



## **Critical Human Behavior factors in development of absorptive capacity in knowledge intensive environment—A qualitative study in pharmaceutical companies of Pakistan**

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**Abstract:** Absorptive capacity has been discussed in different perspectives in research literature. Different models of absorptive capacity in research literature highlight the developmental history. Processes and systems at macro level in relation to absorptive capacity have been taken into account but in general form. Antecedents highlighting successful implementation of absorptive capacity process have not studied so far. This study explores critical success factors with the organization for effective development of absorptive capacity. Results show success factors related to management processes and social mechanisms critical in development of absorptive capacity. This quality study opens new doors for critical evaluation of absorptive capacity in relation to employees of pharmaceutical companies of Pakistan. [Muhammad Rafique, Mujtaba Hassan Agha. Critical Human Behavior factors in development of absorptive capacity in knowledge intensive environment—A qualitative study in pharmaceutical companies of Pakistan.

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### **1. Introduction**

Knowledge has become most important component of the organization in this turbulent environment. Sources of knowledge may be placed in two broad categories: generation of knowledge within the organization and other source is the acquisition from outside the organization. Organization requires specific capabilities to deal with the knowledge obtained from outside the boundaries. These specific capabilities have been discussed in literature in different perspective such as absorptive capacity (Cohen and Levinthal, 1990). Absorptive capacity is the ability to deal with new knowledge which is defined as the ability to recognize the value of new external knowledge, its assimilation and its application for organization. In the last two decades knowledge management has gained importance and organizations strive to gain competitive edge in the changing technological environment (Teece et al, 1997). Knowledge from outside the boundaries of organization has gained importance. The firms with effective knowledge process capabilities (absorptive capacity) enhance their knowledge memories (Nonaka, 1991). Therefore, it is important for organizations to enhance their capabilities to deal with new

knowledge. In this paper we explore the critical success factors which play an important part in development of absorptive capacity. We find that critical factors related to managers and employees directly affect absorptive capacity and factors related to top management moderate absorptive capacity process. However, antecedents related to procedures related factors directly affect absorptive capacity process. Our findings have direct implications for decision makers in the organizations especially dealing with new knowledge as a routine such as knowledge intensive organizations. This paper contributes to growing literature of absorptive capacity by exploring critical factors especially related to knowledge management as highlighted by Volberda et al (2010) in their study as research gap in general.

### **2. Absorptive capacity**

Absorptive capacity was introduced by Cohen and Levinthal (1990). They defined absorptive capacity in terms of capabilities of organization to deal with new knowledge obtained from outside the boundaries of organization. They defined it as “ability of organization to recognize the value of new external knowledge, assimilate it and apply it to

commercial ends". This three component definition was redefined by Zahra and George (2002) who introduced four components of absorptive capacity namely as acquisition and assimilation which was referred as potential absorptive capacity and transformation and exploitation which was referred as realized absorptive capacity. The basic components have been discussed in different dimensions in relation to knowledge process activities. Figure 1 shows absorptive capacity process found in literature in general form.

Absorptive capacity has been discussed in different perspectives and this construct evolved step by step in research literature after introduction by Cohen and Levinthal (1990). The development of absorptive capacity has been viewed by incorporating different antecedents both inside and outside the organization such as Jansen et al (2005) and

Todorova and Durisin (2007) have suggested antecedents within the organization for development of absorptive capacity. Lane and Lubatkin (1998) and Lane et al (2001) have focused on antecedents external to organization. Minbaeva et al (2003) focused on knowledge sharing practices. There has been an extensive debate on development of absorptive capacity inside the organization. Authors have suggested different strategies to absorb the external knowledge and have critically evaluated the knowledge process activities inside the organization. This emerging construct has been discussed at macro level in extensive studies which is understood at strategic level only, whereas, a few studies such as Lenox and King (2004) have discussed human involvement in the development of absorptive capacity inside the organization.

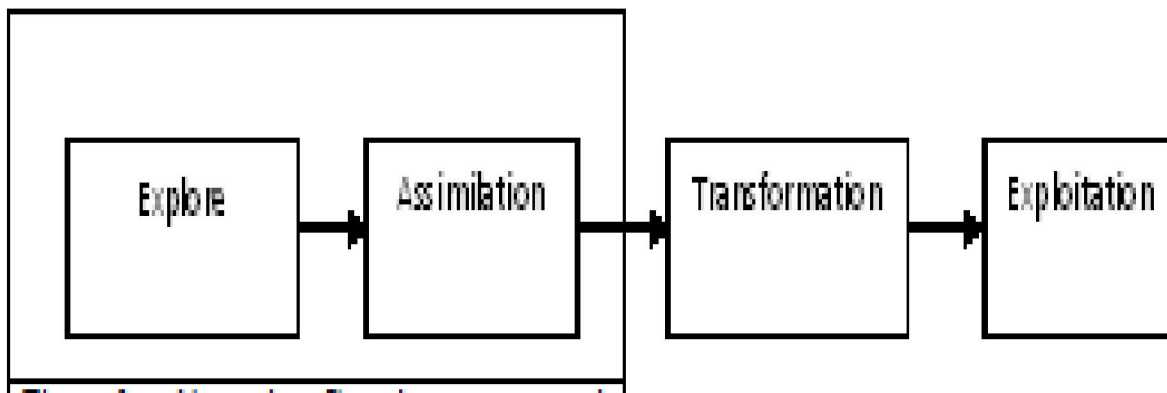


Fig 1: Absorptive Capacity: A General Model

They suggested that absorptive capacity may be enhanced by internal information system if managed effectively. They further argue that information shared by the managers across the organization help the employees to absorb knowledge and in turn enhance absorptive capacity. Minbaeva et al (2003) in their study to enhance absorptive capacity through human resource practices suggested that knowledge transfer may be effectively conducted by taking into account the employees ability and their motivation to process knowledge process activities. They further suggested that training of employees has positive impact in the development of absorptive capacity. They discussed that incentive system for employees, performance based promotion and internal

communications have significant impact on absorptive capacity development and knowledge based activities. This study focuses on the critical success factors contributing to development of absorptive capacity in knowledge intensive environment but taking the views of employees and managers together.

### 3. Methodology

This qualitative study follows action research approach to explore the views of employees in pharmaceutical companies of Pakistan. The data was collected through purposive sampling as the purposive sampling is best approach where little is known and we want to explore the topic in depth with

quality. For innovative topics the inductive approach is appropriate as suggested by Coughlan and Coghlan (2002). Broadly the steps suggested by them are as follows:-

- Gathering of data
- Getting feedback
- Analysis of data
- Planning phase
- Implementation
- Evaluation phase

### 3.1 Sample of study

Participants of this qualitative study came from large pharmaceutical companies of Pakistan having at least 500 employees. As the pharmaceutical companies are committed in knowledge process activities as their normal routine therefore fall in knowledge intensive environment. The absorption of knowledge required for these companies is vital and they follow absorptive capacity process as their routine activities unlike traditional knowledge companies which work in a stereotype processes and acquisition of knowledge is a slow process. This study therefore takes into account the employees from pharmaceutical companies in Pakistan. The sample came from experienced employees and intensively involved in the knowledge process activities for which purposive data collection technique was adopted.

### 3.2 Characteristics of sample

The employees with well experience in their field were selected for interviews of this study. The interviewees were asked to further propose the respondents and were approached for interview. Most of the employees were having the job experience more than ten years and minimum qualification was matriculation, the subject specialists were also included in the sample. Total 41 interviews were conducted and maximum number of employees comprised of upper bracket both in qualification and age to get good quality of data.

Table 1 shows the characteristics of sample.

|               |                |    |
|---------------|----------------|----|
| Gender        | Male           | 35 |
|               | Female         | 6  |
| Qualification | Specialists    | 18 |
|               | Graduates      | 12 |
|               | undergraduates | 11 |
| Age           | 20-30 Ys       | 4  |
|               | 31-40Ys        | 10 |
|               | Above 40 Ys    | 27 |

### 3.3 Conduct study

Initial interviews were conducted in order to find the pattern of trends in the perception of employees in context to absorptive capacity. General discussion with the employees was carried out in order to get feedback from employees and this portion of discussion was not part of the sample of main study. After finding the general trend a formal study was conducted. As the main focus of study was to explore the success factors critical to develop absorptive capacity in the organizations therefore in-depth interviews were conducted and each interview lasted for at least forty five minutes. The respondents (employees) were first introduced with the research aim and research question along with introduction of topic (Absorptive Capacity). Maximum interviews were conducted at the work place of employees; however, few opted to be interviewed off the work place and therefore conducted at their residence or some public place as per their choice.

The interviews were started with a very general question such as **“How knowledge process in your organization is executed?”** to very specific question **“In your opinion what are the critical success factors which attribute to develop absorptive capacity?”** The responses were analyzed keeping in view percentage of responses in the light of interviews.

## 4. Results

Majority of the employees perceived incentive system as one of the critical success factor for development of absorptive capacity followed by skill level of employees. Knowledge sharing was perceived another critical success factor for the development of absorptive capacity. Training and knowledge base was moderately perceived as critical success factor as compared to knowledge sharing and skill level of employees. At the same time involvement of top management was also perceived as critical success factor but with comparatively low perception level. Figure 2 shows

the graphical representation of critical success factors identified by employees in knowledge intensive

environment (pharmaceutical companies of Pakistan).

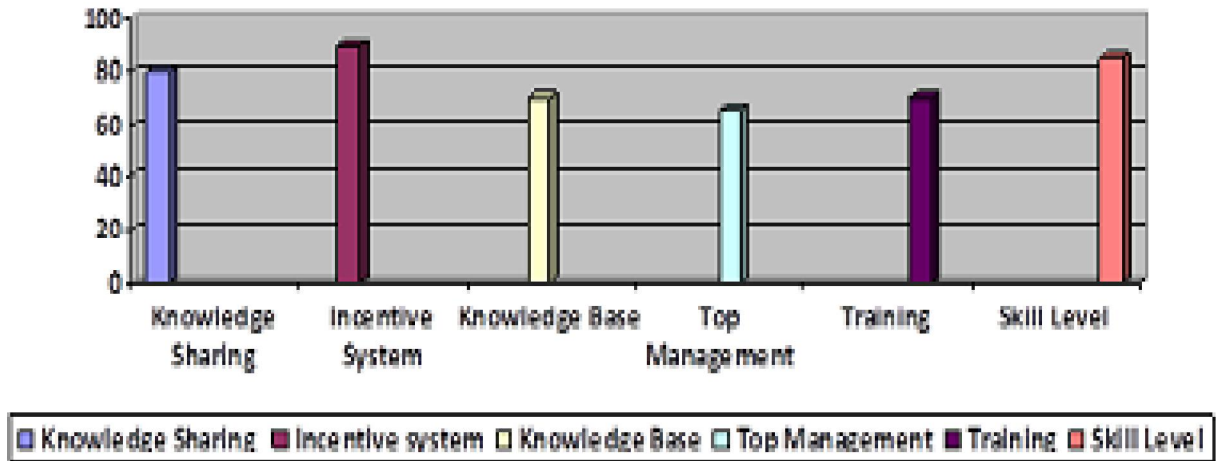


Fig 2: Critical Success Factors

## 5. Discussion and analysis

This study intended to emphasize on the development of absorptive capacity in pharmaceutical companies of Pakistan. Results of interviews with employees highlight that absorptive capacity development is not a function of serial activities but the factors related to organizational activities directly affect the development of absorptive capacity. Knowledge sharing among the employees fosters the knowledge sharing activities as argued by the Cohen and Levinthal (1990) in their original work therefore was perceived as critical success factor for development of absorptive capacity. The organizational knowledge base linked directly with knowledge process activities was perceived as critical success factor which is also well aligned with knowledge management theories where knowledge base generates the dynamic capabilities (Teece et al, 1990). Although the organizational factors (Knowledge sharing, knowledge base and training) attribute to effective absorption of knowledge but the individual level factor (skill level) proved to be most critical success factor after the incentive system devised for them. As the absorptive capacity is considered the routine process inside the organization therefore direct involvement of top management in absorptive capacity process was perceived low which means that top management has less critical value as compared to other critical success factors.

The results highlight those organizations especially those operating in knowledge intensive environment should focus on internal knowledge process activities and factors attributing to these activities.

## 6. Conclusion and Recommendations

Absorptive capacity being a unique process to deal with the new external knowledge is linked with critical factors and organizations may succeed by addressing these critical factors in an effective way while keeping the pace of competition outside the boundaries of organization. The organizations need to keep constant eye on internal processes along with keeping in view the infrastructures. Organizations are required to align their processes with the changing demands and technological base in order to enhance their absorptive capacity.

This study has taken into account the perception of employees in pharmaceutical companies of Pakistan in general form, however, there is potential among the employees to differ in variety of ways therefore, further research be carried out in context to separate critical success factor in depth. Diverse participants with experience in different fields and with different educational background may be incorporated to study critical success factors in context to absorptive capacity.

## 7. Limitations

This study was carried out in knowledge intensive environment (pharmaceutical companies) and results of studies of this pattern may be different in traditional knowledge environment. Moreover, small homogeneous type sample was opted for in depth interviews of employees however, same study with different respondents may give different results. The study may be conducted with greater sample size and may be focused to specific environment.

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