

THE ROLE OF KNOWLEDGE MANAGEMENT IN ACHIEVING SUSTAINABLE COMPETITIVE ADVANTAGE IN BUSINESS

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ABSTRACT

Companies are struggling to gain sustainable competitive advantage in order to survive among aggressive huge competitors. To achieve that, companies must know how to create, share and use the knowledge through the company and aligning it to the company strategy and process as well. Besides, managers have to realize which knowledge strategy should be chose to improve the company's activities to gain sustainable competitive advantage. This is a case study that attempt to demonstrate how companies use organizational knowledge and knowledge management to gain sustaining competitive advantage. Knowledge Management Networking Value chain theory has been applied to explain how the value of a knowledge network increases as the number of the members increases in Toyota. Explaining strategies that Toyota adopted to create and transfer knowledge to subsidiaries abroad in order to give a chance to local markets to create knowledge in foreign markets. In the end of this study, it can be determine how knowledge management concept is a necessary tool to gain competitive advantage for the companies especially automotive industry.

Keywords—Knowledge Management, Competitive Advantage, Organizational Knowledge, Knowledge Creation, Knowledge Sharing.

Introduction

Competitive Advantage

When a firm sustain profits that exceeded the average for its industry, the firm is said to possess a competitive advantage over its rivals. According to Porter (1998), competitive advantage is “the capability that gained through attributes and resources to perform in a higher level than others in the same industry”. It basically means that competitive advantage is created when a company offer a different thing that distinguished it from other companies in the same industry. This feature lead to create a higher market share and lately can lead the company to be the market leader within its industry. Companies would be able to achieve competitive advantage through use of different strategies. These strategies as Almahamid (2010) says are cost reduction, innovation, alliance, differentiation and growth. On the other hand, (Williams, 2009) thinks that in order to apply all these strategies successfully it depends on the degree of organizational knowledge and skills. Knowledge Management is another strategy that company may apply to gain a competitive advantage.

The automotive industry growth is rapidly increasing. Competition in automotive manufacture is increasing due to the new opportunities that are created everyday by globalization (Ferreira, 2007). Automotive manufacturers like Volkswagen, Volvo, Audi, BMW and other big car brands need to have superior attributes that help them to beat each other. In another words, automotive manufacturers should have competitive advantage.

Problem Statement

According to (Nkomo, 2013), the next five years, the economy will keep growing, and motor vehicles demand in the Western world will get stronger. Forecasting of the revenue of Automotive Industry says that it will be annualized 2.5% grow to total an estimated \$2.6 trillion through the two years to 2018. Increased competition over the next two years is going to decrease the vehicle unit sales and this will lead to large inventory, the inevitable result of that is downward pricing pressure, consequently, impacting the financial condition in the operations of the company (Toyota, 2013). Therefore, the company that want to survive in this huge competitive automotive industry need to increase and improve their capabilities and skills constantly (Kakihara, 2002). To solve this issue, companies must focus on Knowledge Management because it considers an important tool that can accelerates the market growth locally and globally (Birasnav, Goel and Rastogi, 2012). This paper attempt to answer what are Knowledge Management techniques and tools for motor vehicles companies to achieve sustain competitive advantage? And how successful automotive manufacturing like TOYOTA are currently practicing Knowledge Management to gain competitive advantage?

Literature Review

Knowledge

Tacit/Implicit Knowledge

According to (Nonaka, 1994), knowledge can be separated into two different types, tacit and explicit knowledge. Explicit Knowledge is the type of knowledge which can be documented while Tacit Knowledge is the experience, behavior, and perception that have been gained inside the human (Duffy 2000). On the other hand, tacit or implicit knowledge is the extreme private knowledge that is not easy to verbalize, articulate and transfer, it also cannot be grasp by official training or education and may even be subconscious but it can be documented to become explicit knowledge (Nonaka and Takeuchi, 1995, Hislop, 2013). Several authors state that tacit knowledge is hard to verbalize and is impossible to be directly accessed. It only expressed

by procedures, actions and values (Baloh et al., 2011). Another authors stated that tacit knowledge is under the ontological dimension that means its explanation needs the use of metaphors and wide process of socialization. From these different opinions it can be saying that, one of the important source that used to achieve sustainable competitive advantage is focusing on the tacit knowledge because it is so difficult to imitate intangible asset by competitors. Therefore, the companies' main duty is trying to transform the tacit knowledge into explicit knowledge. This will attain the greatest advantage from the companies' intellectual capital.

Explicit Knowledge

Authors believe that Explicit Knowledge is more formal and systematic, and it can be easily, collected, stored, and spread. Authors put the explicit knowledge under the epistemic category which in there is possible to describe it with the help of written or coded formats (Nonaka, 1994). Explicit knowledge is documented knowledge; specific context, organized and embodied (Duffy, 2000). Moreover, information technology is the way that knowledge can be captured and spread through.

Polanyi (1966) has a good way to differentiate between tacit and explicit knowledge. He states that in tacit case, people know more than they can tell. Another author like Baloh et al. (2011) gave another example to distinguish between explicit and tacit knowledge. He suggested a restaurant where explicit and tacit knowledge are using as a dish that should be cooked, he says that the explicit knowledge will have a clear ingredients list. While tacit knowledge is not listed down, instead, it is just awareness of what and how much of ingredients to include, and it will focus on processing of actually preparing the dish.

Knowledge Management (KM)

Knowledge Management is process of converting data into right information and deliver it to the right person in the right time. It is the process of putting information into action in ways that will improve company performance.

Knowledge management is a systematic management that consist of the process of making, collection, arranging, disseminate and making use of knowledge to create business value and gaining a competitive advantage (Omotayo, 2015). Knowledge management is an application which is modern and based on technological, it is working and focusing on knowledge and align it with decision making, evaluation and operative systems redesign (Kibet et al., 2010). Moreover, KM is a conscious plan of giving the right knowledge to the right persons at the right time and supporting people to share and put information into action in ways that will improve company performance (Ewyk, 2000).

The generating, coordinating, and transferring knowledge are the main component and process of Knowledge Management in the company to improve the knowledge markets efficiency.

From the simple act of documentation, to indexed systems and databases, there are more and more ways to smoothly and efficiently manage knowledge to increase accessibility and recall. However, organizations that may have suffered from poor knowledge management in the past are better able to effectively monitor and mediate these communities (Caitlin Zucal, 2016).

There is a general agreement that in the 21st century, sustainable competitive advantage will be achieved through Knowledge Management (Khan, 2014).

Big companies are paying more attention to the importance of knowledge for competitiveness, therefore; Knowledge Management is necessary to companies' survival (Jelenic, 2011). It can be saying that, Knowledge Management can be used within a wide range of activities that established in order to manage and create intellectual assets in the company.

Increasing the competitive advantage needs high level of skills and knowledge. Therefore, companies that have ability to persistently increase knowledge can have the ability to achieve success (Danskin, Englis, Solomon, Goldsmith and Davey, 2005). Although the required knowledge is difficult to measure because of the nature of it, without having it the company will face difficulties in term of achieving competitive advantage that may lead to difficulty of surviving. Lots of companies have understand that competitive advantages doesn't stay for long time. They aware of the fact that sustainable competitive advantages is based on employees and to maintain a sustainable competitive edge and to stay at the front line, companies should have focus to connect knowledge with people, processes, and technology. These four elements are called Knowledge Managements components (Desouza 2011).

Apply KM to Gain Sustaining Competitive Advantage

1. Knowledge Creation

Hislop (2013) think that it is important for all companies to survive among surrounded competition in the market place by create knowledge that lead to generate a competitive advantage. The creation of knowledge is an important part of KM (Dul, Ceylan, and Jaspers 2011, Pan and Scarbrough, 1999). Knowledge creation happens in the daily activities at work with many forms, it can be through humanistic way or technical mechanisms. Experts say that knowledge creation is mainly a human process; it can be facilitated by technology but cannot be instead of human being. Companies need to leverage its key resources to create knowledge, innovate, and generate value with new knowledge. It is because it leads to innovative products and improve the ability of making strategic decision of the organizations.

The majority of studies agree about that correlation between KM and sustainable competitive advantage is very positive (Rahimli, 2012). Studies agreed upon that knowledge management process lead to improve the competitive advantage which lead to improve the organizational performance by improving managing of corporate knowledge (Ghannay & Zeineb, 2012).

However, authors and managers have different opinion on what is the best way to do that. Some authors prefer using a process calls Competitive Intelligence (CI) in order to gather important knowledge of the external business environment and transform it to the intelligence required to make strategic decisions. CI enable the company to gain competitive advantage (Williams, 2002). Authors believe that, both KM and CI systems are created to improve the information resources of the organization. Falkenberg (2003) supported the previous idea and suggested that external knowledge can be gained from other companies within value chain. The value chain shows the company's connection with different companies. This makes numerous opportunities for businesses. Sharing consumer's data within the value chain let employees to be updated when there is any change and that grant opportunities to those who make decision to reach customer's satisfaction (Priem, 2001).

Some authors have different opinion, they see the attention should pay more into grasping the knowledge which is kept inside individual employees minds (Nidumolu, Subramani, & Aldrich, 2001). In other words, it is necessary to push the individuals to gain data, and to make them understand it, store it in their memories and turn it to skills and use it in their performance (Falkenberg, 2003). Authors like Bagshaw (2000), Johnson (2000), and Rubinfeld (2001) support and suggest that to gain competitive advantage companies should use Knowledge Management for gathering, organizing, and sharing inwardly created knowledge.

1. Align KM with Company Strategies

Another point of view can be seen when Desouza (2011) state that the main cause of ineffective delivery of products is that not paying enough care toward managing knowledge in proper way. Therefore it is urgent to adopt the idea of aligning Knowledge Management with company's strategy (Oluikpe, 2012), (Gao, Li and Clarke, 2008). Other authors argue that, the matter is no longer whether or not, knowledge is a critical company resource, but on align (Omotayo, 2015). It is also necessary to realize that aligning company's strategy with Knowledge Management is about how the company serves its customer (Hansen, Nohria and Tierney, 1999). Aligning company strategy with knowledge management to gain sustain competitive advantage imposes that managers should be aware of the latest in the markets and what are customers latest needs and they should also be aware of the threatens that came from the competitor's position and other factors that may influence on the business such as technology. All these requirements are important in order to make strategic decisions (Hill, 2007; Esri, 2009).

2. Knowledge Sharing

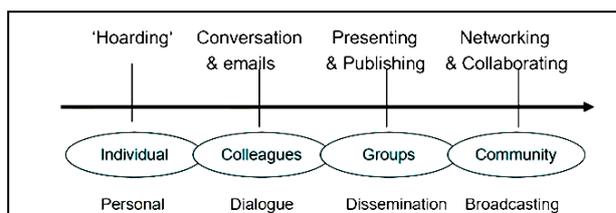
Many authors as (Olatokun and Nwafor, 2012; Epetimehin and Ekundayo, 2011; Amayah, 2013; Lee and Choi, 2003; Oluikpe, 2012; Paquette and Desousa, 2011; Gururajan and Fink, 2010) believe that the main activity of effective Knowledge Management is Knowledge sharing. Knowledge must be shared with co-workers, group team. Knowledge sharing and transforming is very important to the company, it is because companies face difficulties with knowledge loss which is because of employee turnover or retirement. Studies mentioned that the workers at all levels of the company should make a structured attempt to use the knowledge which is available at different points of their activities. This will defiantly improve the operations efficiency, improve the innovations quality and quantity, and improving competitiveness (Hislop, 2013),(Dul et al., 2011). From above discussion, it can be saying that each way has its own special standards that distinguish it from the other.

TOYOTA Case Study

This study is using secondary data method. A case study of Multinational Corporation has been chosen in this study because it's success of using the fourth and fifth mentioned ways "knowledge sharing" and "Knowledge creation". Toyota Motor Corporation has been chosen for its extraordinary success of using knowledge sharing (Dyer and Nobeoka, 2000) and remarkable strategic of using knowledge creation to gain a competitive advantage. TOYOTA is a Japanese automotive manufacturer founded by Kiichiro Toyoda in 1937. Because of Toyota sales of more than 10 million vehicles per year, it consider one of the first automobile manufacturers in the world. It has 338,875 employees worldwide and was the largest automobile manufacturer in 2012 (Oica, 2011). Its revenue put it in 13th largest company in the world by February 2016 In July of that year. The following discussion will explain how TOYOTA use KM to gain competitive advantage and how the value of a knowledge network increases as long as the knowledge share increases.

In this report, a model of value chain in the sharing (networking) aspect that developed by Alebrt Simard (2004) will explain how TOYOTA create and share knowledge to gain competitive advantage. The knowledge value chain is "The flow of knowledge through a series of stages where its value is increased at each stage" (Simard, 2004).

Figure1: Knowledge Sharing (Networking) Value Chain (Simard, 2007)



Toyota action learning (Individual)

Toyota develop its leaders with high relation-building skills. This is one of the Toyota good strategy to practice action learning in the company (Tichy and Cardwell, 2002). Following up the latest with the employees and managers is necessary to the leadership development and it is essential for a manager to know the team members well. The strong relationship with other

leaders is important to understand their strengths, key responsibility areas, weaknesses, capabilities and where all they need. The best way to start a good knowledge creation and sharing is by action learning and enabling good social relationships among business leaders (Ichijo, 2006). Therefore, “the ability of the TOYOTA leaders to cooperate with deep understanding of the work and the ability to develop, mentor, and lead people, are respected for their technical knowledge as well as followed for their leadership abilities.” (Liker, 2004, p.182).

Toyota Quality Circles (QC) (colleagues)

Toyota provide a good example of knowledge creation using tacit knowledge approach by adopting the Quality Circles (QC). The system procedure is starting at the end of every week, Toyota production workers participate meetings in order to examine and check the performance of their part of the procedure in order to search and check of any quality or productivity problems. After that, each one of Quality Circles member proposed to fix the errors and problems. They discussed the consequences of countermeasures taken to address problems identified at the preceding meeting. The advantage of this process has identified, eliminated, and even prevented costly errors and this helps TOYOTA to gain competitive advantages that made it become one of the best in the world. Moreover, in order to explain and train new employees who started to work in new factory of Toyota about the production system, Toyota chooses group of 200-300 member from new factory and sends them for 2 or 3 months for working on assembly line that is created for training only and after that they let them come back to work on the real factory assembly line. In this period, new employees learn about the systems and working together with experienced Toyota workers to make sure that knowledge of Toyota's processes is implanted in the new factory, After that, Toyota send them back to the new factory site

TOYOTA WAY (Group)

According to Ichijo: “creating a knowledge vision is important to move the practical implementation of business strategy” (Ichijo, 2006a). Toyota has new strategy for global business development which is ‘learn local, act global’ it means to learn about local requirements in the globally branches and adapt to them while doing global coordination for the operational excellence. Another knowledge activity called ‘coordinators’. Toyota use the same Japanese team who had sent them before to overseas operations. Toyota send them again to train the other employees who has same positions like them. Face to face corporation between employees is how Toyota prefer to do business (Ichijo, 2006a; Liker, 2004).

It is undoubtedly true that Toyota has made a jump from a global projector to a multinational company. According to Liker (2004, pp.13), “Toyota is a true learning organization that has been evolving and learning for most of a century” and thus created “one of the few examples of a genuine learning enterprise in human history”. Dyer and Nobeoka (2000, p.346) seem to agree when they contend that “Toyota is widely recognized as a leader in continuous learning and improvement”. Ichijo argue that, “it is important for the competitive advantage to operate globally to create knowledge in a particular local unit and spread it to other local units in effective and fast way,” (Ichijo, 2006) because of sharing knowledge globally raising the competitive advantage of any company, Toyota decided to do this by feeding back local knowledge and best practices to its headquarters and spreading it to other global units through its global production centers. It is not an easy strategy to achieve because of culture obstacles accompanying globalizing local knowledge which can be overcome when people contact and share experiences with others who are working in different regions (Ichijo, 2006). It can be saying that Toyota has deal with the concepts of strategic knowledge creation in a good way and use it through the conducting of Toyota new strategy that says ‘learn local, act global’. However, the use of a ‘learn local, act global’ strategy is not limited to Toyota or the automotive industry only. In spite the fact that Toyota is the pioneer of the strategy, but the advantage of this strategy seems to prove them right, and the Toyota way strategy can play a good role model to other industries.

TOYOTA create knowledge sharing using physical environment such as large open space offices. This idea enable employees to share their information and exchange data. Another tool that TOYOTA used is recording all its operations. This way allow to store the information as a library and database by constant reporting by employees. TOYOTA also used managing conversations strategy. It smooths the communication between members, a serious mission because conversations are ‘stadium’ for making and sharing knowledge (Ichijo, 2006). Toyota has a powerful culture of adopting a listening attitude and building its listening capabilities”.

Knowledge Collaborations Strategy (community)

Applying the improvement strategy check the close relationship between company structure, strategy and knowledge enabling. The Toyota style of making the right context is obvious when paying attention at its interaction between provider networks (Liker, 2004). Furthermore, Dyer and Hatch(2004) say that “the company has developed an infrastructure and a variety of inter organizational processes that facilitate the transfer of both explicit and tacit knowledge within its supplier network,” (Dyer and Hatch, 2004, p.58, original emphasis) and Evans and Wolf (2005, pp.100, 101) say that “the Toyota philosophy of continuous improvement likewise comprises a thousand small collaborations” and that “this collaboration also relies on two infrastructure components: a shared pool of knowledge and universally available tools for moving knowledge around”. These collaborations can be seen as the shaping components of the right context at Toyota.

CONCLUSIONS

Intellectual assets is gaining more competitive advantage for the company than physical resources. The procedure of knowledge creation at Toyota of ‘Toyota way’ strategy and the Toyota Production System (TPS) didn't apply and use for manufacturing only but also can be applied on other field like healthcare (Liker, 2004). Companies that need to stay in the market should use a proper knowledge management because when an employee leaves, the company lost his experience, relationships and insights as

well. Therefore, company should attempt to realize, catch and share this knowledge in the company by using Knowledge Management.

The advanced using of knowledge management has been mentioned as the essence component for companies to gain sustainable competitive advantage. It can be saying that technology alone are not enough to gain sustainable competitive advantage, but the knowledge that driven from employees is very integral pivot in companies' success.

This report has explained that to apply knowledge management in proper way, it has to be related tightly to organization strategies. If Knowledge Management didn't add value to the organization, it consider a waste of money, time and become useless asset as well. Value chain theory have been applied on TOYOTA case study. Results show that create, organize, share and apply of knowledge should be taken seriously to achieve a KM strategy successfully.

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