

## The Relationship between knowledge management and social Capital in Developing countries (case study: Kurdistan province Industrial Towns)

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**Abstract:** This study investigates the relationship between knowledge management and social capital in Kurdistan province. Statistical population includes all the firms participating in production activities and its staffs are more than 10 people. The study domain include 820 firms, among them 256 firms were chosen in randomized sampling method as a limited population. The research methodology is measurement. And, for data collection, 5 points Likert questionnaire was applied. The questionnaire validity is conceptual and its reliability for social capital and knowledge management were calculated with  $\alpha$ -Chronbach (92% and 83%, relatively). The research statistical methods include descriptive and deductive (spearman correlation test). The result show there is positive significant relationship between all the social capital aspects (cognitive, structural, and relational) and knowledge management.

**Key words:** Social capital; knowledge management; Structural equations model

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### 1. Introduction

In today competitive environment, organizations requirements to knowledge, comparing to the past, have increased impressively. Un-imitable high value and irreplaceability are regarded as some knowledge asset advantages, along with some procedures and concepts such as knowledge management, mental investment, intangible assets, knowledge- oriented point of view toward organization, and researchers and executive weighty research show increasing importance of knowledge sources in organizations.

"Leitner and warden" believe, societies step toward knowledge based economy; that knowledge is regarded as the most important element in creating the value in the organizations (Leitner, 2003). Information technology revolution and technology rapid advancement, growth pattern of global economic has changed. Today, according to competitive environment, knowledge, as the most important investment, has been replaced the physical and financial investments (Yuan, 2004). Thus, for the most developed countries knowledge management is a symbol for competition and a main factor to obtain power and development (Drucker, 1998). Researcher show the firms with no action toward knowledge management show more delay in their improvement, about 30-40 percent, than their counterparts (Gartner Group, 1998). Actually, such knowledge management has a specified place in firms and organizations, and increasingly its importance intensifies. The researchers report, 80 percent of macro organizations in Britain benefit from knowledge management and 90 percent from

20 remaining percent, apply knowledge management during near future (5 year). In US, similar Studies and especially in 200 macro firms show, among these 85%, benefit from knowledge management. In this regard, 50% budget is devoted to knowledge management and 27% have managerial knowledge post (Shaw, 2001). On the other hand, due to spread changes in organizational operations traditional investment forms, such as buildings, equipment and changeable financial resources, and new investments, new invests have been introduced. These intangible assets play important role in organization development. One investment is physical/ conceptual investment. In contrast to human or physical investment, social capital is conceptual, i.e. far more than those investments belong to a person/ party. Also, it is regarded as one abilities and organizational important.

Factors can help organization to improve knowledge management and create stable organizational benefits. Kurdistan province industrial towns, for instance, as a collection of employee and employers and specialist form a comprehensible collection, in which the connection confederacy, cooperation, amity and trust are regarded as effective variables on performance success of these units, improvement and development of Kurdistan province. In this regard, based on knowledge management aspects and definition, and also social capital in which both focus on interaction and relations among people, with considerable importance in the society, this research investigates the relationship between social capital and knowledge management in Kurdistan province industrial towns. So, the main question is what

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relationship exists between knowledge management and social capital in Kurdistan province industrial town?

## 2. The theoretical framework

### 2.1. Social capital

in contrast to economical investment in individual bank accounts, and human investment in human brain, social capital, due to mutual relationship and interaction among people, is regarded as unique social capital, because social capital have developed as significant social relationship. Accordingly, people invest to create it (Storberg, 2002). Investigators have more tangible opportunities in finding better jobs, wages and attaining promotion, and in comparison with their isolated have more impact and territory. The organizations with powerful social capitals can attain the required investment to create employment opportunity and risky activities, improve organizational learning and get benefit from finding strategic confederates (Chen and Xie, 2004).

During 2 late decades, social capital as an impressive point of view has attained real attention. In spite of key definitions, there is no agreement among researchers. The first definition of social capital was offered by Coleman (1988) " social capital isn't a unit object, but it includes various objects with two common characteristics: first, all of them are aspects of a social structure, and second, certain reactions facilitate economic factors (Coleman and James, 1998). The second, that is the most common one, belong to North. He defines social capital as" environment and social and political conditions led to development and norms improvement and form social capital (North, 1990). The third definition introduced by Putnam (1993) is a collection of horizontal relations between people as a social networks and related norms with real effect on social efficiency (Putnam et al, 1993). Social capital consists of the sun of real and/or visual resources in which a prolonged network of relationships bring mutual recognition and two real components (Bourdieu, 1985). The first one is the source related to group membership and social networks. Actually, social network depends on the social communication one can have. Secondly, it refers to a quality by the way the relationship for among players, (of course. It is beyond a group's common quality). In the late 1980, Coleman opened a new window toward social capital theory of Bourdieu.

Coleman(1990) believes, social capital is obtained by its output, without individuality or individualism thoughts. But it is originated form various existence with two common elements-In this regard a new Coleman's of a collection of mutual relationship between groups and people with real achievements, such that without these real relationships it is impossible to attain them (Colaman, 1990). The Clear- sighted regard social network as an aspect of

social organization which facilitates mutual cooperation among people in attaining common benefits (Putnam, 1995). "Hanifan" reports social capital is not individual or monetary properties. In contrast it includes tangible things with fashionable application in daily affairs such as goodwill, sociability, consultation, social business among people and families who build social unit. Coleman (1998) declares social capital is defined by its function. Social capital has no a unified nature. Instead, it consists of a diverse range of matters with two common characteristic, all of them have some social structure aspects, and make facilitate actions for people inside the structure.

Nahapiet and Goshal (1998) define social capital from organizational perspective. They believe, social capital is the sum of Actually and potential resources within relationship networks of a person or a social unit. Social capital is regarded as one of crucial capabilities and properties can help organizations in creating and sharing knowledge, and bring them, in comparison other organizations, organizational benefits. In this study, Nahapiet and Goshal's definition of social capital as desired definition. Nahapiet and Goshal regard social capital as crucial capabilities and properties and properties which help organizations in developing and improving the organization knowledge management.

### 2.2. Social capital aspects

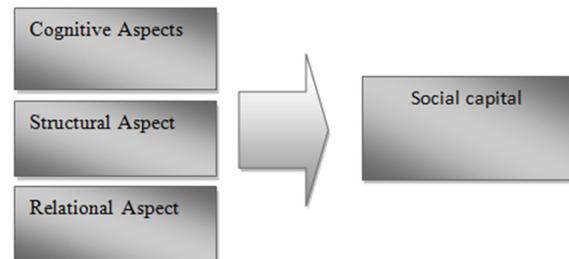


Fig. 1: Social capital: cognitive, structural and relational capital

#### 2.2.1. Cognitive element

Cognitive element of social capital refers to the resources facilitating manifestations, interpretations, and common sense systems among groups. The most important aspects of cognitive element include: common language grammar and stories (common memorials and experiences).

##### 2.2.1.1. Common languages and codes

For various reason, common language impact on knowledge composition and exchange. First, language has direct function in social relationship, because it is a tools which helps people communicate and discuss, exchange information, quest each other, merchandise in their society, etc. second, language impact on our understanding. Also, codes provide reference framework to detect and interpret our

condition. Third, common language increases the ability to combine information. So, common languages and codes can impact on knowledge management procedures, such as knowledge exchange (Nahapiet and Ghoshal, 1998).

### 2.2.1.2. Common Stories

In addition to common languages and codes, the researchers believe, myths, stories and metaphors provide powerful tools in the societies to create and exchange and keep the rich sets of meaning. Karkoulia et al (2008) refer to socialization and storytelling as impressive methods in sharing the tacit knowledge.

### 2.2.2. Relational element

Relational element of social capital is a qualifier of personal relationships people have, due to their interaction history (Nahapiet and Ghoshal, 1998). The most important aspect of social capital includes: trust, norms, expectations, and identity.

#### 2.2.2.1. Trust

Research shows, the more trust-based relationships exist, the more tendency toward social interaction and cooperative interactions is expected. (Misztal, 1996) "Misztal" reports "trust is a supplier of relationships and discourse". Trust refers to an increase in people relationships and, thereby, an increase in knowledge transmission in organizations. In this regard, Mu et al (1996) believe, trust between organization members provides the opportunity in creating and sharing the knowledge and causes more tendency toward cooperation and group work.

#### 2.2.2.2. Norms

Cooperation norms can be a main component to create knowledge in organizations. For example, Sturbeck (1995) refers to the importance of social norms as key characteristics of knowledge-based firms.

#### 2.2.2.3. Expectations and commitment

Commitments refer to a duty in the future. Coleman (1990) distinguishes the commitment from general norms and considers them as created expectations within specific personal relationships.

#### 2.2.2.4. Identity

Identity is a procedure in which people are a unit member with other persons or a party. The researchers found the sense of identity with a group or persons increases anxiety regarding to collective results and procedures. So, it increases the information exchange and group cooperation chance. In contrast, without a sense of identity, real

limitations and difficulties make a barrier in information sharing, learning and knowledge creation (Hoffman et al, 2005).

### 2.2.3. Structural element

Structural Element refers to a general pattern among people connections, that is who and how you access. The most important aspect of this element includes: group relationship configuration of group relations, and appropriate organizations.

#### 2.2.3.1. Group Relationships

The primary suggestion of social capital theory is that group relationships allow access to resources (such as knowledge). Social relationships create informational channels which decrease the time and required investment in gathering data. Weber and Weber (2007) found staff interaction and networks make the opportunity to interact and share knowledge. In this regard, Merlo et al (2006) declare, information flow in the organization arises from a people relationship network.

#### 2.2.3.2. Compositing the group relationship

People relationship quantity is regarded as another crucial aspect of social capital which is effective in knowledge transmission and exchange. Top consultation and cooperation relationships cause knowledge exchange in organizations. Mu et al (2008) found internal and external relationship development provides a suitable condition in communicating between people, bases of modern knowledge creation and firm development.

#### 2.2.3.3. Appropriate organization/ agency

Appropriate social organizations can provide a potential network in accessing people and their resources to guarantee knowledge exchange. Generally, organizations can coordinate organizational groups with each other and make the bed to create relationships among various parts. In this regard, Vander et al (2009) believe creating an appropriate organization structure can increase both social capital domain and sharing the knowledge.

### 2.3. Knowledge management

In today's competitive world, in many organizations knowledge has been converted into a strategic resource. "Nonaka" believes, in today's unstable conditions, the only reliable resource in attaining sustainable competitive benefit is knowledge (Wiig, 1997). So, knowledge management has been converted into the most important task which exploits their precious capital. Although there are various definitions for knowledge, the important note in knowledge management is its application in organizations and its developmental comparison with

previous. Knowledge in management followed by information. Davenport and Prosak believes knowledge is originated with four actions include: to determine consequences, to create relationship, to determine consequences and to discuss rationally. Davenport (1997) regards knowledge management as an attempt toward hidden capital in people mind and exchanges this hidden treasure to organization capital, such that a vast number of people involve in organizational decisions access to capitals and can apply it. Knowledge management and ability to create new knowledge management has two aspects: knowledge management and ability to create new knowledge. Firm, the aim is to service clients in proper time. Second, it includes activities such as acquisition, distribution, application and creation knew knowledge to improve organization operation recent achievements in information technology, has decreased data management cost. These achievements have entered learning organization concepts, knowledge organizations and knowledge management into management and organization literature. Organizations, applying knowledge management strategies, allow innovation get its way in their procedures, services and productions, so improve their competitive environment. Recognizing the effective factors on organizational knowledge management are regarded as primary acts on efficient application of mental capital in organizations (Davenport, 1997).

Knowledge management include knowledge, wisdom and experiences with added value, such that, it facilitates retrieval and knowledge application are protect them as organization property- knowledge management is a procedure which help organization to select, organize, and experiment and knowledge distribution to obtain competitive advantage (North, 1990 ). Knowledge management refer to systematic and comprehensible procedure in coordinating the organization activities such as attaining, creating, storing, sharing and applying knowledge by people and groups to attain organizational goals (Rastogi, 2000). In the other word, knowledge management is regarded as a crucial component in organizations strategies. And, organizations encourage knowledge sharing among their staffs guarantee the organizational performance improvement (Argote and Ingram, 2000). in most knowledge management models, a four stage procedure is introduced as key activities in these procedures (Wang and Ahmed, 2003).

### 2.3.1. Knowledge management Aspect

To perform knowledge management, Hix introduced a pattern including 4 steps: creating knowledge, storage, sharing and applying knowledge (Amberg, 2001).

**Knowledge creation:** It refers to create knowledge including efficient /new solutions and ideas. Forming and recombining new knowledge with traditional one allow the

organization create new concepts and realities (Bhatt, 2001).

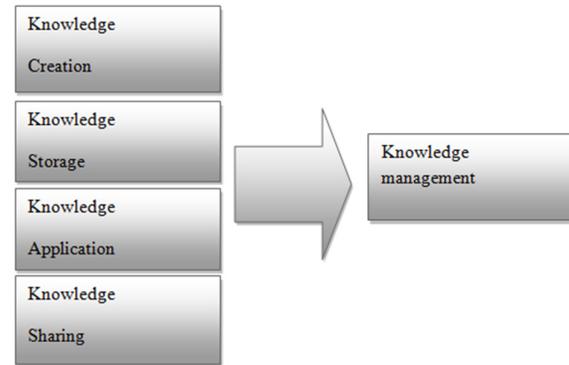


Fig. 2: Knowledge management aspect

**Knowledge storage:** This step includes converting knowledge in an acceptable manner for machine to use it in future. Generally, it refers to documentation and storage such that all beneficiaries take advantage of this knowledge.

**Knowledge sharing:** knowledge sharing and experience is regarded as the most crucial knowledge management function. In this step, continual interaction and communication between peoples skills and technology. it is necessary to develop knowledge efficiency (Lin and Lee, 2006)

**The application of knowledge:** Generally, organizational knowledge should be applied toward production. Services and organizational procedures, an organization couldn't determine knowledge proper form in its suitable place, it encounter problem in competitive domains.

The organizations which are able to manage knowledge re resources naturally, with lower skill in professional knowledge management than other organizations exchange information in knowledge exchange and knowledge in competitive advantage (Nahapiet&Goshal, 1998).

Micro and macro information exchange between people and organizations depends on the people facilitate and accelerate this exchange. As a result, all the factors which encourage or prohibit inter personal relationships would be impressive on person informational exchange (Hoffman at al, 2005). So, the more efficient interaction an organization has among its staffs within groups or organizational units, the more trust would appear among its work force toward efficiency and efficient management (Bhatt, 2001). Empirically, one can deduce social capital can promote organization ability in governing knowledge, because social capital creates capabilities in work diversity (Nahapiet and Ghoshal, 1998). Also, social capital can increase knowledge attraction, knowledge provision and transmission social capital increases these managerial affairs, because helps organizations to combine and exchange resources, to encourage cooperative behaviors and more efficient collective activities. And, these actions are essential

in applying knowledge management in organizations (Hoffman et al, 2005).

### 3. Background

Regarding to the relationship between social capital and knowledge management various activities, some empirical studies have been done. Hoffman et al (2005) In their research, they show the relationship between social capital and knowledge management. The result of their study show the organization with high social capital levels have more knowledge management capabilities than low social capital one. So, social capital, with creating communicative and informational channels and social networks in organizations cause interpersonal relationship which facilitate and accelerate creation, sharing, knowledge application among organization members.

"Helena and Harry" investigated the effects of social capital on some relationship including knowledge acquisition, key consumer knowledge exploitation. They found social interaction and relationship dimensions of social capital or knowledge acquisition as knowledge management procedures having mutual relationships. In other word, social capital increase exchange efficiency, acquisition and knowledge creation in organizations (Helena and Harry, 2001). In a case study, "Styhere" investigates the relationship between social capital and knowledge sharing. The result show social capital plays a crucial role in mediating between human capital and organizational capital and increases knowledge sharing background in organization by expanding the relationship between people (Styhere, 2008). Mu et al (2008) investigated the relationship between social capital and knowledge sharing condition. They found social capital components, especially "Trust" play a crucial role in developing knowledge management programs, and act as an informal strategic mechanism in knowledge management. Adler showed there is significant relationship between social capital and knowledge transmission (Adler et al, 2002). according to the mentioned aspects and definitions for knowledge management. And social capital and its importance the researcher tries to test the relationship between social capital and knowledge management. So, it is between social capital and knowledge management. the study seeks to find " is there relationship between social capital and knowledge management is Kurdistan province industrial towns?

### 4. Research Hypotheses

- Hypothesis 1 (H1): There is significant relationship between social capital cognitive aspect and knowledge management.
- Hypothesis 2(H2): There is significant relationship between social capital structural aspect and knowledge management.

- Hypothesis 3 (H3): There is significant relationship between social capital structural aspect and knowledge management.
- Hypothesis 4 (H4): There is significant relationship between social capital and knowledge management aspects in Kurdistan province industrial town.

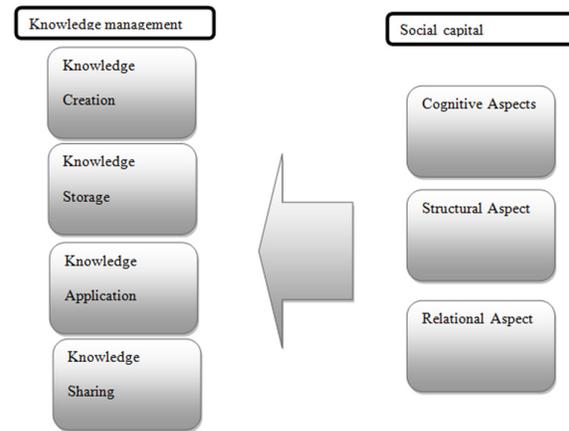


Fig. 3: Conceptual framework

### 5. Research methodology

The research is descriptive and the target is based on application. Data was gathered with library basis. To collect information, randomized sampling was used. Statistical population includes 820 industrial units in Kurdistan province industrial town, and statistical sample was chosen with Morgan table of 2015. The research variables include social capital (cognitive aspect, relational aspect, structural aspect) knowledge management aspect (knowledge creation, knowledge storage, knowledge sharing, knowledge application). Data was gathered with 2 verified questionnaires in which to test social capital aspect and knowledge management Nahapit and Gushal model were applied, respectively. The questionnaire validity and reliability were affirmed by experts. The questionnaire reliability was calculated and affirmed based on primary studies, include to distribute Bo pre- samples and  $\alpha$ -Chronbach obtained, obtained with its comparison with gathered data (91% and 88%, relatively). To analysis data SPSS software was applied.

Spearman correlation coefficient result for hypothesis(1) is depicted in Table1.

There is significant relationship spearman correlation coefficient result for H1 is depicted in Table 1.

According to significance level of  $0/000(\geq 0/05)$ , and correlation coefficient in social capital cognitive aspect and knowledge management is  $0/420$ . So, there is significant relationship between social capital cognitive aspect and knowledge management.

Spearman correlation coefficient result for hypothesis (2) is depicted in Table2.

According to significant level of  $0/000(\geq 0/05)$ , and correlation coefficient for social capital

structural aspect and knowledge management (0/437), as a result there is significant relationship between structural social capital and knowledge management.

**Table 1:** The relationship between social capital cognitive aspect and knowledge management.

Knowledge Management	social capital cognitive aspect
0/420	Spearman correlation coefficient
265	Number
0/000	Sig
Exist	Significancy

**Table 2:** The relationship between Social capital structural aspect and knowledge management

Knowledge Management	Social capital structural aspect
0/437	Spearman Correlation coefficient
265	Number
0/000	Significant Level
Exist	Significant Relationship

Spearman correlation coefficient result for hypothesis (3) is depicted in Table 3

According to significant level of 0/000 ( $\geq 0/05$ ), H1 is rejected. And correlation coefficient for relationship aspect for relationship aspect for rational social capital and knowledge management (0/498), there is significant relationship between social capital and knowledge management.

**Table 3:** The relationship between social capital social capital Relational aspect and knowledge management application

Knowledge Management	social capital Relational aspect
0/498	Spearman Correlation coefficient
265	Number
0/000	Significant Level
Exist	Significant Relationship

**Table 4:** Spearman correlation coefficient to affirm the relationship between social capital and knowledge aspect

sig	Spearman Correlation Coefficient	variables
0	0/499	Social capital and knowledge creation
0	0/495	Social Capital and
0	0/332	Social capital and knowledge sharing
	0/409	Social capital and knowledge application

As table data shows, for all the variables, p-value is  $>0/050$ . As a result, the hypothesis is rejected. So, there is positive significant relationship between all the aspects of knowledge management. Also, coefficient correlation shows the highest relationship exist between social capital and knowledge application and creation. It means

increase in social capital of Kurdistan province industrial towns, the rate of production aspect and knowledge. The least relationship belongs to social capital and knowledge supply. The result similarity can be seen in some researchers such as Landr et al (2002), Cowan (2009), Mu et al (2008), and Chen (2004).

## 6. Discussion and conclusion

Today, knowledge is an intangible resource to obtain competitive and it is regarded as very precious. Most organizations pay close attention to such intangible knowledge to get competitive advantages. Knowledge management focus on 3 subjects: people, technology and procedures, and tries to interact between these factors and creating an environment based on cooperation and mutual trust, sharing background and knowledge transfer and exchange to obtain organizational aim, in other word, physical, human, and financial optimization in organization. So, creating and expanding knowledge and a space which encourage organization toward these relationships and interactions, impact on information and knowledge exchange. So, it is regarded as knowledge management necessity. Social capital make the bed ready to create trust and interaction between organization member, to create culture and group work, increase organizational identity and mobilize the facilities and human resources and to increase creativity in organization and cause develop in knowledge management in the organizations. The result show there is significant relationship between social capital and knowledge management. Also, The literature review show there is positive significant relationship between cognitive, relational and structural aspects of social capital with knowledge management in Kurdistan province industrial town, among these relational social capital social capital has the highest relationship in knowledge management

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