# Factors Influencing Knowledge Sharing in Organizations: A Literature Review

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**Abstract:** *This article reports on the literature associated with knowledge sharing success. Studies reveal a number of factors, which influence the success of knowledge sharing among employees in organizations. The review highlights that the factors contributing to the success of knowledge sharing have been identified as organizational, individual and IT related factors. Based on the review, the conceptual model is proposed, which consists of three main constructs namely organizational factors (Organizational Support, Trust, Organizational Culture, Reward System, Organizational Structure), individual factors (Self-Efficiency, and Subjective Norm), and IT related factors (Information System, Technical Infrastructure, and Usage of Social Media). It is suggested that the empirical study be conducted using the proposed conceptual model.*

**Keywords:** Knowledge sharing, Factors, business organizations

## 1. Introduction

The interest in knowledge management (KM) has increased in the last three decades. Knowledge has been recognized as a source of competitive advantage and a tool for superior organizational performance [1]. Based on the knowledge-based theory, organizations that values knowledge as a significant resource can achieve high productivity and reduce the operational cost [2]. One of the central activities of KM is knowledge sharing. Knowledge sharing is a fundamental part in KM because it enables knowledge to be accessible and usable within and between chosen organizations. It is a means by which, organizational member can contribute to knowledge application, innovation, and ultimately the competitive advantage of the organization [3]. Internal sharing of knowledge enables organizations to utilize the organizational knowledge-based resources such as employees' expertise for innovation, organizational learning, the development of new skills and capabilities, increased productivity, and maintaining a competitive advantage [4].

Because knowledge sharing is considered as a key enabler of KM, a number of studies have been conducted to identify the factors that can influence the success of knowledge sharing. Some factors are found to be attributed to cultural factors [5], [6], [7], [8]; while others viewed that successful knowledge sharing is influenced by top management and motivation [9], [10]. Further, many researchers claimed that knowledge sharing could be influenced by rewards and incentives [11], [12]. Recent trend attributes the knowledge sharing to the information technology (IT) and social media [13], [14] [15], [16]. Findings of researchers vary based on the nature of the organizations and the industry that the knowledge is being shared. However, despite the fact that the identified factors are numerous, none of the studies contribute to identifying those factors, which best contribute to knowledge sharing success. Consequently, organizations are struggling to find the best factor that can be adopted for their organizations.

This paper contributes to knowledge sharing practice by providing a review of factors influencing knowledge sharing in several ways. First, we review and integrate the literature from several different disciplines investigating success factors from social and organizational perspectives. Second, we review success factors from IT implementation to support knowledge sharing. Categorizing these factors may assist organizations to adopt factors the way their KM are implemented.

The paper consists of six sections. The first section presents the background and highlights the factors that influence knowledge sharing. In the second section, the paper presents review of the literature related to the factors that influence knowledge sharing. The third sections present the conceptual framework. This is followed by research methodology, which mainly based on secondary data. In the fifth section, the paper presents and discusses the findings of this study. In the sixth section, a conclusion of the research with directions for future work is given.

## 2. Literature Review

### 2.1 Previous Studies of Knowledge Sharing

Interest in knowledge sharing has its roots in within the technology transfer and innovation literature [17]. Currently, knowledge is considered important as oil and coal were in the industrial age [18]. Voelpel and Han [19] pointed out that the amount of knowledge that organizations acquired internally and externally can determine to large extent their viability and competitive advantage. In a comprehensive study conducted by [20] to identify the factors that influence knowledge sharing intention and behavior, they found that three individual factors (reciprocity, subjective norms, and behavioral control) and one organizational factor (trust) significantly influenced knowledge sharing intention. The knowledge sharing behavior is found to be influenced by two individual factors (reciprocity, and behavioral control) and three organizational factors (CEO support, IT system, and trust). Knowledge sharing has been a theme in the academic literature. Many studies have attempted to identify knowledge sharing, its definitions, and factors that influence knowledge sharing e.g. [21], [15].

## 2.2 Definitions of Knowledge Sharing Success

There is no universal definition of knowledge sharing. Jackson et al [3] defined Knowledge sharing as "the fundamental means through which employees can contribute to knowledge application, innovation, and ultimately the competitive advantage of the organization." Cummings [17] viewed knowledge sharing as "the provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement policies or procedures." According to their definitions, knowledge sharing can occur by direct interaction between individual (face-to-face), communication via online means, documents, handbooks, and expert lecturing. In this study, the definition of [17] is adopted because the study investigates organizational and IT perspectives of the factors that influence knowledge sharing.

## 2.3 Factors Influencing Knowledge Sharing from Social and Organizational Perspective

Many researchers have investigated the factors that influence knowledge sharing. [5] conducted a study on knowledge sharing and its relationship with culture in a project team. Using a quantitative method, the findings from the questionnaire show that time, structure, output orientation and openness have positive effect on knowledge sharing. In the same vein, a conceptual study conducted by [13] they have proposed that the organizational culture elements include trust, leadership, communication, reward system, information system, origination structure influence organizational knowledge sharing. To investigate the relationship between organizational culture and knowledge sharing, the authors propose to use semi-structured interviews with employees in Civil Service in Malaysia. The authors expect that the relationship between organizational culture elements and knowledge sharing is positive and significant.

Researchers have classified the factors into groups. For example, Lin [22] collected data from 172 employees in Taiwan. Findings of the study show that the influencing factors are divided between individual and organizational factors. Individual factor include enjoyment and knowledge self-efficacy, while organizational factors are top management support. These factors are influencers of the knowledge sharing process in the organizations. [23] employed qualitative method using a triangulation of methods include interviews, observations, company data and group discussions. Her objectives to find the cultural antecedent of knowledge sharing in project team. The findings show that many factors influence the knowledge sharing behavior include intrinsic motivation, personal responsibility, trust from top management, and output orientation. Kharabsheh [24] proposed a set of construct to be the factors that influence the knowledge sharing. These include learning orientation, market orientation, absorptive capacity, positive interaction, trust, demographic, IT infrastructure, and reward system.

Al-Alawi et al. [14] have employed a mixed method to find the factors that influence the knowledge sharing. Data was collected from 231 respondents and from semi structure interview, the findings of the study indicate that trust, communication, information systems, rewards, and organization structure are positively related to knowledge sharing in organizations. Similarly, [25] investigated the cultural and social issues for knowledge sharing by using mixed method included an online survey and an interview. The findings reveal that knowledge sharing is based on a trading process. During this process, which can be regarded as information exchange process, people evaluate information on individual basis in an asymmetric way. Further, the motivations for knowledge sharing are found to be participation, cooperation, salary, integration of elder employees and trustful atmosphere. Gold et al [26] highlighted the role of organizational culture, structure, infrastructure for utilizing knowledge management capabilities.

The culture in general has its influence on the knowledge sharing behavior of the population. Zhang et al. [27] conducted a mixed method study to investigate national cultural values effect on explicit and implicit knowledge sharing within a multi-national virtual class. Hofstede's cultural dimensions were investigated and the findings show collectivism directly influence knowledge sharing, while power distance, uncertainty avoidance, and Confucian dynamism have interactive effects with knowledge sharing motivations. Furthermore, some cultural values, like concern for face, have complex effects on knowledge sharing. In similar approach, Ardichvili et al. [7] conducted a qualitative study to find the differences between nations in term of knowledge sharing in online communities. The findings of an in depth interview of employees show that the extent to which national culture affects knowledge sharing differs significantly among countries. Thus, employees in China are more likely to shy away from contributing to online community discussions because of worries about face, modesty, and the lack of language proficiency, than are their Russian counterparts. On the other hand, competition among employees is not such a major barrier to knowledge sharing in Russia and Brazil, as it is in China. It can be seen that culture has influenced the way that people behave. The culture also influences the norm and the attitudes of people. Bock et al [28] have conducted a study to find the factors that influence knowledge sharing in organizations. A total of 154 managers from Korean organizations were the respondents of the study. the findings of the study show that attitudes toward and subjective norms with regard to knowledge sharing as well as organizational climate affect individuals' intentions to share knowledge.

Lai and Lee [8] conducted a study on the influence of risk avoiding culture on the knowledge sharing. The authors collected data via questionnaire from 720 senior manager in Taiwan. The findings indicate that self-efficacy, job autonomy, and trust directly influenced the inclination to share knowledge. In another study conducted by [29] investigated the effect of behavioral information security governance and national culture on knowledge sharing. Following mixed methods, the findings of the study show that processes to coordinate implemented security knowledge sharing mechanisms have a major direct influence on the establishment of security knowledge sharing in organizations; the effect of organizational

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structure is slightly weaker, while business-based information security management has no significant direct effect on security knowledge sharing. Further, the moderating role of the national culture were investigated and the results show that national culture moderates the relationship between the variables and more studies are needed in this field.

Culture has been classified in many types. Suppiah and Sandhu [30] investigated the influence of organizational culture on the tacit knowledge sharing behavior. The data collect via survey from 362 participants in Malaysia. The findings of the study show that organizational culture types influence tacit knowledge sharing behavior and those such influences may be positive or negative depending on the culture type. Cockrell & Stone [31] conducted a study on the influence of culture on pseudo-knowledge sharing by surveying participants in many industries. The findings reveal that financial incentives and the quality of knowledge-sharing motivation fully mediate the effect of industry on pseudo-knowledge sharing. Further, culture, through its influence on financial rewards and organizational knowledge culture, may affect the success or failure of organizational knowledge-sharing initiatives.

Trust has emerged as an important factor for knowledge sharing. Van Acker et al [21] found empirically that trust is related to the intentional and actual sharing of knowledge. Further, they found that knowledge sharing self-efficacy would be an important predictor of sharing and sharing intention. Similarly, [31] investigated the role of trust on knowledge sharing and they found that inter-organizational trust leads to better inter-organizational collaboration and knowledge sharing. Mohamed et al. [32] divided trust to task side and relationship side and concluded that it is important to have trust for successful sharing of knowledge and solving alliance problems.

### 2.4 Factors influencing knowledge sharing from IT implementation perspective

The definition of knowledge sharing by [17] highlighted the importance of having means through which the knowledge can be shared. Traditional means includes face-to-face, training, and reading of manual and instructions. However, due to the advancement in technology many means have developed. One of the most important mean is the social media. Ma and Chan [15] highlighted the role of social media in knowledge sharing. Their finding shows that elements of social media include altruism, perceived online attachment motivation, and perceived online relationship commitment influences knowledge sharing. Further, in a quantitative study conducted by [6] on Facebook group users' willingness to share knowledge. The findings show that reputation and self-worth influence knowledge sharing attitude. Further, element of social networking sharing culture (fairness, identification, and openness) are the most significant factors. Knowledge sharing after implementing Enterprise Resource Planning (ERP) was investigated by [33] in Taiwanese's' enterprises. Using a quantitive method, they found that social capital, intrinsic motivation, and self-efficacy have significant impacts on knowledge sharing after implementing ERP.

Researchers referred to the importance of IT and the technical infrastructure for knowledge sharing. Scarbrough and Swan [34] pointed out that IT is vital for knowledge sharing. Akdede and Turan [35] mentioned that IT resource consists of the overall IT compounds, computer and communication infrastructure. The application of IT includes data recording, storage, production of a particular transaction process by passing the information and access to the information generated, stored, transported that allows for effective and efficient manner [36]. Establishing the mass of information structure, such as internet, intranet, and electronic media has become easier to share knowledge for everybody in the organizations [37]. Top [16] found empirically that the highest risk in knowledge sharing in house, is the lack of technical infrastructure and information system. Thus, technical infrastructure and IT provide employees with the ability to share, obtain feedback, and create ideas [36] [38].

Table 1 shows a literature survey of the variables that have been employed by the researchers who investigated the knowledge sharing.

**Table 1:** Survey of the Literature

| Author | Focus of the literature | Key concept/issues | Proposals and findings |
|---|---|---|---|
| [5] | Knowledge sharing | Relationship between knowledge sharing and culture in project team | time, structure, output orientation and openness have positive effect on knowledge sharing |
| [13] | Organizational culture elements | Relationship between culture's element and knowledge sharing | proposed that the organizational culture elements include trust, leadership, communication, reward system, information system, origination structure influence organizational knowledge sharing |
| [22] | Factor influence knowledge sharing | Divide the factor into individual and organizational | Individual factor include enjoyment and knowledge self-efficacy, while organizational factors are top management support. |
| [23] | Factor influence knowledge sharing behavior | Cultural antecedents of knowledge sharing in project team | intrinsic motivation, personal responsibility, trust from top management, and output orientation |
| [25] | Factor influence the knowledge sharing | Cultural and social issue of knowledge sharing | participation, cooperation, salary, integration of elder employees and trustful atmosphere |
| [8] | Knowledge sharing | Risk avoiding culture on the knowledge sharing | self-efficacy, job autonomy, and trust directly influenced the inclination to share knowledge |
| [20] | Factor influence the knowledge sharing | Knowledge sharing intention and behavior | three individual factors (reciprocity, subjective norms, and behavioral control) and one organizational factor (trust) significantly influenced knowledge sharing intention |

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| [15] | Role of social media in knowledge sharing | Element of social media that can affect knowledge sharing | elements of social media include altruism, perceived online attachment motivation, and perceived online relationship commitment influences knowledge sharing |
|------|------|------|------|

## 3. Methodology

This study used the secondary data collected from the findings of other literatures. Findings of other researchers, who have investigated the factors that influence knowledge sharing are used in this paper. Hence, search engine was used and the word "knowledge sharing" was used as a key term to find the related papers and articles. Other terms have been used such as "factors", "influencing factors", etc. or a combination of the terms. The findings of the paper are presented by analyzing the trends and the patterns of the literature. Next, the factors are categorized and presented under three constructs namely organizational, individual, and IT related factors.

## 4. Conceptual Model

Based on the literature review that has been conducted and the survey table which summarized the factors that influence knowledge sharing, it can been seen that most of the reviewed literature can be categorized under three main group. First group are the organizational factors. This category has focused on factors related to the organization such as organizational support [22], [23]; trust [20], [31]; organizational culture [30], [39]; reward system [13]; and organizational structure [13]. Second is the individual factors and this includes factors related to individuals such as self-efficacy [8] and subjective norms [20]. Third category is the IT related factors. This category includes information system [13], [14]; technical infrastructure [16]; usage of social media [15]. Based on the review, Figure 1 presents the conceptual framework of this study.
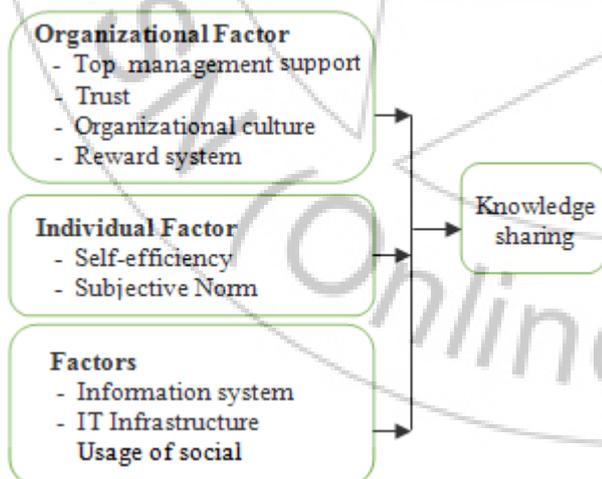


**Figure 1:** Conceptual Framework

## 5. Discussion

The purpose of this paper is to review the literature pertaining to the factors that influence the knowledge sharing in organizations. The review has brought to light three main categories of factors that affect knowledge sharing success. These are organizational, individual, and IT related factors.

An organization seeking to establish knowledge sharing culture must ensure that the top management supports the initiatives and pays efforts and attentions for the practices of knowledge sharing. Management must support and enforce the positive behavior of knowledge sharing [22], [23], [13]. Further, trust has emerged as an important factor inside and outside the organization for knowledge sharing [32]. The organization should create a culture of sharing that facilitates knowledge sharing and the structure of the company must be in shape that can speed the knowledge sharing [13], [30]. In addition, rewards are vital to encourage members to share their knowledge with their colleagues [13].

Individual differs based on their cultures, values, traditions, and norms. The characteristics of individual influence their willingness to share knowledge. Subjective norms were incorporated in many models as a factor that influences knowledge sharing. In multicultural study conducted by [7], it was found that a strong influence of subjective norm of individuals. Similarly, [28] and [20] found strong association between the subjective norm of individuals and their willingness to share knowledge. Further, researchers focused on the ability of individual to share the knowledge. Self-efficacy was found by many researchers to influence employees' willingness to share knowledge [21], [22], [33].

While the review explores the organizational and individual aspect of knowledge sharing, it must be noted that the technological factor cannot be neglected. Knowledge has to be shared through means and channels. Technological factors play a vital role in knowledge sharing. Many studies have found that one of the reasons for successful knowledge sharing is the information system [13], [20], [24], [14]. Similarly, the focus was paid to the technical infrastructure such as intranet, extranet, software, hardware, etc. Researchers pointed out that the right technical infrastructure is vital for the knowledge sharing [34], [35], [16]. Matching the trend of the advancement in technology, research investigated the role of social media and found that social media can enhance knowledge sharing [15].

## 6. Conclusion

This paper has reviewed the literature and proposed a conceptual model for the main factors that influence knowledge sharing. As knowledge sharing is in the interaction between people, organization, and technology, organizations should consider factors that include people, organization, and technology. Thus, this paper contributes to the body of knowledge by exploring factors that influence knowledge sharing and propose category of factors to enable organizations to promote successful knowledge sharing. Future work can test this model empirically using a questionnaire. The model can be adjusted to suit the country or the organization where the future researchers wish to test this model.

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