Available online www.jocpr.com

Journal of Chemical and Pharmaceutical Research, 2013, 5(12):154-159

Research Article

ISSN : 0975-7384
CODEN(USA) : JCPRC5

Research on influence mechanism of supply chain quality coordination on organizational legitimacy based on organizational decoupling

Liping Shi, Yanan Jia and Qiang Liu

School of Economics and Management, Harbin Engineering University, Harbin, China

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ABSTRACT

It is necessary of supply chain quality collaboration to research on the quality improvement strategy for organization legitimacy. From the perspective of organization decoupling, building on the analysis framework between supply chain quality collaboration and organization legitimacy through the quality improvement strategy. Employ AMOS 7.0 and SPSS software on the empirical analysis, analyze the relationship between supply chain quality collaboration and organization legitimacy, finally find that: the behavior of initiative decoupling of enterprises on supply chain has positive influence on quality collaboration indifference, while the passive behavior of organization decoupling has a negative influence; quality collaboration will guide enterprises to carry out rapid quality improvement strategy and slow quality improvement strategy; both of the two quality improving strategies will promote organization legitimacy.

Key words: Organization Legitimacy, Supply Chain, Organization legitimacy, quality collaboration, quality improvement strategy

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INTRODUCTION

Nowadays, the competition among supply chain members is becoming more and more vigorously, especially the mismatching between productions and the market demanding. The behavior of consumers' rational consumption lead to the market's competition regulation of leaving good products, while weeding out bad products which need companies choose moderate way to catch it. Legitimacy refers to the organizations have reached the requirements of the organization, all the elements within the organization have achieve the requirement of rationalization. Therefore, the realization of organizational legitimacy will be expected to the main goal of achieving the enterprise economic benefits. Because of organizational legitimacy and the quality of the products on the supply chain enterprises are closely related, and supply chain enterprises on the synergy has important effects on its quality, therefore, taking quality improvement strategy is an effective path for the supply chain enterprises to achieving organizational legitimacy. At the same time, On the supply chain, the quality of enterprise products has a close connection with organizational decoupling. Organization decoupling theory consists that organizational expectations need the internal factors of organizational environment giving promptly response, due to the hypocrisy of elements and the response lag, eventually leading to organizational expectations fracture failure elements and logic relations. From the perspective of the formation mechanism, organization decoupling can be divided into active decoupling and passive decoupling. Chen Yang contains that active decoupling refers to elements inside the organization to choose to give up the process of achieving the maximum organizational benefits; Passive decoupling refers to the organization's message failed to adapt to the changes in the different organizational environment which lead to the process of group decisions differently[1]. The advantage of applying the organization decoupling theory to explore the collaborative of supply chain quality mainly lies in: first, when the associated validity of the supplier and the manufacturer has negative impact on the quality of the supply chain performance, both sides will actively disconnect association to meet the expectations of improving the products' quality on the supply chain enterprises which will form active decoupling; Second, when one side of the supply chain management concept cannot be consist with the

field of other sides, it will supply the products which can't meet the market demand, and then forming the passive decoupling; Third, active decoupling and passive decoupling are all the process of breaking the connection of enterprises, because of customers' expectations of products which lead enterprises integrate correlation information. Therefore, the collaborative quality can meet the individual needs of customers and achieving organizational legitimacy. The enterprises which have achieving quality cooperative through organizational decoupling can effectively take quality improvement strategies to overcome organizational legitimacy threshold constraint.

The study based on the view of organization decoupling, from the two sides of active and passive decoupling, taking the quality improving strategy as the medium variable, constructing the theory frame of the relationship between supply quality collaboration and organization legitimacy from the two aspects of the mutation type and the gradient type quality improvement strategy. AMOS 7.0 and the SPSS software are adopted to the empirical analysis, this paper analyzes the influence mechanism of supply chain quality coordination and organizational legitimacy, the research conclusion will be used for the research of relationship quality of supply chain coordination and organizational legitimacy which widing the research idea and providing the theory basis.

Literature review and theoretical assumptions

Organizational legitimacy refers to the enterprises' management behaviors and structure systems of organization members meeting the standards of organization expectations[2]. Zhao Mengying expounds the understanding of organizational legitimacy from the view of supply chain, he thought the organizational legitimacy is the sign which the supply chain enterprises and customers all identified[3]. Li Yanping connected the concept of organizational behavior and social institutional environment, she thought that organizational behavior conducted by the exceptions and relevant principles in the environment, these regulations directly determine the acceptable degree of organizational behaviors, organizational legitimacy has an important influence on the organization's environment, new things and the establish of the organization order[4]. Eron give credit for the importance of organizational legitimacy in researching the birth and development of the enterprise, he pointed out that the realization of the organizational legitimacy is one of the important standards to predict the development of new enterprises[5].

As the mediation standards of connecting supply chain and market reaction degree, it need consider the factors for researching the organizational legality. Robson believes the external organizational legitimacy of the enterprises will be affected by the internal members' behaviors which is not closely connected with the management methods. When supply chain members share interests and standardization systems, these members will not consciously reduce decoupling behaviors[6]. Christopher pointed out that companies will adopt the way of alliance to provide products for meeting the market demands, this union behavior depends on the change of market, technology and demand[7]. And enterprises of the supply chain members reach an agreement of the quality improving strategic is effective to enhance enterprise competition and strengthen the market satisfaction. Interest related party alliance enterprises behavior is a recognition of this kind of behavior rules, quality improvement strategy need match a lot of market information and resources, giving full play to enterprise's capital, manpower and material resources, these will be extremely important influence on organizational legitimacy[4]. The implementation of this quality improvement actions process will depend on the different environment conditions and the expected effects. Oliver studied the control relationship between enterprise and environment, that enterprise can make through two kinds of behavior objectives consistent with the organizational legitimacy, one kind is to obey, compromise and avoiding creep behavior, another kind is resistance and mutation of manipulation[8]. Shi Chunsheng also researched on organizational innovation behaviors from the perspective of gradual and mutation, he thought that taking which kind of quality improvement strategy depends on the degree of member enterprises to adapt to the environment factors and enterprise itself to achieve the goal of time expect[9]. Ye Ying thought gradient situation need enterprises had long-term planning and continuity, while mutation was the embodiment of the enterprise under abnormal environment, whether the crisis or opportunity, in the face of this sudden environmental change, it required enterprises had strong ability of emergency and the strain[10]. Li Chunfu explaind the application of mutation and gradient conditions from the view of system, he pointed out that whether to adopt continuous gradient or non continuous mutation, it need to pay attention to the transition state in the middle of the degree of stability to the realization of the system specific phase change finally[11].

Qian Bo thought quality synergy is an important channel of acquiring product quality information and seeking customer market expectations, is the essential condition of shorting the product development and production cycle, improving enterprise competitiveness, and grabing market share[12]. During the process of exploiting product, supplying and circulating, it will have loose connection between nodes on the each link of supply chain. When different degree of loose phenomenon appearing, it need enterprise to take timely information feedback to realizing the goal of satisfy organizational legitimacy. From the view of group decoupling theory to explain this, it can be understood that the feedback information will make the internal enterprise feel different levels of volatility, the change of corporate structure and the uncertainty of market information can make the enterprises to choose active

response and passive to adapt to the two strategies, namely active decoupling behavior and passive decoupling behavior[1]. Through the feedback market information, supply chain member enterprises can adjust enterprise association mechanism, using appropriate quality collaborative behavior of decoupling when appearing rupture between each node in the supply chain, guiding the implementation of the strategy of quality improvement, to achieve the target of feedback to satisfy organizational legitimacy.

The relationship between organization decoupling and quality collaboration: During the quality synergy between enterprises signal transmission with decoupling of behavior, every feedback behavior of decoupling is the market's maladjustment, which need further improving and perfecting in order to balance the interests relationship between related parties[13]. Chen Yang contained that companies would take active decoupling behavior to ease the outside discomfort of legitimacy pressure[1]. These pressures need enterprises replace business mode or adjust the system, but in fact companies only tend to promote the transition of the external appearance, the change is not obviously. Companies want to through the way of active control and positive face to solve the situation of disconnecting between business and market, choosing the plan of enterprise can accept buffer activities for a short time. Before quality synergy , supply chain enterprises will carry out actively preparing, collecting a large number of information, integration of resources, proposing the scheme, sharing the enterprise resources during the process of enterprise collaboration, reorganizing the internal structure and perfecting the management system. Robson pointed out when supply chain members shared interests and standardization system, they would unconsciously reduce decoupling behaviors[6]. When the quality of the synergy between enterprises to achieve a certain effect, active decoupling behavior will disappear, the changing of product quality evaluation standard will be ignored as well.

Chen Yang pointed out that bad communication of enterprises on the supply chain will lead to the sudden rupture of signal transmission, namely information communication channel not free or failure, under the pressure of customer market, the employee will change their behaviors under this pressure with time goes on[1]. Petri studied active decoupling process, the difference between coupling and passive decoupling process, analyzing the passive decoupling degree from strong, weak and the extensibility three aspects, he pointed out that because unable to meeting customer requirements and the quality of the products do not conform to the requirements of the market, supply chain enterprises prompted a passive decoupling behaviors[14]. The difference between passive decoupling and active decoupling is that active decoupling asked to split the inherent links, and the causes of passive decoupling appearing is that companies are not willing to accept this signal fracture. Cao pointed out that the quality collaboration of the supply chain enterprises will affect corporate behaviors, helping enterprises to improve the system internal defects, improving the whole competition mode of cooperation, integrating internal structure, information resources will be for the free flow of communication with the enhance of the consistency of the member enterprises, promoting the realization of quality synergy effect[15]. Therefore, we put forward:

Hypothesis 1: The organization decoupling behavior of enterprises on the supply chain will have a positive influence on quality collaboration.

Hypothesis: 1.1: The organization active decoupling behavior of enterprises on the supply chain will have a positive influence on quality collaboration.

Hypothesis: 1.2: The organization passive decoupling behavior of enterprises on the supply chain will have a positive influence on quality collaboration.

The relationship between quality collaboration and quality improvement strategy: Dirk pointed out that enterprises passed a variety of product information to meet the production requirements of lower the product cost, and these products must conform to the demand of the customer market, all these will need the quality improvement strategy to realize[16]. During the study of enterprise behavior, James put forward enterprise can quickly use quality synergy to integrate resources, improving the quality of products through deeping enterprise relevance in the shortest time, rapidly improving product market share and enterprise competitiveness[17]. Sui Jianli thought that mutation characteristics can test the effect of enterprise's response to uncertain environment, the characteristics of the mutation should match the external demands[18]. Liu pointed out that under the condition of diverse cooperation, suppliers will quickly give response when the punishment strength is lower than the critical value[19]. When enterprises face to a management crisis or development opportunities, namely customer market demands enterprises on supply chain give quickly response to the demands of production quality, mutation type of quality improvement strategy can satisfy the business enterprise management crisis reversed in a short time and the realization of the interests of the economy.

In the whole process of enterprise quality collaboration, a link of the quality information, resources integration and collecting the quantity can be done by the amount of change. The function after quality improving will be

transmitted and connected between each node of the supply chain through the expansion of individual enterprise information, eventually the effect of improving the quality will be gathered to market for legitimacy testing by customers[20]. Han Yu thought achieve the goal of quality improvement need mutual cooperation between the member enterprises on supply chain, each class in every connection point need take effectively quality improving policy, and carrying on the discussion and revision repeatedly, after a longer time period, the product quality will be effectively promoted[21]. Under the pressure of the varying demand of enterprise, when they can still maintain business continuity and a relatively steady state, using the gradient type of quality improvement strategies may be appropriate. Therefore, we put forward:

Hypothesis 2: quality collaboration will guide enterprises on supply to adopt quality improvement strategy.

Hypothesis 2.1: quality collaboration will guide enterprises on supply to adopt the mutation type of quality improvement strategy.

Hypothesis 2.2: quality collaboration will guide enterprises on supply to adopt the gradient type of quality improvement strategy.

The relationship between quality improvement strategy and the organizational legitimacy

Sandra thought rapid promotion of product quality can make the enterprise adapt to the demand of the market, enterprises taking mutation type change behavior can deliver the optimal order quickly, this emergency actions can achieve the goal of the stakeholders in priority order[22]. Thomas pointed out legitimacy is close to the main industry target, when the direction of the industry as a whole benefit target suddenly is affected by the sharp fluctuations in the market, it will drive enterprise behavior to quick response and following the wave phenomenon, this process of change can adjust the effect on the relationship between the quality and organizational legitimacy[23]. When the enterprise is put forward through the quality improvement strategy to adapt to the change of market demand, the goal of enterprise will quickly meet the direction of organizational legitimacy standard.

Marano thought under complex organizational environment state, enterprise and their partners though the way of constantly communication, they can adjust the unfavorable situation to adapt to the complexity of organizational environment in a gradual way[24]. Eiselt proposed quality improvement can be a slow process in the study of the quality problem of the supply chain, improving the process of tardy also need improve the results of tardy, embodied in the link between the business and organizational legitimacy gradually close, and the products conform to the demand of the market gradually[25]. Chaney pointed out that between organizational legitimacy and enterprise demand exists the profit difference, it need companies adjust business strategy to adapt to the organizational legitimacy, it is a process of gradual change[26]. Gradient type product quality improvement can make the enterprise development direction of profit motive demand gradually meet the requirements of organizational legitimacy, finally achieve the consistency of the target. Therefore, we put forward:

Hypothesis 3: quality improvement strategy can promote organizational legitimacy.

Hypothesis 3.1: the mutation type quality improvement strategy can promote organizational legitimacy.

Hypothesis 3.2: the gradient type quality improvement strategy can promote organizational legitimacy.

Empirical Analysis

Data collection: The study collected data mainly through the method of questionnaires. Through the way of interview and communication with the enterprise senior management personnel, selecting 67 companies to send the questionnaire which is suitable for data survey. Taking the 1-7 point Likert questionnaire. 53 enterprise management personnel were participated with 437 copies of questionnaires, recycling 339 questionnaires, recovery rate was 77.57%,39 invalid questionnaires, and 300 valid questionnaires, the effective rate was 68.65%.

Scale variable collection: Referencing the research of Zeng Chuhong which about organizational strategic from the perspective of legitimacy[27], combining with the basic knowledge of supply chain management, on the basis of the integration framework of organizational legitimacy and influence factors put forward by Li Yanping[4], selecting four organizational legitimacy evaluation indexes. Referencing the explanation of quality improvement strategy of Zimmerman and Zeitz, from the angle of quality improvement program and the progress, quality improvement strategy can be divided into mutation type and gradual type two forms[28]. Quality collaborative referencez Qian Bo, Wang Xiuxia which combined with the basic knowledge of supply chain management and quality management[12]. Decoupling behavior evaluation indexes reference Chen Yang, which were divided into two kinds of decoupling

forms, the active form and passive decoupling form[1].

Scale reliability and validity test: This paper uses the coefficient of *Cronbach a* for reliability test, the majority coefficient above 0.8, the credibility of the scale is very high. Using the spherical inspection of *Bartlett* and sampling adequacy quantity inspection tools of *KMO* for factor analysis. Spherical inspection and the value of this study are meet the standards of factor analysis, the factor loading of each factors were above 70%. Therefore, the valid of the scale of is better as well.

Empirical analysis: Using the software of *SPSS* and *AMOS* 7.0 for overall and breakdown analysis and data processing, through the relationship between the measured variables, analyzing the relationship between the quality collaboration and organizational legitimacy, combined with the intermediary variable of quality improvement strategy and affecting quality factor of decoupling, quality of comprehensive analyzing the mechanism of the supply chain quality collaboration and organizational legitimacy, it is concluded that the overall research model, as shown in Fig.1.

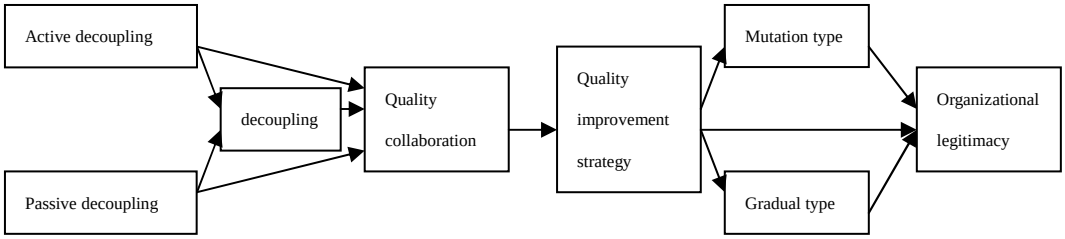

Fig.1 The mechanism figure of the relationship between quality collaboration and organizational legitimacy

Using SEM evaluate the model, $\chi^2/df < 3$, *GFI*, *NNFI*, *CFI*, *IFI* are all higher than 0.9, $RMSEA < 0.08$. All fitting index are within reasonable bounds, the fit of the model is overall good.

This study uses AMOS 7.0 for specific path coefficient of regression and the value of p, as shown in table 1. The path coefficient of active decoupling and quality collaboration, active decoupling and organizational legitimacy are less than 0.1, the value of p are 0.067 and 0.072, the inspection result is failed, the rest of the various assumptions have the supporting part level (values are less than 0.05).

Tab.1 Structural equation model standardization path coefficient

Relationship of variables	standardization path coefficient	*P*	Test result
Mutation type→Organizational legitimacy	0.319	0.000	success
Gradual type→Organizational legitimacy	0.454	0.000	success
Quality collaboration→Mutation type	0.377	0.000	success
Quality collaboration→Gradual type	0.338	0.000	success
Quality collaboration→Organizational legitimacy	0.513	0.000	success
Active decoupling→Quality collaboration	0.078	0.067	fail
Active decoupling→Organizational legitimacy	0.092	0.072	fail
Passive decoupling→Quality collaboration	0.451	0.000	success
Passive decoupling→Organizational legitimacy	0.328	0.000	success

RESULTS

This paper mainly studies the relationship between the quality collaboration of the supply chain and organizational legitimacy, based on the view of decoupling, using the method of quality improvement strategy to research the mechanism of product quality and organizational legitimacy, conclude the following conclusions through theoretical analysis and empirical analysis:

First, the decoupling behavior of the enterprises on the supply chain is closely related to the quality collaboration behavior. Second, the quality collaboration will make enterprises take mutation type quality improvement strategy. Third, the quality collaboration will make enterprises take gradual type quality improvement strategy. Fourth, the mutation type quality improvement strategy is rapidly go toward organizational legitimacy standard. Fifth, the gradual type quality improvement strategy is slowly go toward organizational legitimacy standard.

Acknowledgment
This study is supported Grant No. GZ2011010 from the Defense Science and Technological Industry Technology Foundation Research Programs.

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