The Impact of Customer Legitimacy and Culture Difference on Customer Integration

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Abstract: Since customer integration can bring a lot of benefits for supply chain partners, it is for companies to manage this practice effectively. The concept of legitimacy was introduced into the supply chain, and the effect of customer legitimacy on the customer integration was investigated. The moderation effect of culture was also tested. And some managerial implications are provided.

Keywords: Customer integration; Legitimacy; Culture

I. Introduction

In an ever changing and fiercely competitive marketplace, companies have realized that solely being cost efficient in supply chain management (SCM) does not suffice, and they should collaborate to compete ([1]) and make the supply chain agile, adaptable and aligned to meet the challenges of competitive environments ([2]).And it has been confirmed by a lot of research results ([3], [4]) that supply chain integration can bring benefits to partners in many aspects: reducing the uncertainty across the supply chain, saving costs and enhancing responsiveness, and that supply chain integration have positive impacts on performance ([4]). Furthermore, today's manufacturers are becoming increasingly reliant on their suppliers to gain competitive advantages. Partnerships with suppliers have become the lifeblood of the supply chain, and the issue is not whether to build partnership with suppliers, but how ([1]). Therefore, it is important for the companies to understand the factors affecting supply chain integration.

However, our knowledge of what influences or enables supply chain integration between trading partners is still very limited ([5]), even though a lot of researchers have contributed to this topic, and have identified some factors that can influence the effectiveness and level of supply chain integration, such as trust, relationship commitment, power, environment uncertainty，conflict objectives and information technology.

Institutional theory emphasizes that legitimacy is crucial for organizations, since it concerns how its audiences perceive this organization. In return, it will influence the exchange between the organization and its audience. In the case of supply chain, the audience of a customer can be the supplier, thus, how the supplier perceived the legitimacy of a customer will influence their cooperation. Therefore, the concept of legitimacy is particularly salient in the context of supply chain management.

However, we can find little research has been done in the supply chain management context, even though a lot of studies have talked about the concept of legitimacy for a long time. While legitimacy as a subjective perception toward an organization, it can be easily affected by culture value. Therefore, the main purpose of this study is to investigate how the customer legitimacy and culture value influence the supply chain integration, especially customer integration.

II. Theoretical background

Customer integration

Supply chain integration is defined as a process of interaction and collaboration in which companies in a supply chain work together in a cooperative manner to arrive at mutually acceptable outcomes, such as maximum value to customers at low cost and high speed ([6]).

The supply chain literature seems to have arrived at an agreement of the typology of supply chain integration, that is supplier integration and customer integration ([7]). In this study, we only focus on Customer integration, which refers to the process of interaction and collaboration between an organization and its customers to ensure an effective flow of supplies. Another important goal of customer integration is the improvement of demand planning and visibility in supply chains; without information sharing from one end of the supply chain to the other, tremendous inefficiencies in terms of customer service can occur.

Customer legitimacy

From institutional to neo-institutional theory, legitimacy has been identified as a dominant construct, because of its importance for organizations. Institutional theory indicates that the survival of an organization not only depends on material resources, but also depends on how the organization is isomorphic with its environment. Thus, in order to survive, organizations must conform to the rules and belief systems prevailing in the environment ([8], [9]). And legitimacy is also an important resource ([9], [10]), since it can help to attract economic resource and gain the social and political support necessary for their continued successful operation ([11]).

However, when going through the literature, we find that the definition of legitimacy is quite different across researchers. Dowling and Pfeffer ([9]) proposed that an organization will be perceived as legitimate, if its behaviors

are congruent with social norms and values held by the superordinate system of which it is an element. But this definition focused more on the evaluation side ([12]), while Meyer and Scott ([13]) defined legitimacy from the different perspective which was much cognitive. They defined organizational legitimacy refers to the extent to which the array of established cultural accounts provide explanations for an organization's existence. Here organizations are perceived as legitimate because they are understandable rather than desirable. To combine these two different perspectives of legitimacy, Suchman ([12]) adopt an inclusive definition: legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.

Even though these definitions above are from different perspective, they all stressed the relationship between an organization and its environment. An organization will be perceived as legitimate if it is accepted by its environment as proper. Therefore, in the context of buyer-supplier dyad, the customer will be endowed as legitimate, if it is accepted by its supplier as proper.

Furthermore, since legitimacy is a social judgment that is ultimately accorded the organizations by its constituents or audiences ([14]). Since these constituents and audiences can be both external and internal ([15]), we can divide legitimacy into to types according to different audiences, that is, external legitimacy which refers to the acceptance of the organization by the broader societal environment ([12]), such as customers, suppliers and government, while internal legitimacy refers to the acceptance of an organization by its internal constituents ([16]), such as employees, the board and managers. Nevertheless, we should emphasize that we only focus on the former (external legitimacy) only, since we address the issue in the context of supplier-buyer dyad supply chain, especially the supplier's perception on the customer's legitimacy. Moreover, researchers argued that legitimacy requires consensus only somewhere, not everywhere. Therefore, it is reasonable to focus on the supplier's perception on the customer's legitimacy, because supplier as an important partner plays a crucial role in the success of a customer.

Winning the legitimacy from the supplier is very necessary, since legitimacy affects not only how people act toward organizations, but also how they understand them ([12]). Audiences will perceive the legitimate organizations as more worthy, more meaningful, more predictable, and more trustworthy. According to the reciprocity rules of social exchange theory, if the customer is perceived as more trustworthy, more predictable and more meaningful by its supplier, the supplier will do something good as return. In the context of supply chain, if the customer is endowed as legitimate by its supplier, the supplier will be much more willing to get integrated with its customer. Thus, we propose the first hypothesis as follows:

H1: customer legitimacy is positively related to customer integration, i.e., the higher customer legitimacy, the higher level of customer integration.

Culture

Culture is the collective programming of the mind which distinguishes the members of one group or category of people from another ([17]). As a fundamental principles embedded in an individual or an organization, it can influence behavior by providing nonspecific guidelines toward pursuing end goals ([18]), and also can affect perception by increasing or decreasing the chance of perceiving a stimulus ([19]). In addition, it can influence the interpretation of response outcomes of work, causing some outcomes to be positive reinforcements and others negative ([19]). Therefore, we can predict that there is a moderation effect of culture on the relationships between the perception and the behaviors. In the context of supply chain, culture will moderate the relationship between the supplier's perception on the customer legitimacy and the suppliers behavior, that is, customer integration.

Hong Kong and mainland of China have different cultures, because of different histories and political environment ([20]), even though they share a common Chinese culture heritage ([21]). For example, Hofstede, et al. ([17]) pointed out that mainland of China is much more long-term oriented than Hong Kong, and Head and Sorensen ([22]) detected a lower uncertainty avoidance in mainland of China than in Hong Kong. Since customer integration needs a lot of effort, such as communications and relationship specific investment at the beginning, in the short-term, partners may not be able to gain benefits, while in the long run, customer integration will bring benefits. Therefore, we predict that the positive relationship between the customer legitimacy and customer integration will be reinforced for the long-term orientation companies, the companies possessing a culture of mainland of China. Uncertainty avoidance is the extent to which people feel threatened by ambiguous situations and have created beliefs and institutions that try to avoid these. So higher uncertainty avoidance means organizations will try their best to avoid uncertainty, like the companies of Hong Kong culture. Since supply chain integration is a way to reduce the negative effect of uncertainty, we predict that the positive relationship between customer legitimacy and customer integration will be reinforced in the Hong Kong companies. However, when a company makes the decision about customer integration, these two dimensions works together. So we can not specify the moderation effect of Hong Kong and Chinese culture. Then we propose our second hypothesis as follows:

H2: the culture will have moderate the relationship between customer legitimacy and customer integration.

III. Methodology

Data Collection

The dataset we use is a subset of the project of cross-culture supply chain integration study. We collect data from both Hong Kong and mainland of China. Since Chinese cities are classified as geographic and economic diversity, to capture the whole picture of mainland of China, we collect data from 4 cities, which is Shanghai, Tianjin, Chongqing and Guangzhou.

Random selection from the yellow pages of China Telecom for 4 mainland cities and from the directory of the Chinese Manufacturers Association for Hong Kong helped us to identify the potential samples. And then research assistants helped to approach the companies to determine the contact information of key informants, who should be SC managers, CEOs/presidents, vice presidents in charge of marketing and sales managers. Together with the questionnaire, we sent out a cover letter to explain our objectives and self-addressed, stamped envelopes are attached as well. 1356 out of 4569 confirmed the receipts of the questionnaire. Follow-up calls to make sure the return rate. In the end, we 617 usable questionnaires were returned with a return rate of 13.5%. And to come up with two different culture groups, from these 617 questionnaires, we select the cases that the dominant culture in the company is the same as the region where it comes. That is, in the Hong Kong culture group, the companies should be located in Hong Kong, and at the same time, the dominant culture in the company should be Hong Kong culture. In the end, we get 153 and 362 for the Hong Kong culture group and the mainland of China culture group respectively.

Measurement

The items used to measure customer integration were selected from the previous studies ([23], [24]). The question asked in the questionnaire is "To what extent do you agree with the following statements?" And the scales we use are 7-point Likert scales with 1 indicating strongly disagree, and 7 indicating strongly agree.

A new scale is developed to measure the customer legitimacy, since we can find little empirical research on the operationalization of this construct. We operationalize customer legitimacy according to the definition, which is the extent to which the supplier accepts the customer as proper. And questions were asked about "To what extent do you agree with the following statements?" And 7-point Likert scales are used with 1 indicating strongly disagree, and 7 indicating strongly agree. The items we use are list in the appendix. The first two items are measuring the general perception on the customer, since the legitimate customer will be perceived as worthy, meaningful, and trustworthy, then these will be externalized as the supplier wants to maintain the relationship, and will be proud as a supplier of the customer. And the following two items are measuring the extent to which the customer's knowledge is accepted

by its supplier. The late item is supposed to measure the extent of the acceptance of the customer's position in general.

IV. Results

Construct reliability and validity

To make sure the construct reliability and validity, we deploy a rigorous process which is suggested by the previous researchers ([25], [26]).

First, exploratory factor analysis is conducted to make sure the unidimensionality of the scales, and Cronbach's alpha is used to assessing reliability. The results of exploratory factor analysis are shown in table 1.

Table 1. factor loadings of customer legitimacy

	Factor loadings	
	Customer Legitimacy	Customer Integration
LEG1	0.546	
LEG2	0.674	
LEG3	0.772	
LEG4	0.757	
LEG5	0.563	
CI1		0.633
CI2		0.636
CI3		0.757
CI4		0.677
CI5		0.667
CI6		0.639
CI7		0.666
CI8		0.747
CI9		0.733
CI10		0.769
CI11		0.756

In Table 1, only the factor loadings greater than 0.5 are presented. Then from this table, we can see that each item loads clearly on the construct that it is supposed to measure. And then Cronbach's alpha is calculated for each construct. The Cronbach's alpha for customer integration (0.900) is larger than 0.8, while the one for customer legitimacy (0.682) is not. But it is still acceptable, since it is above the lower limi of 0.6 suggested by Flynn et. al ([27]) for newly developed scales.

Then to assess the construct validity, especially the discriminate validity and convergent validity, confirmatory factor analysis is conducted using Liserl 8.7. The results confirm the convergent validity.

Hypothesis testing

To test the two hypotheses that we proposed above, regression analysis is conducted (Table 2). In model 1, 3 control variables (Years of operation, Industry and Firm size) are entered. Model 2 is used to test the main effect of customer legitimacy, and we can find that the coefficient of customer legitimacy is positive and significant at 0.001. Therefore, the first hypothesis is supported. That means the

higher customer legitimacy can lead to higher level of customer integration.

To test the moderating effect of culture difference, Hong Kong and mainland of China are separated into different groups, one is the Hong Kong culture group and the other one is the Chinese culture group. And the results indicate that the culture different has no significant moderation effect on the relationship between customer legitimacy and customer integration. Therefore, the second hypothesis is not supported.

Table 2. Results of regression analysis

	Model 1	Model 2	Model 3
Years of operation	.048	-.029	-.030
Industry	.065	.107	.108
Firm size	.019	.068	.069
LEG	-	.469*	.460*
Culture	-	.085	.084
Leg*Culture	-	-	.013
R2	.08	.211*	.211*
R2 change	.08	.203*	.000

*significant at .001 level

V. Discussion and managerial implications

This study can help us to extend our understandings about customer integration. Previous studies have identified several factors that can influence the supply chain integration, but little research has mentioned the effect of legitimacy in the supply chain integration. And our findings do provide the evidence to support the positive effect of customer legitimacy on customer integration.

And this positive effect between customer legitimacy and customer integration indicates that suppliers are more willing to get integrated with customers that win they accept. Therefore, customers should try their best go gain the legitimacy from their suppliers, as return, it will help to supply chain integration and gain much more benefits.

However, we didn't find any significant moderation effect of culture different between Hong Kong and mainland of China on the positive relationship between customer legitimacy and customer integration. That means even though Hong Kong and Chinese companies have different culture, they similarly endow the importance to customer legitimacy. Therefore, it provides the insights for the customers that no matter what your supplier's culture is, you can expected the high probability to integrate with your supplier, as long as you can win the legitimacy from them.

For sure, this study still has some limitations. First, we are using a newly developed scale to measure customer legitimacy. Even though we have ensured the construct validity and reliability, it still needs much more empirical research for improvement. Second, we only compare the culture of Hong Kong and mainland of China, which are quite similar to each other. And maybe that is why we can not find the significant moderation effect. Future research

can do much more comparison among multiple cultures. Third, we only treat the culture of Hong Kong and mainland of China as a whole. To understand the effect of culture in detail, we can test the moderation effect in the sub-dimension level. Then we can go further to capture the effect of culture.

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