# Effect of Individual Factors on Knowledge Sharing

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## ABSTRACT

*Knowledge management has been acknowledged as an important element for businesses today. While individuals within the organisations might recognize the importance of knowledge management for the success of their day to day business functions, previous literatures have shown that individuals are still reluctant to participate in knowledge management efforts especially knowledge sharing. As the behaviour people show in different situations depends highly on their personal character traits as well as the social forces, the degree of the reluctance or willingness towards sharing their knowledge might also fit in the same case. This paper suggests a relationship between knowledge sharing and four of the individual factors namely altruism, self efficacy, mutual reciprocity and trust.*

## Keywords
*Knowledge, knowledge management, knowledge sharing, individual factors, social cognitive theory (SCT) and social exchange theory (SET).*

## 1.0 INTRODUCTION

Managing organisational knowledge has been identified as the most important force of today's business activities. Knowledge management affects an organisation both directly and indirectly, such as increasing return on investment, employee satisfaction, and providing economies scope and scale (Becerra-Fernandez et al., 2004). Knowledge is considered to be the only resource that increases in value, so is worth of great effort in managing it (Probst et al., 2000).

Knowledge management has changed the paradigm of most organisations by turning the organisational climate to be a learning block where knowledge is discovered, captured, shared and applied to maximise and actualise their goals and objectives. Knowledge management makes it possible for employees to rely on captured past experience and knowledge in doing their current operations. This benefits the organisation by reducing defects in production and maximising the profit. Hence, it is beneficial for organisations to invest in managing their knowledge as well as investing into material assets (Quinn, 1992).

Knowledge management has given many organisations a sustainable competitive advantage, setting them at the high ranks in their market domains. Examples of such organizations are Xerox, IBM, Microsoft, Schlumberger Limited, Shell, British Telecom and Mitsubishi (Becerra-Fernandez et al, 2004; Nonaka and Tekeuchi, 1995; Carla, 2008).

Knowledge management is defined as "performing the activities involved in discovering, capturing, sharing and applying knowledge so as to enhance, in a cost-effective fashion, the impact of knowledge on the units goal achievement"(Becerra-Fernandez et al., 2004). Knowledge management can be termed as the act of finding, selecting, sharing information and expertise essential for organizational activities (Gupta et al., 2000).

According to the International Labour Organisation (2006, p.1) knowledge sharing is "a process which begins by capturing and organising knowledge and experience gained from others and proceeds to make this knowledge accessible to a wider audience –thus cultivating new linkages between interest group". Knowledge sharing has been tagged as the key element within the organisations in the 21st century.

In as much as knowledge sharing is perceived as one of the critical factors in the functioning of an organisation, it's been proven that most of the employees share knowledge with one another reluctantly which in a way decreases the intellectual capacity of the organization and its productivity (Davenport and Prusak,1998; Haas and Hansen, 2001). Organisational environment is supposed to be a learning platform or knowledge society where individuals share and capture knowledge but as indicated above knowledge, especially tacit knowledge is thought to be inaccessible for employees within the organization.

Theoretically, knowledge sharing emanates from the social theory which is also the foundation of social exchange and social cognitive theories. Social cognitive theory defines human behaviour as a dynamic, reciprocal and interactive network of a triad of personal factors, behaviour and the environment (Bandura, 1962). This theory emphasizes that individuals may consider the environment, personal goals and social networks before taking the initiative to share knowledge. On the other hand, Social Exchange Theory states that voluntary actions of individuals are encouraged by the returns they receive from others (Blau, 1964). Thus the constructs, self-efficacy and altruism seems to evolve from Social Cognitive Theory, whilst mutual reciprocity and trust emanate from Social Exchange Theory. The aim of this paper is to discuss the influence of individual factors i.e., altruism, self-efficacy, mutual reciprocity and trust on knowledge sharing based on the Social Exchange Theory and Social Cognitive Theory as the theoretical basis.

## 1.1 Knowledge

Knowledge does not lend itself to a precise definition, but many writers have made efforts to define it. According to Becerra-Fernandez et al. (2004) knowledge is a "justified belief about a relationship among concepts relevant to that particular area". Another definition introduces knowledge as a justified truth or belief (Nonaka and Takeuchi, 1995). Knowledge is also defined as "a fluid mixed of flamed experience, values, contextual information and expert insight" (Davenport and Prusak, 1998). Zack (1999, p.125) defines knowledge as "that which comes to believe on the value on the bases of the meaningful organized accumulation of information through experience, communication or inferences".

Most people use data, information and knowledge interchangeably. However, Becerra-Fernandez (2004) tries to draw-up the difference between these concepts. Data is identified as raw facts, figures and the truth of a subject or event. Data represents raw declaration or figures which has no meaning and intuition per se. Even though data has no meaning by itself, it is captured, stored and shared by using different forms of media to infer certain meanings by people. Information on the other hand, can be defined as data that has meaning, context, relevance and can be manipulated. Knowledge is akin to information and data but knowledge is the richest and deepest among them (Becerra-Fernandez et al., 2004). A certain level of knowledge is necessary to derive information out of data (Becerra-Fernandez et al, 2004).

## 1.1.1 Types of knowledge

Tacit and explicit knowledge are the main important taxonomy of knowledge (Nonaka and Tekeuchi 1995; Polanyi, 1966). Explicit knowledge is the kind of knowledge that is communicated in a formal and systematic manner (Nonaka and Tekeuchi, 1995). Explicit knowledge is knowledge related to information and easy to articulate (Nonaka and Tekeuchi, 1995). Explicit knowledge can be found in manuals, drawings, audios, and computer programs. Explicit knowledge is easy to be captured, manipulated and assesible.

On the other hand, tacit knowledge is quiet complicated to express and formalize (Nonaka and Tekeuchi, 1995). According to Nonaka and Tekeuchi (1995) tacit knowledge is found in individuals' minds and thoughts and difficult to codified. Ipe (2003) denotes that tacit knowledge is difficult to transfer or share than explicit knowledge. Examples of tacit knowledge are insights, intuitions, hunches, ideas and visions.

## 1.2 Knowledge Management

Knowledge Management is defined as the act of capturing, storing, sharing and using knowledge (Davenport and Prusak, 1998). Bhatt (1998), defines knowledge management as the process of creating knowledge, distributing, presentation and the application of the knowledge. Knowledge management can also be described as the process of disseminating information to the right people at the right time and making good use of the knowledge resources (Holm, 2001).

According to Becerra-Fernandez et al (2004) the effect of knowledge management on organisations includes job satisfaction, increased return on investment, competitive advantage and improvement of the process of production. The president of American Productivity and Quality Centre, Carla O'Dell, uses Schlumberger Limited as an example. The organization implemented knowledge management database where employees form an expert team that shared knowledge among team members in order to respond to clients' enquiries. These activities improve the service delivery, reduce the number of defects in serving their customers. These in aggregate resulted in a 150 million-dollar-saving. In addition, the time that engineers used in solving and updating technical issues was reduced (Dell et al, 2000).

## 1.3 Knowledge Sharing

Knowledge sharing is one of the core blocks of knowledge management. Perhaps it is the important aspect of knowledge management. Knowledge sharing is denoted as the edge to create knowledge

which contributes to the increase in employees' performance and harnessing innovation (Libowitz and Chen, 2001). Knowledge Sharing is defined as a deliberate act that makes knowledge reusable by other people through knowledge transfer (Lee and Ai-Hawamdeh, 2002). Knowledge sharing can also be defined as the act of exchanging ideas through deliberations to create new knowledge (Hislop, 2002). Hooff and De Ridder (2004) denote knowledge sharing as the process of giving and receiving knowledge.

Organizations can choose to invest all their resources into knowledge management, however, when employees are not participating in sharing their knowledge among themselves within the organization, then the knowledge management efforts become a fiasco. When knowledge is not shared in the organization then the benefits of knowledge will not be actualized.

### 1.4 Individuals role in knowledge sharing

In the process of knowledge sharing, individuals serve as knowledge generator and knowledge receptor. Individuals generate knowledge by exchanging their ideas and experience through socialisation. As a receptor of knowledge individuals seek and interpret the knowledge before it is transferred to any repository (Nonaka and Tekeuchi, 1995). In this process, it indicates that creation and sharing of knowledge depends on the conscious effort of an individual who has to set the ball rolling for knowledge to be shared or hored.

For instance, an employee is made known of a work problem faced by a colleague. The employee has the solution to the problem. The employee may share or may not share the knowledge with the colleague. It is up to him or her to share the knowledge with the colleague. The decision to share the knowledge may be influenced by his or her personal beliefs on knowledge sharing. The example indicates that individuals serve as a pivotal role in the process of knowledge sharing. Nonaka and Tekeuchi (1995) posits that, knowledge management process perhaps, knowledge sharing will not be successful within an organisation without the involvement of humans. Therefore, it is important to understand individual factors that influence individuals to share knowledge.

## 2.0 THEORETHICAL BACKGROUND

### 2.1 Social Cognitive Theory, the Construct and Knowledge Sharing.

Social cognitive theory is a theory that has it bases in social learning theory. It defines individual behaviour as dynamic, reciprocal or interactive network of personal factors, behaviour and the surroundings (Bandura, 1962). This theory was introduced by Bandura and has its foundations in social learning theory, arguing that individual learning is influenced by the environment. The environment denotes the people and the artefacts within the organization. These emphasize that individuals' initiative to accomplish something may depend on the combination of these triadic factors.

This theory postulates that the combination of the three human behaviour factors breed to a formulation of a certain outcome and expectation that lead to a decision (Bandura, 1989). These allude to the fact that individuals consider a combination of factors that are personal, social and environmental to make decisions on either to exhibit a certain behaviour or not.

The social cognitive theory argues that the mind of an individual is an active tool which guides one's steps towards formulating expectations, abilities and outcomes (Bandura, 1989).In the context of knowledge management this theory can explain that if individuals are not sure of their capabilities and the outcome of the knowledge they are supposed to share, they may not share it. This shows that individuals build confidence before sharing their knowledge. If they feel incapacitated they will not share, however individuals may still share knowledge when their expectation of the outcome is high.

According to Bandura (1997) self efficacy is the judgments of one capability to organize certain behaviour. Those individuals formulate their self efficacy based on their environment, personal, goals and the social network they find themselves in. Hence one may formulate a degree of self efficacy depending on the expectation of the outcomes. People may develop higher self-efficacy to exchange their knowledge when there is cooperation within the environment and the social network that they found themselves in.

Altruism also has a linkage with Social Cognitive Theory in that individuals weigh the psychological benefits before getting involved in sharing their knowledge. Even though an altruistic person may be seen as a person who donates without seeking any return, a study by Honeycutt, (1981) argues that an altruistic person gains a kind of control over the recipients. Moreover, an altruistic behaviour of giving out something without expecting any return is personal. Therefore an altruistic individuals act upon their personal goals to undertake certain initiative whilst social cognitive theory also argue that individuals ability to exhibit certain behaviour

is based on the triadic factors, which highlights personal goals as a factor.

## 2.2 Social Exchange theory, the constructs and knowledge sharing

Social Exchange Theory is one of the models used in explaining knowledge sharing behaviour (Ting-Ping et al, 2008; Blau, 1964). Social exchange theory is concerned with people behaviour, outcomes or benefits, environment and the interpersonal network between individuals (Blau, 1964).

In actual sense the Social Exchange Theory views relationships or exchanges as cost-benefit analyses. It states that people will try to maximize profit and minimize cost in their endeavour. The benefit of this behaviour is normally intangible and based on the expectation of the future outcome. Social Exchange Theory posits that individuals may not involve in certain activities unless they view the outcomes as being positive.

In the process of exchange the donor assumes a confirmation of positive returns before exhibiting the action. Here it is not a commodity exchange form where there is an agreement; but there can be just a mental assumption of the positive outcome.

Social exchange theory argues that individuals may form their knowledge sharing behaviour based on the future expectations, meaning that individuals will not share when they perceive activities as mere costs, but intend to share when positive returns are expected.

Reciprocity indicates that people may exhibit knowledge sharing behaviour with the intention of accruing positive rewards. The social exchange theory also posits similar ideology that individuals share their knowledge only when they perceive benefits after the activity. The social exchange theory can be deduced as the foundation of mutual reciprocity which argue based on the benefit returns and states that one will not exhibit certain behaviour unless the expectation of the outcome is positive (Blau,1964).

On the construct of trust, individuals will not consider certain activities when they feel uncertain about associated future returns. In other words people will decide on a behaviour based on the trust they have for the system. Individuals develop their trust for another only when they are guaranteed that their dealings with the person will not cost them. When there is existence of trust between two people they turn to easily cooperate among each other (Ting-Peng et al., 2008). This alludes to the fact that when individuals perceive other partners

untrustworthy they will not exchange or cooperate with them since there is a certain level of uncertainty. Based on this discussion on trust one may conclude that trust within two individuals may encourage them to share their knowledge. The link between social exchange theory and trust is that knowledge being shared won't cause harm to the giver.

## 3.0 HYPOTHESIS

### 3.1 Trust

Trust is the focal point of every relationship within the organization (Fox, 1974). Trust is defined as the act of becoming open to people based on the good recognition of the result of their action (Gambetta, 2000; Regilsberger et al., 2003). With trust people tend to risk, with the intention of the other partner would not cause any harm. Trust has been proven to be the most cost efficient technique that enhances knowledge sharing within the organization (Dyer and Singh, 1998). Trust enhances the act of knowledge sharing within the members of the organization. Whenever there is trust within individuals in an organization there is a tendency of higher cooperation (Nahapiet and Ghoshal, 1998).

According to Nonaka and Tekeuchi (1995) trust among people (interpersonal trust) contributes to improvement in knowledge sharing behaviour among employees. Kalantzis and Cope (2003), conclude in their study that inter-personal trust is directly proportional to knowledge sharing.
We feel that, people will be motivated to share their knowledge when they perceive the recipients to be honest, trustworthy, and reliable. Higher trust will make individuals not think of any future negative occurrence on the activities and will share their knowledge. The first hypothesis is proposed.

Hypothesis 1: There is a positive relationship between trust and knowledge sharing behaviour.

### 3.2 Altruism

Altruism can be referred to as a behaviour that costs an individual and benefit the other person. People donate something to other people without thinking of any returns when showing altruistic behaviour. Altruism is a costly activity that profits others (Chattopadhyay, 1999). Normally, some individuals may share their experience and knowledge with others without thinking of the benefit he or she may gain from it. From the definitions above, it can be seen that individuals within an organisation may share their knowledge freely without thinking of any strings attached. We postulate that individuals with higher altruism may easily share their knowledge than individual with low altruism. In her

study, Lin (2002) found that, females have high altruism than males and so they tend to share knowledge more than men. This leads to the next hypothesis.

Hypothesis 2: Altruism has a positive relationship with knowledge sharing behaviour

### 3.3 Mutual Reciprocity

According to Davenport and Prusak (2003), mutual reciprocity is one of the key enablers of knowledge sharing. According to Blau (1964) reciprocity is "actions that are contingent on rewarding reactions from others and that cease when these expected reactions are not forthcoming". According to Thibaut and Kelley (1978) individuals involved in virtual teams would share their knowledge when they perceive a commensurate behaviour from the other partner. It was confirmed that knowledge sharing within communities of practice (CoPs) is enhanced through reciprocity behaviour shown by individuals (Wasko and Faraj (2005). Study by (Chiu, 2006) concludes that reciprocity has a positive significant relationship to knowledge sharing behaviour.

Mutual reciprocity is about cost and benefit. In the context of knowledge sharing, the donor of the knowledge will decide whether the recipient possesses potential of giving back a positive outcome. People tend to weigh others' capabilities before they exhibit certain behaviour. They intend not to lose in any endeavour so they will not share their knowledge to someone who has nothing to offer. This leads to the next hypothesis.

Hypothesis 3: Mutual Reciprocity has a positive relationship with knowledge sharing.

### 3.4 Self-Efficacy

According to Bandura (1997) self efficacy is people's judgments of their capabilities to organize and execute courses of action. It concerns not with the skills one has but with judgments of what one can do with whatever skills one possesses.

According to Endres et al., (2007) the act of individuals making judgement on their capabilities gives an insight into how people make decisions on sharing their personal knowledge. Bandura (1997) postulates that, self-efficacy determines the willingness of a person to perform certain activities. This indicates that individuals' behaviour of sharing their knowledge may be affected by their self-efficacy. Research by Endres et al., (2007) posits that individuals environment contribute to the formulation of self-efficacy which leads to knowledge sharing. We believe that individuals

with a higher self efficacy may share their knowledge and past experience more willingly than individuals with low self efficacy because individuals with higher self efficacy would formulate a positive judgement on their capabilities which would motivate them to share their knowledge. Thus the last hypothesis is proposed.

Hypothesis 4: Self-efficacy has a positive relationship with an individual's knowledge sharing behaviour.

## 4.0 PROPOSED EMPIRICAL TEST

We propose an empirical study to test the hypotheses we just suggested. A questionnaire can be used to collect data on individual variables i.e., altruism, trust, self-efficacy and mutual reciprocity and dependent variable i.e., knowledge sharing. Each items used to measure the construct will be on the 5 points likert scale ranging from strongly agree to strongly disagree. The questionnaire consists of part A and part B.

The part A may contain the biodata of the respondent, which includes: Age, Gender, Tenure, Level of education and Position. These would be closed ended questions where respondent only has to choose from the list of categories attributed to them. The questions here would be up to a total of ten close-ended.

Part B would consist of about 25 likert scale questions, 5 questions for each of the variables. That is the independent variables and the dependent variable, Altruism.Trust, Reciprocity, Self-efficacy) and the dependent variable knowledge sharing.

We propose a multiple regression as the statistical technique to test the relationships.

## 5.0 CONCLUSION

As Nonaka and Tekeuchi (1995) indicated organisations would not succeed in creating knowledge without individuals since individuals are considered as being key elements in knowledge management. This paper makes an attempt to discuss some of the individual factors that can affect knowledge sharing.

## REFERENCES

Bandura, A. (1989). Social Cognitive Theory. In R.Vasta (Ed), *Analysis of Child Development* (pp. 1-60). Greenwich: Jai Press Limited.

Bandura, A, (1997). *Self-efficacy: The exercise of Control*. New York: Freeman.

Becerra-Fernandez, I., Gonzalez, A., & Sabherwal.R. (2004). *Knowledge Management: Challenges, Solutions and*

*Technologies*. New Jersey: Pearson Education Inc.

Bhatt, G. (1998). Managing Knowledge through People knowledge and processes. *Management Journal of Knowledge Management, 53,*165-171.

Blau, P. (1964). *Exchange and Power in social life.* New York: John Wiley and Sons.

Carla, O. D., Hasnali., F. Lopez., K. Hubert.,M. Odem.,P. & Raybourn, C. (2000). *Successful Implementing Knowledge Managemen*t. U.S.A: American Production Quality Centre. Retrieved from http://help.sharepoints.com

Chartopadhyay, P. (1999). Beyond direct and symmetrical effects: The influence of demographic dissimilarity on organisational citizenship behaviour. *Academy of Management Journal*, *42*, 273-287.

Cheng, J.W., & Lee, S. (2001). The relationship between organizational justice, trust and knowledge sharing behavior. *Journal of Human Resouce management (in Chinese), 1*(2), 69-93.

Chiu, C.M., Hsu, M.H & Wang, E.T.G. (2006). Understanding knowledge sharing in virtual communities: An integration of Social capital and social cognitive theories. *Decision Support Systems, 42*, 1872-1888.

Davenport, T.H., and Prusak. L. (1998). *Working knowledge: How organisation manage what they know*. Boston, Massachusetts: Havard Business School Press.

De Vries, R. E., van den Hooff, B., & de Ridder, J. A. (2006). Explaining Knowledge Sharing: The Role of Team Communication Styles, job satisfaction and performance beliefs. *Communication Research*, *33*, 115-135.

Dyer, J.H., & Singh. (1998). The Relational View: Cooperative Strategy and Sources of interogranisational Competitive Advantage. *Academy of Management Review*, *23* (4), 660-670.

Endres,M.L., Endres.S.P.,Chowdhury.S.K., & Alam.I. (2007). Tacit knowledge sharing, self efficacy theory and application to the open community, *Journal of knowledge management*, *11* (3), 92-100.

Fox, A. (1974). *Beyond contract power and trust relations*. London: Faber and Faber.

Gambetta*,* D. (2000). *Can we trust? Trust: Making and breaking cooperative relationships* (pp. 213-237). Department of Sociology University of Oxford.

Gupta, B., Iyer, L.S., & Aronson, J.E. (2000). Knowledge management: practices and challenges. *Industrial Management & Data Systems, 100* (1), 17-21.

Haas, M.R., & Hanson, M.T. (2005). When using knowledge can hurt performance: The value of organisational capabilities in a management consulting. *Strategic Management Journal*, *26* (1), 1-24.

Hislop, D. (2003), Linking Human Management and Knowledge Management via commitment. *Employee Relations*, *25* (2), 182-202.

Honeycutt, J.M. (1981). Altruism and Social Exchange Theory: The vicarious rewards of the altrustic. *Mid-American Review of Sociology*, *6* (1), 93-99.

Holm, J. (2001). Capturing the spirit of knowledge management. *Paper presented at the American Conference on Information Systems, Boston, MA, August 3-5.*

International Labour Organisation, (2006). *Knowledge Sharing: Gender equality in the world of work.* Retrieved from http//www.ilo.org/gender

Ipe, M. (2003). Knowledge sharing in Organisations: A conceptual framework. *Human Resource Development Review,* 2 (4), 337-359.

Kalantzis, M., & Cope. B. (2003). Linking trust values and perceived benefits. *International Conference on Knowledge Management (ICKM, 2003), 7-9 July, Putra World Trade Centre, Kuala Lumpur, Malaysia.*

Kelley, M., & Thibaut, J.W. (1978). *Interpersonal Relationship: A theory of interdependence.* New York: Wiley.

Lee, C.K., & Al-Hawamdeh. S. (2002). Factors impacting knowledge sharing, *Journal of Information and Knowledge Management, 1*, 49-56.

Libowitz, J., & Chen, Y. (2001). Developing knowledge-sharing proficiencies: Building a supportive culture for knowledge sharing. *Knowledge Management Review*, *3* (6), 12-15.

Lin, C.P. (2007). Gender differs: Modelling knowledge sharing from perspective of social network ties. *Asian Journal of Social Psychology*, *9*, 236-241.

Nahapiet, J., & Ghoshai, S. (1998). Social capital, intellectual capital and organisational advantage. *The Academy of Management Review 23* (2), 242-266.

Nonaka, I., & Tekeuchi, H. (1995). *The Knowledge Creating Company: How Japanese Companies Create The Dynamics Of Innovation*. London: Oxford University Press.

Polanyi, (1962). *Personal Knowledge: Toward A Post-Critical Philosophy*. New York: Harper Torchbook.

Probst, G., Raub.S.,& Ramhardt,k. (2000). *Managing Knowledge: Building Blocks for success*. Chichester: John Wiley.

Quinn, J.B. (1992). *Intelligent Enterprise-A knowledge and service based paradigm for industry*. Free press.

Reigilsberger, R., Sasse, M., & McCarthy, J. (2003). The Researchers dilemma: evaluating trust in computer mediated communication. *International Journal of Human Computer Studies*, *58*, 759-781.

Wasko, M.M. ,& Faraj, S. (2005). Why should I share? Examing social capital and knowledge contribution in electronic networks of practice. *MIS Quarterly, 29* (1), 35-57.

Zack, M.H. (1999). Developing a knowledge strategy. *California Management Review, 41* (3), 125-145.