The Review on Investigation of Barriers in Knowledge Sharing and Partnership in Information Communication Technology Companies

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Abstract: Challenging business environment in Information Communication Technology today requires firms to adapt quickly to associate new challenges and competition and present a particular problem for small businesses especially with limited resources. This study aims to study the meaning of knowledge sharing, partnership and identify the characteristic of barriers in social activities in these small and medium companies. Knowledge sharing is a process of identifying existing and accessible knowledge and transferring and applying this knowledge inside or outside the organization with better, faster and cheaper tools. The partnership is loosely-coupled system where the participants are neither linked by capital (joint venture) nor through joint efforts on specific projects or business areas. The findings of barriers in knowledge sharing and partnership are compared and the result can be used to aid decision making in companies for improving social activities practice among leaders, employees and partners from various agencies in today's global market.

Key words: Knowledge sharing, partnership, social barriers, sharing motivation, information communication technology

INTRODUCTION

Information communication technology companies or firms offers employment, encourage development and speedy growth of the advanced economies. The companies also play as important role in the innovation of the country's economic system. Therefore, it is vital for firms to understand the challenges in such a way as to reduce implications arising especially in social activities.

Recently, many companies are turning to sharing and doing partnership. As a result, sharing capability is receiving a significant attention as a new way of gaining competency (Lee *et al.*, 2016). Thus, the studies on knowledge sharing and partnership are important to provide considerable social risks and challenges for firms. Theoretically, this paper aims to provide knowledge sharing and partnership literature studies focus on barriers of different growth types of information communication technology business.

MATERIALS AND METHODS

Knowledge sharing: There are many ways to define knowledge sharing: a process of identifying existing and accessible knowledge and transferring and applying this knowledge inside the organization with better, faster and cheaper than they could be solved without knowledge sharing (Christensen, 2007). This study support the findings of (Lee *et al.*, 2016) who suggested that sharing competency is based on a firm's collaboration ability within and between organizations to pursue a common set of goals. Furthermore, interaction such as sharing is a mutual or reciprocal action where two or more parties have to depend to one another (Gronroos, 2009). This interaction ability can be done through Internet and related communication technologies in facilitating and sharing integration of resources such as help, advice and useful information (Belk, 2007). Sharing of knowledge occurs when a firm realizes it does not have the capacity, constituency and legitimacy to carry out and achieve its goal alone. There are two different type of sharing activities which are intra-firms and inter-firm sharing activity (Lee *et al.*, 2016). Intra-firms sharing activity is sharing behaviors within the same organization. It involves knowledge sharing, information sharing and collaboration between different functional teams through formal and informal meetings, dialogs and social networks (Vij and Faroop, 2014). Throughout this sharing behavior

could keep information and knowledge up-to-date and serves as a guide for future business action (Hsu and Wang, 2008).

Inter-firm sharing activity is sharing behaviors between individual firms (Lee *et al.*, 2016). The most common example is strategic alliance. This sharing activity is an inter-firm model of sharing behavior that allows firms to create value, obtain market leadership, access new markets by sharing possible resources (Anand and Khanna, 2000). The term is supported by another form of inter-firm collaborative effort which is open innovation (Lee *et al.*, 2016). In today's business environment, firms are required to explore the use of external source of ideas and innovations to augment in house R and D (Martinez, 2014).

Sharing motivations: The motivations of sharing activities have been studied by several researchers. The findings of (Lin and Darnall, 2015) were in line with the findings reported by Mohsen where by organizations are increasingly participating in sharing activities for different reasons. The reasons of sharing in firms are organizational learning, developing new products, accessing new markets, sharing risk and cost, partnership with channel members and co-creating customer value (Grant and Baden-Fuller, 2004; Kogut, 1991; Eisenhardt and Schoonhoven, 1996; Dacin *et al.*, 2007). These findings were supported by the study done by Martinez (2014) that identified three major key success factors to open innovation which are organization culture, intellectual property management and relationship. The attributes in all factors are key stakeholder support, effective internal communication strategy, focus on making money out of partnership than ownership, relationship building and trust, true win-win situation, flexibility and openness. All these factors are the business reason to open innovation.

Lee *et al.* (2016) study regarding three Korean companies which are Samsung Electronics, Korean Telecom and Oracle, six categories of sharing behavior were used in data analysis. The categories:

- Meaning of sharing competency
- Causal conditions
- Central phenomenon
- Context
- Action and interaction strategy
- Intervening conditions

Lee *et al.* (2016) described the result of sharing activities as a multi-causal phenomenon as given in Fig. 1. Lee *et al.* (2016) study, the qualitative method was used to find causal condition (positive condition, negative condition) and then shaped central phenomenon (positive, neutral and negative), context (interaction and communication) as well as intervening conditions (positive and negative). From the findings of Lee *et al.* (2016), the negative phenomenon and negative intervening can be identified as the barriers of sharing activities in firms. By recognizing the barriers in sharing activities, the management of firm can steer their actions towards the prevention and elimination of these barriers.

Knowledge sharing barriers: In previous literature, knowledge sharing barriers or challenges have been studied from different angles. For example (Christensen, 2007) has studied knowledge sharing problems from viewpoint of social and knowledge dilemmas and (Haldin-Herrgard, 2000) conducted a study of difficulties in sharing a tacit problem in organizations. Both (Christensen, 2007) and (Haldin-Herrgard, 2000) summarized the barrier of sharing knowledge was lack of time as they stated the internalization of knowledge typically requires a lot of time for building trust within organization.

The barrier in knowledge sharing relates also to personal characteristics (Cabrera and Cabrera, 2002). If the person in firm fails to see any personal benefits in knowledge sharing, they are reluctant to share knowledge (Haldin-Herrgard, 2000). Furthermore, a part of the motivation to share knowledge, there must be a relationship between the knowledge sender and receiver (Haldin-Herrgard, 2000). According to Kukko and Helander (2011), the language barrier can occur because it is not easy to put into words something that seems natural and obvious to oneself. This finding was supported by Christensen (2007) study who found that if parties such as novices and experts do not have any common, shared experiences and same absorptive capacity, it is very hard for them to understand the thinking process of others and to find common terminology. This has been proven by the findings of Kukko and Helander (2011) as given in Table 1.

Investigation on key knowledge sharing barriers in different growth of companies showed that knowledge typically not so easy to perceive and share with others, e.g., between software developer, salesmen and customers. In Table 1, organic growth is defined as natural growth of revenue and personnel by adding sales of services or products (Hirvikorpi and Swanljung, 2008).

Causal Conditions

[Positive condition]
- Consensus formation about sharing
- Top manager's leadership role
- Cooperation based work style

[Neutral condition]
- Fits between sharing and organization
- Effects of employees' sharing capability

Phenomenon

[Positive phenomenon]
- Knowledge shared
- Useful for problem solving
- Operation improvement in efficiency
- Increase of creative outputs

[Negative phenomenon]
- Confusion on the concept of sharing
- Limitation of IT system alone
- Conflicts with personal interests
- Setting the restrictions on the sharing activity
- Difficulties in measuring sharing performance

[Neutral phenomenon]
- Impose limitations of what to share
- Generation of informal sharing

Intervening Conditions

[positive]
- Sharing by IT tools
- The role of sharing infrastructure
- Organizational culture promoting sharing

[Negative]
- Organizational structure against the sharing

Context

[Interaction & communication]
- Mutual reciprocity between the sharing parties
- Feedback about the sharing activity

Action/Interaction Strategy

[Action]
- Positive attitude toward sharing
- Concern about work efficiency
- Concerns about information security
- Create sharing competency

[Coping strategy]
- Liaise with employee evaluation
- Develop personal incentives
- Better market oriented
- Active organizational change
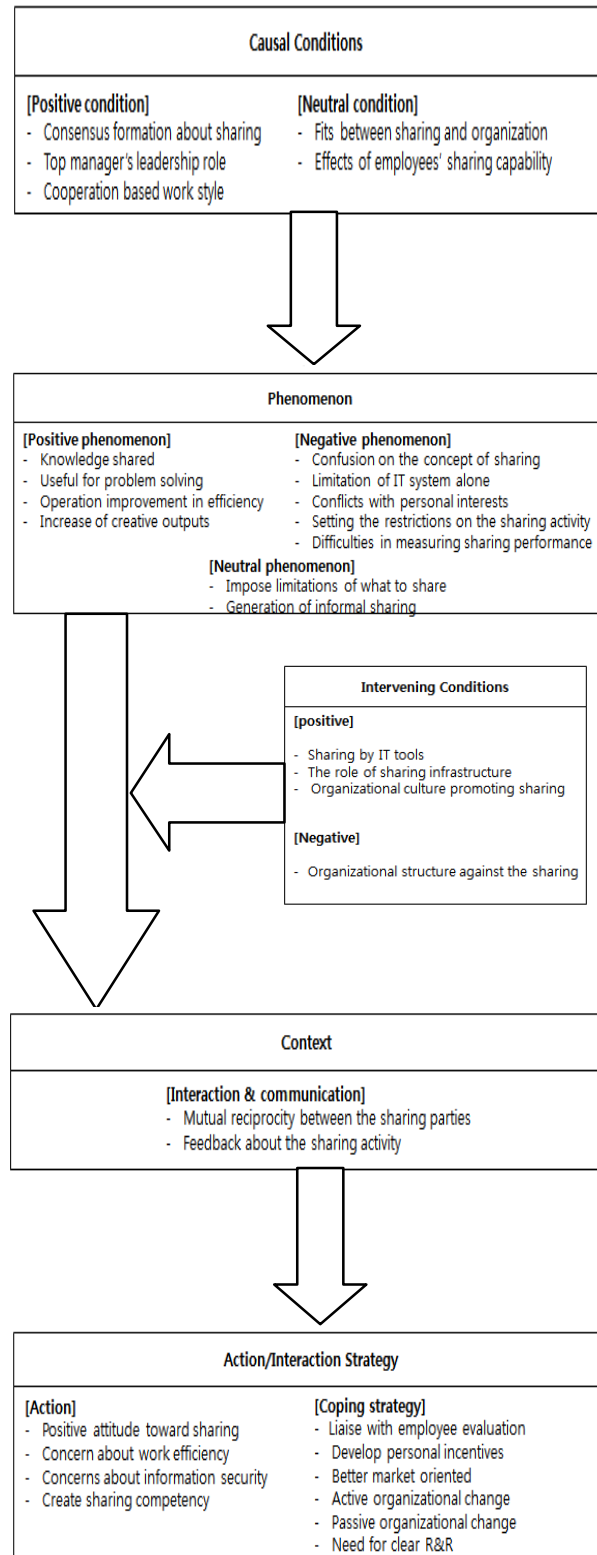- Passive organizational change
- Need for clear R&R

Fig. 1: The paradigm model of sharing behaviour (Lee *et al.*, 2016)

Table 1: Key knowledge sharing barriers in the different growth types of software company

Knowledge sharing bariers	Organic	Acquisitioned	Network
Individual			
Lack of time	x		
Lack of trust		x	x
Low awareness of the value of possessed knowledge		x	x
Power relationships		x	
Personal characteristic lack of social networks	x	x	x
Language problem	x		
Organizational			
Poor organizational climate and culture			
Disintegration of the knowledge sharing purpose from the organizational goals	x		
Neglect of managerial comunication about the benefits of knowledge sharing	x		
Distance		x	x
Lack of infrastructure to share knowledge	x	x	x
Lack of reward system for knowledge sharing			
Competitiveness of different units		x	
Complexity of the organization		x	x
Lack or exiguity of network connections	x	x	
Technological			
Unsuitable techonology		x	x
Un realistic expectations			
Reluctance to use the choosen techonologies		x	x
Lack of traning	x		
Lack of communication about the benefits of choosen techonologies	x		
Lack of time	x		

The term of acquisitions in Table 1 is where companies truly merge together in order to gain benefits of new competencies and synergy (Kukko and Helander, 2011). Lastly, network growth can be defined as a mix of organic and acquisitioned growth, doing business with other companies and all remain the same in term of personnel and culture and working as independent firm (Kukko and Helander, 2011).

RESULTS AND DISCUSSION

Partnership: In the software industry, outsourcing partnership is a good start for productive collaboration. Within the partnership network, a limited number of large organization, often referred to as hub, platform leaders, or key-stones, provide the systems' architecture as well as generic core functionalities while smaller independent software vendors often referred to as complementors, spokes, or niche players, build their solution on top and complement these platforms (Iansiti and Levien, 2004; Prencipe, 2003; Teng, 2003; Brandenburger and Nalebuff, 1997). According to Orton and Weick (1990), the partnership networks were described as loosely-coupled system where the participants are neither linked by capital (joint venture) nor through joint efforts in specific projects or business areas.

In addition, Kude *et al.* (2012) studied two theoretical perspectives in partnership formation which include the input-oriented perspective and output-oriented perspective. The first one is accepted as inter-firm partnership arrangement which organizations form partnership in order to gain access to external resources and capabilities. The second perspective is less established where the complementary of the partners' products influences the benefits obtained from the partnership.

The importance of partnership is supported by the findings of Kinnula *et al.* (2007) when the outsourcing partnership model was created based on empirical data from a software R and D outsourcing partnership. The model is given in Fig. 2 can give more in-depth insight into the formation and management process of an outsourcing partnership.

According to Kinnula *et al.* (2007) study, the model had 4 phases which involved planning, developing, implementing and managing the relationship and each of them contained activities. The Planning phase has three different activities which consist of form an outsourcing team, support the outsourcing partnership process and form a business plan. A fully empowered and competent outsourcing team is needed to make a business plan and manage the outsourcing partnership process. Members of the team must be chosen so they represent different functions, divisions and levels of the hierarchy. If not, troubles may arise such as problems with partner services and coverage in particular locations or overlooking particular functions. In this phase, when forming the business plan, objectives for outsourcing need to be identified as well as the needed services (Embleton and Wright, 1998). Best practices benchmarking of the outsourced work is useful to get a good picture of different alternatives, to help in cost identification for all the alternatives and to analyze the needed company internal competences (Ellram and Edis, 1996; Lacity and Hirschheim, 1995; McIvor, 2000).

In the developing phase, the most important decision in outsourcing process is whether to continue with the outsourcing partnership process or to terminate it. Before making the decision, the potential partners need to be screened, identified and evaluated (Embleton and Wright, 1998; Ellram and Edis, 1996; Lacity and Hirschheim, 1995 Domberger, 1998).

The main aims in Implementing phase is to make the relationship work by getting the transition done (planning and carrying it out) and by establishing the relationship by creating management processes and setting up the relationship management.
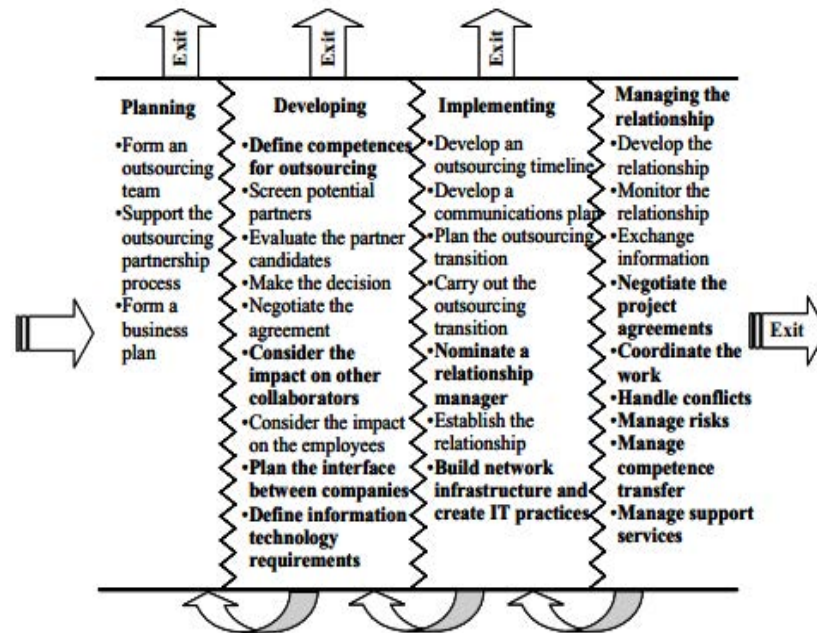
Fig. 2: The outsourcing partnership model (Kinnula *et al.*, 2007)

For the managing the relationship, there are a few operational activities involve which are develop the relationship, monitor the relationship, exchanging information between companies and considering the future of the relationship.

Based on the Fig. 2, the activities with bold text were the new activities compare with the synthesis models. These new activities have been added based on an analysis of the empirical data.

Partnership barriers: Based on study regarding the partnership barriers (Jang *et al.*, 2015) found that deep mistrust, limited sources and frustrating with incompetence such as limited practice knowledge and skills, unclear guidelines for those who is in charge of the case, conflict of attribution, lack of communication and continuity issues in following up with cases were the issues that raised in the partnership activities.

The findings of partnership barriers by Jang *et al.* (2015) are similar to what has been found by Kukko and Helander (2011) in knowledge sharing barriers which involve mistrust, limited resources and communication problem. Their findings regarding the barriers in social activities demonstrated the reality situation of firms that leaders' need to improve and to suggest re-evaluation in sustaining in global market today.

CONCLUSION

Implementing knowledge sharing activities and partnership will give challenges to firms. Due to these reasons, this paper focuses on the knowledge sharing and partnership meaning and barriers in information communication technology companies. The barriers of these two social activities mostly have similarity and firms need strategies to improve knowledge sharing and partnership. The firms must have clear guidelines and concrete policy that stipulates mutual cooperation between leaders, employees and partners from various agencies. When these social activities are successful, it may be a good start for a productive collaboration among them. However, further investigation on social barriers in knowledge sharing and partnership are crucial to sustain in recent business trend.

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