# HOW ORGANIZATIONS COPE WITH KNOWLEDGE ECONOMY? FORMALISING A "LEARNING BY SHARING" PROCESS INSIDE THE ORGANISATIONS

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#### Abstract:

This paper analyses what determinants are involved in knowledge sharing and organizational learning and which relationship exists between these two processes by designing a methodology in order to asses these process in an integrated one called learning by sharing. Based on a literature review of knowledge, the aim of this article is to build an integrative model of learning by sharing which takes into account four main differentiations of an organization: knowledge differentiations, competency differentiations, cooperation differentiations and competition differentiations. The research was conducted during April – May 2013 and was based on the population made of organizations located in Northeast region of Romania. The research method was a descriptive explanation based on self-administrated questionnaires distributed by e-mails. Results show that learning by sharing process is highly influenced by the four differentiations involved in the systemic learning by sharing diamond. This study provides empirical evidence for testing a new integrated model by taking into account four organizational differentiations. The value of the article reside from a guidance for practioners in order to see the importance of the learning by sharing process in current economy, and as well for academics in order to introduce a new paradigm in current economy theory.

Keywords: learning by sharing, differentiation, competitive advantage, methodology, individual and organizational benefits

# 1. INTRODUCTION

In the increasingly dynamic and complex environment, knowledge and competences tend to become outdated in a very short time; therefore learning and his improvement are imperative for organizational succes. Coupled to this context, social developments have shown that the main features of the knowledge economy are related to: the expansion and deeping of scientific knowledge, management and use of existing knowledge in the form of technological and organizational knowledge, new technological knowledge production through innovation.

Learning is a continuous process and its importance to businesses today can not be disputed. Moreover, the dynamics of economic processes requires adaptability which is possible only through sustainable learning, where each employee really wants to enrich their knowledge. Therefore organizations must not only develop and expand employee knowledge, but must use mechanisms and procedures in order to transform individual knowledge in assets.

Due to personnel flow and dispersion of knowledge over many entities, organizations can no longer afford to innovate alone but rather must engage in alternative practices of innovation. As a result, organizations have begun to adopt strategies based on open innovation in order to use internal and external resources to exploit technologies and thus to the accumulation of knowledge from external sources (Chesbrough, 2003). Moreover, the accumulation of knowledge from external sources requires internal capacity to manage innovation for: 1.integration flows of knowledge innovation activities; 2.the application of successful internal and external knowledge; 3.direct actions for innovation (Robertson et al., 2012). In this sense, developing a knowledge capital can be supported by complementary relationships (vertical cooperation with suppliers and customers) and similarity of competences (horizontal cooperation with competitors and other organizations).

# 2. THE LINK BETWEEN ORGANIZATIONAL LEARNING AND KNOWLEDGE SHARING

Since the business environment experience a great dynamic, organizations must be able to quickly acquire new dynamic skills (which permit to adapt themselves to continuous technologic change), to identify and share best practices, to learn from their mistakes. Starting with competences, abilities, and finishing with intellectual operations and knowledge, all are acquired by learning activities.

The emerging of organizational learning theory and knowledge management in recent years has given rise to important insights regarding learning process and knowledge sharing that still requires much reflections in order to be integrated into practice. The assembly of traditional perspective of each of involved areas sparked sophisticated discussions about the "learning analysis unity" (at individual or organizational level) (Stacey, 2003; Field, 2004), the "nature of knowledge" (explicit or tacit knolwedge) (Blackman and Henderson, 2005; Spender, 2006), contributes to organizational knowledge (Spender, 1996).

So far there is no common agreement regarding the literature on the meaning of knowledge, or their definition (Singh et al., 2008). Some researchers believe that there are differences between knowledge and information (Nonaka, 1994), the information is considered to be a flow of messages, while knowledge is based on information and justified by personal beliefs. Other researchers think that all the information can be considered information; however knowledge is more than "know-how" (Kogut & Zander, 1992; Machlup, 1980). Therefore, it can be adopted in this paper that the term of knowledge is processed information at an individual level and includes ideas, facts, expertise and relevant decisions for the employees as well as for the organizational performance (Alavi & Leidner, 2001). However, a more current knowledge formation process shows a nonlinearity argued by the fact that knowledge transformation is inherent and unpredictable (Pohontu et al., 2012). Thus, each transformation process faces many interactions such as: the presence of agents, entry's heterogeneity, conditions and organizational culture.

# 2.1. Communities of practice and learning

Communities of practice emerged as a "knowledge sharing" facilitator instrument and an adequate learning environment (Lave and Wenger, 1991). Communities of practice have become a feature of

knowledge management whereas their application on business has received an increased attention (Lesser, Fontaine and Slusher, 2000). This kind of practices can exist, wherever there is a "willingness to share" information, knowledge and experiences. However, participation in the network is essential. Therefore it is important to identify different kinds of network inside the firm to promote learning by sharing process. While personal interactions can boost relationships and trust within the group, "communities of practice" can also take place virtually, meaning that individuals can collaborate even if physically are not in the same place. Moreover, members don't have to be from the same organization, they can also come from outside of it. Both networks and "communities of practice" are larger than the firm and this is the reason why they are both more appropriate to foster among members the learning by sharing process which needs some continuous movements between knowledge inside and knowledge outside.

# 2.2. Interdependence of organizational learning and knowledge sharing

"Knowledge sharing" and "learning" are social phenomena; the current study draws useful conclusions in terms of social construction of knowledge and learning. Such a perspective assumes that organizations are a group of individuals acting regularly and who share a sense of collective identity.

In their paper, Pasteur, Petit and Schagan (2006) argue that despite the fact that "knowledge transfer" and "organizational learning" have the same objectives, the ways and methods of achieving them varies greatly both in theory and in practice. Some authors, such as Wiig et al. (1997) believe that "organizational learning" is part of the knowledge management strategy, while others assert that "knowledge management" is a strategy of organizational learning implementation, or both of them are interlinked.

Collaboration is a process by which people that see different aspects of a problem can constructively explore their differences in the search for solutions which are going beyond their own vision of what is possible (Tiwana, 2000). In the work of Tiwana, we could see how important is the differentiation of the actors to achieve a solution in a complex world. So traditional management fails to take into account these fructuous differentiations.

#### 3. NEED FOR A NEW INTEGRATED MODEL OF LEARNING BY SHARING

In analyzing learning by sharing model, "collaboration" can be seen as a process by which individuals who see different aspects of a problem can constructively explore their differences and search for solutions that can go beyond their own limited vision of what is possible (Tiwana, 2000). The only way to enable the sharing of knowledge is to put individuals together through collaboration controlled by managers in order to create an enjoyable environment for all participating parties. Therefore, individual and group skills through learning may be the key to an efficient transfer of knowledge.

## 3.1. The systemic learning by sharing model

Given the complexity and uncertainty of the external factors like mobility and dynamism of the organization's internal factors, this paper proposes a new learning model that focuses on knowledge sharing under intra and inter-organizational level approach. The systemic model (as can be seen in Figure 1) is designed based on the "theory of communities of practice" (Duguid, 2005), which focuses only on the internal process within organizations (Duguid triangle: horizontal arrow linking knowledge (knowing that) and skills (knowing how) and the bottom of the graph (cooperation), and the "competitive adavange theory" developed by Porter (1985, 1990), with the four forces involved in sustainable competitive advantages, which focuses on both the internal environment (the production of knowledge and skills within the organization) and the external environment of the organization (the cooperative and the competition mode).

Competition
Differentiations
Co-opetition:
a dynamic mix of cooperation and competition

Co-innovation:
interactive generation of new knowledge

Cooperation
Differentiations

Cooperation
Differentiations

Figure 1: The systemic learning by sharing model

Source: Pohontu et al. (2012)

Essentially, through this model, "competitive advantage" and "learning by sharing" are seen as two common processes through its objectives (market needs constant adaptation to remain efficient), and from the point of view of perspective of time (long-term). However, the biggest challenge of this model is effective mobilization of certain interactions in organizations before (or simultaneously) in order to compete with external factors as well as organizations need to transform knowledge (both owned by the organization and its members) in organizational skills using cooperative relations. The proposed model is an "open" model, bearing in mind that it accords attention also to the external factors (competition, status and trends in the environment).

Thus, unlike other models found in the literature, the proposed system model reveals the complexity achieved by the activities of organizations in knowledge-based economy. In this economy there is a free open world economy (mobility of goods, services, capital assets, information and knowledge), organizations must be based on both competition and cooperation. Therefore, to become more adaptable and to be able to respond quickly to the market changes, there must be a high interest for learning. Such versatility is not just about learning and knowledge creation, but also about the creation of new connections between these components, known by scientists as "Cognitive Division of Labor" (Mouhoub, 2003), stating that connections are also important than each component to create new knowledge.

#### 3.2. The four differentiations processes comprised in learning by sharing model

The systemic model learning by sharing as developed in this chapter incorporates interactive cooperation and collaboration between the four differentiations involved at a high level of learning by sharing. In the following paragraphs the four differences involved in the proposed model are presented.

On the horizontal part of the model are two distinctions that have a direct connection with individuals within organizations, namely knowledge and skills by the means of two kinds of knowledge: "Knowing that" and "Knowing How". Despite this, two aspects cannot be substituted; Knowing How does not lead to knowing that.

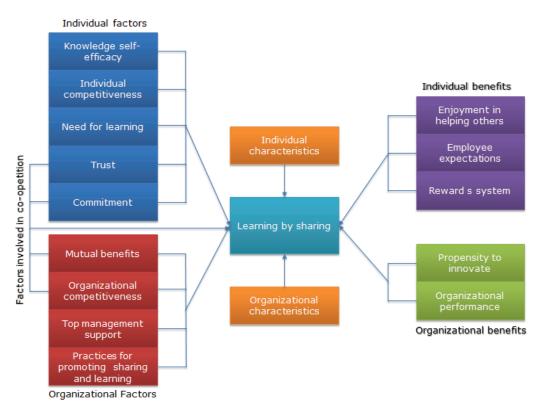
To summarize, our systemic approach takes into account 4 main aspects of a systemic approach, 1 - interactions between agents (the interactions between levels and agents are important, they could create a meta level wich could organize learning in intermediary approach), 2 - building an intermediary level which will be involved in learning by sharing behavior (the whole is more than the sum of its parts, the intermediary level is very important and useful to create new behavior based on learning by sharing because such behaveior needs confidence, and this could be reached by community of practice at intra and inter-organizational level), 3 - the dynamic character of learning by

sharing (the learning by sharing processes cannot be copy and implement in different organization, this kind of processes require adaptation to the environment and culter of each organization on reward motivation), 4 - the key role of communication in the learning by sharing (in order to implement and develop learning by sharince procees the involved agents must be capable to communicate in the right level in using the same concept and the same way of practice.

### 4. RESEARCH METHODOLOGY

Considering the proposed systemic model of learning by sharing, the following research model is proposed with the role of investigating the relationship between the four differentiations included. After using the approach proposed by Rajagopalan (2001) the analytical framework of this study is threefold: determinants, processes and outcomes.

Figure 2: Research model



As seen in the figure above, the research model includes seven variables divided into 15 dimensions. In this research model, the emphasis is on learning by sharing process, these two variables were combined into a single variable called "learning by sharing". The dimensions used in this research model were adapted from previous studies, and were validated and used by most researchers in the field.

However, the originality of this research model comes from the fact that learning by sharing process are combined under a single process and are certified in accordance with the key factors of cooperation – competition mix, individual and organizational factors and organizational and individual benefits.

Given the fact that literature review of this study is focused on testing the integrative model for promoting synergetic processes of knowledge sharing in the purpose of innovation, the specific objectives of the research can include: O1. Testing the learning by sharing model by conducting a quantitative research. O2. Analysis of the operation of knowledge sharing based on the four differentiation of an organization. O3. Determining the impact of learning by sharing processes on individual and organizational benefits.

Analyzed sample: Taking into account the intended research purpose, the target population of this research consists of employees from organization located in North-East region of Romania, from private sector, regardless the dimension or field of activity.

Setting the content of the questionnaire: For each considered dimension was constructed or adopted from the literature, a set of representative questions that could show the most important aspects of the dimension.

Carrying out the research: The research was conducted during April – May 2013 and was based on the population made of organizations located in Northeast region of Romania. Of the total of e-mail sent, 280 valid questionnaires have been received, representing a response rate of 5%.

# 5. ANALYSIS OF RESEARCH RESULTS

H1 – There is a direct relationship between individual factors and learning by sharing, in the sense that the individual who will get high scores in terms of individual factors will have a high level of learning by sharing behavior.

Table 1: Correlation between individual factors (component dimensions) and learning by sharing

			Total score for learning by sharing
Sig.	(2-	Knowledge self-efficacy	537
tailed)		Individual competitiveness	.044
		Need for learning	.384
		Trust	481
		Commitment	.117
N			280

Based on correlation coefficient analysis it can be stated that the first hypothesis is partially validated.

At first glance, the results show that not all dimensions included in individual factors variable have influence on learning by sharing. Taking into account the construction of the hypothesis, there was a need for a detailed investigation. Thus, knowledge self-efficacy and trust registered negative results, in terms of correlation coefficient. In essence, this result is contrary to expectations; the influence of these factors has been seen as positive in several studies (Cabrera et al., 2006, Lin, 2007; Tseng, 2007, Chen et al., 2012; Ignasio and Rios, 2013).

According to the literature, there are many ways of explaining human behavior. One of the most powerful theory is social cognitive theory formulated by Bandura (1986, 1999), which states that individuals are not autonomous agents which act without context influence, or entities who mechanically respond to environmental conditions. In his theory, personal factors, the context and the behavior work as determinants of mutual influence (Bandura, 1989). Therefore, human behavior is partly self-generated and partially determined by environmental conditions. In terms of social cognitive theory, individuals are agents, self-assessors of motivators and actions who are constant concerning the interaction with the environment (Bandura, 2001). Thus, it is expected that a person with a high self-efficacy is more prone for knowledge sharing. There is several research which link self-efficacy with knowledge sharing behavior (Endres, Endres, & Chowdhury Alam, 2007 Mon & Leung, 2004 Mon, Leung & Koch, 2006). Regarding individual competitiveness dimension, the value of correlation coefficient (0.044) indicates that this factor has the lowest value, indicating that it is not an important factor of influence on learning by sharing. According to the authors such as Schepers & Van den Berg, 2007, Wang, 2004; Willem & Scarbrough, 2006, an organizational climate that emphasizes individual competitiveness can be a barrier for knowledge sharing, while the prospect of cooperation helps to create confidence, a necessary condition for knowledge sharing. Also, Wang (2004) noted that it is unlikely that knowledge sharing takes place between individuals who are competing for a certain interest (extrinsic or intrinsic motivation).

H2 – There is a direct relationship between organizational factors and learning by sharing in the sense that individuals who will get high scores on organizational factors will have a high level of learning by sharing behavior.

Table 2: Correlation between organizational factors (component dimension) and learning by sharing

			Total score for learning by sharing	
Sig. tailed)	(2-	Mutual benefit		522
		Organizational competitiveness		042
		Top management support		.547
		Practices for promoting knowledge sharing and learning		.485
N				280

According to results, there is a positive correlation between organizational factors and learning by sharing, since r = .174 p=0.0, p<0.05.

Similar to overall organization, individuals are acting in their own interest. Therefore, it was considered important to study the motivation that goes beyond relationships. Thus, on the assumption that both parties can benefit from relationship. Because of the importance of collaboration in terms of relationship, this aspect was investigated separately by trust and commitment, which are seen as key determinants of relationships. The negative value of mutual benefits indicates that an individual who is in a cooperative relation with its competitor will get the advantage of knowledge accumulation. Through collaboration, individuals aim to increase knowledge, and through competition they will try to gain competitive advantage. Therefore cooperation between individuals in the sense of learning by sharing cannot take place unless the conditions of cooperation will be followed.

H3 – There is a direct relationship between factors involved in co-opetition and learning by sharing in the sense that individuals who get high scores on factors involved in co-opetition will have a high level of learning by sharing behavior.

Table 3: Correlation between factors involved in co-opetition (component dimension) and learning by sharing

		Total score for learning by sharing
Sig. (2-tailed)	Trust	481
	Commitment	117
	Mutual benefits	522
	Organizational competitiveness	.042
N	·	280

According to results, there is a negative correlation between organizational factors and learning by sharing, since r=-.324 p=0.0, p<0.05. Therefore, the third hypothesis is rejected.

As can be seen from above table, the values of correlation coefficient in terms of trust, commitment and mutual benefits recorded negative results, while only organizational competitiveness recorded a positive result, but not a very statistical significant correlation. Thus, mutual benefits have the highest value, and the lowest was achieved by commitment. From this results it appears that individuals who commit in a relationship with the competitor they will not embrace learning by sharing.

The result of this hypothesis indicates that the aggregation of the four considered dimensions in order to verify the influence on learning by sharing indicates that it is not necessary to propose new work procedure to promote collaborative relationships based on co-opetion. Therefore, in the final framework, this variable will be removed. The individual openness on the possibility to collaborate with competition will be analyzed only in terms of mutual benefits.

H4 – Individual benefits may be associated with a high level of learning by sharing behavior.

Table 4: Correlation between individual benefits (component dimensions) and learning by sharing

		Total score for learning by sharing
Sig. (2-tailed)	Enjoyment in helping others	.248
	Employee expectations	.245
	Rewards system	.216
N		280

According to results, there is a positive correlation between organizational factors and learning by sharing, since r = .329, p=0.0, p<0.05.

As can be seen in above table, enjoyment in helping others dimension has the highest significant positive effect on learning by sharing, in terms of individual benefits (0.248). This result is consequent with previous studies found in the literature. Therefore, managers are encouraged to promote a behavior based on social exchanges. On other hand, reward system dimension recorded the lowest value of the correlation coefficient (0.216). This result is confirmed by previous studies who stated that this factor is not an important factor in promoting knowledge sharing (Constant, et al., 1996; Gupta and Govindarajan, 2000; Bartol and Srivastava, 2002, Adel et.al., 2007). A reward system could provide a temporary effect on knowledge sharing (Kohn, 1993). In this regard, Leonard-Barton (1998) stated that rewards system can determine how knowledge is accessed and flow within the organization. Moreover, rewards help in recognizing employee competences, as a fair and objective way, based on performance bonuses, which in turn increase the rewards system. As well is very important that employee do not fear that their careers may confront with danger if knowledge sharing can lead to mistakes or failures.

Following the verification of this hypothesis, it appears that individual benefits are an important aspect in creating learning by sharing culture, and greater emphasis should be placed on cognitive human being. The success or failure of the organization in fulfillment of its obligations to employee has influence on employee engagement concerning organizational effectiveness. Obligation compliance of both parties has a positive impact on employee attitudes towards strategic advice and operational contributions. It is also argued that employee satisfaction is an important factor in determining the quality of service (Zeithaml, et.al, 1990), which means that a successful psychological contract between employer and employee has a direct influence on acquiring and maintaining a durable competitive advantage.

H5 – Organizational benefits may be associated with high level of learning by sharing behavior.

Table 5: Correlation between organizational benefits (components dimension) and learning by sharing

			Total score for learning by sharing
Sig.	(2-	Propensity to innovate	.315
tailed)		Organizational performance	.330
N			280

According to results, there is a positive correlation between organizational factors and learning by sharing, since r = .343 p=0.0, p > 0,001. Therefore this hypothesis is validated.

As can be seen from above table, organizational performance dimension recorded the highest value of correlation coefficient in relationship with learning by sharing, namely (0.330). However, the results of component dimensions of organizational benefits does not have high significant differences, which means that promoting of learning by sharing could have long effect on assuring a propensity to innovate and organizational performance. The results of this coefficient correlation are confirmed by previous empirical studies who have been concerned about one of these dimensions included, namely propensity to innovate for knwoeldge sharing (Wasko and Faraj, 2005; Jantunem, 2005), and organizational performance for organizational learning (Brown & Duguid, 1998, Hansen, 1999; Mesmer-Magnus & DeChurch, 2009).

### 6. CONCLUSION

In current economy, organizations undergo a double mutation: everything is marketed and capitalized, and knowledge and innovation have become the pillar of competitive advantage. The main purpose of this paper is based on concepts from "knowledge management" and "organizational learning" field as discussed in the literature, being treated independently by some authors. Such an approach resulted in increased ambiguity between the two concepts.

Essentially, the learning by sharing process has three advantages, according to traditional approaches. Firstly, the learning by sharing approach is represented by the dynamic method established for a long – term to increase the organizations' competitiveness. Secondly, the learning by sharing – based processes can be useful and applied without requiring the financial resource. In this respect, employees only need to cooperate and be open to suggestions from other colleagues. And

finally, by promoting learning by sharing procedures the creation of a working environment (avoiding unfair competition) can be ensured.

Therefore, in addition to contributions to the theory, the results of this study contribute in practical terms, the relationships between the factors that influence learning by sharing may provide a clue as to how organizations can promote knowledge sharing – based culture.

By combining the power of knowledge sharing to organizational learning, organizations can create procedures, cultures and structures that allow scanning, evaluating, anticipating and taking concrete measures on unexpected threats and opportunities.

The proposed model depends on the collective understanding of the processes inducing the learning by sharing behaviors. Therefore, learning by sharing can be used by organizations in order to develop a realistic environment that can conduct knowledge sharing.

By increasing the level of learning and knowledge generation within an organization, the synergy between knowledge sharing and learning process becomes increasingly clear. In acceptance of this premise, we can't say that the two concepts, "knowledge sharing" and "learning process" can be treated separately, but more than that they can't function one without the other. Therefore, we can summarize the following benefits of learning by sharing concept. Organizations should fulfill their role of learning organizations by integrating knowledge management and organizational learning initiatives and practices within functions. By implementing such practices, they will be capable of acquiring a sustainable competitive advantage. The success of knowledge management initiatives and promotion of organizational learning can only be achieved if the organization is concerned with establishing a clear long - term strategy. Such a strategy should be implemented taking into account that knowledge - based resources necessary for the organization to become one that learns. The existence of a unified culture can reduce the communication barriers and lead to a closer cooperation within the organization. Thus it must show the existence of a framework whose components (vision, strategy, values, etc.) recognize the benefits raised from supporting organizational learning and knowledge transfer. In order to achieve the synergistic benefits of knowledge sharing and organizational learning initiatives, organizations should develop deliberate strategies that serve to integrate human resource management principles. Human resource management can motivate, encourage or facilitate knowledge sharing through policies. Moreover, organizations should strive to improve employee retention rates, so that knowledge can be retained within organizations. It is also required the understanding that the purchase of computer systems or installing computer networks will not ensure the knowledge sharing promotion. Instead, successful learning by sharing lays in the availability of qualified sharing and knowledge application staff, so that the technological tools have only a facilitating

Current views of human resources management argue that there should be a strategic orientation that would allow the organization to build its own unique human capital needed to possess a sustainable competitive advantage. This suggests that organizations with different strategies most likely will need different types of human capital in order to achieve success. However, in the ever changing competitive environment that the organizations are facing today, some skills are required regardless of the business strategy: the ability to continuously renew knowledge – based assets. The human resource management should therefore devote its efforts on understanding the way in which the knowledge flow increases that would ensure adaptation to unforeseen competitive forces. Understanding the dynamics of knowledge sharing can help identify people management practices in organizations.

Moreover, organizations must not only develop and expand employee knowledge, but must use mechanism and procedures in order to transform individual knowledge in assets. Continuous use of knowledge does not diminish the value, as other inputs. Conversely, the more knowledge is more widely used, the more it can be developed gradually, as employees gain experience in the business, yet they can be lost easily by employees who leave the organizations (personnel fluctuation). Therefore it is extremely important for modern organizations to develop logical mechanism and methods for learning by saring in order to systematize knowledge and information based assets and to optimally combine existing knowledge in order to enhance organizational performance.

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