THE EFFECTS OF PERSONALITY ON WILLINGNESS AND BEHAVIOR OF KNOWLEDGE SHARING

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ABSTRACT
How to ensure that people share knowledge and increase performance with effective managerial knowledge has become the most important issue in organization. Making profit is not only the main purpose of non-profit organization but also pursuing efficiency what is same as enterprises. As a result, knowledge management is absolutely needed in operation of Non-Profit organization. However, the biggest obstacle of knowledge management is lots of people are not willing to share their knowledge with others. Actually adequately willing to share knowledge among colleagues is the key point of success in organization. Non-profit social welfare and benevolent foundations both are altruistic organization. Among all of members have no gains or losses relations, so they will not impede to share their knowledge. According to the above reasons, the non-profit social welfare organization and benevolent foundation are choosing to be the main subjects of this research. We are also from the personal point of the view to understand the effects of knowledge sharing, members’ (obligation duty and non-obligation duty) demographic traits, the personality and analyses the relationships between the willingness and behavior of knowledge sharing.

After ANOVA and path analysis researching, we found that different demographic traits lead no obvious influence on the willingness of knowledge sharing, but the behavior of knowledge sharing. About personality traits, the neuroticism attribute has negative correlation with the willingness and behavior of knowledge sharing but the others have positive influence. The conscientiousness attribute has influence on both willingness and behavior of knowledge sharing.

Keyword: Personality Traits, Knowledge Sharing
INTRODUCTION

With the coming of internet era, the central topic in organization is to enhance its performance within efficient managerial knowledge. Enterprise initiates its value by conducting knowledge management. Peter F. Drucker once pointed, “The most important capital of business in 21st century (including both profit and non-profit organization) contains knowledge workers and their productivity.” Though non-profit organization is not profit-oriented, its operation approach of pursuing efficiency is similar to enterprise. Conceptually, knowledge management is also developed in non-profit organization. Nevertheless, obstacle of knowledge management is the unwillingness of sharing when decisive factor to implement knowledge management is willingness of sharing. On one hand, individualism is considered to restrict knowledge sharing in enterprise. On the other hand, members in non-profit organization are regarded as altruism due to less competition. Altruism inspires willingness of sharing.

In this paper, we will analyze willingness and behavior of knowledge sharing in non-profit organization to find the contributing and stranding factors. The emergence of personality traits has generated correlation and influence between variables and knowledge sharing in which be reviewed in the following perspectives. 1. To highlight the relation and effect between personality traits and willingness and behavior in sharing knowledge in non-profit organization. 2. To discuss the link between willingness and behavior in sharing knowledge.

LITERATURE REVIEW

1. Application of Knowledge Management in Non-profit Organization

Over the last decades, dramatic growth of non-profit organization becomes a phenomenon indicator for rapid development of Taiwan society. After natural disaster of 921, non-profit organizations, such as religious groups, foundations, cultural groups from community, social welfare institutions, became major strength at the scene by the effective mobilization during disaster rescue to reconstruction. They are consolidation communication to connect Taiwan and international society. Energetic, efficient and flexibility system in non-profit organization is competitive comparing with profit organization or government (Kuo, 2000).

The primary of knowledge management is to circulate internal knowledge sharing flow efficiently in organization on the purpose of increasing competitive skills and abilities in members. Much of the work in non-profit organization is recognized, such as mobilization system, communication channel in members and widespread capability of information. Take Tzu-Chi foundation as an example, it is the most organized non-profit organization across the island. Volunteers in Tzu-Chi foundation always gather together and solve problems in short term.

In essence, effective knowledge management is to exchange information adequately. The crucial question is about how to upgrade willingness of
knowledge sharing in non-profit organization.

2. Definition and its Object of Knowledge Sharing

Definition of knowledge sharing is individuals among interdisciplinary work group across an organization gather and process knowledge from a variety of channels, such as discussion, conference on internet, knowledge bases and etc… It covers a broad spectrum of information value to knowledge synergy.

Two objects contribute to the cultivating of willingness and behavior in knowledge sharing, and respectively are knowledge holder and user (Hendriks, 1999; Davenport and Prusak, 1998). Behavior of sharing knowledge is feasible in circumstances with both consensus from knowledge holder and user (Wang, 2002). This paper will be organized to reflect both willingness and behavior of knowledge sharing in perspective of individual knowledge provider level.

3. Willingness of Knowledge Sharing

Willingness to share knowledge is around broaden-wide fields, however common perspectives are related to need theory, transaction cost theory, social exchange theory and learning.

(1) Need Theory

Much of the work in finding of psychological factor, willingness of knowledge workers to share is based on the higher needs depicted in Marslow’s hierarchy need theory (1954) in which regard to belonging, self-esteem and self-actualization.

(2) Transaction Cost Theory

The notion from economists conceives that transaction cost is due to affection of uncertainty and bounded rationality (Williamson, 1975). Sharing professional knowledge will distribute information extensively and uniqueness of knowledge worker will diminish. Lose of individuals’ benefit is transaction cost in the process of sharing knowledge (Hendriks, 1999).

(3) Social Exchange Theory

It suggests a person in sociological perspective perceives a long-term approach to expect feedback rather than receives immediate reward (Blau, 1964).

(4) Learning Perspective

Senge (1998) credited that knowledge worker shape knowledge demander by sharing experiences with aim at being supportive role in learning and developing effective ability.

4. Behavior of Knowledge Sharing
Wang (2001) analyzed knowledge sharing behavior in members of modern organization referred in literatures of Davenport and Prusak (1998), Hendricks (1999), Senge (1998) and Nonaka and Takeuchi (1995). He concluded several specific identification, including direct communication on issues or demonstration at work. In addition to release documentation of complex tasks, storage of specified knowledge in knowledge bases is also considered as sharing activity. Public speeches, educational training, or interaction with lecturers and co-workers in seminar are regarded as sharing behavior.

5. Influence of Personality Traits on Willingness of Knowledge Sharing

What is called personality trait is a set of enduring and unique personality traits in which an individual can reveals steady to encounter various circumstances.

(1) Agreeableness associate with knowledge sharing willingness

Agreeableness reflects individual differences in concern with cooperation and trust. Agreeable individuals value getting along with others (Barrick and Mount, 1991) as well as have social harmony in friendship (Digman and Inouye, 1986).

Senge (1998) discovered that knowledge sharing is an approach to stimulate learning. However, interaction during knowledge sharing can also establish friendship to top up effective learning (Szulanski, 1996), willingness to share knowledge is positive associate with decent friendship (Wu, 2000). Knowledge owners willing to share is base on their trust of people and The degree of trust decides the extent of knowledge sharing (Cheng and Li, 2001). It will lead to hiding detail information or knowledge if there is lack of trust in two parts. Sharing program will be a visionary plan. In this paper, we conclude agreeableness is positive associated with knowledge sharing.

(2) Openness associate with knowledge sharing willingness

Openness describes a dimension of personality that are intellectually curious, vivid imaginative, creative, various and holding unconventional and individualistic beliefs (Barrick and Mount, 1991). They tend to explore any opportunity to keep knowledge updated (Costa and McCrae, 1985) and appreciate new experiences (LePine and Van Dyne, 2001).

Open people are intelligent and willing to share their knowledge (Wah, 1999). They undertake knowledge sharing as foundation of initializing new intelligence which satisfy hunger for knowledge. Openness may regard to high willingness of knowledge sharing.

(3) Neuroticism associate with knowledge sharing willingness

Neuroticism refers to tendency of negative emotion such as easily upset, anxiety, panic, insecurity and depressed to resist pressure (Barrick and Mount, 1991).
Trust is decisive in willingness of knowledge sharing. (Cheng and Li, 2001) Neuroticism reaction like anxiety or fear would be negatively affect on trust. People high in Neuroticism are less willing to share knowledge.

(4) Extraversion associate with knowledge sharing willingness

Extraversion is marked as being social-able and enjoying cooperation with people (Barrick and Stewart, 1998). Extraverts are talkative, relationship-oriented and action-oriented in group (Barrick and Mount, 1991).

Knowledge sharing is essentially founded on knowledge exchange and communication (Gupta and Govindarajan, 2000). It will successfully transfer to one another through interpersonal relationships. Interpersonal relationship and knowledge exchange will reverse the influence on knowledge sharing (Zucker, 1986). Communities-of-Practice is an informal relationship which supports sharing and creation of knowledge (McDermott, 1999). People score high in extraversion like to asset themselves in both formal and informal occasion as knowledge sharer. It is assumed that knowledge owner with explicit personality in extraversion is highly associated with willingness of knowledge sharing.

(5) Conscientiousness associate with knowledge sharing willingness

Conscientiousness concerns the way in which to be responsible and achievement-oriented (Barrick and Mount, 1991).

They can be seen as responsible, achievement and self-esteem in knowledge sharing (Hendriks, 1999). During the process, they will build-up self image as knowledge authority (Davenport and Prusak, 1998). It approves self-value and fulfill need of being exact achieving. LePine and Van Dyne's (2001) reported that conscientiousness trait is associated with willingness of knowledge sharing.

6. Framework of Research

As references described above, there are a few points being conclude. It shows significant difference of personality traits engaging in willingness and behavior of knowledge sharing which also corresponded to each other. The conceptual structure of this paper is as shown in figure 1:

<table>
<thead>
<tr>
<th>Personality Traits</th>
<th>willingness of knowledge sharing</th>
<th>behavior of knowledge sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreeableness</td>
<td></td>
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<tr>
<td>Openness</td>
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<tr>
<td>Neuroticism</td>
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<tr>
<td>Extraversion</td>
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<tr>
<td>Conscientiousness</td>
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Methodology

1. Object and Data Sourcing

Nation-wide charities listed on “2003 edition of charity foundations for social welfare” published by department of social affairs, Ministry of Interior are the study objects. Respondents are those who work for non-profit organization as staff or volunteers. There were 110 conveniences samplings from nation-wide list for pre-test before releasing official questionnaire. Pre-test questionnaires were delivered through personal visit to Syin-lu social welfare foundation, World vision Taiwan, Good shepherd sister Taiwan, Sunshine social welfare foundation and Tsao Chung Gih foundation. The survey period for pre-test was from 12, March to 30, March 2003 and 40 validated copies were returned which reaches up 36.36% of return rate. 375 copies of official questionnaire were posted to respondents on 1, April, 2005 and 341 copies of questionnaire were returned before 7, May, 2005. It was 5 weeks to complete the questionnaire. Despite of 5 invalid copies, there were 336 validated copies returned and this corresponds to a return rate of approximately 89.6%.

2. Questionnaire Design

Primary data from questionnaire is the priority in data collection. The questionnaire is designed as close-ended, structured question adopted from the work of Yang et al. (1999), Senge (1998) and Wang (2001). There are three parts in questionnaire including checklist of personality traits, willingness and behavior of knowledge sharing, and plus final part, background of respondents. Underneath each part, it contains 37 items for either positive or negative questions to assist respondents to reflect precise feelings. The choices in each item were conducted by Likert 5 Interval scale. The final draft of questionnaire was amended by suggestion from pre-test respondents. It is prerequisite to proceeded discrimination analysis and reliability analysis of questionnaire scale. Each coefficient is shown in table 1. The overall reliability of survey is up to 0.86, which cataloged as high reliability. In general, answers from respondents show relatively high consistency and reliability is acceptable. The questionnaire was finalized in March.

<table>
<thead>
<tr>
<th>Table 1: total questionnaire and dimension of coefficient alphas</th>
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<tbody>
<tr>
<td><strong>Total Coefficient alphas= 0.86</strong></td>
</tr>
<tr>
<td>Personality Traits $\alpha= 0.73$</td>
</tr>
<tr>
<td>willingness of knowledge sharing $\alpha= 0.83$</td>
</tr>
<tr>
<td>behavior of knowledge sharing $\alpha= 0.68$</td>
</tr>
</tbody>
</table>

3. Methodological Data Analysis

SAS 8.0 statistics software package is conducted in this paper as instrument for data analyzing. Methods such as discrimination analysis, reliability analysis,
descriptive statistics, correlation coefficient and path analysis are applied depending on type of data and research purpose. In this paper, applied statistics methods are briefly introduced as follows:

(1) Descriptive Statistic Analysis

Background description in returned questionnaire includes gender, age, education level, competence, occupation, years of working and etc to analyze various statistic of basic characteristic among samples.

(2) Correlation Coefficient Analysis

To analyze the correlation of paired variables like intrinsic and extrinsic motivation and personality traits in willingness and behavior of knowledge sharing in conceptual structure, this paper will conduct related coefficient analysis and focus on correlation of paired variables.

(3) Path Analysis

Path analysis is conducted to analyze cause and effect relation between intrinsic and extrinsic motivation and personality traits in willingness and behavior of knowledge sharing. Path analysis is to study several variables occurring in sequent timing. It is to understand in which path, the first variable is able to influence on later variables.

ANALYSIS AND DISCUSSION

This chapter is to analyze primary data in each perspective of conceptual structure to exam the correlation.

1. Background Data Analysis

Frequency analysis is applied in descriptive statistic. Distribution of individual statistic variables from 336 valid copies of returned questionnaires shows that 23.28% of respondents are male while 76.72% are female. The majority age composition of samples is between 21~30 years old which occupies 40.12% and education background are massively from universities or colleges which reaches 57.49%. As to competence, 55.39 % are full-time staff while 36.83 % are volunteers. The average working years are 1~5 years which occupies 49.29%.

2. Correlation Coefficient Analysis

In table 2 illustrated, agreeableness, openness, extraversion and conscientiousness have significant positive correspond to willingness and behavior of knowledge sharing. On contrary, neuroticism is significantly negative affect on knowledge sharing behavior. Though there is a significant positive link between willingness and behavior of knowledge sharing, correlation coefficient is 0.38 which implies a weak correlation in between.
Table 2: personality traits in willingness and behavior of knowledge sharing

correlation coefficient analysis

<table>
<thead>
<tr>
<th></th>
<th>Agreeableness</th>
<th>Openness</th>
<th>Neuroticism</th>
<th>Extraversion</th>
<th>Conscientiousness</th>
<th>willingness of knowledge sharing</th>
<th>behavior of Knowledge sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>willingness of knowledge sharing</td>
<td>0.55 &lt;.0001***</td>
<td>0.28 &lt;.0001***</td>
<td>-0.07 0.1804</td>
<td>0.32 &lt;.0001***</td>
<td>0.43 &lt;.0001***</td>
<td>1.00</td>
<td>—</td>
</tr>
<tr>
<td>behavior of Knowledge sharing</td>
<td>0.32 &lt;.0001***</td>
<td>0.27 &lt;.0001***</td>
<td>-0.17 0.0014**</td>
<td>0.44 &lt;.0001***</td>
<td>0.34 &lt;.0001***</td>
<td>0.38 &lt;.0001***</td>
<td>1.00</td>
</tr>
</tbody>
</table>

N=336. **p<0.01; ***p<0.001; two-tailed tests

3. Path Analysis of Personality Traits in Willingness and Behavior of Knowledge Sharing

Personality traits are measured to analyze willingness and behavior of knowledge sharing in non-profit organization. The results can be conducted when interviewing staff. This will encourage willingness and behavior of knowledge sharing in organization.

Table 3 demonstrates that personality traits, such as agreeableness, openness, and conscientiousness are directly related to willingness of sharing, particularly in turn of agreeableness with path coefficient of 0.41174. The secondary influencing factor is conscientiousness with path coefficient of 0.15847. The factor as openness is less implicated and its path coefficient is 0.11868. Neuroticism, extraversion and conscientiousness are personality traits with straight link to behavior of sharing. Extraversion contributes high impact on behavior of sharing and path coefficient is 0.23593. This is due to this type of people tends to be enthusiastic to cooperate with others, social-able, and draw attention in group as being social-oriented. Therefore, they engage in action to share knowledge. Secondarily, path coefficient of conscientiousness in behavior of knowledge sharing is 0.15536 which displays that this type of people is responsible and achievement-oriented. Feasible practice as self-value is also a sharing behavior. Path coefficient of neuroticism in knowledge sharing behavior is -0.11859, which indicates conscientiousness and neuroticism have negative influence on each other. The more neuroticism, this person is more self-consciousness, easily angry, panic, overwhelming concerned, insecurity, unable to deal with stress and does not trust people easily. As a result, there will be no feasible behavior to share knowledge.

Table 3: personality traits on willingness and behavior of knowledge sharing on the path analysis test result

<table>
<thead>
<tr>
<th>model</th>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Path coefficient</th>
<th>Parameters test</th>
<th>Model test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>willingness of knowledge sharing</td>
<td>Agreeableness (X3)</td>
<td>0.41174</td>
<td>7.30 (&lt;.0001**)</td>
<td>35.07 (&lt;.0001**)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Openness (X4)</td>
<td>0.11868</td>
<td>2.36 (=0.0188*)</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th></th>
<th>(Y₁)</th>
<th>Neuroticism (X₅)</th>
<th>Extraversion (X₆)</th>
<th>Conscientious (X₇)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Y₂)</td>
<td>-0.00514</td>
<td>0.05666</td>
<td>0.15847</td>
</tr>
<tr>
<td></td>
<td>behavior of knowledge sharing</td>
<td>-0.11 (≈0.9089)</td>
<td>1.07 (≈0.2863)</td>
<td>2.92 (≈0.0037**)</td>
</tr>
<tr>
<td>2</td>
<td>Agreeableness (X₃)</td>
<td>-0.03271</td>
<td>0.02911</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Openness (X₄)</td>
<td>-0.11859</td>
<td>0.23593</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neuroticism (X₅)</td>
<td>0.11868*</td>
<td>0.41174**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extraversion (X₆)</td>
<td>-0.00514</td>
<td>0.02911</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conscientious (X₇)</td>
<td>-0.11859</td>
<td>0.23593</td>
<td></td>
</tr>
<tr>
<td></td>
<td>willingness of knowledge sharing (Y₁)</td>
<td>0.20928**</td>
<td>0.20928**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.15847**</td>
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</table>

*P<0.05; **p<0.01; two-tailed tests

Drawing the results shown in table 3 to tracking map, it displays the path between personality traits and willingness and behavior of knowledge sharing. Figure 2 illustrates that personality traits, such as agreeableness, openness, and conscientiousness are directly related to willingness of sharing, however, behavior of knowledge sharing is retained by personality traits like Neuroticism, extraversion and conscientiousness.
*p<0.05 ; **p<0.01; two-tailed tests

Figure 2: the path analysis effect of personality traits on willingness and behavior of knowledge sharing

We can get information from table 3 and figure 2, the path model of personality traits on willingness and behavior of knowledge sharing as below:

\[ Y_1 = 0.41174X_3 + 0.11868X_4 - 0.00514X_5 + 0.05666X_6 + 0.15847X_7 \]

\[ Y_2 = -0.03271X_3 + 0.02911X_4 - 0.11859X_5 + 0.23593X_6 + 0.15536X_7 + 0.20928Y_1 \]

\( X_3: \) Agreeableness, \( X_4: \) Openness, \( X_5: \) Neuroticism, \( X_6: \) Extraversion, \( X_7: \) Conscientiousness, \( Y_1: \) willingness of knowledge sharing, \( Y_2: \) behavior of knowledge sharing.

**CONCLUSION AND FURTHER RESEARCH**

Effective knowledge management becomes a priority in organization to highlight its performance through sharing knowledge and experiences. It is necessary to comprehend the driving force of improving willingness and behavior of sharing. Literatures are reviewed in this paper and empirical analysis is cross examined. Several conclusions are approved in empirical work.

1. **Current Condition of Non-Profit Organization in Social Welfare Charity**

   Most staff working for non-profit organization is female. It is because women have empathy to contribute for charity while men are less interested in working for a downsizing organization with less promotion and salary raise opportunity. In addition, most staff is young in between 21~30 years old and mostly graduated from universities or colleges. They have been working only for 1~5 years, so the turnover rate is relatively high. One contrary, remained staff is at retiring age. It is because young people are not able to sustain themselves by this job. A talent reserving mechanism is required to inherit and accumulate knowledge for non-profit organization.

2. **Influence of Personality Traits to Willingness and Behavior of Sharing Knowledge in Organization**

   Personality traits are relevant to willingness and behavior of knowledge sharing. The four fundamental dimensions among big five personality traits, such as agreeableness, openness, extraversion and conscientiousness, are significantly positive link to willingness and behavior of knowledge sharing. Neuroticism negatively affects on behavior of knowledge sharing. However take a view from gender analysis, male staff is more active in sharing knowledge than female though numbers of female staff are normally more than male in non-profit organization. A step further analysis suggests that male is more
openness with curious, intelligent, various, imaginative, independent thinking, determination and etc. In the contrast, female are considered as neuroticism like anxious, depressed, fear, inferior, worrying, sensitive, emotional and etc. In the process of sharing knowledge, female are more neurotic than male which drives low achievement in behavior of sharing knowledge. Despite of above, male and female has no difference in turn of agreeableness, extraversion, and conscientiousness.

To compare willingness of knowledge sharing in big five personality traits, agreeableness has most willingness to share knowledge and experiences while people with extraverts take action in knowledge sharing. As to conscientiousness, it has strongly connection between willingness and behavior of sharing. The most common behavior of knowledge sharing in organization is focus on particular objects in certain circumstances.

3. Correlation of Willingness and Behavior of Knowledge Sharing

The analysis of correlation between willingness and behavior of knowledge sharing finds a weak correlation (r=0.38) in willingness and behavior of knowledge sharing even though it has significant correlation. It indicates that staff willing to work for non-profit organization is more altruistic to serve for public. In another words, members in organization are generally willing to share their knowledge and experiences. However, does willingness reflect on behavior? From path analysis, path coefficient in influencing of willingness of sharing on behavior is only 0.20928. It represents that with willingness of sharing, there will be sharing behavior occurred but only the matter of frequency.

In a non-profit organization with limited of time and human resources, it can be difficult to engage in sharing behavior. However, willingness of sharing does not constrained by personal characteristic or influenced by extrinsic environment. It is suggested that there is somewhat relation between willingness and behavior of knowledge.

4. It can be referencing indicators to interview or educate future members in organization. It can also be significance resources to allocate shift rotate and task assign in non-profit organization with understanding the influencing personalized factors. Hence, it is recommended that while selecting a member, conscientiousness personality trait is helpful to increase organization performance, and to promote cultural ambiance to share knowledge and experiences among organization.
REFERENCES


