

2014

BioTechnology

An Indian Journal

FULL PAPER

BTAIJ, 10(19), 2014 [10849-10854]

Method study on supply Chain management theory applied to GJ airlines

Peng Yubing, Bai Yangmin*

Economics and Management College, Civil Aviation University of China, Tianjin, 300300, (CHINA)

ABSTRACT

Supply chain management is the basic theory for company material procurement. In applying it to China Northern Airlines (GJ), the key point is to understand nowadays supply chain management theory and figure out the intrinsic relationship between material procurement and the theory. Thus, the fundamental value of the theory and its scientific application can be guaranteed. From the perspective of the supply chain theory, the effective analysis on the intrinsic relationship between the supplier and the buyer enables the specific study on the environment of establishing the supply chain between them. Thus, makes it possible for the supplier and buyer to further discuss the factors that affect the establishment of the supply chain environment. Thereby, manifest the diversification and creativity in GJ's material procurement approach. Besides, both targeted and comprehensive, Supply chain management can also be gradually achieved. Based on the study of supply chain management theory, this paper firstly discusses the specific issues of traditional procurement model. Then it studies the important role of strategic procurement partnership to help establish the emerging supply chain system. Finally, it explores how to establish strategic procurement partnership so as to realize diversification of GJ material procurement approaches. The above shows the topic, the idea and main targets of this paper. I hope this could help to provide theoretical support for further study in the future.

KEYWORDS

Supply chain management theory; Material procurement; Procurement methods; Exploration and research.



INTRODUCTION

Supply chain management theory plays an active role in the development of the relationship between the supplier and the buyer. In management science, supply chain is a benign development chain that helps to maintain healthy development of companies. Effective management guarantees companies daily operation. This paper discusses the influence exerted by traditional procurement management model on GJ's material procurement. Besides, it also studies the effect and establishment of strategic partnership. All this helps to make the idea of this paper more coordinated and express its application value as clear as possible.

THEORETICAL PRINCIPLE OF SUPPLY CHAIN MANAGEMENT THEORY

Traditional procurement management model

In traditional material procurement process, the first step is to make an effective choose of the supplier and products as required by batch rule in accordance with the specific procurement needs. However, when in face of more than one suppliers, the buyer need to take prices and the quotation process into consideration and make effective choice so as to finally reach an agreement on the price contract. To get the best supplier in this stage, buyers usually take measures to influence the competition of suppliers, but at the same time keep their private information unrevealed^[1]. The more suppliers, the more information is needed to provide for the suppliers. This may enable the supplier to have more advantage. But to GJ's material procurement, it is a disadvantage. So, to make the competitive advantages to the utmost extent, confidential treatment is needed in the competition among the suppliers. After the supplier confirming the order, the buyer shall pay the supplier. Repeat the above steps if change of the order is needed. The final step is the buyer's acceptance of goods. Notify the supplier to replace or return the good and make a claim if any quality problem was found by the buyer during acceptance. In order to guarantee the normal operations of GJ, goods are usually in storage. Traditional GJ material procurement is shown in Figure 1. The essence of this process is a trading process of goods. However, with the development of market economy, growing market competitiveness will also bring a serious of negative influence, mainly in the following two aspects.

Price is the first element of traditional procurement

In GJ's material procurement process, quality, price and delivery time are the three important elements of material procurement. But price remains to be the top priority. The direct result of acquiring the inexpensive price contract and reducing the cost gradually is the affected delivery quality. Price sovereignty has its own commercial value against this commodity economic times. However, to the buyer, materials procured in this stage are popular commodities. This thought is apparently unsuitable with the development of times^[2].

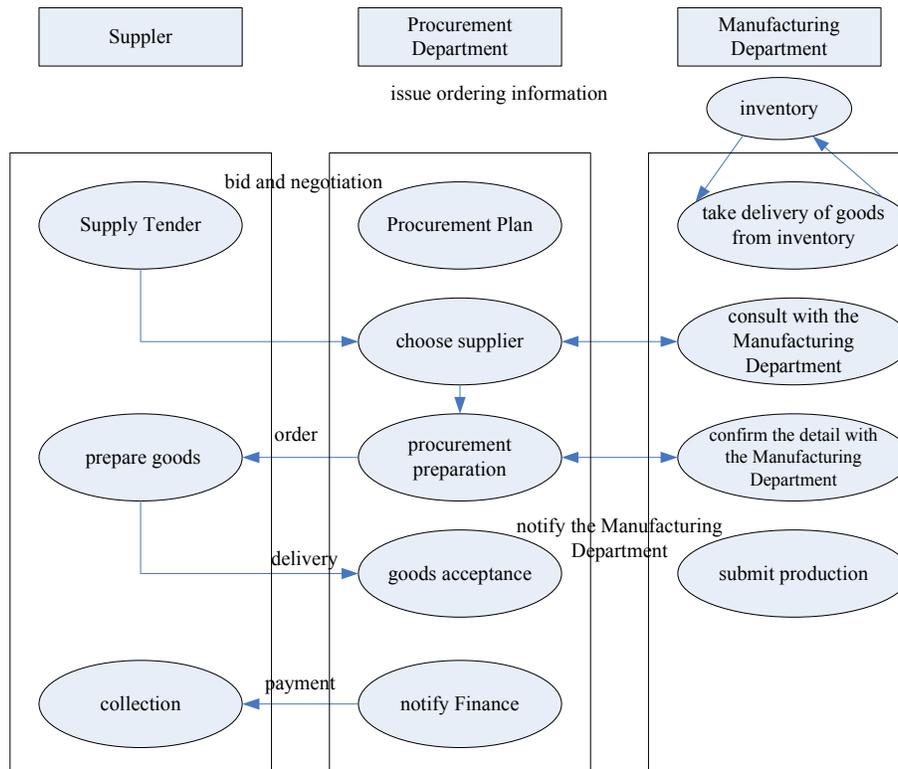


Figure 1 : Principle of traditional procurement operation

Procurement process, a game of asymmetric information

In the process of GJ's procurement, buyer's and seller's unwillingness of sharing commercial information with each other result in the zero-sum game. For instance, in the process of procurement, the buyer should have revealed the information to the supplier. However, even in the manufacturing process, no information exchange is conducted between them. Thus result in the supplier's stock method to deal with the sudden need of the buyer. Even with enough quantity, quality of the stock goods may not satisfy the buyer. The reason for the traditional procurement view lies in the procurement agreement, which creates a winner and a loser.

Procurement management under supply Chain management (SCM)

In the model of supply chain management, cooperation should be established between a company and its subordinates. Company should effectively transform product supply strategy when dealing with different market development environment and customer groups. Thus the supplier could satisfy different requirement of different customer groups. Procurement involves different material or goods. GJ's procurement is high-tech material oriented. Considering this, GJ should take the feature of global material supply in to consideration while conducting procurement so as to organically integrate the supply chain. In this way, it could help companies to deliver a better supply performance against the unstable market supply environment. To GJ, the scientific final goal of establishing a well-planned distribution and management mechanism will be realized. It will ensure the material supply company to provide goods with best quality within the shortest time, thus improves service standard and level of the companies^[3].

Key points in supply Chain and supply Chain management

There is no clear definition of supply chain in professional area. Supply Chain usually refers to the following process. First is to effectively process the raw materials, and then is to send the processed products to the customers. Since its targeted object is the terminal client who receives the service, the following five indicators compose the evaluation standards of the supply chain. They are service speed, service quality, service flexibility, service cost and service process. From production point of view, supply chain is the final outcome of social production. It is an important manifestation of interaction among companies and the flow of goods. Social market is now changing from the seller's market to the buyer's market. The dominant role of the buyer is becoming more and more important. This puts a higher requirement on the constitution of the supply chain. Considering this, it should be the most important thing in supply chain management. To achieve unified standard and management, comprehensive management model should be carried out. In this way, the goal of supply chain management would be become clearer. It could also help to create favorable conditions for supply-demand relationship in the development of market economy, thus exert active influence on GJ's material procurement.

Supply chain is the product of logistic intensive development among companies. In modern logistic development, managing the buyer and supplier effectively can help to integrate the information so as to provide the buyer with effective procurement resources. As the key component of supply chain management, it is also the necessary element of GJ's procurement.

Supply and demand are the two necessary parts of supply chain. In the whole logistic process, the supplier, who is in the initial stage, is gradually get to the end of the supply chain, the buyer, through a series of links. Each link in the process needs the correspondence between the buyer and supplier. GJ's procurement process is the final embodiment of the above process^[4].

In GJ's procurement process, the strategic idea of effective integration both in the upper and lower supply companies helps to create the advanced logistic system. In fact, GJ's procurement process is also a kind of supply commodity of which the value gradually increases. For this feature, the supplier will gradually reduce the production cost and the service cost so as to get relatively high competitive advantage. Its utmost goal is the satisfy GJ's value added service during its procurement. In some way, supply chain is an extension of GJ's material procurement. It can gradually increase the value added service in the whole procurement process.

Some experts regard supply chain management as the extension of material management. The fact is that great differences as following exist between the two concepts

(1) Significant component put higher requirement on cooperation between companies. This is not constrained to the internal and external management and coordinated development of a company.

(2) During the process of effective supply chain management, great number of inventory is not a necessity, but a guarantee element of balanced production. However, the idea of zero inventory is preferred in supply chain management. In this way, capital occupied room could be narrowed, thus provide supplier with the most favorable supply condition. It is the basic measure point of GJ's procurement.

(3) The most important strategy in supply chain management is overall planning of supply chain. This could provide the buyer (GJ) with better supply service and meet its practical procurement requirement. It could also create favorable conditions for the realization of GJ's scientific optimization and purify the development environment. In this way, the scientific system of GJ's procurement measures could be created (shown as Figure 2).

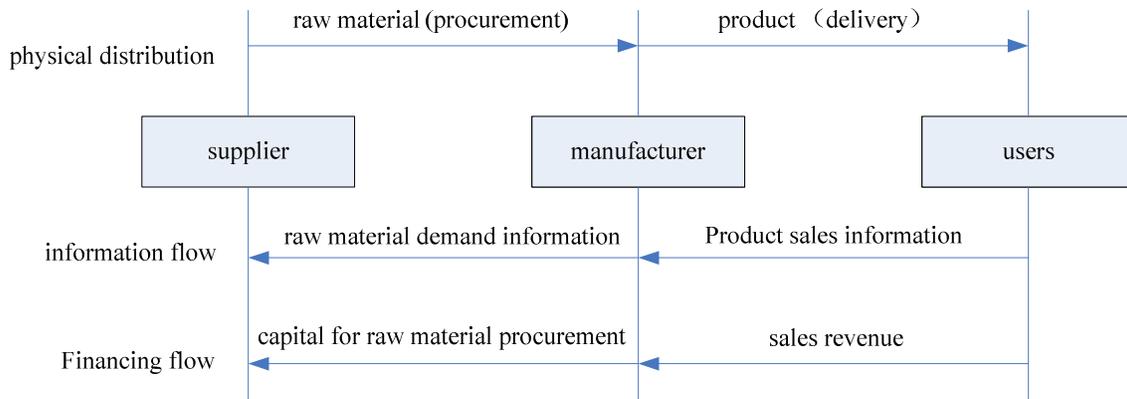


Figure 2 : Fundamental model of supply Chain

From supply relationship perspective, comprehensive observation on GJ suppliers’ operation and its various modes of production should be carried out in GJ’s procurement process. In this way, the ideal standards of stability and its patterns of acceptance of risk could be realized during the procurement process. Maximum opportunity and benefit could be obtained both in GJ’s material procurement and in the supplier’s material supply^[5].

Positive impacts of optimized supply chain management on GJ’s material procurement are reflected in the following aspects. First, supply time could be effectively reduced, thus improve the material supply efficiency. Second, inventory could be effectively reduced, and cash flow of the supplier could be faster. Thus provide financial support to GJ’s materiel procurement to the largest extent and improve the quality of GJ’s procurement greatly. TABLE 1 perfectly shows the fact.

TABLE 1 : Supply Chain established on the best production platform

1980s		1990s	After 2000
manufacturing resources planning (MRPII)	Just-in-time (JIN)	Lean Production (LP)	Supply Chain (SC)
Promoting system. Material ordering is based on the assignable demand. Eliminating Safety stock and inventory turns stock. Depend on related ordering plan and reliable anticipation. Realizing the flexibility of customers demand through adjustment.	Promoting system. Comes from fixed demand, productive capacity and demand of users. The scope of Similar product production is small and in limited batch.	Waste elimination. Minimum occupation of stock. Cost transparency in supply chain. Employees with Versatile expertise. Reduce artifacts queuing. Adjust and shift in a short time. Adhere to diversified products availability and small scale.	Quick response. Flexible supply. Customization of custom-made. Supply chain under control. Process. Integrated partners’ capacity. Apply E-commerce in a comprehensive way.

THE ROLE OF STRATEGIC PROCUREMENT PARTNERSHIP

Related International research literature shows different understandings on concrete modes of supply chain management. The concept of strategic procurement partnership is the one enjoys deepest understanding. When the relationship among companies is transformed to the kind of a new cooperative one, the difference between this new model and the traditional management model of company relationship should be effectively distinguished so as to establish modern supply chain management. This idea also shows GJ’s new motion in dealing with the relationship with other companies^[6]. Seeing from its development history, the company relationship management went through three main stages. Figure 3 shows the three stages.

The effective transformation from the traditional company relationship to the innovative cooperation relationship can help to establish the strategic procurement partnership between GJ and its Supplier, and make it possible for the scientific development of the supply chain components. However, in traditional supply management, supply management is logistic management. Besides, buying and selling relation is the only relationship and cooperation is excluded. From this perspective, management only exists in production. To GJ’s procurement, it does not matter. The traditional way could not satisfy GJ’s procurement demand, and real strategic cooperation between supplier and buyer could not be established.

integration scale with the supply chain companies

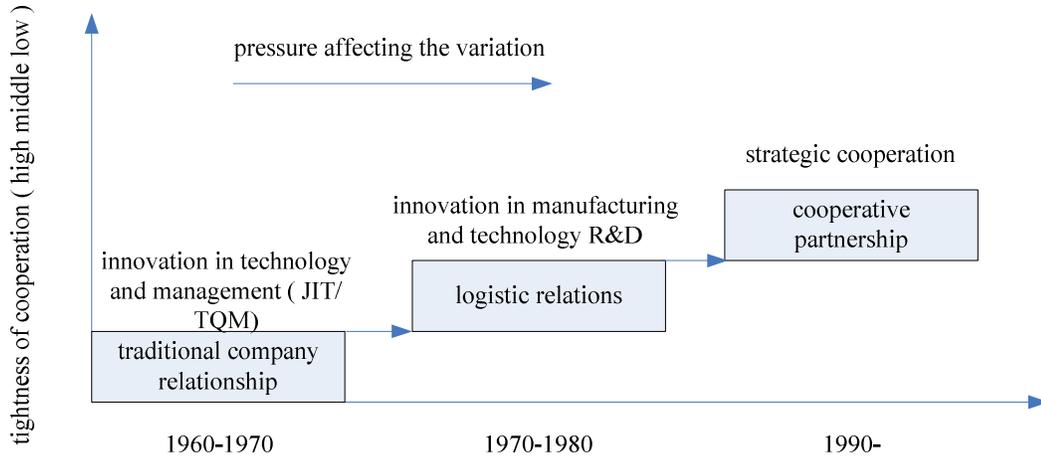


Figure 3 : Evolution process of companies relationship

The important position of supply chain cooperation relationship in the whole cycle time of supply chain shows its significant role in supply chain management. As is showed in Figure 4:

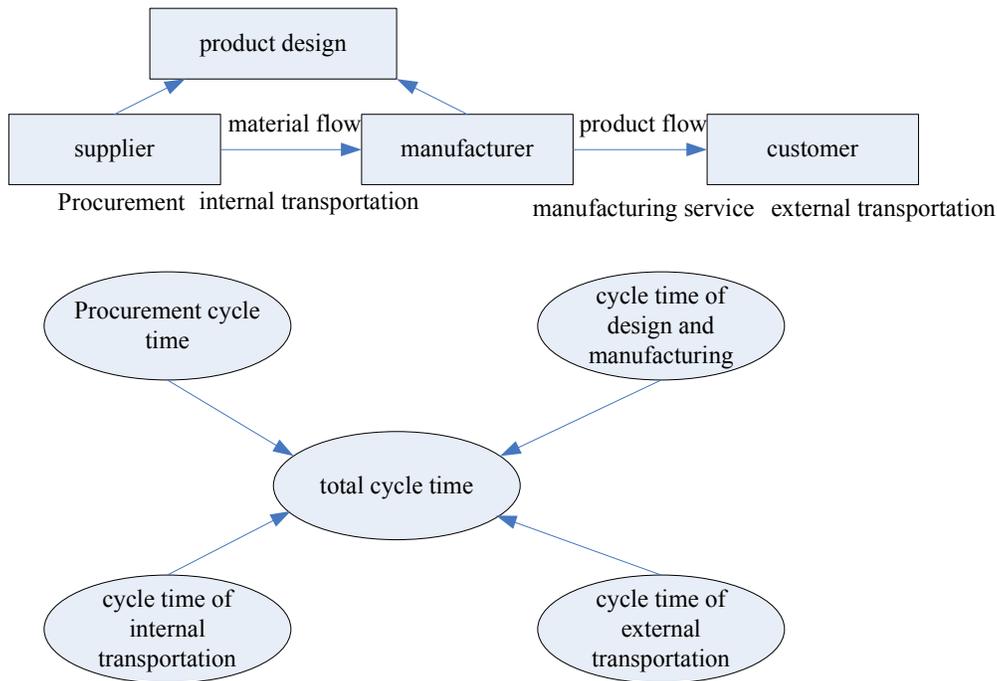


Figure 4 : Cycle time of supply Chain

ESTABLISHMENT OF THE STRATEGIC PROCUREMENT RELATIONSHIP

Company integrated mode based on Strategic procurement relationship is shown in Figure 5. Interrelated integration of companies has been realized at macro, middle and micro level. From macro perspective, it is mainly about optimization of resource allocation, cooperation and delegated completion among companies. From the middle perspective, it is mainly about information sharing based on IT support and joint development. Besides, logistics and service coordination at micro level are also needed during this process^[7].

The key point of supply management under supply chain environment lies in suppliers' strategic cooperation and daily management. To improve the productive capacity and the benefit of a company, the relationship with suppliers should be properly developed. Besides, suppliers' activity should be taken as an organic part of one's own supply chain. The company should also take full use of all the resources in the supply chain. In this way, the market demand could be satisfied to the largest extent.

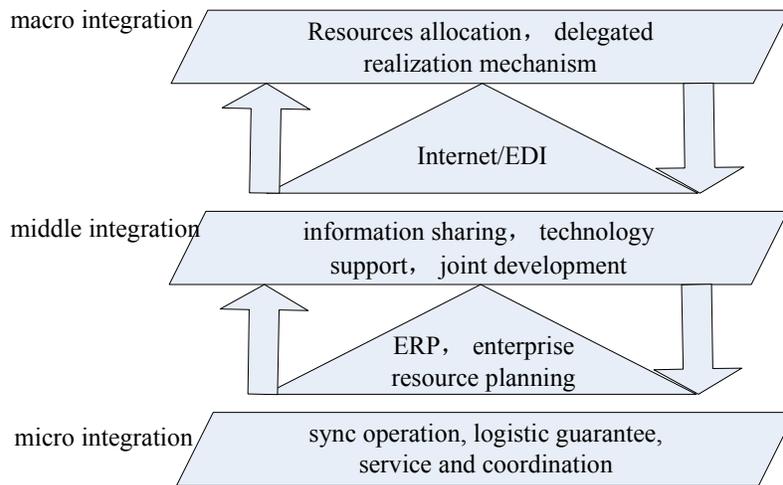


Figure 5 : Company integration model of strategic partnership

CONCLUSION

This is my study on GJ's material procurement based on supply chain management theory. In the study process, the theory is adopted in finding and presenting problems. This paper also explores ways of model improvement, thus laid a solid foundation for the establishment of GJ's material procurement theory.

ACKNOWLEDGEMENT

Found Project : Soft Science Project of Civil Aviation Administration of China. Study on Coordinated Development Between Air Transportation and National Integrated Transport System RKXZY0804

REFERENCES

- [1] An Zhiyu, Zhou Jing, Li Min; Large-scale construction project's procurement contracts on strategic resources, *Journal of Industrial Engineering and Engineering Management*, (1), 179-184 (2014).
- [2] Tian Jun, Zhang Haiqing, Wang Yingluo; Emergency supplies purchasing model based on capacity option contract with dual purchasing sources, *Systems Engineering- Theory & Practice*, 33(9), 2212-2219 (2013).
- [3] Mo Ping; Audit case and analysis on material procurement under ERP environment, *Internal Auditing in China*, (9), 57-59 (2013).
- [4] Zhou Pei; Study on management of bidding and tendering management of company procurement, *Social Scientist*, (12), 84-87 (2012).
- [5] Cui Yuhua, Liu Jiaying, Li Junjie; Logistic solution on management of material procurement management of corporation, *Oil-Gasfield Surface Engineering*, 31(7), 6-7 (2012).
- [6] 张海青Zhang Haiqing; An emergency supplies purchasing model on capacity option contract led by purchaser, *Journal of Systems Science and Mathematical Sciences*, 31(10), 1317-1327 (2011).
- [7] Chen Jinsheng; The best selection of the supplier in material- purchasing, *Journal of Southwest China Normal University (Natural Science Edition)*, 36(5), 79-82 (2011).