

# Cultural Antecedence of Knowledge Sharing and Organizational Performance

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**Abstract-** *The central issue in this research is how voluntary solidarity and reciprocal interaction improves organizational performance through the support of knowledge sharing culture. The population in this study was private Universities' (PTS) lecturers at Semarang which was selected as group random sample. The data was collected through the questionnaires of 241 respondents. The data was analyzed using structural equation model (SEM) with AMOS 19.00 system. The study shows that (1) the voluntary solidarity gave positive influence on knowledge sharing culture, (2) reciprocal interaction brought positive and significant effect on knowledge sharing culture, (3) voluntary solidarity brought positive and significant effect on the organizational performance, (4) reciprocal interaction dimension had positive and significant effect on organizational performance, (5) knowledge sharing culture brought positive and significant effect on the organizational performance.*

**General Terms-** *Organizational Performance*

**Keywords-** *Organizational Learning; Knowledge Sharing Culture; Altruist Spirit; Competitive Advantage*

## 1. INTRODUCTION

University autonomy which is applied across Public Universities (PTN) in Indonesia as well as industrial expansion has given an impact toward the survival of Private Universities (PTS). The curriculum, practice of teaching, course materials and teaching goals, need to be linked and matched with the industrial world. However, PTS seems to undergo weak 'link and match', therefore this condition has reduced prospective students. PTS faces some demands to change the effectiveness of the learning process by adopting specific processes in order to promote the improvement of teaching and learning process.

A study conducted by (Dill, 1999)[18] at 12 educational institutions in Europe concludes that with increasing attention and academic responsibility, universities must be more creative in creating new knowledge to improve teaching and learning activities and must be able to adapt to the changing environment. One problem that often occurs in the management of knowledge is that the organizational knowledge is controlled by only few individuals (Jarvenpaa and Staples, 2001)[24], then when the individuals leaves the organization, the organization loses the possible knowledge that they have had (Gupta and Govindarajan, 2000)[21]. Moreover, the individual feels that power comes from the knowledge that they have led to the accumulation of knowledge in certain individuals, instead of sharing knowledge (Davenport and Prusak, 1998)[17]; Gupta and Govindarajan, 2000)[21].

Knowledge sharing culture is a fundamental issue due to knowledge management implementation. According to (Burt, 1992)[9], the ability of association depends on the condition where the community shares their willing to seek common ground of norms and values, if there are ethical-norms found in the community, then the individual interests would be defeated by the group interests.

Lu and Koch (2005)[29] who study the willingness to share knowledge issue, find that workers do not have the willingness to share knowledge. They consider that knowledge is very important and valuable to be protected, so his working position can be safe, and not replaced by others. Therefore, storing knowledge becomes their natural tendency which is difficult to be changed (Bock and Young-Gul, 2002)[7]. However, several other studies claim differently. (Bhirud et al., 2005)[5] state that knowledge value will increase when it is shared to others. Coakes and Coakes and Smith (2007)[14] argue that some intangible values actually increase every time the knowledge is shared, because the nature of knowledge according to Coakes and Coakes and Smith (2007)[14] will be more than doubled if it is divided.

Correspondingly, (Ramzy, 2011)[37] adds that the difficulty of sharing is caused by several factors,

- 1) there is no tool which can be used by people to share knowledge,
- 2) some people think that knowledge requires a lot of cost,
- 3) organizational culture does not fully accommodate the importance of knowledge sharing, and
- 4) there is competition within a community.

The success of knowledge sharing depends on the amount and quality of interaction among employees, and the willingness and ability to use (Lagerstrom, 2003)[28], and during the process of social exchange, the benefits of sharing knowledge plays a role as a motivator of behavior that can be either extrinsic or intrinsic (Vallerand, 1983)[48].

Based on the previous research gap dealing with knowledge sharing, the researchers try to bridge the concept of voluntary solidarity and reciprocal interaction. Both of these concepts are built from three fundamental theories, they are; social exchange theory, organizational learning theory and the theory of organizational culture. This study aims at investigating how voluntary solidarity and reciprocal interaction improved organizational performance through the support of knowledge sharing culture.

## 2. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

### 2.1 The Concept of Knowledge Sharing Culture

Knowledge is the gathered data and information which is combined with the ability, intuition, experience, ideas and motivation from a competent source. There are two types of knowledge; tacit knowledge—which is stored in the human brain, and explicit knowledge—which is on documents or other storages out of human brain (Uriarte, 2008)[47]. While sharing is a process where the source is given and received by the receiver (Sharratt and Usoro, 2003)[42].

Some terms, which are frequently used in social and management literatures dealing with knowledge sharing, are the ‘knowledge transfer’ or ‘knowledge exchange’. Both terms have indeed brought different meaning. Knowledge transfer describes the movement of individuals between units, divisions, or different (Szulanski et al., 2004)[46], and it involves sharing knowledge with the source of knowledge and the acquisition and application of knowledge by the recipient. Meanwhile, knowledge exchange is usually used interchangeably with the concept of knowledge sharing. (Carbrera and Salgado, 2006)[12].

Knowledge sharing refers to the task information availability to help others and to solve problems, develop new ideas, or implement policies or (Cummings, 2004)[16]. Knowledge sharing occurs through correspondence, face-to-face communication over network with other experts, or making documentation for others’ importance (Cummings, 2004)[16].

Knowledge sharing between individuals is an influencing process towards individual and organizational learning (Andrews and Delahaye, 2000[2]; Nidumolu et al., 2001[33]). Lu and Leung (2006)[30] in their research find that workers do not have the willingness to share knowledge, because knowledge is considered very important and valuable to be protected, in order to secure his position so that their position was not replaced by others. Conversely, (Bhirud et al., 2005)[5] state that knowledge will only grow if it is shared.

Some factors that influence Knowledge Sharing Culture is closely tied to one's ego and work, so it does not flow easily throughout the (Davenport and Prusak, 1998)[17]. Therefore, people may not be willing to share knowledge without a strong personal motivation (Stenmark, 2002)[45]. The factors affecting motivation to share knowledge between individuals can be divided into internal and external factors. Some internal factors refer to the perceiving of inherent strength and reciprocal knowledge generated from sharing. External factors include the relationship with the recipient and the benefits of sharing.

According to the social exchanges theory which involves extrinsic benefits and economic value (e.g. knowledge, financial resources) and the intrinsic benefits that are not directly related to economic objectives (gratitude, pleasure). Both types of benefits and benefits value of exchange affect people’s willingness to engage in the exchange (Blau, 1964)[6]. The reciprocal interaction can facilitate knowledge sharing if people see that the added value depends on the extent of knowledge sharing among them (Hendriks, 1999[22]; Weiss, 1999[50]).

Schein (1992)[40] states that organizational culture is the pattern of shared basic assumption that is learned by the group while solving problems. Organizational culture also involves external adaptation and internal integration that have functioned well enough to be considered true and to be taught to new group members as the correct way of receiving something, thinking and feeling such issues. There are many studies which are conducted to examine the influence of organizational culture on knowledge sharing.

Mutual aid, sharing, volunteering, and willingness to share knowledge are the added value which describe the behavior of the employee which is also one form of pro-social behavior, that is positive social behavior, constructive and helpful. Free and voluntary attitude is a behavior that is not required by roles or any job descriptions that clearly prosecute under the contract with the organization; but as a personal choice.

Pro-social behavior is a form of behavior that is likely to benefit others, voluntarily, sincerely, happily without having governed and controlled by the company in providing good services. That kind of behavior is called citizenship behavior (Organ, 1988[35]; Robinson and Curry, 2005[39]). Sloat (1999)[43] calls that also as extra-role behavior, where individuals do something more to the organization. Such behavior does not require job descriptions or any formal reward system.

**Table 1: The Summary of Previous Studies**

No	Author/Year	Concept	Research Findings
1	Lee (2001)	Knowledge sharing	The role of knowledge sharing on the success of information system project (SI)
2	Nonaka and Takeuchi (1995)[34]; K.E. Sveiby (1997)[25]	Knowledge sharing	The benefits of science and learning process for individual and

			organizational quality improvement
3	Somech and Drach (2004) [44]; Robbins and Judge (2008)[38]	OCB Indicators: voluntary, organization oriented behavior, individual behavior as a manifestation of working satisfaction, un-related to reward system.	OCB is a modern concept in organization behavior. OCB is crucial to achieve organizational success since its antecedence enables the employees to work better. OCB in a company could improve task performance and organizational performance.
4	Sears et al. (1994)[41] Batson et al. (2002)[4] Hurlock (1999)[23]	Altruist	Voluntary action undertaken by a person or group of people to help others without expecting anything in return, except the feeling of having done a good deed.
5	Gefen and Ridings (2002)[20]	Social exchange theory	Social exchange theory is derived from the economic exchange theory, which assumes that people participated in the exchange behavior because it has benefited from their sacrifice.
6	Cropanzano and Mitchell (2005)[15]	Social exchange theory	There are 4 issues discussed: the source or root ambiguity, the rules or norms, the nature and source of social relationship exchange.
7	Hendriks (1999)[22] Weiss (1999)[50]	Reciprocal	Reciprocal relationship or mutual giving and receiving knowledge (resiprocal) could facilitate knowledge sharing if people see that the value added depending on the extent of knowledge sharing among them.
8	Johnson (1988)	Reciprocal	In society, social interaction is a reciprocal relationship between the individual

			and other individuals, groups of individuals with and vice versa.
9	Putman (2006)[36]	Voluntary	Social and communal activities can increase social capital and strengthen communities in providing services.
10	Musick et al. (2000)[32]	Voluntary	Activities that provide a positive impact for the individual in the sense of belonging physically and psychologically creating social networks, enhanced career opportunities and reduced the feeling of being alone.
11	Waterman (2001)[49]	Solidarity	Solidarity is characterized from the identity of solidarity, complementarity, exchange, affinity and recovery.
12	Baker et al. (2004)[3]	Solidarity	Integrative bond develop in individuals, between individuals and social units in which the individual is located.

Based on the description above, there are some hypotheses that can be drawn in this study:

#### Hypotheses:

1. Voluntary solidarity (VS) has significant influence on knowledge sharing culture (KSC).
2. Reciprocal interaction (IR) has significant influence on knowledge sharing culture (KSC).
3. Voluntary solidarity (VS) has significant influence on the organization performance (PO).
4. Reciprocal interaction (IR) has significant influence on the organization performance (PO).
5. Knowledge sharing culture (KSC) has significant influence on the organization performance (PO).

#### 2.2 Research Variables

1. Knowledge Sharing Culture: It is a process where individuals mutually exchange the knowledge through social interaction based on the experience and skills they have to share and receive knowledge in the whole organization to create new knowledge.

Indicator (Calantone and Y. Zhao, 2002)[10]: Willingness to help and guide; Willingness to obtain higher knowledge; and Disseminate new knowledge, share experiences.

Variable Voluntary Solidarity: is a form of attitude which is demonstrated through active response in the

form of individual voluntarily selfless attitude by building bonds and identity in resource sharing.

Indicator: Perform extra actions obligation sincerely, happily without having governed and controlled by the employer in providing services; perform selfless action; share group resource.

2. Reciprocal Interaction Variable; is a form of behavior shown in response to the actions of individuals in a reciprocal relationship or mutual giving and receiving knowledge and facilitate knowledge sharing if people see that the value added depends on the extent to which shared knowledge between them.

Indicators: Give and take knowledge; Willingness to collect knowledge; Receive feedback and criticism; Strive to provide input and criticism; Build conditions and mutual respect.

3. Organization Performance: as a reflection of the company achievements both quantitatively and qualitatively resulted by the individual, group, or organization that has been achieved from the various undertaken activities.

Indicators: (Cameron, 1978)[11]: Students' satisfaction; academic development; students' career development; Lecturers and staffs' job satisfaction; Professional development and the quality of lecturers; Transparency system and communal interaction; Users maintenance ability; Capital gain ability to get capital.

### 3. RESEARCH METHODS

The population in this study was all Private Universities (PTS) lecturers in Semarang, Central Java. There were 241 lecturers which were randomly selected as sample from the total sample. The data were collected through questionnaires and observation. Likert scale was used to measure answer scores under the value of 1 to 7.

#### 3.1 Validity and Reliability

This study used Cronbach's Alpha factor analysis to test the validity of the instrument. There were three failed variables dealing with organization performance while other variables were safe. Coefficient matrix component was greater than 0.5, and Cronbach Alpha coefficient was greater than 0.7, this identified that the data were consistent and able to describe the real situation. Therefore, it could be seen that the instrument used was valid and reliable.

#### 3.2 Data Analysis

The data were analyzed using Structural Equation Model (SEM) via AMOS-19.00 system. SEM is a set of statistical techniques system that tests relationship possibility on simultaneous sequences.

There were several steps done in the analysis: 1) development of theoretical models; 2) development of path diagram; 3) the conversion of path diagram into an equation; and 4) Criteria evaluation (goodness-of-fit) and 5) Result interpretation (Ferdinand, 2006)[19].

## 4. RESEARCH FINDINGS

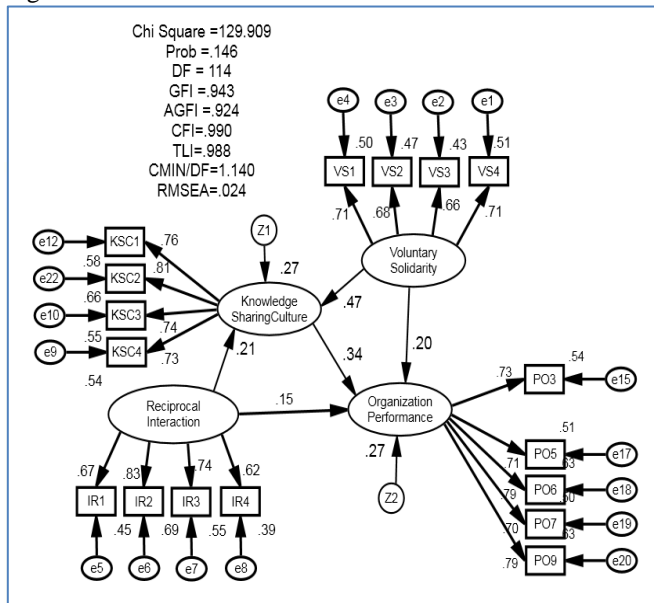
Table2 : Respondent's Identity

Gender	Number	Percentage
Male	162	67.22%
Female	79	32.78%
Age	Number	Percentage
20 - 29	0	0.00%
30 - 39	58	24.07%
40 - 49	112	46.47%
50 - 59	64	26.56%
> 60	7	2.90%
Education	Number	Percentage
S1	0	0.00%
S2	218	90.46%
S3	23	9.54%
Academic Ranks	Number	Percentage
Professor	4	1.66%
Senior Lecturer	98	40.66%
Lecturer	105	43.57%
Associate Lecturer	34	14.11%
Lecturer Assistant	0	0.00%
Year of service	Number	Percentage
0 - 5	0	0.00%
5 - 10	7	3.56%
11 - 15	33	12.89%
16 - 20	39	17.33%
21 - 25	48	21.33%
26 - 30	87	38.67%
35 - 40	11	5.33%
> 45years	16	0.89%

Based on the above, table it can be concluded that the majority of respondents was men aged over 40 years, and they had over 15 years of work experience, their education background was at master degree (S2), and their academic rank was as lecturer (Lektor-Indonesian Academic Rank). The respondents' characteristics strongly supported the purpose of this study in identifying factors that influenced knowledge sharing culture and organization performance.

**SEM Analysis**

Figure 1 : SEM Full Model



The feasibility test of the model indicated that the model fit the data or fit to the data as seen on Table 3:

**Table 3 : Model Feasibility Test**

Criteria	Cut of Value	Result	Remarks
Chi-Square	small	129,909	fit
Probability	≥ 0,05	0,146	fit
TLI	≥ 0,95	0,998	fit
CFI	≥ 0,95	0,990	fit
GFI	≥ 0,90	0,943	fit
AGFI	≥ 0,90	0,924	fit
CMIN/DF	≤ 2,00	1,140	fit
RMSEA	≤ 0,08	0,024	fit

The analysis shows that in general, the measurement model fulfills the criteria, since the probability value of RMSEA, GFI, AGFI, TLI, and CFI fit the criteria, then the model surely can be used for further analysis. The model has also been tested as free of problems or deviations from the assumptions of SEM. Similarly, Hoelter coefficient is at 0.01 significance level of 281 and 0.05 significance level of the total 258. Therefore 252 samples are sufficient to generate a fit model. The minimal representative sample size using SEM and AMOS program is 100 people. Critical N developed by Hoelter (1983) argues that if the critical value of 200 N is at a significance level of 0.01 and 0.05, then the model can be accepted as satisfactory fit.

**Hypotheses Testing**

AMOS 19.00 data processing yields standardized regression weights for hypotheses testing.

**Table 4. Regression Weight**

Variable Relations	Std Estimate	Estimate	S.E.	C.R.	P
KSC ← VS	.472	.534	.096	5.545	***
KSC ← IR	.212	.188	.063	2.969	.003
PO ← VS	.201	.208	.089	2.331	.020
PO ← IR	.152	.122	.058	2.093	.036
PO ← KSC	.340	.310	.081	3.845	***

Based on the data analysis, it can be observed that the five hypotheses agree the acceptance quality, since they are at the value of p < 0.05 and CR value > 1.96.

**4.1 Discussion**

**Hypothesis 1 :the stronger voluntary solidarity, the higher knowledge sharing culture.**

Mutual aid, sharing, volunteering, and willingness to share knowledge are added values that describe the behavior of the employee and it is a kind of pro-social behavior covering positive and helpful social behavior. Free and voluntary behavior is a behavior that is not required by the role or job description that is clearly prosecuted under contract with the organization; but it is merely as a personal choice. This kind of behavior is called Organizational Citizenship Behavior (OCB) (Organ, 1988[35]; Robinson and Curry, 2005[39]). OCB is a modern concept in organizational behavior, OCB is important to achieve success, since it enables the employees to work well (Somech and Drach, 2004)[44].

Solidarity indicates identity, complementarity, exchange, affinity and recovery, also the association of developing integration within individuals, between individuals and social units in which the individual is located (Baker et al., 2004[3]; Waterman, 2001[49]).

The measurement of Voluntary Solidarity (VS) effect on Knowledge Sharing Culture (KSC) shows significant results, it is proven from the value of the critical ratio (CR) which reaches 5.545 and < 0,001 probability. The number indicates that hypothesis 1 is accepted. The estimation coefficient (β) is 0.472 and it is positive, this illustrates that the higher the Voluntary Solidarity (VS), the higher the Knowledge Sharing Culture (KSC).

Within the high solidarity in maintaining the organization's image and high mutual cooperation among members, knowledge sharing culture can improve. Strong cooperation among members gives impact on mutual assistance in completing the work; it influences the ability of each personnel in performing duties and functions as a lecturer in transforming the knowledge to students.

**Hypothesis 2 : The stronger reciprocal interaction, the higher knowledge sharing culture.**

Social interaction was a complex process, which is performed by each individual in organizing and interpreting other people's perception of the situation in the same environment. Social interaction can also be

understood as a process undertaken by a person to express his or her identity to others and to receive recognition for the identity that forms the difference between a person's identity with others (Liliweri, 2005). Meanwhile, the term 'reciprocal', according to Alvin and Helen Goudner, is a relationship that requires action and reaction.

Bandura states that there are many aspects of personality functioning that involve interaction with others. As consequence, an adequate theory of personality must have been taken in the social context in which the behavior is obtained and maintained. Bandura's social learning theory is based on the concept of reciprocal determinism, without strengthening, and self-regulation or thinking.

Reciprocal factors explain that human behavior is in the form of mutual interaction between continuous determinants of cognitive, behavioral and environment. Someone influences behavior by environmental forces, but he can also be controlled by the environment. Reciprocal strength is an important concept in social learning theory proposed by Bandura. Social learning theory uses determinants as a basic principle to analyze the psychosocial phenomena at various levels of complexity, from the development of intrapersonal to interpersonal behavior and interactive functions of organizations and social systems.

Bock et al. (2005)[7] find that the reciprocal interrelationship influences individual attitudes toward knowledge-sharing behavior. It means that the higher the mutual relationship then the better knowledge sharing attitude will be. Chennamaneni (2006)[13] shows that the perception of reciprocal benefits significantly affect the attitudes toward knowledge sharing behavior.

The measurement of reciprocal interaction (IR) on the organization performance (PO) shows significant results, as proven from the value of the critical ratio (CR) of 3.845 and  $CR < 0,01$  probability. The value accepts hypothesis, and it indicates that the effect of Knowledge Sharing Culture (KSC) on the Organization Performance (PO) proves to be significant. The estimation coefficient ( $\beta$ ) is positive under the value of 0.192. This shows that the higher Knowledge Sharing Culture, the higher the Organization Performance.

This study is consistent with previous studies conducted by (Carbrera and Salgado, 2006)[12] who finds that the hope to get feedback in return will form positive attitude towards knowledge sharing and brought positive relation on the willingness to do knowledge sharing behavior. A study conducted by (Hendriks, 1999)[22] and (Weiss, 1999)[50] conclude that the mutual relations of giving and receiving knowledge or called as reciprocal interaction can facilitate various knowledge if people see that the value added depended on the extent of shared knowledge between them.

It can be concluded that knowledge sharing culture is an important component of knowledge management system (Alavi and Leidner, 2001)[1]. Davenport and Prusak (1998)[17] define knowledge sharing as a process that involves knowledge exchange between individuals

and groups. Previous studies done by (Bock et al., 2005) [7] reveal that the principle of mutual giving and receiving of knowledge is as the basis for the sustainability of knowledge sharing.

### **Hypothesis 3 :The higher voluntary solidarity (VS), the better organization Performance .**

The term 'voluntary' is generally understood as a social and communal activity that improves social capital, strengthens communities and assists service delivery that was previously costly or not sufficiently available (Putman, 2006)[36]. Volunteering in the context of social behavior does not only focus on the aspect of helping fellows without material rewards, but also it emphasizes that helping is a free will. Voluntary Solidarity concept is an active individual involvement through the group to give effect to the environment in a knowledge-sharing culture. (Waterman, 2001)[49] finds that solidarity indicates identity, complementarity, exchange, affinity and recovery, also the association of developing integration within individuals, between individuals and social units in which the individual is located (Baker et al., 2004)[3].

The measurement of Voluntary Solidarity (VS) on the organization performance (OP) shows significant results, as evidenced from the value of the critical ratio (CR) of 3.845 and  $CR < 0,01$  probability. Therefore the influence of voluntary solidarity (VS) on the organization performance (OP) proves to be significant. The estimation coefficient ( $\beta$ ) is at 0,192 which means positive and indicates that the higher Voluntary Solidarity concept, the higher the Organization Performance is.

Social and communal activities can increase social capital, strengthen communities in providing services where are previously costly (Putman, 2006)[36].

### **Hypothesis 4 : The better reciprocal interaction, the higher organization performance**

Social cognitive approach emphasizes that the people, the environment and behavior are in constant interaction with each other and influence each other reciprocally. This approach is a combination of cognitive and behavioristic elements. An advanced concept initiated by Homans implied that interaction is an action taken by a person, and the interaction is a stimulus for the actions of another individual who becomes his partner. Thibaut and Kelley state that social interactions are events which influence each other when two or more people are present, they thus communicate each other. So in the interaction, the actions of each person influence another individual.

The reciprocal interaction (IR) on the organization performance (PO) shows significant result, as proven from the value of the critical ratio (CR) of 3.845 and a  $<0,001$  probability. This indicates that the hypothesis is accepted. The estimation coefficient ( $\beta$ ) is positive 0.192, it shows that the higher the reciprocal interaction, the higher organization performance.

This study supported Musick et al. (2000)'s[32] finding that some activities which bring positive impact on the individual in the sense of belonging, will create

social network physically and psychologically, enhance career opportunities and reduce the feeling of being alone.

Based on the above description, it can be concluded that the knowledge sharing culture requires reciprocal interaction to transfer knowledge from the source to the recipient. A study conducted by (Kwok and Gao, 2006)[27] indicates that there are various ways in the process of knowledge sharing.

**Hypothesis 5 : The stronger knowledge sharing culture, the better the organization performance.**

As described by Andrews and (Andrews and Delahaye, 2000[2]; Nidumolu et al., 2001[33]) that knowledge sharing among individuals is an instrumental process to individual and organizational learning. The term is described as 'knowledge-sharing culture' in this study to define the habit of knowledge sharing within the organization of the same skill group as well as different skill group. Knowledge sharing is to contribute in the knowledge center and organization's website by sharing knowledge informally based on mutual trust and transparency as part of organization learning for the organization betterment.

The measurement of Knowledge Sharing Culture (KSC) on the Organization Performance (PO) shows significant results, as shown from the value of the critical ratio (CR) of 3.845 and a probability <0,001. The hypothesis is accepted, therefore there is a significant influence of Knowledge Sharing Culture (KSC) on the Organization Performance (PO). The coefficient ( $\beta$ ) is positive 0.192 and this shows that the higher knowledge sharing culture, the higher the organization performance.

The results of this study support some previous studies conducted by (Kim, 2012[26]; Moshref Javadi et al., 2012[31]), that knowledge sharing brings positive and significant effect on performance. The researchers have shown some evidences of the benefits of science and learning process for improving the quality of an individual and organization, and success of knowledge sharing facilitate reciprocal interaction between individuals in the forms of knowledge sharing and mutual assistance among employees.

This study finds that the presence of shared knowledge can stimulate innovative ideas then to be shared and upgrade to new knowledge.

## **5. CONCLUSIONS**

Based on the previous discussion, it can be concluded that:

1. Voluntary solidarity gives direct influence on organization performance in Private Universities at Semarang city, but it gives indirect influence on knowledge sharing culture variable.
2. Reciprocal interaction gives direct influence on organization performance in Private Universities at Semarang city, but it gives indirect influence on knowledge sharing culture variable.

This study contributes new perspectives on the role of group solidarity in knowledge sharing culture. The process

requires the development of the knowledge-sharing routine through some changes in attitudes and behaviors that have been believed and become the norm and value system of all members of the organization (Schein, 1992). Thus, knowledge sharing culture involves not only the individual interest alone but all members of the group to another resources sharing between members.

Voluntary solidarity concept is a form of the attitude shown as the active response of the individual in the form of a voluntary attitude, selfless, bond building and identity in resource sharing. The concept of reciprocal interaction is a form of individual attitudes shown in behavior. Reciprocal interaction or mutual giving and receiving knowledge can facilitate knowledge sharing if people see that the added value depends on the extent of shared knowledge between them.

Mutual aid, sharing, volunteering, and willingness to share knowledge is an added value that describes the behavior of the employee which is one form of free and voluntary pro-social behavior. This behaviors are not required the role or job description that are clearly demanded by contract with the organization, but as a personal choice.

With the establishment of knowledge sharing culture in the university environment, it is expected that private universities could compete in education world.

### **Managerial Implications**

The academia, -in this case is lecturers or their assistants, work dependently one another. Therefore, the success is not only determined by the individual. Good knowledge sharing culture will be able to establish good cooperation among the staffs and this may give impact on improving the attitude and willingness of sharing.

If someone has shared his knowledge to others, or he gets knowledge from someone, it is impossible that the knowledge itself is reduced. A professor serves as the knowledge transfer can successful if he is able to release his knowledge to others or the environment around him, yet he will never lose his previous knowledge. In fact, the knowledge becomes greater and wider because knowledge is not only for himself but for the whole organization. Mostly, knowledge is only owned by members of the organization and was still in the head of each member until it is shared in some practices that involve all members.

Voluntary solidarity concept is a form of individual active response in the form of a voluntary, selfless, building bonds attitude and identity in resource sharing. The concept of reciprocal interaction is a form of individual attitudes shown in behavior. Reciprocal interaction or mutual giving and receiving knowledge can facilitate knowledge sharing if people see that the added value depends on the extent of shared knowledge between them. The lecturer ability to do the jobs can yield quality improvement, secure good atmosphere in the organization. Besides, the social interaction influences knowledge sharing culture that makes Private Universities as an effective, efficient and suitable center of education, teaching and research.

There are some recommendations in this study:

1. Reciprocal interaction is built from interpersonal interaction. Lecturers must be creative in making relationship outside work relationship, such as during vacation, dinner, and sports. The institution or the leaders must also realize that knowledge sharing culture is also based on the harmonious interaction between individuals.
2. The head of institution must also pay attention to regeneration issue among lecturers, so that the existing knowledge will not bring deviant gap between one generation to another, since it could hamper working interaction and productivity. The policy which is made should also consider age issue in the period of 5 years recruitment, so that the new staff will be placed before the old staff is retired.

## 6. FURTHER STUDY

The four components discussed in this study were voluntary solidarity, reciprocal interaction, knowledge-sharing culture and organization performance, while the result of empirical tests showed medium to high value respectively. Yet, the researchers still views that the result is not that optimal because the value resulted from the multiple square result is still relatively low and still can be improved through various ways such as:

1. Improving the quality of data collection during the survey, which means that determination of the sample to be examined has to match the characteristics of the respondents such as age and years of service.
2. Creating a system that motivates members of the organization to share knowledge, especially knowledge of personal expertise. This requires an appreciation of leadership and includes the component of performance assessment and incentive system.

Looking at the results of this study, there are several things that can be used as an advanced research topics such as:

1. Expanding the object of research such as secondary schools and basic education instead of higher education institutions only.
2. Examining further reciprocal interaction variables and voluntary solidarity as well as additional new variables related to the practice of TQM (total quality management) using leadership dimension, organizational culture, teamwork, education and training, and customer focus.

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