

# Knowledge Sharing Issues to Success of Information System Projects

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**Abstract:** Actual knowledge division in organizations is motionless a quandary for bosses. Even, the procedure of knowledge administration, knowledge division matter appeals additional care of specialists and scientists in the arena. It is highlighted that actual knowledge distribution can smooth control the achievement of projects in administrations. In realism, around reports on the great let down amount in information systems (IS) enlargement projects in group. For discourse the upstairs stated matter, this learning with a complete works appraisal, planned an advanced conceptual model of the issue touching knowledge sharing of IS development projects. This model advises that character issues and management qualities have important part in knowledge sharing between project group memberships. This model assist project bosses to classify significant issues touching knowledge sharing, make appropriate conduct among their workers and improve their project achievement proportion.

**Keywords:** Hypothesis; Conceptual Model; IS Project; Project

## I. INTRODUCTION

Disappointment may be identical through several IT schemes ended the previous four periods. Causes for disappointment have been accredited to technical problems, organizational and practical glitches, executive matters, and numerous extra details. Usually, a project must supply decided upon functionality on period and in assessed budget. A complete learning lead by Standish Group International in 1995, that comprised some thousands of IT project exposed that solitary 16% of those projects remained complete on period, and in the projected budget; 32% remained ended before they were finished, though the residual 52% complicated prices higher than the novel estimations and remained finished late their timetable [1]. The in height rate of unsuccessful IT projects has developed a actual and pertinent apprehension of the commercial situation [2]. One habit of overawed on this unruly is actual information distribution amongst project squad. Knowledge sharing shows now as the delivery or receiving of job information, identify how, and response on a produce or a process [3].

Present learning goals to examine the matter of knowledge

sharing among project squads as well as its result on the achievement of projects. Subsequent a complete study assessment, the significant issues were mined from pertinent literature, and formerly the relations among them were deliberated. Founded on the conversation if, the applicable hypotheses were advanced and a conceptual framework the subject of knowledge sharing in IS project expansion was recommended.

## II. RESEARCH REVIEW

The significance of knowledge administration inside group and fascinating knowledge from outside relations and its result of organization achievement in present stormy commercial situation is addressed by academics. This is a valuable knowledge fundamentals are usually extensive in society, and a lone organization cannot produce and usage all pertinent knowledge owing to the belongings of restricted shrewdness and incomplete properties. So, companies functioning in this modern epoch have to classify, fascinate, and participate outside knowledge to improvement and uphold good benefit [4].

Knowledge sharing suggests a association amid two revelries, one of them owns the knowledge then the additional that needs the knowledge. It is clear as a aware performance to contribute in knowledge conversations smooth when nearby is no outside force to prepare so. It is also clear as tight fitting the company of relevant knowledge deprived of un avoidably conveying it in its total [5].

Knowledge sharing among staffs and inside and cross way squads let official domains to deed as well as exploit on knowledge-based properties. Numerous revisions have exposed that knowledge sharing mixture is positively linked to decreases in manufacture prices, earlier conclusion of novel produce expansion schemes, squad recital, secure novelty abilities, and stable recital with auction evolution and income from novel foodstuffs and facilities [6].

Several revisions in the arena of knowledge sharing that confers precise facets of issues moving knowledge

sharing. Several of those revisions have exposed that knowledge sharing is powerfully related to business philosophy [7], [8], [9], [10]. Also others spoken that capacity to donate this knowledge sharing is vital [11]. Other academics have premeditated the part of inherent incentive in sharing knowledge [12], [13] and [14].

Authors of [15] prove that the prophesied contact, morals apparent, and boldness to sharing, can influence on knowledge sharing. Several researchers have measured separate features in knowledge sharing like [6], [16], [17] and [18]. Some scholars have deliberate the effect of communal systems [6], [11] and [19]. organizational assembly [6] and management sustenance [20], [21]. In next portion, since the upstairs stated issues, the relations among them can be deliberated. Authors of [42] describe various scopes of knowledge sharing and give some hypothesis as well as planned a model. We have discuss those hypothesis and give more three hypothesis as well as update this model

### III. Updated INVESTIGATION MODEL AND HYPOTHESES EXPANSION

This segment offers conversation for the factors mined from nonfiction in earlier segment and crumpled for hypotheses expansion. Authors of [42] has discussed from A to F subsections and give first 9 hypothesis. We have added three more subsection (G to I) and generated three more hypothesis (10 to 12) with updated conceptual model.

#### A. Project Complexity

IS expansion schemes classically concur with technical and commercial innovation [22]. As cooperating and collaborating to decrease the danger of complexity when leading novel produce growth, the project squad improves structural knowledge [23] and accrues the project knowledge that stalks from the expansion procedure [24]. Therefore, teamwork in complex errands is reliant on the companions' knowledge and preceding knowledge in the project squads [25]. IS expansion is normally extremely complex as it needs business procedure alteration with technical acceptance. The commercial customers in any project essential need a varied set of answers in assumed occupied zone [26]. Formerly, the next hypothesis is planned:

**Hypothesis 1:** Project difficulty is absolutely linked to need on the companion.

#### B. Expertise

Apparent expertise mentions an assessment of the pertinent capabilities related to the conversation partner. Into IS works, expertise mentions to the partner's aptitude to provision associates of the projects squad for applying the IS explanation [27]. The apparent skill of partner container also upsurge the partner's faith in the client. Expertise can be originated for a factor of faith [28] crossways a diversity of contexts, including health care [29]. Authors of [29] highlighted that skill theatres a main part in the equal of faith in the client-dealer association. So, the next hypotheses are projected:

**Hypothesis 2:** The partner's expertise is positively connected to the dependence on the partner.

**Hypothesis 3:** The partner's expertise is positively connected to trust in the partner.

#### C. Communication Frequency

Communication frequency is contended to effect clients' sentiments near their relations with their associates [30]. Frequent communication likewise aids to form and uphold the squad's communal wealth, which is entrenched in the squad associates' relations [31]. In sum, recurrent communication action (communication) can decrease battle, decrease business prices, reinforce inter-relational collaboration, and recover project presentation. All of these welfare upsurge the need with the partner [32] and the faith with the partner [33]. Thus, we propose the following:

**Hypothesis 4:** The occurrence of communication is positively linked to the dependence on the partner.

**Hypothesis 5:** The occurrence of communication is positively linked to the faith in the partner.

#### D. Dependence

Considering project condition, essential mentions to the notch to which contributor trust that contingent on the additional to convey available their exertion [34]. If one organization is very reliant on its partner, it will dedicate important energy to achieve the partner's needs so that does not misplace its position as a valued partner. So, dependence to a partner has a robust result on the information conversation in interpersonal conduct [35]. Thus, the following has been proposed:

**Hypothesis 6:** Dependence on the partner is definitely linked to knowledge sharing.

**Hypothesis 7:** Dependence on the partner is definitely linked to trust in the partner.

#### E. Trust

Similar as the nonfiction on association organization, trust can be documented as significant issue moving knowledge sharing in practical groups [36]. In the IS nonfiction, trust is measured may be one of the causes of the efficiency of the knowledge sharing actions [37]. Under the disorder of a great of trust, the project connections are extra probable to obtain project related knowledge [38]. So, the following has been proposed:

**Hypothesis 8:** Trust in the partner is positively linked to knowledge sharing.

#### F. Empowering Leadership

Conduct of officialdoms could recover efficacy and concert is to authorize their staffs and let them part what they have, thus that extra employees can study from others. In this respect, knowledge sharing is one of perilous feature of authorized teams [39]. The training conduct of an authorizing front-runner comprises educate team associates how to efficiently connect with one another and hopeful them to collaboratively resolve difficulties, so if chances for them to portion their information in repetition [40], [41]. The authorizing front-runner inspires team associates to resolve problems composed and contribute in decision taking,

Thus providing employees with prospects to portion their

knowledge. So:

**Hypothesis 9:** Empowering of leadership will positively linked with the close of knowledge sharing in IT facility project squads.

*G. Environment*

Environment effects an significant part in knowledge sharing in any organization. If the environment condition is good, staffs can share knowledge among them. Any problem can be solved by sharing knowledge each other. So,

**Hypothesis 10:** Environment may be positively linked with the close of knowledge sharing.

*H. Culture*

Culture is an important fact of knowledge sharing. Junior staff can share knowledge with senior and vice versa and can be solved any problem

**Hypothesis 11:** Culture will be positively linked of knowledge sharing.

*I. Rewards*

Rewards increase workers to work more efficiently. So we can say:

**Hypothesis 12:** Rewards will be positively linked of knowledge sharing.

Grounded on the conversation providing upstairs, subsequent conceptual model may be planned to display the relations amongst the factors affecting for knowledge sharing in Isexpansion projects.

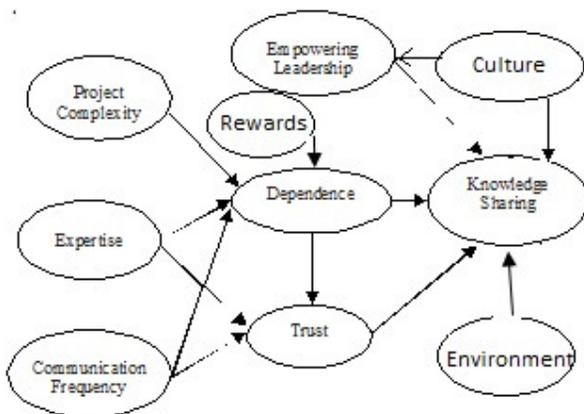


Fig. 1 The planned Theoretical Model

IV. CONCLUSIONS

This study, enlarge our empathetic of sharing of knowledge in Isexpansion projects. The learningsimilarly presents the tool of self-reliance by way of an actualintermediaryknowledge sharing in Isexpansion projects. Directorsthroughlearning of this kind of studymay be acquainted with significantissuesmoving knowledge sharing insideadministrations, particularly in the many projects besides will be competent to feast the rightmethod of this conductamongst their workers. Classifying and counteractiveapplication of such issues will brand projects applicationachievement fororganizations.

REFERENCES

- [1] Standish Group, The Chaos Report, [www.standishgroup.com](http://www.standishgroup.com)1994
- [2] Al-Ahmad, W., Al-Fagih, K., Khanfar, K., Alsamara, K., Abuleil, S., Abu-Salem, H, "A Taxonomy of an IT Project Failure: Root Causes, International Management Review," 2009, Vol. 5 No.1.
- [3] J. Foss, N., Husted, K., Michailova, S, "Governing Knowledge Sharing in Organizations: Levels of Analysis, Governance Mechanisms," and Research Directions, Journal of Management Studies, DOI: 10.1111/j.1467-6486.2009.00870.x,2010.
- [4] Wang, Y., Wu, J., Yang, Z, "Customer Participation and Project Performance: The Mediating Role of Knowledge Sharing in the Chinese Telecommunication Service Industry," Journal of Business-to-Business Marketing, DOI: 10.1080/1051712X.2013.840820,2013.
- [5] Pee, L., Kankanhalli, A., Kim, H, "Knowledge Sharing in Information Systems Development: A Social Interdependence Perspective," Journal of the Association for Information Systems Vol. 11 Issue 10 pp. .550-575 October2010.
- [6] Wang, Sh., Noe, R, "Knowledge Sharing: A Review and Directions for Future Research," Human Resource Management Review, DOI:10.1016/j.hrmr.2009.10.001,2010.
- [7] Issa, R. A. A., Haddad, J, "Perceptions of the Impacts of Organisational Culture and Information Technology on Knowledge Sharing in Construction," Construction Innovation, 8, 3, pp. 182-201,2008.
- [8] Al-Ahmad, W., Al-Fagih, K., Khanfar, K., Alsamara, K., Abuleil, S., Abu-Salem, H, "A Taxonomy of an IT Project Failure: Root Causes," International Management Review, Vol. 5 No. 1,2009.
- [9] Lee, J. N, "The Impact of Knowledge Sharing, Organizational Capability and Partnership Quality on IS Outsourcing Success," Information & Management, 38, 5, pp. 323-335,2001.
- [10] Tong, C., WahTak, W., Wong, A, "The Impact of Knowledge Sharing on the Relationship Between Organizational Culture and Job Satisfaction: The Perception of Information Communication and Technology (ICT) Practitioners in Hong Kong," International Journal of Human Resource Studies ISSN 2162-3058,2014.
- [11] Tangaraja, G. MohdRasdi, R. Ismail, M. Abu Samah, B, "Fostering knowledge sharing behaviour among public sector managers: a proposed model for the Malaysian public service," Journal of KnowledgeManagement, Vol. 19 Iss1 pp. 121 – 140,2015.
- [12] Meyer, J.P. and Herscovitch, L, "Commitment in the workplace: toward a general model," Human Resource Management Review, Vol. 11 No. 3, pp. 299-326,2001.
- [13] Gupta, B., Joshi, S. and Agarwal, M, "The effect of expected benefit and perceived cost on employees' knowledge sharing behavior: a study of IT employees in India",Organizations and Markets in Emerging Economies, Vol. 3 No. 1, pp. 8-20,2012.
- [14] Liu, W.C. and Fang, C.L, "The Effect of different motivation factors on knowledge-sharing willingness and behavior," Social Behavior and Personality, Vol. 38 No. 6, pp. 753-758,2010.
- [15] Chuang, Sh. Chen, K. Tsai, M, "Exploring the antecedents that influence middle management employees' knowledge-sharing intentions in the context of total quality management implementations," Total Quality Management & Business Excellence, 26:1-2, 108-122, DOI: 10.1080/14783363.2013.809941,2015.

- [16] H. Dulayami, S., Robinson, L., "The individual and the collective," *Journal of Documentation*, Vol. 71 Iss1 pp. 198 – 209,2015.
- [17] H. Chan, S., Huang, Y., "I Exploring the Knowledge-Sharing Intention of Research and Development Personnel in the Electronics Industry," *International Journal of Engineering Innovation & Research*, Volume 4, Issue 1, ISSN: 2277 – 5668,2014.
- [18] Liu, J., Rau, P., "Impact of Self-Constraint on Choice of Enterprise Social Media for Knowledge Sharing," *Social Behavior and Personality*, 42(7), 1077-1090,2014.
- [19] Yates, D., Paquette, S., "Emergency Knowledge Management and Social Media Technologies: A Case Study of the 2010 Haitian Earthquake," *International Journal of Information Management*, DOI:10.1016/j.ijinfomgt.2010.10.001,2010.
- [20] Whisnant, B. Khasawneh, O., "The Influence of Leadership and Trust on the Sharing of Tacit Knowledge: Exploring a Path Model," *Journal of Business Studies Quarterly*, Volume 6, Number 2, ISSN 2152-1034, 2014.
- [21] Lee, J. Lee, H. Park, J., "Exploring the impact of empowering leadership on knowledge sharing, absorptive capacity and team performance in IT service," *Information Technology & People*, DOI 10.1108/ITP-10-2012-0115,2013.
- [22] Xia, W., Lee, G., "Grasping the complexity of IS development projects," *Communications of the ACM* 47, 68–74,2004.
- [23] Sorenson, O., "Interdependence and adaptability: organizational learning and the long-term effect of integration," *Management Science* 49, 446–463,2003.
- [24] Brookes, N.J., Morton, S.C., Dainty, A.R.J., Burns, N.D., "Social processes, patterns and practices and project knowledge management: a theoretical framework and an empirical investigation," *International Journal of Project Management* 24, 474–482,2006.
- [25] Little, T., Context-adaptive agility: managing complexity and uncertainty
- [26] Liberatore, M.J., Wenhong, L., "Coordination in consultant-assisted IS projects: an agency theory perspective," *IEEE Transactions on Engineering Manag.* 255–269,ement 57,2010.
- [27] Wang, E.T.G., Chia-Lin Lin, C., Jiang, J.J., Klein, G., "Improving enterprise resource planning (ERP) fit to organizational process through knowledge transfer," *International Journal of Information Management* 27, 200–212.,2007.
- [28] Abrams, L.C., Cross, R., Lesser, E., Levin, D.Z., "Nurturing interpersonal trust in knowledge-sharing networks," *Academy of Management Executive* 17, 64–77,2003.
- [29] Spake, D.F., Megehee, C.M., "Consumer sociability and service provider expertise influence on service relationship success," *Journal of Services Marketing* 24, 314–324,2010.
- [30] Massey, G.R., Kyriazis, E., "Interpersonal trust between marketing and R&D during new product development projects," *European Journal of Marketing* 41, 1146–1172,2007.
- [31] Joshi, K.D., Sarker, S., Sarker, S., "Knowledge transfer within information systems development teams: examining the role of knowledge source attributes," *Decision Support Systems* 43, 322–335, 2007.
- [32] Scheer, L., Miao, C., Garrett, J., "The effects of supplier capabilities on industrial customers' loyalty: the role of dependence," *Journal of the Academy of Marketing Science* 38, 90–104,2010.
- [33] Bendapudi, N., Berry, L.L., "Customers' motivations for maintaining relationships with service providers," *Journal of Retailing* 73, 15–37, 1997.
- [34] Van der Vegt, G.S., Van de Vliet, E., "Effects of perceived skill dissimilarity and task interdependence on helping in work teams," *Journal of Management* 31, 73–89,2005.
- [35] Sezen, B., Yilmaz, C., "Relative effects of dependence and trust on flexibility, information exchange, and solidarity in marketing channels," *Journal of Business and Industrial Marketing* 22, 41–51,2007.
- [36] Lin, M.-J.J., Hung, S.-W., Chen, C.-J., "Fostering the determinants of knowledge sharing in professional virtual communities," *Computers in Human Behavior* 25, 929–939,2009.
- [37] Staples, D.S., Webster, J., "Exploring the effects of trust, task interdependence and virtualness on knowledge sharing in teams," *Information Systems Journal* 18, 617–640,2008.
- [38] Xu, Q., Ma, Q., "Determinants of ERP implementation knowledge transfer," *Information Management* 45, 528–539,2008.
- [39] Argote, L., McEvily, B. and Reagans, R., "Managing knowledge in organizations: an integrative framework and review of emerging themes," *Management Science*, Vol. 49 No. 4, pp. 571-582,2003.
- [40] Nemanich, L.A., Keller, R.T., Vera, D. and Chin,W.W., "Absorptive capacity in R&D project teams: a conceptualization and empirical test," *IEEE Transactions on Engineering Management*, Vol. 57 No. 4, pp. 674-688,2010.
- [41] Robertson, P.L., Casali, G.L. and Jacobson, D., "Managing open incremental process innovation: absorptive capacity and distributed learning," *Research Policy*, Vol. 41 No. 5, pp. 822-832,2012.
- [42] S. M. Jafari, N. Z. Sulimani and A. K. Zare, "Factors affecting knowledge sharing in information systems development projects," 2015 11th International Conference on Innovations in Information Technology (IIT), 2015, pp. 338-341, doi: 10.1109/INNOVATIONS.2015.7381564.

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