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level is one of the most mentioned research titles in management. Present paper attempts to explore some aspects of the reality and clarify dark parts of impacts by personality competencies on employees' knowledge sharing behavior.

Literature review

Project-oriented organizations: Project-oriented organizations are those ones that their most operations are projects. Project-oriented organizations are also called knowledge-oriented and learning organizations. Often, project team consists of members that have not already worked with each other and do not expect to work again in future (Ajmal and Koskinen, 2008). Project-oriented organizations have dynamic borders since the numbers and types of projects are constantly changing. Due to need to competition power and business stability in market turbulent environment, traditional organizations have resorted to project-orientation. It is better to see project-oriented organizations as types of organizations to acquire special work targets and formulation and execution of future strategies through resource regulations and integration and both inside and outside capitals. In these organizations, knowledge and resources are mainly acquired through project execution which expands project management so that one can say that "it is too difficult an organization that has not entered project management scope". Usually knowledge is accumulated in individuals' minds, resources or documents through past projects. Through awareness of past projects, people allocate them to current similar ones and improve project execution. Knowledge management project execution in project-oriented organizations would help these organizations and their employees to improve the use of time and resources in projects by accessing to needed information and decision making improvement. Needed documents for future projects indicate methods, processes, precise expression of difficulties, explain both successful/unsuccessful solutions and are a directory of those people who have special knowledge, know-how and experience. Project management knowledge improvement can improve the quality, promote customer satisfaction, mitigate the costs and shorten project time table. Using knowledge management in projects helps to mitigate errors, to need lower working, to create more independence from time and place, to generate lower questions, to create better decision making, to improve customer relationship, to improve services and to develop profitability. Project-based learning constantly highlights problems in an attempt to take, share, disseminate and learn knowledge.

Knowledge sharing behavior: It is consisted of behaviors by which people disseminate their experience voluntarily. By knowledge sharing, people disseminate some information among others. Knowledge sharing is defined as knowledge dissemination throughout the organization (Alavi and Leidner, 2001). Knowledge dissemination process can be occurred among people, groups or organization through any channel. Some researchers believe that knowledge exchange is equaled with knowledge flow (Gupta and Guvindarajan, 2000). Davenport and Prusak defines knowledge sharing as a process which includes knowledge exchange among people and groups. Connelly and Kelloway (2003) define knowledge sharing as a set of behaviors that cause information exchange with others. There are different factors that can impact on knowledge sharing and dissemination. These factors include tools, technologies, motivations and incentives to persuade knowledge sharing. Organizational culture, personal values, national culture, trust, attention, organizational resources like time and space an d people's accessibility of knowledge people are other factors which impact on knowledge sharing in organization. Another group of authors believe that the most important affecting factors on knowledge sharing include organizational infrastructure such as organizational culture, organizational structure, laws and IT. Knowledge sharing is defined as sharing organizational information, beliefs and thoughts, recommendations and experiences of organizational members (Bartol and Srivastava, 2002). Likewise, v sharing can be defined as a systematic action to transfer and exchange knowledge and experience among the members of a group or organization by a joint goal (Christensen, 2007). Knowledge sharing is organized through written or face-to-face communication, networking and documenting (Wang and Noe, 2010). Connelly and Kelloway (2003) identified some factors which impact on employees' understanding on knowledge sharing culture. These factors can be divided into two individual and organizational factors. Knowledge sharing is a concept which relates to social interaction, knowledge sharing among organizational members is the most important and challenging g tool in knowledge value generation. Knowledge sharing is an important organizational behavior that organizations need to cultivate and harness it in order to achieve a competitive situation in knowledge economy. bviously, organizations need to benefit from their knowledge-based resources already existed in the organization (Wang and Noe, 2010). Knowledge sharing is like a knowledge-oriented activity and a main instrument by which employees can have shares in using knowledge, innovation and finally, organizational competitive advantage (Matzler *et al*., 2006).

Personality constructs: Five-Factor Model (FFM) is the first estimation of traits in the history of personality psychology and considered by many psychologists as the best way to configure the traits. Likewise, this model is supported in different cultures. Main parts of these studies support this model. As a great integrated theory on personality, FFM has received many approvals. Describing personality traits by five factors is shown as the most agreed normal personality framework. Authors explain that personality traits are the main reasons of human behavior and personality profile can predict individuals' behaviors in different situations. Five-big factors include:

Neurosis: It is a range from emotional instability to emotional stability. Individuals with high neurosis are tended to be shameful, anxious and low self-esteem. These individuals are usually faced more failures in their interpersonal relations.

Extraversion: People with higher scores in this trait are recognized as active individuals (Staples and Webster, 2008). Researchers show that contributive behavior positively relates to extraversion. People with lower scores are talking less (Migliore, 2011).

Agreeableness: It is recognized by behavioral indicators such as generosity and friendship. People with higher agreeableness are honest and collaborative. People with lower scores lack affection and cooperation morale.

Resilience: People with higher resilience are creative, analytical, imaginative, inventive, broad interests and usually believe that they are smarter than others. They are looking for new and diverse knowledge.

Accountability: It involves such traits as thinking before practice, respecting the laws and norms and organizing and prioritizing the tasks (Staples and Webster, 2008). Higher scores show high care and concentration (Migliore, 2011).

MATERIALS AND METHODS

Research methodology is descriptive-survey type. The aim of survey can be seen as expressing the status quo of a phenomenon or process. To gather needed information, a questionnaire is used in which their options are designed based on Likert scale. Questionnaires were distributed among population member in three project-oriented organizations and to clarify the possible questions and ambiguities of respondents, their population is 105 subjects that their main trait is that they are knowledge workers. The participants include deputies, supervisors or experts of organization. Data collection was conducted in spring 2014. Of 105 distributed questionnaires, 100 cases were filled and returned. On this basis, the rate of responses was 90%. The first part of the questionnaire includes demographic questions while the second part consists of questions on personality constructs. The third part was consists of questions on knowledge sharing behavior measurement. The validity of behavior questionnaire of knowledge sharing is proved in

Table 1: Investigation of AVE and composite reliability

Variables	AVE	Composite reliability
Neurosis	0/56	0/79
Extraversion	0/56	0/81
Flexibility	0/54	0/82
Agreeableness	0/49	0/85
Responsibility	0/71	0/81
Knowledge sharing behavior	0/55	0/83

Table 2: Model test results

Variables	Neurosis	Extraversion	Flexibility	Agreeableness	Responsibility	Knowledge sharing behavior
Neurosis 1	0/78	-0/40	-0/28	-0/42	-0/39	-0/36
Neurosis 2	0/78	-0/37	-0/2	-0/41	-0/25	-0/34
Neurosis 3	0/69	-0/47	-0/27	-0/52	-0/24	-0/30
Extraversion1	-0/37	0/75	0/44	0/54	0/44	0/42
Extraversion 2	-0/29	0/70	0/42	0/52	0/40	0/44
Extraversion 3	-0/55	0/79	0/53	0/62	0/44	0/44
Flexibility 1	-0/32	0/51	0/86	0/51	0/44	0/32
Flexibility 2	-0/20	0/36	0/64	0/45	0/26	0/15
Flexibility 3	-0/29	0/50	0/72	0/46	0/38	0/23
Agreeableness 1	-0/56	0/36	0/22	0/67	0/30	0/43
Agreeableness 2	-0/40	0/44	0/32	0/63	0/35	0/30
Agreeableness 3	-0/34	0/61	0/50	0/67	0/43	0/37
Agreeableness 4	-0/31	0/49	0/43	0/68	0/38	0/37
Agreeableness 5	-0/36	0/59	0/57	0/69	0/55	0/32
Agreeableness 6	-0/46	0/67	0/57	0/75	0/57	0/44
Agreeableness 7	-0/39	0/48	0/42	0/75	0/45	0/32
Responsibility 1	-0/38	0/44	0/36	0/51	0/81	0/35
Responsibility 2	-0/29	0/52	0/48	0/54	0/88	0/43
Knowledge sharing behavior 1	-0/37	43/0	0/22	0/40	0/27	0/71
Knowledge sharing behavior 2	-0/26	0/47	0/22	0/39	0/42	0/77
Knowledge sharing behavior 3	-0/38	0/40	0/30	0/41	0/34	0/76

scientific credible researches (Tseng and Huand, 2011). Concerning measuring personality constructs, NEO five-factor questionnaire (neurosis, extraversion, flexibility, agreeableness and responsibility) was used. The reliability and validity of the questionnaire are proved in many studies (Furnham, 1997; Saucier, 1998). After minor modifications, total validity of the questionnaire was supported by elites. Total reliability of the questionnaire was supported by Chronbach's alpha value (0.83). Validity and reliability of the results in Table 1 and 2. The output tables are calculated with the PLS Software.

RESULTS AND DISCUSSION

Analysis of the research model: Studying the relationship between personality constructs and knowledge sharing behavior:

- Sub-hypothesis 1: neurosis impacts on knowledge sharing behavior in project-oriented organizations
- Sub-hypothesis 2: extraversion impacts on knowledge sharing behavior in project-oriented organizations
- Sub-hypothesis 3: flexibility impacts on knowledge sharing behavior in project-oriented organizations
- Sub-hypothesis 4: agreeableness impacts on knowledge sharing behavior in project-oriented organizations
- Sub-hypothesis 5: responsibility impacts on knowledge sharing behavior in project-oriented organizations

Beta ratio value is -0.11 for sub-hypothesis 1 which shows that the amount of impact by neurosis on knowledge sharing is 13% and negative. Since, computed t-value greater than 1.96, one can say that there is a significant and negative relationship between neurosis and knowledge sharing behavior in project-oriented organizations. Beta ratio value is 0.34 for sub-hypothesis 2 which shows that the 34% of knowledge sharing behavior is due to extraversion. Since, computed t value greater than 1.96, one can say that there is a significant and positive relationship between extraversion and knowledge sharing behavior in project-oriented organizations. Beta ratio value is -0.11 for sub-hypothesis 3. Since, computed t-value lesser than 1.96, one can say that flexibility has no impact on knowledge sharing behavior in project-oriented organizations. Beta ratio value is 0.13 for sub-hypothesis 4. Since, computed t-value lesser than 1.96, one can say that agreeableness has no impact on knowledge sharing behavior in project-oriented organizations. Beta ratio value is 0.16 for sub-hypothesis 5 which shows that the 16% of knowledge sharing behavior is due to responsibility. Since, computed t-value is greater than 1.96, one can say that there is a significant and positive relationship between responsibility and knowledge sharing behavior in project-oriented organizations. The results are summarized in Table 3 and 4. The summary of results from PLS analysis for structural model tests and the summary of hypothesis test results are shown in Fig. 1.

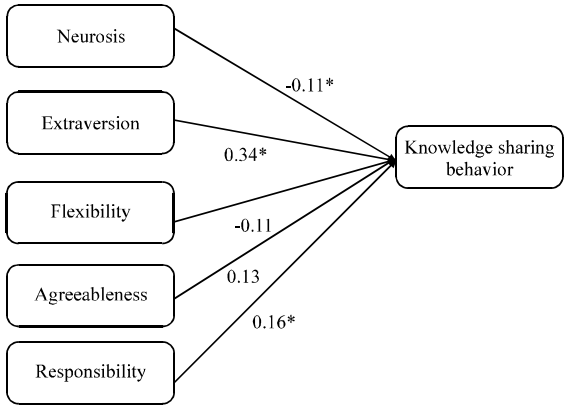

Fig. 1: Research tested model (path ratio)

Table 3: Test results

Hypothesis	Path ration	t-statistics
Neurosis impacts on knowledge sharing behavior in project-oriented organizations	-0.11	2.60
Extraversion impacts on knowledge sharing behavior in project-oriented organizations	0.34	4.19
Flexibility impacts on knowledge sharing behavior in project-oriented organizations	-0.11	1.39
Agreeableness impacts on knowledge sharing behavior in project-oriented organizations	0.13	0.62
Responsibility impacts on knowledge sharing behavior in project-oriented organizations	0.16	2.81

Table 4: Model test results

Hypotheses						
Independent variable	Dependent variable	Path ratio	SD	Standard	t-values	Test result
Neurosis	Knowledge sharing behavior	-0.11	0.05	0.05	2.60	Supported
Extraversion	Knowledge sharing behavior	0.34	0.09	0.09	4.19	Supported
Flexibility	Knowledge sharing behavior	-0.11	0.07	0.07	1.39	Not supported
Agreeableness	Knowledge sharing behavior	0.13	0.15	0.15	0.62	Not supported
Responsibility	Knowledge sharing behavior	0.16	0.05	0.05	2.81	Supported

CONCLUSION

Despite of theoretical documents on the importance of knowledge management related activities in project-oriented organizations and the relationship between knowledge sharing behavior and people's psychological components, no comprehensive research is conducted yet. Therefore in present research it is tried to use structural equation method to investigate the relationship between personality constructs with employees' knowledge sharing behavior in project oriented organizations. This research has investigated for the first time a comprehensive attitude of personality factors on knowledge sharing behavior in the format of a model. For the first time, present paper has studied affecting personality factors on knowledge sharing behavior in the format of a model and a comprehensive attitude. These investigations indicate that two aspects of extraversion and responsibility impacts on knowledge sharing behavior positively and significantly and nervousness impacts on it negatively and significantly. Concerning these relations, it is recommended to consider personality's when hiring employees. Concerning the categorization of affecting factors on knowledge sharing behavior, while the ranks of affecting personality constructs on knowledge sharing behavior in terms of achieve path ration include: extraversion, responsibility and neurosis. Future researches can study the issue in other organizations with different behaviors and attitudes and to study the relations between other psychological components such as interpersonal variables (social adaptability, emotional adaptability and health adaptability) by different methods like modeling and fuzzy techniques.

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