

THE RELATIONSHIP BETWEEN ABSORPTIVE CAPACITY AND ORGANIZATIONAL EFFECTIVENESS: MODERATED BY STRUCTURE

Tan En Hwa, Chua Geok Ling,
Faculty of Business, Economics and Accountancy, Universiti Malaysia Sabah

Email: terrancextanx@gmail.com

ABSTRACT

This study aimed to investigate the relationship between absorptive capacity and organizational effectiveness that moderated by structure. The variables included in this study are absorptive capacity exploitation as independent variable, organizational effectiveness as dependent variable and structure as moderator. The discussion of this study concluded that absorptive showed significant relationship with organizational effectiveness. The relationship between structure and organizational effectiveness showed significant relationship. Meanwhile, the discussion of this study are close related with the previous studies which showed significant relationship in between structure as moderating effect and absorptive capacity towards organizational effectiveness. In conclusion, it can determine absorptive capacity brings impact towards organizational effectiveness and it can be enhance the effect through structure as moderator.

Keywords: Organizational Effectiveness, Structure, Absorptive Capacity

1.0 INTRODUCTION

This study focus is on verifying the correlation between absorptive capacity and organizational effectiveness with moderating effect of structure. It is followed by the knowledge based-view as foundation research in this study. Dependent variable (organizational effectiveness), independent variable (absorptive capacity) and the moderating effect of structure are introduced and briefly described as part of the main topic of literature for this study. Knowledge management aids to identify the important or critical problems of organizational survival, adaptation and competitiveness. Organizational effectiveness is about the effectiveness of organizations which correlated with organizational performance (Basol & Dogerlioglu, 2014). It can be refer as "the degree to which an organization realizes its goals" where efficiency, adaptability and innovativeness are included (Gold, Malhotra & Segars, 2001). Meanwhile, the definition of structure is referring to the organization's form whereby only organizational structure itself is included (Gold *et al.*, 2001). It means the extent of an organization's structural intention in encouraging knowledge related activities (Chang & Chuang, 2011). The dynamic environmental changes that happen which affects the organizations (Malhotra, 2002; Cooper, 2005). The environmental change is depends on both the supply environment and changing nature of consumer behavior. It is especially critical on the rapid changing of situations at destinations, whereby knowledge is required to correspond to the situation. knowledge is difficult to control or obtain whereby many organization have trouble in identifying the internal and external knowledge. It is because knowledge is one of the sources to assist organizations in achieving the organization's goals. Thus, absorptive capacity is needed in organizations to acquire the internal and external knowledge (Thomas & Wood, 2015). There are situations of unstandardized in terms of knowledge transfer process, especially within the organization in obtaining relevant information (Hjalager, 2015; Weidenfeld, Williams, & Butler, 2010). The SME-managerial level are not aware or failed to identify which information is relevant

and useful to them for sharing purpose (Thomas & Wood, 2015; Hjalager, 2015; Weidenfeld *et al.*, 2010). Consequence that followed include failed to act and correspond effectively to any unexpected incidents that happened.

2.0 LITERATURE REVIEW

2.1 Knowledge-based View

Knowledge based-view is closely related to social capital theory whereby effective management is done on the knowledge within an organization. Grant (1995) suggested the source of competitive advantage for organizations can be found from level of knowledge integration and coordination capabilities. Three level of knowledge integration has been discovered which inclusive of the efficiency of integration, flexibility of integration, and scope of integration. Meanwhile, there are four main mechanisms of coordination which are routines, group problem solving and decision making, rules and directives, and sequencing.

The efficiency of integration is refers to the "ability of an organization to access, transfer and apply specialized knowledge" (Gold *et al.*, 2001). It shows the role of an organization in differentiating the organizations' functions and integrating those functions to achieve common goals (Lawrence & Lorsch, 1967; Gold *et al.*, 2001). In order to further improve on knowledge management, the integration is further divided into several dimensions of social capital (Bartlett & Ghoshal, 1998). The effective mechanisms for integrations depends on the existing communication of common language and vocabulary within organization. It assists in facilitating the communication and forming fundamental co-operation between individuals or groups within an organization to create new knowledge.

On the other hand, coordination of knowledge is the basic task within an organization contributed by the efforts of different individuals inside the organization (Grant, 1996; Gold *et al.*, 2001). The four main mechanisms of coordination are routines, group problem solving and decision making, rules and directives, and sequencing. Firstly, routines is supporting the complex interactions between individuals which are essential for generating knowledge. Group problem solving and decision making are necessary to be achieved by social interaction of individuals. Meanwhile, rules and directives are about plans, forecasting, policies and scheduling through communication. Lastly, sequencing is referred to each of the processes input which happened independently in a specific time frame.

Thus, knowledge-based view can assist better in understanding the organization to manage effectively on a particular or new knowledge within the organization. It shows that knowledge-based view is correlated with the dimensions of absorptive capacity whereby the more the knowledge be acquire, assimilate, transfer and exploit within the organization, the more competitive advantage that an organization can create. It means by generating and managing the new knowledge well, the effectiveness of the organization would be increased. The organizational effectiveness is determined through the dimensions of the absorptive capacity and further enhanced by structure as moderator (Carlborg, Kindstrom, & Kowalkowski, 2014; Hjalager, 2015; Weidenfeld *et al.*, 2010).

2.2 Knowledge Management

Knowledge acts as a foundation for understanding the nature of a situation where the starting of various relevant processes occur (Gold *et al.*, 2001). Many perspectives have been used to investigate knowledge and knowledge management.

Many researchers have given several definitions attributed to knowledge and knowledge management. Knowledge has been defined as "thing that lives between information and wisdom" (Gold *et al.*, 2001). It is referred as having the fundamental of understanding on knowledge by experience. Eventually, some authors have defined knowledge as the fundamental of scientific whereby it had been tested and proof for validity (Porter-Liebskind, 1996; Gold *et al.*, 2001). In addition, some authors defined it as information based, action oriented, and as a function of information, individuals, systems or technologies. Meanwhile, several authors defined knowledge as a function of framed experience. This means that there are individuals and organizations' spirit which embedded into documents, routines, practices, norms and procedures (Gold *et al.*, 2001).

Basically the dimension of knowledge can be divided into tacit and explicit which have been agreed and supported by numerous of researchers (Gold *et al.*, 2001). Tacit knowledge has been defined as complex, unobservable which is difficult to transfer and not teachable (Porter-Liebskind, 1996; Gold *et al.*, 2001). Implicit which are more likely consists of the inside of individuals' think or mind (Gold *et al.*, 2001). In contrast, explicit knowledge can be found in the form of products, protocols, and documents which have been written or recorded. It can be easily transferred, observable and simple to teach. The dimension of tacit and explicit knowledge can be further explained by the knowledge stickiness (Gold *et al.*, 2001). Knowledge stickiness is referring to knowledge which is naturally difficult to transfer (Szulanski, 1996). The level of stickiness is depending on unreliable sources, unproven knowledge, and lack of context. Therefore, knowledge that are tacit could be more sticky and vice-versa.

However, knowledge management can be defined as involvement of coordination and integration of several knowledge-based structures, processes, individuals, activities, and resources within the organization (Gold *et al.*, 2001; Alavi & Leidner, 1999). It means that knowledge management creates a combination between knowledge and action whereby managing the organizational change, aligning the process, technology and organization have to be continued. Maintaining and reusing the information to improve performance are essential too. Ang and Massingham (2007) stated that knowledge is known as the most valuable strategic resource for organizations. It could increase the capabilities of organizations to create competencies by having knowledge combining with resource. According to Schafferling *et al.* (2011), knowledge management is recognizing and leveraging the collective knowledge in an organization to assist the organization being competitive and increase the level of innovation and responsiveness. Organizations need to concentrate on knowledge management process in order to build its own core competencies such as creation, sharing and distribution of knowledge (Toh, Muhamad Jantan & Ramayah, 2003). Several knowledge management processes have been introduced which basically divided into four dimension namely acquisition, application, storage and retrieval, and coordination (Gold *et al.*, 2001; Ang & Massingham, 2007).

2.3 Organizational Effectiveness

The organizational effectiveness refers to the effectiveness of knowledge management within an organization (Gold *et al.*, 2001). However, evaluation of effectiveness of organizations has been suggested to be based on four components which are resources acquisitions, efficiency, customer satisfaction and goal achievement (Basol & Dogerlioglu, 2014; Kushner & Poole, 1996).

In addition, organizational effectiveness is value based through achieving goals within a specific time frame (Roy & Dugal, 2005). Organizations also experience a learning effect through improving from time to time on its capabilities for creating value (Galumic & Rodam,

1998). Organizational effectiveness varies according to divisions such as owners, customers and employees (Roy & Dugal, 2005). At the organization level, integration and adaption of activities and resources took place whereby they coordinate with each other in order to use and gain more knowledge from other units (Haas, 2010). Sensitivity of the organization is related to its business environment, representing the ability to learn, adapt and respond to market demands (Kushner & Poole, 1996).

Many researchers had agreed that effectiveness of organizational is correlated with organizational performance. Besides that, Daft (1995) also had defined organizational effectiveness as "the degree to which an organization realizes its goals". It measures the assessment of organizational effectiveness on the overall success, market share, growth rate, profitability and innovativeness of the companies (Zheng, Yang & McLean, 2010). Performance is refers as the organizations' capabilities to create or generate new product (Langa, Morales & Miquel, 2015). Performance measures the innovative capability of organizations for innovation to new product, service or process creation in terms of business unit. Organization performance is referring to the organization value which generated by intangible assets like knowledge or brand, while financial measurement is developed by depending on the industrial society (Lee & Lee, 2007). External growth is used to measure organizations' performance in knowledge management and employees' performance. Knowledge management has also been regarded as enhancing the organizational effectiveness.

2.4 Absorptive Capacity

Absorptive capacity is defined as the ability of the organizational to acquire, assimilate, transfer and exploit knowledge from the environment (Zahra & George, 2002; Ang & Massingham, 2007; Schafferling *et al.*, 2011). Schmidt (2005) agreed with the definition which absorptive capacity is depending on the organization's capability or ability to absorb or adapt with the external knowledge. However, Cohen and Levinthal (1990) found that an organization's absorptive capacity is depends on the absorptive capacity of the individuals within the organization. Thus, absorptive capacity can be simplified as the ability to absorb internal and external knowledge.

The components of absorptive capacity can be divided into explicit and implicit process of knowledge management (Schmidt, 2005; Gold *et al.*, 2001). External knowledge is exploited by transforming a particular knowledge to be used within the organizations (Escribano, Fosfuri & Tribo, 2005). It is necessary for organizations to change or combine the existing knowledge by acquiring new knowledge and assimilating it (Souza & Kulkarni, 2015; Limaj, Bernroider & Choudrie, 2016). Other authors supported that absorptive capacity's dimensions could be divided into efficiency, scope and flexibility. Efficiency is refers as the cost and economies of scale and follows with a specific level of acquisition, assimilation, and exploitation of external knowledge (Cohen & Levinthal, 1990). Schafferling *et al.* (2011) stated that the ability to recognize, assimilate and apply new knowledge depends on the interactions, interdependent activities and knowledge exchanges among individuals in the organizations. Absorptive capacity could enhance the ability to sense surrounding environment and recognize opportunities for prior knowledge to be accumulated over time. Schafferling *et al.* (2011) emphasize that assimilation and transformation are interdependent on each other because knowledge can be assimilated, transformed and assimilated again.

Meanwhile, some researchers have differentiated two types of absorptive capacity, potential absorptive capacity (PACAP) and realized absorptive capacity (RACAP) (Schafferling *et al.*, 2011; Zahra & George, 2002). Potential absorptive capacity is defined as the ability of organizations to acquire and assimilate the external knowledge whereas realized absorptive

capacity is about the ability of organizations to transform and exploit knowledge (Schafferling et al., 2011; Zahra & George, 2002). Potential absorptive capacity and realized absorptive capacity are independent but have complementary role whereby both act as the subset of absorptive capacity that coexist at all time for improving organizations' performance (Lewandowska, 2015).

The study of Schmidt (2005) mentions about the factors which are influential towards absorptive capacity. The three main factors which are useful in the management or innovation process; R&D activities, prior knowledge and individuals' skills, and organizational structure. However, Ang and Massingham (2007) stated that organizational culture could be another factor that affects absorptive capacity as well.

Absorptive capacity also assists the organization to identify and acquire knowledge which are beneficial for them. The ability to identify, evaluate or obtain potential absorptive capacity is also known as the ability to use and to exploit. Generally, the level of absorptive capacity can be divided into different terms of benefits which organization can exploit them for higher efficiency performance (Cohen & Levinthal, 1990; Schmidt, 2005; Schafferling *et al.*, 2011).

The R&D activities are important in forming absorptive capacity whereby R&D can assist in the innovation process of organizations (Cohen & Levinthal, 1990; Schmidt, 2005; Schafferling et al., 2011). R&D could form or generate new knowledge and innovation for the organizations. On the other hand, prior knowledge and individuals' skills can be facilitated to absorb new external knowledge (Schmidt, 2005; Mariano & Walter, 2015). It acts as a foundation for forming ACAP whereby time is needed to acquire and transform the use of new knowledge in the organizations. For example, the employees' level of education which could affect the ability to adapt or absorb new knowledge, like higher education level can increase the individuals' ability to assimilate and use new knowledge (Cohen & Levinthal, 1990; Schmidt, 2005; Schafferling et al., 2011). Prior knowledge includes basic skills or shared language to develop high level of absorptive capacity (Cohen & Levinthal, 1990; Moutinho, 2016). Cohen and Levinthal (1990) also supported that past learning experience could bring effect towards ACAP.

2.5 Acquisition

Acquisition is referring to the ability of organizations to recognize and acquire external knowledge to be applied into operations (Schafferling *et al.*, 2011; Thomas & Wood, 2014). It shows that absorptive capacity can be influenced by three attributes under knowledge acquisition which are intensity, speed and direction (Zahra & George, 2002; Krstic & Petrovic, 2011). The intensity and speed of an organization's efforts to recognize and collect knowledge can ensure the quality of the particular organization's acquisition capabilities.

Acquisition is a very important part of the process in increasing the absorptive capacity level. It is because acquisition is able to bring in new knowledge towards the organization. This new knowledge can be used as future innovation purpose. Acquisition can affect the creative capabilities, knowledge exploitation for future absorptive capacity. Basically, these are two types of acquisition which are market knowledge acquisition (indirect and direct) and technological knowledge acquisition (Krstic & Petrovic, 2011). An organization can acquire external resources by either decreasing or increasing its dependence on other organizations, that is, its power can be modified through its interaction with other parties (Ulrich & Barney, 1984).

2.6 Assimilation

Assimilation is defined as the "organizations' routine and processes to process, analyze, interpret and understand the information" from external source (Schafferling *et al.*, 2011). It shows that acquired knowledge could have different outcome of significance level on organizations. For instance, if an organization assimilates knowledge in a fast and comprehensive way, then it will show a higher significance level on the organization's effectiveness. External knowledge is also known as specific source of knowledge which cannot be easily replicated by outsiders (Krstic & Petrovic, 2011).

Assimilation process is also essential as without assimilation, the acquired knowledge cannot function in the right path. Assimilation have other definition whereby it is refers as the understanding of knowledge like using economic resource for innovation development (Krstic & Petrovic, 2011). Thus, it is important to minimize the gap between the need knowledge and the existing knowledge. Lack of assimilation causes organization failed in exploiting the new gained knowledge or unable in detecting its importance.

Due to the insufficiency of the existing resources, organizations need to absorb knowledge from outside, especially when the market competition increases. An organization can absorb knowledge from other parties, such as customers, competitors, universities, and business associations or through addressing other means, such as radio, television, newspapers, and the Internet (Ulrich & Barney, 1984).

2.7 Transformation

Transformation is referred as the ability of the organizations to develop and refine the new knowledge to facilitate it to be combined with existing knowledge (Schafferling *et al.*, 2011; Thomas & Wood, 2015). It shows that transformation involves the adding of new knowledge into the organizations, while some of the old or useless knowledge is deleted or replaced. This ability could indirectly fasten the entrepreneurial mindset and actions (Zahra & George, 2002; Krstic & Petrovic, 2011). It can facilitate the recognition of opportunities and possibly generate new competencies within the organizations.

Transformation process could be more efficient if the assimilation increases. The relation between assimilation and transformation is very significant. There are basically three elements consist in transformation which are understanding the existing knowledge resources, summarize knowledge and combination of both (Krstic & Petrovic, 2011).

2.8 Exploitation

Exploitation is about the organizations' ability to harvest and assimilate knowledge into operations (Schafferling *et al.*, 2011; Zahra & George, 2002). It shows that exploiting knowledge could produce something new in term of products or process within the organizations (Garvin, 1993). The ability to exploit external knowledge is critical for improving organizations' innovative capabilities (Cohen & Levinthal, 1990). From the perceptive of Zahra and George (2002) stated that exploitation as the organizational capability where it allows organization to refine, extend, and leverage existing competencies or generate new competency by incorporating acquired and transformed knowledge into the operations (Krstic & Petrovic, 2011; Thomas & Wood, 2014).

In the exploitation process, it has been highlighted that certain application of extended knowledge took place in the organization. The outcome of exploitation after integrated with transformation could be used for commercial ends to launch some sort of prototype of products in the organization. For example, the ideas for product or patent application which known as ability to develop ideas for meeting the market needs (Krstic & Petrovic, 2011; Cohen Levithal, 1990).

2.9 Structure

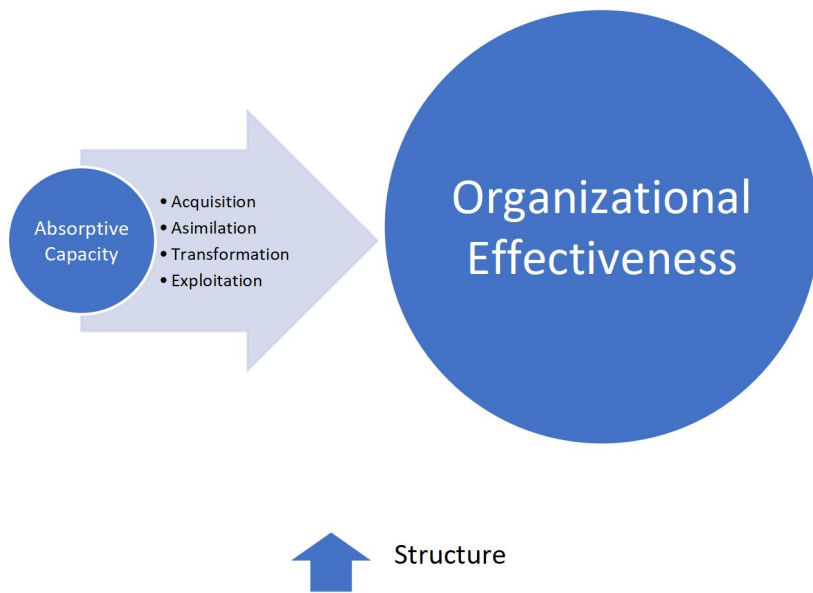
The structure is related to knowledge management where it mainly concentrates on importance of social interaction for creation of new knowledge (Gold *et al.*, 2001; Sanchez & Mahoney, 1996). The definition of structure is "the organization's form which not only depends on structure itself but including the strategy and management processes." As suggested by Miles, Snow, Matthews, Miles and Coleman (1997), structure has been used by organizations in many situations for essential continuous of learning and innovation. This means that an organization and every unit within the organization have to be able in adapting to continuous reconstruction in order to make the expected contribution to the overall organization. It shows that being adaptive and flexible are important elements to apply within organization (Sanchez & Mahoney, 1996). It also refers to the extent of an organization's structural disposition about the knowledge related activities (Chang & Chuang, 2011).

Generally, structure capabilities of knowledge management infrastructure consist of two which are organizational structure and incentive system (Gold et al., 2001). Structure is an important element in leveraging technological as it promotes individualistic behavior in which locations, divisions, and functions as information can inhibit effective knowledge management across the organization (Grant, 1996). Structure components usually have the unexpected consequences of constrain cooperation and sharing of knowledge across internal organizational boundaries.

Incentive and rewards system under knowledge management structural is refers as a process to identify channels from which knowledge is accessed (Leonard-Barton, 1995). It means these systems could create obstacles to effective knowledge management activities. Incentive systems is essential to be structured in order for the individuals within organization to be motivated by rewarded for generating new knowledge. In addition, employees could share their knowledge or assist other divisions or functions which would benefit the organization (Gold *et al.*, 2001; Leonard-Barton, 1995). Thus, combination of knowledge management structural which include formal organization's formal structure and incentive systems could build up an organization's overall knowledge management structure.

3.0 DISCUSSION

Figure 1: Conceptual Framework



3.1 Absorptive Capacity and Organizational Effectiveness

The absorptive capacity is significantly correlated with the innovation process and company innovativeness, adaptability and efficiency which affect the organizational effectiveness. Absorptive capacity and organizational effectiveness are correlated with the capabilities that brings impact towards innovation performance, adaptability and efficiency level (Escribano *et al.*, 2005; Cohen & Levinthal, 1990). A positive impact of absorptive capacity on innovation performance may influence the innovation ability, adaptability and efficiency which referring to the organizational effectiveness.

Some researchers stated that absorptive capacity has an impact on innovation performance whereby organization obtains external knowledge to detect, assimilate and exploit it. Thus, organization with more absorptive capacity will significantly benefit more (Cohen & Levinthal, 1990; Zahra & George, 2002). The higher the level of absorptive capacity, the greater the impact it brings towards organizational effectiveness. It is because organization can gain as much internal and external knowledge as possible. The finding from Cohen and Levinthal (1990) showed that the impact of absorptive capacity on influencing the level of innovation activities which is refers as organizational effectiveness.

H1: There is positive significant relationship between absorptive capacity and organizational effectiveness.

3.2 Structure and Organizational Effectiveness

The effect of structure on organizational effectiveness has been investigated and showed significant level (Ledbetter, 2003). The results have shown that environment, technology, size, strategy, goals, culture and philosophy impacted on structure and a definite connection existed between organizational effectiveness and structure. Hao, Kasper and Muehlbacher (2007) studied about the relationship between structure and performance. The findings indicated that in a high technology or knowledge intensive industry, structure affects organizational effectiveness mainly through innovation and organizational learning. But in traditional industry, such as labor or capital intensive industry, structure impacts organizational effectiveness mainly through innovation.

Previous study has stated the relationship between structure and organizational effectiveness is significantly. Structure components usually have the unexpected consequences of constrain cooperation and sharing of knowledge across internal organizational boundaries (Gold *et al.*, 2001). Structure is an important element in leveraging technological as it promotes individualistic behavior in which locations, divisions, and functions as information can inhibit effective knowledge management across the organization (Grant, 1996). Incentive systems is essential to be structured in order for the individuals within organization to be motivated by rewarded for generating new knowledge. (Gold *et al.*, 2001; Leonard-Barton, 1995). The combination of knowledge management structural which include formal organization's formal structure and incentive systems could build up an organization's overall knowledge management structure that effectively influence and control on innovation ability, adaptability and efficiency level as organizational effectiveness.

There is a positive correlation between organizational effectiveness and structure (Ledbetter, 2003). The result shows that organizations with structure take the approach of emphasizing skills that allows employees to better serve the organization by solving problems and interacting with customers and other employees. The more flexible an organization, the more it moves toward effectiveness. Thus, organization will be able to meet objectives,

adapt to dynamic environment and survive in the future (Latifi & Shooshtarian, 2014). The hypothesis can be formed as:

H2: There is positive significant relationship between Structure and organizational effectiveness.

3.3 Structure as Moderator

Structure is the ability of organization to stimulate and transfer knowledge across departments, functions and individuals (Gold *et al.*, 2001; Grant, 1996). Absorptive capacity is depending on the organization's capability or ability to absorb or adapt with the external knowledge. Across functional communication could improve absorptive capacity whereby departments will share the knowledge among themselves within the organizations (Cohen & Levinthal, 1990; Gold *et al.*, 2001). It brings positive impact on the level of absorptive capacity as knowledge diffusion by the empowerment of employees and managers could strengthen the relationships within organizations for transformation of tacit knowledge (Schmidt, 2005; Ang & Massingham, 2007). Some authors agree that there are difficulties for organization especially small type of organization or enterprise to practice the concept of absorptive capacity. It is because are not aware of the need for change or lack of ability for to acquire and exploit new knowledge (Krstic & Petrovic, 2011).

Structure affects the dissemination of absorptive capacity. Dissemination involves transferring the acquired knowledge to all parts of the organization. Hence, the organization's structure should maximize the movement of knowledge through formal and informal networks (Welsch, Liao & Stoica, 2001). A functional structure permits a high efficiency of absorption, but with a limited scope and flexibility of absorption (Boer, Bosch & Volberda, 1999). Functional structure increases the effect of specialization, without creating communication barriers between the different departments. Structure allows the maximum amount of communication among various subunits in order to improve on an organization's absorptive capacity. An organization has to enhance the greatest communication between the knowledge producing and knowledge using subunits. Yet, to improve absorptive capacity, the structure should eliminate bureaucracy, because it slows down responsiveness to change and innovation. The structure should be flat, flexible, adaptable, dynamic, and participative. The following is the hypothesis for this study:

H3: Structure moderates the relationship between absorptive capacity and organizational effectiveness.

4.0 CONCLUSION

This study also convinced that it has generated useful findings for future use as this study attached beneficial information on top of the established literature on the areas of knowledge management, absorptive capacity, organizational effectiveness and structure. The knowledge-based view also had assisted for better understanding the organization to manage effectively on a particular or new knowledge within the organization. Thus, this study can generated future use because it attached more beneficial information from the established literature on the area of absorptive capacity, organizational effectiveness and the moderating effect of structure. Scholars may also use the findings of this study to educate and produce awareness in the literature and specifically to managerial level employees in order for them to understand more on the dimensions of absorptive capacity. Besides that, scholars may also support managerial level employees in learning more for better service and productivity for increasing the effectiveness of organization. This study

has able to support and convince managerial level including employers, managers and supervisors to put more concern on the importance of absorptive capacity. This study requires further research and analysis but it has established a helpful starting point and provided early information to the literature in absorptive capacity and organizational effectiveness amongst companies. New studies would be able to further understand and determine precise strategies and knowledge management infrastructure that assist in organizational effectiveness to improve organization performance.

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