

The Role of Supply Chain in Organizational Agility of Production Management

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Abstract: The subject of this research was to study the role of supply chain in organizational agility of production management. In recent years, several concepts for organizational have been changed emphasizing business processes as a conceptual basis for organization design. Process and process-centric view are the most important characteristics which leading organizations must have. Embracing change and transformation is based on the initial assumption that organizations have to refocus on its main purpose, namely they must focus on supplying needs of customers. Given that today the needs are varied, leading organizations should seek a solution as quickly as possible and with the highest quality product or service to provide client and put it at his disposal. One of the approaches that have been faced in this area with great interest of the organization is agility of the organization; this means that organizations from all directions are ready to possible changes in the type, number and quality of customer demand. Since supply chain of an organization is a key role in the main activities of the organization, inevitably an agile organization without having agile supply chain is doomed to failure. In this article, we have tried noting the importance of the issue and providing concise definitions of related concepts and factors affecting agile supply chain are introduced.

Keywords: Organizational Agility, Agile Production, Agile Supply Chain.

Introduction

In turbulent and changeable world, the only thing that does not change is change. In the business world increasingly dominated by three words, customers, competition and change, companies seek a solution to their business problems (Hammer & Champy, 1993). Some companies fail not because they do wrong actions or moderately, but also because that they repeat actions for a long time that have already been true. In fact, these companies are sacrificing strength and stiffness for their operations models. In the face of severe global competitive and environmental discontinuities and disrupt, companies need a sense of accountability and more learning of their operational changes than before. As a result, it can be concluded that companies in business environment with rapidly changing should consider operational agility because the function of a traditional approach can result in structural stiffness of the company so that this can restrict an ability to improve and reconstruct of the company (Khodami & Osanlou, 2014). To reduce response time and improve flexibility, this should create wholly new form of organization. Organizations must be able to prepare quickly internal forces and resources of firms to align with changing environment businesses and respond agilely changes. Agility is higher than flexibility and versatility. Agility is the ability to modify and adapt in a rapidly changing environment with intelligence, creativity and

innovation. Agility is a set of capabilities and competencies that help organizations survive and thrive in a business environment (Khoshsima, 2003).

Definitions

Agility: The word in a dictionary means fast movement, dexterity, active, and the ability to fast and easy movement and quick and clever thinking ability (Hornby, 2000). Agility root of agile manufacturing is a concept that has become popular in recent years. Manufacturers, who are preparing themselves for a significant increase in performance, have accepted it as a successful strategy. In such situations, each organization must have simultaneous production of different products with short life spans, redesign products, changing production methods, and effective responsiveness to change. To firms that have such capabilities, agile organization will be called. On exigencies of organizational agility, different researchers provided some grouping from indices and different requirements. Goldman et al, have developed four main strategic dimensions, which are focused on achieving agile capabilities of competitiveness: enriching the customer, working to increase competitiveness, organizing for major changes, and leveraging the effect of people and information (Goldman et al., 1995).

Sharifi and Zhang (1999) define agility of the organization as follows: "the ability to meet unexpected challenges, to overcome new threats and unpredictable business environment, advantages and changes as opportunities".

Organizational agility

Agility history dates back to the period of recession in the US industry. Due to the recession and the loss of competitiveness of US manufacturing industries during the 1980s well documented, in 1990, the US Congress decided to take necessary measures in this regard. As a result, Congress ordered the agency to provide the Department of Defense to evaluate US manufacturing industry with the aim of making its competitiveness. In 1991 at a conference held at Lee University, named "strategies for the 21st Century", the term of "agility" was introduced that this is considered paradigm of the 21st century.

Knowledge management

Today, knowledge is the most important assets of an organization and incentives for creating competitive advantage, organizational change and innovation in organizations. This asset compared to other types of assets is unique; because whatever this is used more, the value is added. In recent years, knowledge is mentioned as a means of reducing the gap between developed and developing countries (Hassanzadeh, 2007).

The management of intangible assets during the past decades has attracted much attention so that implementing of an effective strategy for knowledge management and becoming a knowledge-based organization is a necessary condition of requirements for the success of the organization in the period when this is called economic period. Knowledge management refers to systematic and integrated process of integration of extensive activities including acquisition, creation, storage, sharing and using knowledge by individuals and groups to achieve organizational goals (Rastegi, 2000).

Supply chain

Supply chain consists of all efforts related to the production and delivery of the final product from suppliers to customers. Five of main process of supply chain contains planning, sourcing, manufacturing, delivering and returning to a wide range describe these efforts including supply and demand management, sourcing of raw materials and related parts, manufacturing and assembling, storage and inventory tracking, receiving orders and management of orders, distribution in all channels of delivery to the customer (Zand Hesami et al., 2009).

Principles of agile manufacturing

For agile manufacturing, there are four key principles that distinguish it from other production systems:

1. Delivering of customer value
2. The importance of people and the role of information (knowledge management)
3. intra-organizational and inter-organizational collaboration
4. Preparing for change

One of the basic principles of agile manufacturing is knowledge management that it can be considered as the missing link in most activities of agility of organizations, because in developing countries, often for reasons including fear of occupying administrative posts by a person under or no need for the organization to a person skilled, some resistance are performed in the spread of knowledge management. Given the importance of knowledge management process in agility of the organization, this is outlined as follows.

The conceptual framework of agile supply chain

Parallel developments in the areas of agility and supply chain management have led to the introduction of agile supply chain while agility is widely accepted as a winning strategy for the growth, even as the basis for survival in some specific business environment is considered and the idea of creating agile supply chain is raised as a logical step for organizations. According to the theory of Esmaili and Sharifi (2005), agility in supply chain is the ability of the entire supply chain and its members to coordinate quickly with networks and operations for compliance with turbulent and dynamic requirements of the customers. The most important purpose on the implementation of business activities in network structures and taking into account the adequate level of agility to respond to change is that just based on action (pre-emptive) is able to predict the changes and seeks emerging opportunities. Compared with the general definition of agility, agility of supply chain should be defined as follows:

"Agility is the ability of a supply chain to respond quickly to changes in market and customer demands".

Process-oriented approach in agile supply chain

It is clear that agility in the supply chain will enable a manufacturer to achieve a higher level of agility in the organization. Supply chain agility will enable an organization to react effectively and quickly market turbulence and other cases of uncertainties and as a result, this will allow the organization to obtain top-level competitive position (Swafford et al., 2006).

In addition, the organization with the agility of supply chain processes will be more sensitive to the market and this has greater ability for matching supply and demand and is able to deliver products to achieve shorter cycle. It is said that supply chain agility directly affect the ability to produce products of innovative organizations (new products) and deliver them to the customer, but some researchers believe that supply chain agility of the organization is a critical element on the overall competitiveness of the organization (Zand Hesami et al., 2009).

Supply chain can be considered one of the most important and most key components of Porter's value chain and according to emphasizing process approach that process-centric is considered the most important factor in the success of organizations and it can be concluded from these findings that discussing on the supply chain agility leads to the organization agility. In other words, since based on existing models, the underlying processes in the supply chain are emphasized, it is inferred that by agility of supply chain processes, organizations moves toward the agility and obtains an agile organization. On the other hand, since superior supply chain strategies which are organizational strategies, they are considered a motor factor (stimulus) of supply chain and as long as an organization in its strategies is not agile, practically agility cannot be felt in supply chain (Zand Hesami et al., 2009).

Components affecting agile supply chain

Factors affecting the agile supply chain are as follows:

1. New product development has a positive direct effect on supply chain agility.
2. Delivery management on supply chain agility has no effect.
3. Production and supply management on supply chain agility has a positive effect.
4. There is a positive relationship between new product development and delivery management.
5. Also, information technology as the capability has a major impact on agility of the organization.

Agility criteria

Jafarnejad and Shahaei introduced vigesimal criteria of agility by studying agility literature: organizational structure, delegation of authority, setting up production, the status of employees, employee involvement, nature management, acceptance of customer response, product life cycle, product service period, improving design, method of manufacture, production planning, cost and accounting systems, automation, integration of information technology, business processes and technical change, time management, quality, efficiency, and outsourcing (Jafarnejad & Shahaei, 2007).

Conclusion

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Conflict of interest

The authors declare no conflict of interest

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