Journal of Engineering and Applied Sciences 12 (16): 4028-4033, 2017
ISSN: 1816-949X

Why Operational Innovation Matters to Firm's Performance?

[1]Chin Fei Goh, [1]Amran Rasli, [1]Owee Kowang Tan and [2]Sang Long Choi
[1]Faculty of Management, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia
[2]Raffles University Iskandar, Johor Bahru, Johor, Malaysia

Abstract: The idea of process enterprise has been embraced and stimulated many management changes in big corporations in these few decades. Business Process Re-engineering (BPR) perspective are widely adopted the business leaders in advanced economies. Nevertheless, many companies failed to achieve to become a process view organization although many actions had been taken to improve the organizational process. This study the identify the failure to implement fully effective processes enterprise is the lesson should be concerned. This study provides some important lessons of "operational innovation" that related to the performance of process enterprise and subsequently provide insights pertaining to the important determinants for successful transition. We adopted the management thought perspective to bridge the industry knowledge gap for explaining the relationship operational innovation and firm performance.

Key words: Operational innovation, firm performance, BPR, corporations, knowledge, relationship

INTRODUCTION

The Hammer's concept of process enterprise is that the corporations are now focusing and weighing the process goals heavier than unit goals. Over the years, the idea of process enterprise has been embraced and stimulated many management changes in big corporations. Business Process Re-engineering (BPR) perspective has been fully embedded in the business leader's mindset. Nevertheless, Hammer and Stanton (1999) argued that process view organizations had not been completely achieved by many companies although, many actions had been taken to improve the organizational process. In our opinion, the failure to implement fully effective processes enterprise is the lesson should be concerned.

Hammer and Stanton (1999) explained that the difficulties faced by some companies in creating a process enterprise. In the case of texas instrument they commented that the first pilot team only can carry out basic operations because the team was intentionally not supported by other existing organizations in the company. IBM also failed to create a process enterprise for worldwide operations due to similar problems. To solve the problems, texas instrument had to change the organization and IBM was forced to change the management structure in order to create process enterprise. These negative experiences imply that that traditional organizational structure of the company is required to change to create new management systems, culture and management responsibilities that will support new "process owner" teams and achieve balance the power in the new structure. In additional, based on facts from implementing the enterprise process by Duke Power Company and Manning Company, the role of the process owner in a process enterprise must be clearly defined to prevent failure in implementing the Business Process Engineering (BPR). The contention is that new process owner must have power and authority to re-design the process, measure the performance and train the frontline employees whose responsibility relates to process goals.

It is vital to recognize lessons for the trend of process innovation in the industries. In this study we review some important lessons of "operational innovation" that related to the performance of process enterprise and subsequently provide insights pertaining to the important determinants for successful transition. We adopted the management thought perspective to bridge the industry knowledge gap for explaining the relationship operational innovation and firm performance.

The danger of orthodoxies to corporate performance: The central idea history can always serve as our guidance for future development and endeavor. Just few decades ago, the emerging of Japanese corporations had thrown away the dominancy of previous giant western companies in the world market. I believe that exploring distant past about the different strategies between western companies and Japanese companies will provide us a better picture about danger of orthodoxies for corporate performance.

Corresponding Author: Chin Fei Goh, Faculty of Management, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia

History show that the traditional management thoughts of Western companies from 1960-1980 had led them lose the war to Japanese companies in new globalized market (Hamel and Prahalad, 2005). At that time, Western companies still obsessed with traditional management thoughts. For example, Western companies embraced traditional competitor analysis to analyze tactical advantages of present competitors in the market. Unfortunately, this orthodoxy had blind themselves to new potential competitors-Japanese companies. Furthermore, the management team of US companies generally were committed to traditional measurement metric which they measure their contributions based on maximizing the shareholder's wealth. However, Western companie's business strategies were focused on achieving optimal matching between their resources and current market opportunities. Putting it all together, I contend that this denotes the western companies only acted to maximize the shareholder's wealth from short-term perspective and overlooked their core competencies and potential future growth prospects.

On the other hand, there was only small number of Japanese companies owned comparable human, technical and financial resources to US and European business leaders in 1960s (Hamel and Prahalad, 2005). However, the main distinction between them is that Japanese companies possessed clear "strategic intent". One example is that NEC's strategic intent in 1970 was to obtain technologies which will put NEC in dominant position to capitalize on convergence of computing and telecommunications. The top management of Japanese companies also envisioned themselves as future global leaders with their "strategy intent" that seemed contradicting to the traditional western management perspective. The strategies of Japanese companies were tailored to need of their aspirations. The Japanese companies first utilized their existing labor cheap and cost advantages to create and accumulate future competitive advantages. Subsequently, the western companies also tried to imitate Japanese's strategy in labor and cost advantages and began to shift the production to foreign countries in 1960's. However, the Japanese companies responded by utilized new acquired core competencies in technology to expand economy of scale and improve quality of products. Ultimately, many Japanese companies such as NEC, Honda, Fujitsu and Panasonic successfully built their global brands and gained dominant position in the market. On the contrary, there was almost no single new US company able to build global brand in 1980's.

The lesson, we learnt from this history is that orthodoxies can pose great danger to current dominant companies in market. As Hamel and Prahald (2005) said "A company's strategic orthodoxies are more dangerous than its well-financed rivals". Therefore, we should always beware such potential threat from current orthodoxies and quickly adapt ourselves with new development trend. In emerging economies, many companies intend to achieve better corporate performance through automation (Frey, 2015). This can be partly attributed to the declining costs of machines and labour-saving technologies are believed to be efficient. For example, the China views workforce automation is important to uphold competitive advantage in manufacturing industries (Frey, 2015).

The workforce automation, however is unlikely to ensure the emerging economies to achieve modern industrialization. After the automation reaching a saturating point, it is unlikely to enhance the manufacture output significantly (Frey, 2015). Thus, the alternative strategic viewpoint should be considered in emerging economies. For example, operational innovation is of paramount and should not be discarded. It is an alternative way, if not the remedy to transform the emerging economies into modern industrialized economies.

MATERIALS AND METHODS

Review

Task management: The central idea of "task management" (Taylor, 1911) is still used very much today even if Taylor did not claim to have invented this principle himself. He wisely gave it a name and described his thoughts about it in a clear way. The main idea of task management is that the weak management system is the main reason why workers cannot perform work efficiently (or faster). The workers should not be blamed for the slow work because the management system do not emphasize on the quality (efficiency) of research.

It is important to point out that time and motion studies are performed in basically the same way as Taylor described them. In his view, it was an aspect of having tasks performed as effectively as possible but he had also in mind the risks of fatigue among the workers and for example the shortening of working hours (Taylor, 1911). These aspects are still very important today as they were new to industry and management in Taylor's time. A good example for current development is that time studies are still used in the auto industry even though in many tasks people have been replaced with machines or robots.

Taylor argued that employers and employees would have common interests in profitability and that profits should be divided in a fair manner when using his

management ideas (Taylor, 1911). The division of profits is very popular now and elaborate corporate plans for profit sharing can be found in many companies around the world. According to Taylor, employees must be chosen on scientifically. The situation today is that recruiting employees is a very serious business and much has been done to find the best ways to identify suitable qualities among the employees that could be hired.

Transition to process enterprise for better corporate performance: Hammer's research has shown that company has to take some actions to ensure the transition from traditional organization to process enterprise to achieve high performance process enterprise. This is another important lesson worth to mention. Hammer and Stanton (1999) suggested that if the company intends to transform into new process enterprise, it must put attention and verify thoroughly on the change programs by removing irrelevant ones but merges relevant programs. Then, the company should have clear strategic initiative and goals. They gave one example that American Standard's strategic initiative was to attain long-term goal to reduce working capitals through minimizing the cycle times and inventory levels. That is a company should assign the best people in "process owner" team to increase the probability of success and implement process-based measurement system.

Hammer and Stanton (1999) also reminded us that the transition to enterprise process requires longer time and the company must be patient while seeing disruptions and organizational resistance (i.e., resistance from senior functional executives and divisions heads). To alleviate this problem they suggested CEO must carry out successful communication to related parties who might resist the change. The company can try to transform one of the business units to enterprise process first to promote this concept to the rest of company to temper the resistance.

Benefit of business process re-engineering to corporate performance: The main lesson from "operational innovation" that we can see is that firm can gain substantial benefits from re-engineering business processes. Hammer (1990) provided evidence that some corporations had embraced business process re-engineering and was reaping the tremendous benefits. He first explained that Ford achieved 75% of headcount reduction (out of 500 people) for account payable in North America after re-designing the work process. He contrasted this result with Ford initial rationalizing process with new computer systems which only able to reduce 20% of head count. The comparison clearly shows that re-design work process can significantly improve the performance of company than using new technology in rationalizing the process. Secondly, Hammer (1990) described how Mutual Benefit Life (MBL) re-designed the process of insurance applications and then eliminated redundant 100 fields of positions. Furthermore, the new work process enabled case managers to process a double number of applications than before. Previously, application of insurance in MBL underwent a rigid and sequential process in almost one direction. Realizing the technology of database and computer network can share the information across departments the MBL's management team implemented such systems so that many people can work concurrently. MBL also created a new position called case manager who is responsible for the application of insurances. Case manager work autonomously with assistance of specialists.

In short, we can see that operational innovation through business process reengineering will lower overhead costs and reduce the cycle times that lead to substantial improvement in financial results and also improve customer satisfaction overall.

Performance aspects: process standardization and diversification: One important lesson we can draw from Hammer's research is that process standardization and process diversification in process enterprise will improve the performance of a company in different ways.

The benefits of process standardization from IBM, duke power and progressive insurance experience (Hammer and Stanton, 1999). That is, the process standardization will temper overhead costs on the ground that only one owner with one staff and one information system is required to support the process. They also saw that standardized processes are beneficial for suppliers and customers. Hammer (1990) supported this argument by two evidences. First evidence shows that IBM's single list of approved vendors had increased the leverage of suppliers to make purchases. The second evidence is that the order fulfillment process was standardized in owens corning company enable customers to receive one invoice and pay one bill which in turn reduce the transaction costs dramatically. Lastly, Hammer and Stanton (1999) also argued that throughout the standardization processes can increase organizational flexibility because a company can re-assign people to across units to support similar process.

On the other hand, the process diversity provides different type of advantages (Hammer and Stanton, 1999). That is, process diversity is required to meet the various demand of customers. For example, each process can be developed to cater its type of customers. In the case of

Texas Instruments, it is impossible to use one process to fulfill the demand of industrial customers and retailers because their demands are different Hammer and Stanton (1999). Furthermore, the argument is that the company can diversify the process to support a variety of product development, manufacturing and sales to meet the customer demand on product differentiation. Important elements in organizational structure for successful BPR.

RESULTS AND DISCUSSION

These important lessons of "operational innovation" are reminiscent of Taylor's task management to a certain extent (Taylor, 1911). Taylor's philosophical management involves "task system" to increase work efficiency and implementation of necessary systems for example, a monetary based incentive system to influence workers to support new "task system". Evolving from task systems perspective, many companies have adopted the automation to improve the operational efficiency. These companies intend to speed up the processes and wish to enhance the assets utilization. However, the automating is an outdated method because it is difficult to enhance the business processes performance significantly.

On the other hand, Hammer's proposed process enterprises to capitalize "operational innovation" to improve work efficiency in process enterprise (i.e., people work in parallel process rather than sequential process) in order to attain company's strategic goals. The change also relies on new systems and organizational structure that support process enterprise to deliver high performance. Hence, we believe that new development in management thoughts has been essentially always a reflection of past experience. And, the companies that want to adopt a process change should use the lessons learnt from operational innovation development as guidance for their future endeavor. Figure 1 shows the evolvement of task management, automation to reengineering processes.

Important elements in organizational structure for successful BPR: The modern companies often embrace decentralization structure in firm management. It is important to ensure each division can establish transparent functionality to allow top management to coordinate the operations. The power decentralization can be performed if the CEO manage the important executives and mainly responsible for long-term company development. The CEO will monitor the operational staff, staff with consultancy role to have control on executive staff. Third, the finance committee in a company can

Fig. 1: Evolvement of task management, automation and reengineering processes

implement an integral policy for financial control in firm's investment. However, many companies are transforming into process enterprise to improve the overall performance (Hammer and Stanton, 1999; Hammer, 1990, 2007).

Our review suggests that there are some important elements in the organizational structure of the process enterprise must exist to produce efficient processes which in turn will improve company's performance. The elements such as measurement and compensation systems; facilities; training and development system and career paths for employees must be altered to sustain efficient processes in the company (Hammer and Stanton, 1999). We will further the explanations at following part.

First, performance measurement system must be redesigned based on the significant aspects in the process which contributing to organization's objectives. For instance, they explained duke power company implemented performance measurement metrics for deliver products and services process, provide reliability and integrity process that matched company's overall strategic goals.

Second, there are some successful cases that indicate correct compensation system should be in place to ensure frontline workers and managers have the incentive to focus on the performance of a process. The new compensation system of American Standard Company for example includes process performance. In our opinion, this kind of compensation system is based on the principal-agency framework from an economist's perspective. That is to say that sufficient incentive must be available to induce people to behave in a desired way.

In terms of facilities, the process workers across (vertical) divisions can be located together and share the same facility to support the work in process. This argument is basically derived from American Standard company successful experience in relocation and creating shared spaces dedicated to process teams. The process workers must undergo training and development programs to understand their role in the process work. In my viewpoint, this is one type of personnel controls that described in Management Control System's theoretical framework (Merchant and Stede, 2007) which provide direction to employee to behave correctly. Finally, the

transformation from traditional organization into new process enterprise will eliminate the significant number of middle level managers that subsequently change of conventional corporate ladder (Merchant and Stede, 2007). This can be seen by the example that allmerica financial company effort in providing more new career models to employees. My contention is that such new models are needed to reduce the resistance of implementing process enterprise and it also creates alternative opportunities to employees.

Process and Enterprise Maturity (PEMIM) Model: Many firms which wanted to change to be a process enterprise had encountered great difficulty (Hammer, 2007). These companies need a reference model to carry out the transformation endeavor. In 2007, Hammer laid out Process and Enterprise Maturity Model (PEMIM) to help the companies to transform to process enterprise that can deliver high performance. We regard this model is the last and utmost important lesson to achieve high performance process enterprise. This model includes five mutually interdependent process enablers and four enterprise capabilities.

The company wishes to transform into high performance process enterprise must have enough organizational capabilities to make it work (Hammer, 2007). First, senior management teams must be fully committed in business process approach because the transformation process often receives great resistance that stem from the vast organizational change. The company also must have certain cultures such as customer-focus, teamwork, personal accountability and willingness to transform into a process enterprise. The last condition is that the company must ensure employees and management having enough knowledge and skills that can redesign the process. So, the company can conduct the maturity test with a PEMIM Model to examine their four enterprise capabilities which are leadership, culture, expertise and governance. Each capability can be evaluated and categorized into four levels of strength. In short, sufficient enterprise capabilities are mandatory to exist before the company institutionalize enablers and achieve high performance processes.

There are five important process enablers (characteristics) of a process (Hammer, 2007) do deliver high performance in the PEMIM Model: design that is the process must well designed; performers that is, the performer must have sufficient knowledge and skills; owner that is a senior executive must be appointed as owner with responsibility and authority; infrastructure, that is company must support with process with infrastructure such as information technologies and other systems; metrics that is company must use correct performance measure for the process. All in all, we believe that these enablers will increase the probability to deliver high performance process enterprise.

CONCLUSION

This study, the review the failure to implement fully effective processes enterprise. The lessons of "operational innovation" that related to the performance of process enterprise and subsequently provide insights pertaining to the important determinants for successful transition. The transition requires reengineering that not to reply information technology to automate business processes but to create new processes to aim for significant level of improvement in operations. It is required to have new conceptualization in business processes that will add value to business performance.

To ensure the organization can implement successful operational innovations that can improve firm performance, the firm's management need to take several factors into account. First, the Taylor's "task system" may improve the work efficiency but transition to process enterprise for example using business process re-engineering is required to further enhance firm performance. Second, process standardization and diversification will bring benefits to reduce overall costs to company, suppliers and customer as well as meeting different customer's demand. Third, performance measurement system is of paramount to support a successful BPR transition. Finally, a process and enterprise maturity model and the enablers are important to achieve the transformation into high performance process enterprise.

ACKNOWLEDGEMENT

The researchers acknowledge the Malaysian Ministry of Education and Universiti Teknologi Malaysia under Research Grant (Vot. 4F709) for supporting this publication.

REFERENCES

Frey, C.B., 2015. Cheap Automation Raises Risk of Premature Deindustrialisation. The Financial Times Ltd, London, England, UK.

Hamel, G. and C.K. Prahalad, 2005. Strategic Intent. Harvard Business Press, Boston, Massachusetts.

Hammer, M. and S. Stanton, 1999. How process enterprises really work. Harvard Bus. Rev., 77: 108-120.

Hammer, M., 1990. Reengineering work: Don't automate, obliterate. Harvard Bus. Rev., 68: 104-112.

Hammer, M., 2007. The process audit. Harv. Bus. Rev., 85: 111-122.

Merchant, K.A. and V.D.W.A. Stede, 2007. Management Control Systems: Performance Measurement, Evaluation and Incentives. Pearson Education, Upper Saddle River, New Jersey, USA., ISBN:9780273708018, Pages: 850.

Taylor, F.W., 1911. The Principles of Scientific Management. Norton Library, New York, USA.