

JHSMS

**JOURNAL OF HUMANITIES, SOCIAL
& MANAGEMENT SCIENCES**

VOL. 2, NO. 1, NOVEMBER 2022

**A PUBLICATION OF THE FACULTY OF HUMANITIES, SOCIAL AND
MANAGEMENT SCIENCES EDWIN CLARK UNIVERSITY, KIAGBODO,
DELTA STATE, NIGERIA**

© Faculty of Humanities, Social and Management Sciences Edwin Clark
University, Delta State

All rights reserved except as permitted under the Nigerian
copyright act of 1999, no part of this publication should be
reproduced, stored in a retrieval system or transmitted in any form
or by any means, electrical, mechanical, photocopying, recording
or otherwise without the prior permission of the publisher.

ISSN:1597-0396

Designed in Nigeria by Debbichuks Printing and
Computer Services, Kwale, Delta State
Tel: 08039580583

EDITORIAL BOARD

Prof. (Mrs) J. Okoh (Editor-in-Chief)

Department of Languages,
Edwin Clark University, Kiagbodo, Delta State

G.S. Chukwuemeka PhD (Editor)

Department of History and International Studies
Edwin Clark University, Kiagbodo, Delta State

Ocheja T. Attabor PhD (Editor)

Department of Languages
Edwin Clark University, Kiagbodo, Delta State

Okpimah, S.A. Emoeke PhD (Editor)

Department of Business Administration
Edwin Clark University, Kiagbodo, Delta State

Oboro Emmanuel PhD (Editor)

Department of Economics
Edwin Clark University, Kiagbodo, Delta State

EDITORIAL CONSULTANTS

Prof. A. J. Udoudo

University of Port Harcourt, Choba, Nigeria

Prof. C. Ewhrudjakpor

Delta State University, Abraka, Nigeria

Prof. Orji, Eke Kingdom

Ignatius Ajuru University of Education
Rumuolumeni, Port Harcourt, Rivers States

Prof. Ngozi Ojiakor

Nnamdi Azikiwe University, Awka, Nigeria

Prof. Onwuka Njoku

University of Nigeria, Nsukka, Nigeria

EDITORIAL NOTE

I want to specially thank the Editorial Board for their unreserved contributions towards the production of Volume 2, Number 1, of the Journal of the Faculty of Humanities, Social and Management Sciences (JHSMS), Edwin Clark University, Kiagbodo, Delta State, Nigeria.

JHSMS is a multi-disciplinary journal that promotes academic excellence in research as well as in the dissemination of research reports particularly as it concerns Humanities, Social and Management sciences. JHSMS welcomes and publishes scholarly articles and research reports. These articles are subjected to peer-reviews and editing before they are accepted for publication.

Prof. (Mrs) Juliana O. Okoh

The Editor-in-Chief

DETERMINANTS OF KNOWLEDGE SHARING BEHAVIOR AMONG UNIVERSITY LECTURERS IN NIGERIA

By

Egbule A. C. Solomon PhD

Department of Business Administration and Management,
Bellarks Polytechnic Kwale, Delta State, Nigeria

Email: Soky4real@gmail.com

Abstract

The goal of this study is to look into the factors that influence lecturers' knowledge sharing behavior in Nigerian universities. Trust among colleagues, total reward systems, teamwork, communication with colleagues, and senior management support are all determinants of knowledge sharing behavior. The support of senior management had no recognizable influence on knowledge sharing behavior. Overall, the findings revealed that communication with colleagues, accompanied by reward systems, is the most important factor contributing to knowledge sharing behavior in academic settings in Nigeria, implying that communication among colleagues is a key factor in driving lecturers to engage in knowledge sharing activity. The Nigerian government provides regular training and group-building activities to encourage high levels of knowledge sharing behavior, thereby fostering trust among individuals and departments.

**Key Words: Trust, Reward Systems, Teamwork, Engagement,
Knowledge Sharing Behavior**

Introduction

In a dynamic and competitive economy, knowledge is a critical organizational resource that provides a sustainable competitive advantage. Many businesses understand the value of knowledge and, in particular, knowledge sharing, because knowledge can appreciate in value when it is shared with and passed to others. In terms of organizational and individual learning, knowledge sharing practices and initiatives are frequently a key component of knowledge management programs (Tompang and Yunus, 2018)

The sharing of knowledge is defined as the exchange of knowledge (skills, experience, and understanding) between individuals within an organisation that can help employees share knowledge and experience to quickly complete projects and plans and save costs (Almuhim, 2020; Muafi, 2020; Supriyanto, Sujianto, and Ekowati, 2020). We recognize that knowledge management is any process of creating, acquiring, receiving, sharing and utilizing knowledge anywhere to enhance organisational learning and work efficiency. It is also the method of maintaining and fostering the awareness of an organisation (Armstrong, 2009; Sadq and Mohammed, 2020). Knowledge is the most valuable asset and the basis for the competitive advantage of an organization.

As a result, people will take on new tasks and share the knowledge they've found, gained or inspired to participate in especially valuable information-based activities (Almulhim, 2020). High-quality lecturers mean high-quality teaching, with impact on learners, their families and the social community. Studies have shown that exchanging information creates awareness (Akhavan, Gho-javand and Abdali, 2012), promotes organisational growth, development and survival (Durmusoglu, Nayir, Jacobs, Khilji and Wang, 2014; Wang and Noe, 2010; McDermott and O'Dell, 2001), increases productivity and profitability (Hsu, 2008), and understanding of consumer needs (Sandhawalia and Dalcher, 2011).

Recognizing the value of information sharing is generating a market for its implementation in institutions of higher education, which are seen as

knowledge-intensive environments (Punniyamoorthy and Asumptha, 2019). Knowledge sharing plays a significant role in achieving maximum outcomes for higher education institutions, considering their essential role in generating, managing, and spreading knowledge in society (Babalhavaeji and Kermani, 2011). In addition, academics are seen as professional information workers engaged in teaching, writing, and research from which they derive interest from their academic institutions. Bearing in mind that higher education institutions are growing and prospering from their academic knowledge, it is essential to encourage and promote the sharing of knowledge among academics, taking into account their role in influencing students' knowledge, improving education, research and academic work (Babalhavaeji and Kermani, 2011).

Universities are research centers set up to produce and provide information, and to provide people with the best education to serve their communities and to uplift human well-being. Students in school, particularly the academics, will grow and prosper from the knowledge of the impact on them (Singer and Hurley, 2005; Igbinoia and Osuchukwu, 2018). Universities strive to ensure progress and permanence in the knowledge-based era, attain organisational objectives (Sharma, 2010) and have continuous efficiency improvements. The role of knowledge sharing in the academic environment is becoming very significant to achieve the strategic objectives of these institutions (Babalhavaeji and Kermani, 2011). Academics play an important role in educating, mentoring students, conducting research and publishing scholastic works. Universities should therefore encourage the sharing of knowledge amongst their academics (Ashraf Tan, Thurasamy, Oluwaseyi and Shogar, 2019).

Some recent research has focused on knowledge sharing as an innovative behavior (Almuhim, 2020; Muafi, 2020; Supriyanto et al., 2020). Although goods and capital are not as important in the public sector as they are in the private sector, knowledge is an important component of competition (Siami-Namini, 2018; Hsu, 2016). The compensation principles and mechanisms used in the knowledge transfer literature were only partially and incompletely complete (Norfadzilah, Wan, Hairunnisa, Nini, Nor, and Nur'Ain, 2013). According to Kim, Lee, Chun, and Benbasat (2014), the most difficult problem to solve in the entire sector is the "individual survival instinct" question, in which certain individuals believe that they will benefit more from keeping knowledge than sharing it with other colleagues.

Some think sharing knowledge gives away power. The study has taken pains to examine the effect of a reward system, trust between colleagues, teamwork, contact with colleagues and other deciding factors in fostering knowledge sharing behavior among lecturers in universities. Few studies have looked at factors influencing information sharing (Foss, 2007). To gain an in-depth understanding of the influencing factors of information sharing by lecturers, it is important to find out which deciding factors influence their actions in sharing knowledge.

Prior studies focused on knowledge sharing in the services of business and management, construction, and police (Ahmad and Daghfous, 2010; Rowley, Seba and Delbridge, 2012; Skok and Tahir, 2010). These researchers examined either the tradition of exchanging information and its operations, or the impact of certain organisational, human, and technological factors. Nonetheless, to the best of our knowledge, the issue of knowledge sharing activity in the Nigerian higher education sector has only been discussed by few studies (Edward, Egbule and Bridget, (2017): Nguyen and Pham, 2018: Nguyen, et al., 2019: Ngoc, 2020).

With the scarcity of empirical studies investigating the conduct of information sharing in Nigeria, this research aims to make a significant contribution in the management field. The significance of this study lies in the fact that to the best of our knowledge, it is among the pioneer studies that address the conduct of knowledge sharing in the higher education sector in Nigeria, with particular emphasis on the knowledge sharing behavior of federal university lecturers, considering the vital role in knowledge creation and the value of knowledge sharing in achieving the goals and objectives of universities.

The objective of the study

The general objective of the study is to examine the determinants of lecturers' knowledge sharing behavior in Nigerian universities. The specific objectives are to:

- 1.Examine the effect of trust and knowledge sharing behavior of lecturers.
- 2.Ascertain the effect of reward systems and knowledge sharing behavior of lecturers.
- 3.Evaluate the effect of teamwork and the knowledge sharing behavior of lecturers.

4. Determine the effect of communication with colleagues and knowledge sharing behavior of lecturers.
5. Ascertain the effect of support from senior management and knowledge sharing behavior of lecturers..
6. Evaluate the effect of engagement and knowledge sharing behavior of lecturers

2. Review of Literature

Theory of Planned Behavior and Knowledge Sharing Behavior

The theory of planned behavior denotes the relationship between beliefs and behaviors, implying that behavior can be planned and is intentional. A theory of planned behavior is a theory that is used to predict and comprehend behavior. It contends that behaviors are determined immediately by behavioral intentions, which are determined by a combination of three factors: attitude toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 2011). It is assumed that an individual's intention to engage in a particular behavior would increase if he or she possessed more favorable attitudes and subjective norms, as well as greater perceived behavioral control. An individual's attitude toward engaging in a specific behavior is reflected in their attitude (Danes, Ferdinand, Meitiana, Maria, Trecy, Rita, Ani, 2021).

If someone already has a positive attitude towards a certain behavior, that person will have faith in that behavior (Ajzen, 2010). Subjective norms are beliefs about whether the majority of people approve or disapprove of a particular behavior. It refers to a person's beliefs about whether peers and important people in his or her life believe he or she should engage in the behavior (Ajzen, 2010). People's perceptions of their ability to perform a given behavior are referred to as perceived behavioral control. The total set of accessible control beliefs, i.e., beliefs about the presence of factors that may facilitate or impede the performance of the behavior, is assumed to determine perceived behavioral control (Ajzen, 2011). Personal attitudes, subjective norms, and perceived behavioral control, according to (Ajzen, 2011) can explain the intention to share knowledge.

Attitude Toward Knowledge Sharing Intention

According to Azjen (2010), when implementing the theory of planned behavior, the behavioral actions must be well-defined in order to allow for valuable generalization. Igbinoia and Osuchukwu (2018), on the other hand,

demonstrated how attitude can influence knowledge sharing in the context of library personnel. They came to the conclusion that attitude has a significant impact on knowledge sharing behavior. According to Igbinovia and Osuchukwu (2018), citing Azjen (2002), self-efficacy refers to the lecturer's confidence in his or her ability to perform the behaviors necessary to achieve specific performance outcomes. The theory also emphasizes self-efficacy as a belief in one's ability to exert control over one's own motivation, behavior, and social environment, such as in universities. As a result, one of the primary determinants of developing an optimistic attitude toward knowledge sharing is self-efficacy. According to Sajeve (2014), workers' willingness to share knowledge is influenced by the various types of rewards they will receive. According to Lee and Ahn (2007), in order to achieve effective knowledge sharing, workers must be encouraged to share their knowledge in the best interests of the organization. However, successfully implementing this encouragement with the right attitude is extremely difficult. Several organizational factors, such as teamwork, communication with colleagues, senior management support, and engagement, can supplement reward systems in increasing knowledge management performance and mitigating the productivity problem in organizations (Danes, Ferdinand, Meitiana, Maria, Trecy, Rita, Ani, 2021). We believe that the success of knowledge management goals, targets, and programs will be determined by attitudes toward various types of knowledge sharing (Tirana, and Tjakraatmadja, 2019).

Factors affecting knowledge-sharing behavior in the organization

Recent study conducted by (Ngoc, 2020) identified the following factors of knowledge sharing: trust, reward systems, teamwork, communication with colleagues, the scale of support from senior management, information technology and commitment to knowledge sharing among lecturers. At the same time, the paper examines the strengths and limitations of each of these variables regarding the sharing of knowledge between lecturers.

Knowledge generation is not enough, there must be a purpose for using and sharing the knowledge generated (Dixon, 2000). Syed-Ikhsan and Rowland (2004) believe that transfer of knowledge requires a group or individual's enthusiasm for working with others and sharing knowledge to their shared advantage. Without sharing, transfer of information from one person to another is roughly impracticable. The transfer of information may only take place in an organisation where its workers demonstrate a high degree of cooperative

behavior (Goh, 2002). Knowledge does not run through organisations automatically. In reality, the time and energy of people are limited, and they will choose to do what gives them the best return given their scarce resources.

There is a lot of research on factors influencing the exchange of knowledge in the world and in Nigeria. Al-Alawi, Al-Marzooqi and Mohammed, (2007), moved toward a working group and Lin (2007) approached the behavior of sharing personal knowledge. Mehrabi, Siyadat and Allameh, (2013) examined the association between the culture of the organisation and the behavior of knowledge sharing in the service sector. Kathiravelu, Mansor and Kenny, (2013), conducted research into the nature of public information sharing in Malaysia. Bui (2014) assesses the level of sharing behavior in terms of knowledge of university lecturers in Nigeria. Canh and Dao (2016) assessed the knowledge-sharing behavior of bank staff from an ideological standpoint. Nguyen and Pham (2018) have shown that there are six (6) factors affecting bank employees' knowledge sharing behaviour, including trust, communication with colleagues, information technology system, reward, team work, interest in management. Based on previous studies, the factors which influence behaviors of knowledge sharing are summarized as follows (see Table 1).

Table1. Factors affecting knowledge sharing behavior in the organization

Considered Factors	Sources
Trust	Al-Alawi et al. (2007), Kharabsheh et al. (2012)
Telecommunication	Al-Alawi et al. (2007), Kharabsheh et al. (2012)
Information technology system	Al-Alawi et al. (2007), Akamaviand Kimble (2005), Kharabsheh et al. (2012);; Bock et al. (2005); Kathiravelu et al. (2013)
Total Rewards System	Al-Alawi et al. (2007), Kharabsheh et al. (2012), Edward G. E andEgbule A. C. S, (2017)
Organization structure	Al – Alawi et al. (2007), Teimouri (2011), JavadpourandSamiei (2017)
Technology of organization	Teimouri (2011)
Organizational strategy	Teimouri (2011)
Culture of the organization	Teimouri (2011), Kharabsheh et al. (2012).
Methods of implementation	Teimouri (2011), Samadi (2018)
Orientation of learning	Kharabsheh et al. (2012), Hassan and Din (2019)
Mutual support	Bui (2014)
Communication	Davenport andPrusak (1998); Smith and Rupp (2002); Zahidul et al. (2011)
Leadership	Zahidul et al. (2011)
Cohesion	Lee (2001); Hislop (2003); WuytsandGeyskens (2005); Nyaga et al. (2010); Kathiravelu et al. (2013)
Knowledge management Infrastructure	Lee (2001); Nguyen G. H. (2009)

Source: Ngoc (2020)

3. Materials and Method

According to available information on the NUC websites as of August 1st, 2019, Nigeria has 174 approved universities. There are 43 federal universities, 52 state universities, and 79 private universities in the system (NUC, 2019). Nigeria is divided into 36 states and one Federal Capital Territory (FCT), Abuja. These states are also divided into geopolitical zones. South West, South-South, North Central, South East, North West, and North East are the six zones. The North West Zone (Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara) has the most Federal universities, with ten. The South West region (Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo) has the most State and Private Universities. The Zone is home to 11 public universities and 36 private universities. South West has 7 Federal universities, 11 State universities, and 36 Private universities. While South-South 7, 10, 14, North Central 7, 6, 11, South East 5, 10, 13, North West 10, 8, 3, North East 7, 7, 2, Federal, State, and Private universities respectively.

The analytical unit consists of selected academic staff in the department of business administration from the forty-three (43) Nigerian federal universities with a target population of 3,657. The study adopts a cross-sectional research design. Taro Yamane formula was used to determine sample size 360, Simple random probability sampling method was adopted which gives an equal chance to each subject in the population to be selected. The respondent's emails and data were collected using a structured questionnaire, sent to their emails with the help of survey monkey software.

The Research Instrument

Knowledge sharing behaviour (KSHB) was adapted from (Bock, Zmud, Kim and Lee, (2005). and measured with 7 items; Confidence (TRST) adapted from Hsu (2006), Bock et al . (2005), Blacker (1995) and measured with 6 items; Reward systems (RWST) adapted from Lin (2007), Bock et al . (2005) measured with 9 items; Team work (TMWK) adapted from Nguyen et al., 2019 and measured with 6 items. While Engagement (ENGT) dimension was adapted from Yam et al., (2012) and measured with 6 items. with a 5-point Likert scale ranging from strongly agree (SA), agree (A), disagree (D), strongly disagree (SD) and Undecided (U).

A total of three hundred and fifty (350) replied questionnaires were returned

which were used for review, reflecting a return rate of 97 percent, the high response rate was due to the lockdown caused by Covid-19 and all the lecturers are not busy with academic work at school but at home. Using the Cronbach alpha coefficient, the research instrument was tested for internal consistency. A pilot study was conducted using 10 per cent of the sample size at Delta State University and the reliability test result showed an acceptable Cronbach alpha score above 0.9 for all constructs and a mean value of 0.924 as shown in Appendix 2 (reliability). The data collected for the study were analyzed using descriptive statistics, correlation, multiple regression and post-regression diagnostic testing performed to certify the included regression model, Heteroskedasticity test, Ramson RESET test and Variance inflation factor (VIF) testing using Stata version 13 software package.

Model Specification

Model: $KSHB = \alpha_0 + \beta_1 TRST + \beta_2 RWST + \beta_3 SMCD + \beta_4 TMWK + \beta_5 CMWC + \beta_6 ENGT + U_i$

Where:

KSHB = knowledge sharing behavior

TRST = Trust

RWST = Reward systems

TMWK = Team work

CMWC = Communication with colleagues

SSMT = Support of senior management

ENGT = Engagement

U_i = Error Term or Stochastic Variables

$\beta_1 - \beta_n$ = Coefficients of Regression

α_0 = The Intercept

4. Results and Discussion

The respondents' demographic profile points out that the respondent's 289 were males, representing 83 percent of total responses, while 61 respondents are female, representing 17 percent of total responses, indicating that the academic sector of selected universities includes more male gender than female. The age distribution of respondents indicates that 18 respondents representing 5 percent, are below the age of 30, 120 respondents, representing 33 percent, are within the age bracket of 30-40 years, 62 respondents, representing 18 percent, are between 41-50 years of age, while 150 respondents, representing 43 percent, are over 50 years of age, meaning that

our respondents are senior lecturers. 325 respondents representing 93 percent of the respondents are women, 25 of whom constitute 7 percent of the total respondents. This is in line with the respondents' age distribution, with 95 percent of respondents above 30 years of age. 75 respondents representing 21 percent had MBA / M.Sc on the highest educational qualification of the respondents. As their highest credentials, and 79 percent of the 275 respondents had a Ph.D. This indicates that Ph.D. qualifications hold the highest number of respondents sampled.

Table 2: Results (Appendix 2)

Variable/Statistics	Coefficient	Std. Err.	T	P(t)	Decision (Ha)
Trust	0.1347529	0.0523214	2.58	0.010	Accepted
Reward systems	0.1987258	0.0563778	3.52	0.000	Accepted
Team work	0.1664358	0.0418159	3.98	0.000	Accepted
Comm. with colleagues	0.3605187	0.046358	7.78	0.000	Accepted
Engagement	0.1233089	0.0450518	2.74	0.007	Accepted
Support of senior mgt.	0.0177358	0.0568737	0.31	0.755	Rejected
Cons.	-0.0132851	.161693	-0.08	0.935	
R-squared	0.6831				
Adj R-squared	0.6776				
F	123.24				
Pr.(f)	0.0000				
Post Regression test:					
Heteroskedasticity	1.25(0.2631)				
Ramson RESET test	0.3479				
Mean VIF	2.67				

Source: Researcher's computation (using Stata (13.0) see Results in appendix 2)

The descriptive characteristics of the data set used in the analyses showed that perhaps the constructs have a maximum value of 5 indicating that the

respondents are strongly in agreement with all the questions asked at some point, while the lower limit of 2 for the constructs indicates that the respondent's knowledge was undecided to any question. The descriptive statistics further show that the sample size was sampled from 350 respondents. The result of the Jacque Bera normality test was that it showed that all variables are normally distributed at a level of significance of 1 percent. Any suggestions provided to a very large extent would therefore represent the characteristics of the true population of the study. The correlation test reveals positive correlation between all the constructs. Appendix 2 (Result) reported the correlation between a variable of interest, suggesting a positive correlation between the variables of factors influencing the behavior of sharing of information among lecturers.

Test of Hypotheses

Shortly after the regression analysis, post-regression diagnostic testing was performed before testing the formulated hypotheses as seen in Appendix 2 (Results) for the heteroskedasticity test, we observed that the variation between the dependent and independent variables is hankedastic since there is no heteroskedasticity problem 1.25(0.2631). The model is free of unequal variance, implying that. This further points to the reliability and validity of our probability values for drawing inferences at the level of significance. Thus, implying that robust regression or weighted square least regression is not required. Hence, the regression results can be used to test the formulated hypotheses.

The variance inflation factor test follows, the mean VIF value is 2.67 which is lower than the reference value of 10 and indicates the absence of multicollinearity and no variable in the model should be dropped. The results obtained from the test for Ramsey regression equation specification error test, indicate the probability value of 0.3479 indicating that the model has no omitted variables.

H₀₁: There is significant positive relationship between Trust and knowledge sharing behavior of lecturers. Trust ($\beta = 0.1347$, $p = 0.010 > 0.05$) indicates that there exists a significant positive relationship between Trust and knowledge sharing behavior. Suggesting that Trust has a substantially positive impact on the conduct of information sharing.

H₀₂: There is a positive association between Reward programs and the

lecturer's actions in sharing information. It shows that there is a substantial positive association between incentive systems and information sharing activity ($\beta = 0.1987$, $p = 0.000 > 0.05$) suggesting that reward systems greatly influence information sharing actions.

Ho₃: There is strong positive relation between Teamwork and lecturer 's behavior in sharing knowledge. Teamwork ($\beta = 0.1664$, $p = 0.000 > 0.05$) suggests a significant relationship exists between teamwork and actions in knowledge sharing. In view of this, the null hypothesis was rejected and the alternative hypothesis accepted, implying a significant relationship exists between the behavior of teamwork and sharing of knowledge.

Ho₄: There is interaction between Communication with colleagues and lecturer's sharing behaviour. Communication with colleagues ($\beta = 0.0627$, $p = 0.000 > 0.05$) indicates that the relationship between communication with colleagues and knowledge sharing behavior is significantly positive. Implying communicating with colleagues and lecturers' knowledge sharing behaviour.

Ho₅: There is positive relationship between lecturer engagement and knowledge sharing behaviour ($\beta = 0.1233$; $p = 0.007$). Consequently, suggesting a substantial relationship exists between lecturer engagement and actions of information sharing.

Ho₆: There is a significant positive relationship between support from senior management and knowledge sharing behavior of lecturers. Support from senior management ($\beta = 0.0177$, $p = 0.755$), implying that support from senior management has no significant positive relationship with knowledge sharing behavior. We also observed from the multiple regression that the adjusted R-squared value of 0.67 shows that about 67% of the systematic variations in knowledge sharing behavior is explained by influencing factors. The F-statistic of 123.24 and its associated P-value of 0.000 shows that the multiple regression model on the overall is statistically significant at 1% level.

Discussion

The results showed that trust plays an important role in social relationships, rather than in economic transactions. Trust is a positive expectation to one's integrity, ability, honesty, and goodwill for the capacity of other colleagues in the organisation. So trust will help achieve the sharing of knowledge, because

one's willingness to share one's knowledge with others is a social exchange. Trust is a positive expectation of one's integrity, ability, honesty, and goodwill for the capacity of other colleagues. A social exchange is one's willingness to share one's experience with others. If a company has mutual trust, implementation of knowledge sharing will be easier. This is in alignment with Davenport and Prusak (1998) that if a company has mutual trust, implementation of knowledge sharing will be easier. Trust plays an extremely important role in sharing information (Davenport and Prusak, 1998). Trust is often argued as essential for knowledge sharing and numerous authors believe that people willingly exchange knowledge when trust exists among themselves (Bakker, Leenders, Gabbay, Kratzer and Van Engelen, 2006).

Total reward system is an incentive for members in organisations to guide their behavior in knowledge sharing (Amstrong 2009) and improve effectiveness in learning (Pham and Swierczek, 2006). Organisational incentives may include physical benefits such as pay increases, and bonuses or non-physical benefits such as performance recognition, gratitude or consideration of priority promotions. In addition, long-term rewards such as profit sharing or other options are also seen as an effective means of promoting knowledge sharing compared to other short-term incentives. For the need to promote exchange, sharing and creativity in groups of lecturers, they must work together to improve knowledge. The members of a working group must come from different units, which they usually only know about their expertise and lack the necessary knowledge of other areas.

Diversity and globalization have created difficulties among teams. Therefore, it is essential to increase the ability and efficiency of teamwork, especially the sharing and viewpoint exchange of team members. Communication among colleagues in the organisation ranked highest among the factors studied, this is because Communication among colleagues is the basis of encouraging knowledge sharing (Smith and Rupp, 2002). The organisation promotes the exchange of information, and information reaches the organisation naturally to promote open discussions, and vigorous debates and to make individuals (no matter what their position is) freely show their opinions and own viewpoints on a variety of issues (Davenport and Prusak, 1998). Through practical activities, individuals can collect information and data from many different groups, and evaluate their opinions and viewpoints. Then, they can convert information to create new knowledge for themselves.

Senior management is the highest-level individuals in the organisation, they are responsible for managing and taking responsibility for their decisions in the joint activities of the organisation, in this case in the Nigerian Federal Universities studied our result shows that support from Senior management in federal universities in Nigeria are not encouraging knowledge sharing behavior. Hence, senior managers' support is not significant, the top management is not creating and preserving the organisation's positive values and beliefs for lecturers under their leadership to share knowledge (Lin, 2007). The reason is that appropriate reward programs are not in place to boost the lecturers' attitude which is part of the primary determinants of developing an optimistic attitude toward knowledge sharing (Shaari et al., 2014).

A high degree of cohesion will build trust from individuals and departments (Wuyts and Geyskens, 2005). Cohesion promotes the process of communication and knowledge sharing in the organisation. Therefore, having the ability to communicate and share information and ideas to promote the understanding of knowledge is also an important signal to partners. Nyaga, G.N., Whipple, J.M., & Lynch, D.F. (2010) affirmed that when one person shares important knowledge with others, it is an affirmation of attachment to those people and motivating them to re-share knowledge. Trust is an important factor in knowledge sharing, for people to share knowledge, there must be elements of trust and confidence. Lee (2001) argues that knowledge sharing is the process of transmitting or disseminating knowledge from one person, group or organisation to other. Such knowledge connection allows organisations to transfer knowledge to new lecturers so that the information technology system will promote the reception of new knowledge and consolidate the previously-accumulated knowledge or utilize in the whole organization.

Conclusion

This study was carried out in the Nigerian higher education sector of the economy, particularly the University to examine knowledge sharing behavior among academic staff. Possessing Knowledge sharing behavior is vital to the success of knowledge transfer practices in any establishment. The determinant factors studied, that are vital to explain behaviours in knowledge sharing include; trust among colleagues, total reward systems, team work,

communication with colleagues and support of senior management. The study found that all other factors were significant with the exception of the support of senior management.

Members in the same group should help each other at work. Without teamwork skills, it is easy to cause conflicts due to contrary opinions. It is very important for creating a consensus in the group to work towards common interests. With the knowledge exchange of each department, it is also necessary to attract experts from other departments. Public universities in Nigeria also need to have exchange meetings and teamwork activities among lecturers. Unions of public universities in Nigeria also need to show a linking role in creating cohesion. Training young lecturers on how to effectively communicate among themselves can help them improve their ability to share knowledge. Organisations should provide different financial and non-financial reward packages to encourage employees to share. Previous research has either studied the intention to share knowledge or knowledge sharing. The Nigerian government should encourage regular training and group activities that will promote a high degree of cohesion, thereby building trust among individuals and departments.

Theoretical Implementation

This study includes a theoretical application of the analysis findings. This study expands on the theory of planned behavior by hypothesizing that psychological empowerment can act as a determinant or influencer of behaviors, resulting in a positive and significant link between knowledge sharing behavior. The theory emphasizes the relationship between attitude and behavior, implying that behavior can and should be planned. Inferring that a lecturer's attitude can be influenced by an appropriate reward system, which can positively influence their behavior toward knowledge sharing; similarly, a good attitude promotes trust between colleagues, teamwork, contact with colleagues, and other deciding factors in fostering knowledge sharing behavior among lecturers.

From a theoretical standpoint, this study strengthens the educational sector in terms of knowledge sharing in a novel way. For example, for effective service delivery in higher educational institutions, trust must be built with the right attitude toward employers and employees. This study's findings indicate that if an organization shifts its focus to knowledge sharing, it will reduce the risk of loss because it will psychologically empower workers and foster teamwork.

The theory of planned behavior supports the findings of this study. Finally, the current findings broaden our understanding of knowledge sharing and highlight the importance of influencing lecturers' attitudes toward positive knowledge sharing behavior.

The theory also emphasizes self-efficacy as a belief in one's ability to exert control over one's own motivation, behavior, and social environment, such as in universities. As a result, one of the primary determinants of developing an optimistic attitude toward knowledge sharing is self-efficacy.

Practical Implementations

The finding of this study explains that sharing knowledge facilitates and engages employees in more traditional or ambidextrous actions that facilitate great ideas when working in a team. Particularly, these results are applicable to the universities enterprise, because the knowledge sharing enables the workers to solve the problems related to performance and bring innovation to the working style.

Usually, an educational sector has a desire to retain knowledge by constantly improving their lecturing and research. At the same time, these universities want to stay practical by motivating their lecturers to improve research work that will promote an innovative teaching environment economic development in learning and in the future academic performances.

The findings of this study further revealed that universities should encourage trust among colleagues through a range of total reward systems and team work. The findings also reveal that effective communication with colleagues promote knowledge sharing behaviour. Arrange training sessions from time to time for empowering the employee psychologically; the psychological empowerment will lead the sense of knowledge sharing in an employee. Knowledge could be composed of extra value and resources for the advancement of organisations (Jeon, Rosalen, Falsetta, and Koo, 2011) and further opportunity to increase the performance level to maximise productivity and benefits.

Limitations and Future Research

There are some limitations to be discussed surrounding the study. Firstly, it used an accurate time-lagged design, but a longitudinal approach is needed to inspect the link between knowledge sharing behaviour and attitude. The knowledge sharing among the lecturers used to fluctuate from time to time due to behavioral changes with the changing factors.

Second, this study collects the data from Federal Universities in Nigeria for the analysis; the working environment of the organisation is different from that of state universities and private universities. Therefore, advanced research should be carried out if the results have similarities in State universities and Private universities. Thirdly, this study focused on the six main variables: trust among colleagues, total reward systems, team work, communication with colleagues and support of senior management. But future studies can identify other determinants of knowledge sharing.

References

- Ahmad, N., &Daghfous, A. (2010). Knowledge sharing through inter-organisational knowledge networks: Challenges and opportunities in the United Arab Emirates. *European Business Review*, 22(2), 153–174. doi:10.1108/09555341011023506.
- Ajzen, I. (2010). Constructing a theory of planned behavior questionnaire. *Biofeedback and Self-Regulation*, 17(3), 1–7. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).
- Ajzen, I. (2011). The theory of planned behavior: Reactions and reflections. *Psychology and Health*, 26(9), 1113–1127. <https://doi.org/10.1080/08870446.2011.613995>.
- Akhavan, P., Ghojavand, S., & Abdali, R. (2012). Knowledge sharing and its impact on knowledge creation. *Journal of Information & Knowledge Management*, 11(2), 1–12. doi:10.1142/S0219649212500128.
- Al-Alawi, A. I., Al-Marzooqi, Y. N., & Mohammed, Y. F. (2007). Organisational culture and knowledge sharing: Critical success factors. *Journal of Knowledge Management*, 11 (2), 22-42. DOI: 10.1108/13673270710738898.
- Almulhim, A. F. (2020). Linking knowledge sharing to innovative work behavior: The role of psychological empowerment. *Journal of Asian Finance, Economics, and Business*, 7(9), 549–560. <https://doi.org/10.13106/Jafeb.2020.Vol7.No9.549>
- Almulhim, A. F. (2020). Linking knowledge sharing to innovative work behavior: The role of psychological empowerment. *Journal of Asian Finance, Economics, and Business*, 7(9), 549–560. <https://doi.org/10.13106/Jafeb.2020.Vol7.No9.549>.
- Armstrong M. (2012) *Armstrong's H&book of Human Resource Management Practice*. 12th ed. UK. Kogan.
- Ashraf Fauzi, M., Tan Nya-Ling, C., Thurasamy, R., OluwaseyiOjo, A., &Shogar, I. (2019). Evaluating academic knowledge sharing intention

in Malaysia public universities. *Malaysian Journal of Library & Information Science*, 24(1), 123–143. <https://doi.org/10.1108/JIMA-10-2017-0111>.

- Babalhavaeji, F., & Kermani, Z. J. (2011). Knowledge sharing behaviour influences: A case of library and information science faculties in Iran. *Malaysian Journal of Library & Information Science*, 16(1), 1–14.
- Bartol, K. M., & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organisational reward systems. *Journal of Leadership and Organisation Studies*, 9(1) 64–76.
- Blacker, F. (1995). Knowledge, knowledge work and organisations: An overview and interpretation. *Organisation Studies*, 16 (6), 1021 – 1046.
- Bock, G. W., Zmud, R. W., Kim, Y. G., & Lee, J. N. (2005). Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social – psychological forces, and organisational climate. *MIS Quarterly*, 29(1), 87-111.
- Bui, T. T. (2014). Factors affecting knowledge sharing behaviors between lecturers in universities. *Journal of Economics and Development* (Nigeria), 199, 71- 79.
- Canh, C. H., & Dao, V. X. (2016). Factors affecting knowledge sharing behavior of Sacombank employees. *Economy & Forecast Review* (Nigeria), 23, 33-36.
- Chugh, R. (2012). Knowledge sharing with enhanced learning and development opportunities. *IEEE Xplore*, 100-104.
- Cummings, J. N. (2004). Work groups, structural diversity and knowledge sharing in a global organisation. *Management Science*, 50(3), 352–364. doi:10.1287/mnsc.1030.0134.
- Danes J. N, Ferdinand F ,Meitiana M , Maria H. A ,Trecy A , Rita S , Ani M, (2021). Knowledge Sharing Behavior in Indonesia: An Application of Planned Behaviour Theory. *Journal of Asian Finance, Economics and Business* Vol 8 No 3 (2021) 1053–1064.

- Davenport, T. H., & Prusak, L. (1998). *Working Knowledge: How Organisations Manage What They Know*. Boston, Harvard Business School Press. DOI: 10.1145/348772.348775.
- Dixon, N. M. (2000). *Common Knowledge: How Companies Thrive by Sharing What They Know*. Boston, Harvard Business School Press.
- Durmusoglu, S., Jacobs, M., Nayir, D., Khilji, S., & Wang, X. (2014). The quasi-moderating role of organisational culture in the relationship between rewards and knowledge shared and gained. *Journal of Knowledge Management*, 18(1), 19–37. doi:10.1108/JKM-05-2013-0183.
- Edward G. E, Egbule A. C. S and Bridget I, (2017) Relationship Between Strategic Human Resource Management and Knowledge Management Practice (A Study of selected FMCG Industry in Nigeria). *Nigerian Journal of Management Sciences*. 6(1), 52-61.
- Egger, U.K. (2013). Cross Organisational Knowledge Sharing.
- Foss, Pedersen, Reinholt and Stea, 2007). The emerging knowledge governance approach: Challenges and characteristics. *Organisation*, 14(1), 29-52.
- Goh, S. (2002). Managing effective knowledge transfer: An integrative framework and some practice implications. *Journal of Knowledge Management*, 6 (1), 23-30.
- Gurbuz, T. (2008). Knowledge management in education and research: An elective course at METU. Paper presented at the 8th International Educational Technology Conference (IETC2008), 1313-1316.
- Homans, G. C. (1958). Social Behavior as Exchange. *American Journal of Sociology*, 63(6), 597-606.
- Hsu, I. (2008). Knowledge sharing practices as facilitating factor for improving organisational performance through human capital: A preliminary study. *Expert Systems with Applications*, 35(3), 1316–1326..

- Igbinovia, M. O., & Osuchukwu, N. P. (2018). Predictors of knowledge sharing behavior on sustainable development goals among library personnel in Nigeria. *IFLA Journal*, 44(2), 119–131. <https://doi.org/10.1177/0340035218763445>.
- Kankanhalli, A., Tan, B. C. Y., & Wei, K. -K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS Quarterly*, 29(1), 113- 143.
- Kathiravelu, S. R., Mansor, N. N. A., & Kenny, K. (2013). Factors Influencing Knowledge Sharing Behavior (KSB) among Employees of Public Services in Malaysia. *International Journal of Academic Research in Economics and Management Sciences*, 2(3), 107-119.
- Kim, T. H., Lee, J.N., Chun, J.U., Benbasat, I. (2014) Understanding the effect of knowledge management strategies on knowledge management performance: A contingency perspective. *Inf. Manag.* 51(3) 398–416.
- Lee, K. C., Lee, S., and Kang, I. W. (2005). KMPI: measuring knowledge management performance. *Information and Management Journal*, 42 (3), 469–482.
- Ling, C. W., Sandhu, M., & Jain, K. K. (2009). Knowledge sharing in an American multinational company based in Malaysia. *Journal of Workplace Learning*, 21 (2) , 125 – 142 . doi:10.1108/13665620910934825.
- Matoskova J. and Smesna P, (2017), “Human Resource Management Practices Stimulating Knowledge Sharing”, *Management and Marketing. Challenges for the Knowledge Society*, 12 (4): 614-632.
- McDermott, R., & O'Dell, C. (2001). Overcoming cultural barriers to sharing knowledge. *Journal of Knowledge Management*, 5(1), 76–85. doi:10.1108/13673270110384428.
- Mehrabi, S., Siyadat, S. & Allameh, S. (2013). Studying the relationship between the process of knowledge Sharing and organisational agility among personnel of Agriculture- Jihad Organisation in Share-Kord. *International Journal of Academic Research in Business and Social Sciences*, 3(5), 324-36.

- Muafi, M. (2020). A nexus among strategic orientation, social network, knowledge sharing, organizational innovation, and MSMEs performance. *Journal of Asian Finance, Economics, and Business*, 7(6), 327–338. <https://doi.org/10.13106/jafeb.2020.vol7.no6.327>.
- Ngoc T. T., (2020) Factors affecting knowledge sharing behavior of lecturers: The case of public universities. *Management Science Letters* 10 (2020), 2789-2798.
- Nguyen G. H. (2009). A resource-based view of knowledge management infrastructure elements: an empirical study in Nigeriaese construction industry', *International Business Research*, 2 (3), 3-16.
- Nguyen, N. D. P. & Pham, T. S. (2018). Factors affecting knowledge sharing behavior of bank employees - Research at Joint Stock Commercial Bank for Industry and Trade of Nigeria - Lam Dong province. *Industry and trade magazine* (Nigeria), 14, 281-286.
- Nguyen, T., Nguyen, K., & Do, T. (2019). Knowledge sharing and innovative work behavior: The case of Nigeria. *Uncertain Supply Chain Management*, 7(4), 619-634.
- Norfadzilah F. H., Wan H. J., Hairunnisa T., Nini G. K., Nor D. L., and Nur'Ain H. N (2013) Integrating Knowledge Management and Human Resource Management for Sustainable Performance. *Journal of Organisational Knowledge Management*. 2 (10), 1-13.
- Norfadzilah F. H., Wan H. J., Hairunnisa T., Nini G. K., Nor D. L., and Nur'Ain H. N (2013) Integrating Knowledge Management and Human Resource Management for Sustainable Performance. *Journal of Organisational Knowledge Management*. 2 (10), 1-13.
- Nyaga, G.N., Whipple, J.M., & Lynch, D.F. (2010). Examining supply chain relationships: do buyer and supplier perspectives on collaborative relationships differ? *Journal of Operations Management*, 28(2), 101-114.
- Pangil, F., & Moi Chan, J. (2014). The mediating effect of knowledge sharing on the relationship between trust and virtual team effectiveness. *Journal of Knowledge Management*, 18(1), 1–24. doi:10.1108/ JKM-

09-2013-0341.

- Pham, N. T., & Swierczek, F. W. (2006). Facilitators of organisational learning in design. *The Learning Organisation*, 13(2), 186–201.
- Punniyamoorthy, M., & Asumptha, J. A. (2019). A study on knowledge sharing behavior among academicians in India. *Knowledge Management and E - L e a r n i n g* , 1 1 (1) , 9 5 – 1 1 3 .
<https://doi.org/10.34105/j.kmel.2019.11.006>.
- Reychav, I., & Weisberg, J. (2009). Good for workers, good for companies: How knowledge sharing benefits individual employees. *Knowledge and Process Management*, 16(4), 186–197. doi:10.1002/kpm.335.
- Rowley, J., Seba, I., & Delbridge, R. (2012). Knowledge sharing in the Dubai Police Force. *Journal of Knowledge Management*, 16(1), 1–24.
- Sadq, Z., Othman, B., & Mohammed, H. (2020). Attitudes of managers in the Iraqi Kurdistan region private banks towards the impact of knowledge management on organisational effectiveness. *Management Science Letters*, 10(8), 18351842.
- Sandhawalia, B. S., & Dalcher, D. (2011). Effective knowledge sharing for competitive advantage. *Journal of Knowledge Management*, 15(2).
- Sandhu, M. S., Jain, K. K., & Umi Kalthom, A. (2011). Knowledge sharing among public sector employees: Evidence from Malaysia. *International Journal of Public Sector Management*, 24(3), 206–226. doi:10.1108/09513551111121347.
- Sharma, A. (2010). Enabling knowledge management of organisational memory for groups through shared topic maps. Master dissertation. Iowa State University, UAS.
- Siarni-Namini, S. (2018). Knowledge management challenges in public sectors. *Research Journal of Economics*, 2(3), 1–9.
https://www.scitechnol.com/peer-review/knowledgemanagement-challenges-in-public-sectors-jh10.php?article_id=7533.
- Singer, P., & Hurley, J. E. (2005). The Importance of Knowledge Management Today. *ALA-APA Library Work life Home*, 2(6), 1–3.

- Skok, W., & Tahir, Saad. (2010). Developing a knowledge management strategy for the Arab World. *Electronic Journal on Information Systems in Developing Countries*, 41(7), 1–11.
- Supriyanto, A. S., Sujianto, A. E., & Ekowati, V. M. (2020). Factors affecting innovative work behavior: Mediating role of knowledge sharing and job crafting. *Journal of Asian Finance, Economics, and Business*, 7(11), 999–1007. <https://doi.org/10.13106/jafeb.2020.vol7.no11.999>.
- Syed-Ikhsan, S.O.S. and Rowland, F. (2004). Knowledge management in a public organisation: a study on the relationship between organisational elements and the performance of knowledge transfer. *Journal of Knowledge Management*, 8(2), 95–111.
- Tirana, R. A., & Tjakraatmadja, J. H. (2019). Factors affecting knowledge sharing intention of an expert in a group of faculty member Telkom Corporate University. *The Asian Journal of Technology Management*, 12(1), 70–85. <https://doi.org/10.12695/ajtm.2019.12.1.6>.
- Tompang, N., & Yunus, A. M. (2018). The effectiveness of knowledge sharing practices in a government agency. *International Journal of Academic Research in Business and Social Sciences*, 7(12), 1172–1187. <https://doi.org/10.6007/ijarbss/v7-i12/3749>.
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, 20(2), 115–131.
- Wuyts, S., & Geyskens, I. (2005). The formation of buyer-supplier relationships: detailed contract drafting and close partner selection. *Journal of Marketing*, 69(4), 103–117.
- Xiao, Y. C., & Jin, Y. H. (2010). The hierarchical linear modeling of shared mental model on virtual team effectiveness. *Kybernetes*, 39(8), 1322–1329. doi:10.1108/03684921011063619.
- Yam, P.T., Kent, C.B., Morin, S., Farmer, W.T., Alchini, R., Lepelletier, L., Colman, D.R., Tessier-Lavigne, M., Fournier, A.E., and Charron, F. (2012). 14-3-3 proteins regulate a cell-intrinsic switch from sonic

hedgehog-mediated commissural axon attraction to repulsion after midline crossing. *Neuron*, 76, 735–749.

Zahidul, I. M., Hasan, I., Ahmed, S., & Ahmed, S. M. (2011). Organisational culture and knowledge sharing: Empirical evidence from service organisations. *African Journal of Business Management*, 5(14), 5900-5909.

Appendix 1 (List of Federal Universities in Nigeria)

S/N	Federal University
•	Abubakar Tafawa Balewa University, Bauchi
•	Ahmadu Bello University, Zaria
•	Bayero University, Kano
•	Federal University Gashua, Yobe
•	Federal University of Petroleum Resources, Effurun
•	Federal University of Technology, Akure
•	Federal University of Technology, Minna
•	Federal University of Technology, Owerri
•	Federal University, Dutse, Jigawa State
•	Federal University, Dutsin-Ma, Katsina
•	Federal University, Kashere, Gombe State
•	Federal University, Lafia, Nasarawa State
•	Federal University, Lokoja, Kogi State
•	Federal University, Ndifu-Alike, Ebonyi State
•	Federal University, Otuoke, Bayelsa
•	Federal University, Oye-Ekiti, Ekiti State
•	Federal University, Wukari, Taraba State
•	Federal University, Birnin Kebbi
•	Federal University, Gusau Zamfara
•	Michael Okpara University of Agricultural Umudike
•	ModibboAdama University of Technology, Yola
•	National Open University of Nigeria, Lagos
•	Nigeria Police Academy Wudil
•	Nigerian Defence Academy Kaduna
•	Nnamdi Azikiwe University, Awka
•	Obafemi Awolowo University,Ile -Ife
•	University of Abuja, Gwagwalada
•	Federal University of Agriculture, Abeokuta
•	University of Agriculture, Makurdi
•	University of Benin
•	University of Calabar
•	University of Ibadan
•	University of Ilorin
•	University of Jos
•	University of Lagos
•	University of Maiduguri
•	University of Nigeria, Nsukka
•	University of Port-Harcourt
•	University of Uyo
•	UsumanuDanfodiyo University
•	Nigerian Maritime University Okerenkoko, Delta State
•	Air Force Institute of Technology, Kaduna
•	Nigerian Army University Biu

Appendix 2. Result:

Descriptive Analysis

variable	mean	p50	max	min	N
trst	4.257143	4	5	2	350
rwst	4.271429	4	5	2	350
tmwk	4.325714	4	5	2	350
ssmt	4.271429	4	5	2	350
engt	4.291429	4	5	2	350
cmwc	4.285714	4	5	2	350
kshb	4.274286	4	5	2	350

Normality Test

Skewness/Kurtosis tests for Normality					
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	joint Prob>chi2
trst	350	0.0000	0.0166	4.23	0.0000
rwst	350	0.0000	0.1252	3.31	0.0000
tmwk	350	0.0000	0.0120	7.86	0.0000
ssmt	350	0.0000	0.0000	4.41	0.0000
engt	350	0.0000	0.0000	6.35	0.0000
cmwc	350	0.0000	0.0000	5.20	0.0000
kshb	350	0.0000	0.0000	5.30	0.0000

Correlation Analysis

	trst	rwst	tmwk	ssmt	engt	cmwc	kshb
trst	1.0000						
rwst	0.6981	1.0000					
tmwk	0.5493	0.5730	1.0000				
ssmt	0.6393	0.6267	0.5796	1.0000			
engt	0.6959	0.5078	0.5313	0.5706	1.0000		
cmwc	0.6365	0.7855	0.6297	0.6851	0.5823	1.0000	
kshb	0.6861	0.6828	0.6343	0.7430	0.6175	0.6762	1.0000

OLS Multiple Regression

Source	SS	df	MS	Number of obs = 350		
Model	87.2128441	6	14.535474	F(6, 343)	=	123.24
Residual	40.4557274	343	.117946727	Prob > F	=	0.0000
				R-squared	=	0.6831
				Adj R-squared	=	0.6776
Total	127.668571	349	.365812526	Root MSE	=	.34343

kshb	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
trst	.1347529	.0523214	2.58	0.010	.0318418	.2376641
rwst	.1987258	.0563778	3.52	0.000	.087836	.3096156
tmwk	.1664358	.0418159	3.98	0.000	.0841879	.2486836
ssmt	.3605187	.046358	7.78	0.000	.2693369	.4517004
engt	.1233089	.0450518	2.74	0.007	.0346963	.2119214
cmwc	.0177358	.0568737	0.31	0.755	-.0941292	.1296009
_cons	-.0132851	.161693	-0.08	0.935	-.3313197	.3047496

Post Regression Test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of kshb

chi2(1) = 1.25

Prob > chi2 = 0.2631

Ramsey RESET test using powers of the fitted values of kshb

Ho: model has no omitted variables

F(3, 340) = 1.10

Prob > F = 0.3479

Variable	VIF	1/VIF
cmwc	3.44	0.290715
rwst	3.27	0.306137
trst	2.94	0.339635
ssmt	2.28	0.438311
engt	2.21	0.453025
tmwk	1.88	0.531678
Mean VIF	2.67	

Reliability Test

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alpha
trst	35	+	0.8457	0.7834	.2263507	0.9102
rwst	35	+	0.8388	0.7759	.2288803	0.9110
tmwk	35	+	0.7755	0.6903	.2361812	0.9194
ssmt	35	+	0.8349	0.7694	.2283073	0.9116
engt	35	+	0.7776	0.6926	.235547	0.9192
cmwc	35	+	0.8604	0.8037	.224697	0.9081
kshb	35	+	0.8690	0.8148	.22285	0.9070
Test scale					.2289734	0.9240

Appendix 3

Knowledge Sharing Intentions

I am willing to share my understanding with colleagues

I am willing to share my information with colleagues

I am willing to share my knowledge with colleagues

I work with colleagues in the same Division

I collaborate with other colleagues in the division to share knowledge

I access documents, information of other parts of the unit where I am working
Within the Unit I am working with, employees often share knowledge with each other while working

Independent variable:

Trust (TRST)

Colleagues often consulted me at work
Colleagues often appreciate my opinion
Colleagues appreciate my work experience
Colleagues often praised the results of my work
Colleagues believe in my expertise
Colleagues want to learn from my work experience

Reward systems (RWST)

The unit I work with encourages employees to share knowledge with colleagues.

Sharing knowledge with colleagues will be rewarded a lot of money by the working unit

Knowledge sharing with colleagues is evaluated by the Unit I am working on

Sharing knowledge with colleagues will be honored by the Unit I am working on

Sharing knowledge with colleagues is recognized by the Unit I am working with.

Colleagues try to accomplish the group's goals

Colleagues always share work in groups

I will work more successfully if I work with my team members.

My personal experience can become great ideas when working in a team

Teamwork (TMWK)

Colleagues try to accomplish the group's goals

Colleagues always share work in groups

I will work more successfully if I work with my team members.

My personal experience can become great ideas when working in a team

Team members always listen to each other's ideas

The knowledge of each team member is combined to perform the work

Communication with colleagues (CMWC)

I have a close relationship with my colleagues

I often talk to colleagues about work

I spend a lot of time working with colleagues at work

I often talk to colleagues about work

I often talk to colleagues

I always trust my colleagues

Support of senior management (SSMT)

Senior management thinks sharing knowledge with colleagues is helpful
Senior management believes that knowledge sharing improves the quality of training for the Unit I am working with

Senior management provides most sources of information so employees can share knowledge.

Senior management believes that knowledge in the Unit is an advantage to creating work efficiency.

Support from senior management s employees to study each other at work

Senior management provides most sources of information so employees can share knowledge.

Senior management believes that knowledge in the Unit is an advantage to creating work efficiency.

Engagement (ENG)

The unit I work with is a very good place for me to work

I care about the activities of the unit I am working with

I always try harder to help my unit is working effectively

I always tell people good things about the Unit I'm working with

I am proud to tell everyone I work at this unit

I actively participate in the unit's courses for professional development