

## A Study on Factors Influencing Relationship Quality Between Enterprises Under Different Economic Environment

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### Abstract

This paper presents an empirical study on the influences of variables on the relationship quality between enterprises in China. The variables consist of relationship specific investment, relationship understanding and trust between enterprises. The related empirical data is collected from domestic enterprises. Then the study is conducted based on adjusting the macroscopic economic environmental variables. Lastly, the paper draws conclusions and proposes suggestions based on the according to the results of the empirical test.

**Key words:** Economic environment; Relationship quality; Hierarchical regression

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### INTRODUCTION

At present, more and more enterprises realize the importance of cooperation between enterprises to their survival and development. With the increasing of various cooperation modes of strategic alliance, virtual organization and business outsourcing, the cooperative relationship quality, as the important factor that influences the cooperative performance, has been concerned by more and more researchers.

Joyce et al. (2000) studied on the relationship quality in strategic alliance based on close relationship theory. They classified the term of relationship quality into six dimensions, which are relationship strength, relationship duration, relationship frequency, diversity of relationship, flexibility of relationship and relationship fairness. Holmlund (2001) proposed the concept of perception relationship quality. He pointed out that the perception relationship quality is the comprehensive evaluation and understanding given by important personnel of cooperated parties to businesses (effect) according to certain standard. In his research, the perception relationship quality is divided into three dimensions that are technical dimension, social dimension and economic dimension. Lages et al. (2005) focused on the relationship quality between foreign trade enterprises in Britain. They measured the relationship quality of cooperation between the import and export enterprises in Britain from four dimensions that are information sharing, communication quality, long-term relationship orientation and relationship satisfaction degree. Wu Zhiwei et al. (2007) conducted an empirical study to measure and analyze performance of relationship quality of cooperation between enterprises in China from three dimensions that are relationship strength, relationship fairness and relationship duration.

The existing studies on relationship quality between enterprises mainly focused on the measurement of relationship quality and analysis of direct influential factors. In fact, the changes of external economic environment may also influence the relationship quality

between enterprises by changing the business decisions and market expectation of enterprises. Since 2006, the increase of oil price, improvement of inflation level and a series of tight economic policies adopted by Chinese government greatly influenced the market environment and financing environment that are relied on by enterprises. Will the enterprises in cooperation choose honesty cooperation to tide over the crisis together? Or will they choose splitting up when facing changes in economic environment? Will the changes in economic environment influence the relationship quality between enterprises? There is rare discussion on the above topics in previous literature.

This paper attempts to apply the approaches of factor analysis and hierarchical regression to investigate the influence of different factors on relationship quality by adding the variables of macroscopic environment on the basis of existing studies in order make it beneficial to the improvement of cooperation performance between enterprises in China.

## 1. THEORETICAL ANALYSIS ON FACTORS INFLUENCING RELATIONSHIP QUALITY BETWEEN ENTERPRISES

This paper summarizes the influence of different factors on the relationship quality between enterprises by reviewing the exiting literatures, which are decribed as follows:

### 1.1 Influence of Relationship Understanding on Relationship Quality

McCutcheon and Stuart (2000) believed that relationship understanding is emerged between both parties at the initial stage of establishing cooperation. It is a balancing process. During the process, two parties evaluate the fitness of internal and external conditions, including target relativity, compatibility of enterprise culture and mutual complementarity of resources. It is a key pre-condition for establishing a cooperation relationship.

Angeles and Nath (2001) indicated that target relativity is helpful for both parties to achieve agreement in cooperation and reduce resistance to cooperation. It can not only promote the strength and duration of cooperation between both parties, but also can be helpful to the accomplishment of relationship fairness. Stiles (1994) pointed out that during the long-term cooperation, the similar and compatible enterprise culture of cooperative partners could not only effectively reduce the conflicts in cooperation and increase the strength and duration of cooperation, but also be helpful for both parties to solve the conflicts occurred rapidly and improve the flexibility of cooperation.

Complementary resources are the unique resources

possessed by each cooperative partner. The integration of both parties will produce more profits. Gadde and Snehota (2000) found in their research that when a supplier owns the professional core technology and ability that a manufacturer does not possess, there would be more potential chances for both parties to make further cooperation and their willingness to cooperate would be obviously enhanced.

### 1.2 Influence of Relationship Specific Investment on Relationship Quality

Heide et al. (1990) pointed out that the investment of relationship specific capital can show enterprise's agreement on cooperative relationship and confidence in developing long-term relationship. When an enterprise invests more specific assets in cooperation, it means the enterprise believed it will obtain more profits in future by developing cooperative relationship. This will help improve the strength of cooperation.

Jap (1999) and Pelton (2001) found that if the relationship specific assets invested has strong specialty, then the cost for giving up the relationship would be very high, which will improve the cost of opportunistic behavior to stimulate both parties to develop long-term cooperation. Goodman and Dion (2001) also believed that when one party will make specific investment for the other party, it is shown that the previous party has the will to establish a long-term relationship. Thus, the specific investment is a specific promise on relationship between cooperative partners. It will be helpful for both parties to make fair communication and reasonable distribution of profits.

### 1.3 Influence of Human-relationship Investment on Relationship Quality

Due to the differences between western and eastern cultures, enterprises from western and eastern regions have different understanding of relationship specific investment when establishing cooperation. Western enterprises establish cooperation according to certain business purposes and seldom pay attention to the relations between individuals within both parties. While eastern culture, especially Chinese culture pays a lot attention on developing private relationships except for business purposes.

Wong & Chan (1999) indicated that human-relationship is a social interaction existed in network. Members of network attempt to confirm their trust on each other by making human-relationship investment repeatedly so as to minimize the risk and improve the specific level of specific assets, i.e., improve the strength of cooperative relationship. Luo (1997) pointed out that the human-relationship investment can be used to consolidate the relationship and positively cultivate complex and delicate human-relationship network being full of imagination and penetrating power so as to develop

long-term business relationship.

#### 1.4 Influence of Trust Between Enterprises on Relationship Quality

Trust between enterprises means that the cooperative parties fulfill their obligations according to their relationship when they believe in the promises of each other. It is a mutually beneficial process, which is that one party has sufficient confidence on the reliability and honesty of the other party.

Dyer (1997) believed that mutual trust could promote both parties to invest specific assets and improve the strength of their relationship. The trust between enterprises is beneficial for them to exchange knowledge and share information so to establish a channel for exchanging open ideas to encourage the establishment of fair cooperation. Jeffries and Reed (2000) further pointed out that trust is an important factor leading to the success of long-term relationship. Even the level of trust is not very deep; the long-term partnership can also be well maintained.

#### 1.5 Influence of Economic Environment on Relationship Quality Between Enterprises

There have been many studies on the concept and meaning of enterprise environment, but few literatures discuss the basic content and feature of enterprise environment. Current studies on macro-environment mainly focused on four aspects that include policy and legal environment, market environment, financing environment and technical environment (Liu Xiaotong et al., 2007). The external economic environment discussed in this paper involves the market environment and financing environment. The positioning of enterprise in market competition produces the opportunities and risks it will face. Then it will influence the entire business policy of the enterprise. Therefore, enterprises in cooperation may change their perception to cooperation due to the changing of market environment, or change their investment to current cooperation during adjusting their business strategy. As a result, this may influence the relationship quality. On the other hand, the changes in financing environment may also push the enterprise to re-allocate its resource, which then will influence the investment scale of specific assets in cooperation.

## 2. RESEARCH DESIGN

### 2.1 Research Hypothesis

This paper proposes the following research hypothesis based on the theoretical analysis on factors influencing relationship quality between enterprises:

H1: relationship understanding can promote the improvement of relationship quality

H2: relationship specific investment can promote the improvement of relationship quality

H3: human-relationship investment can promote the

improvement of relationship quality

H4: trust between enterprises can promote the improvement of relationship quality

H5: the roles of the above factors have difference under different economic environment

### 2.2 Definition of Variables

#### 2.2.1 Explained Variable

The definition of relationship quality presented by Wu Zhiwei (2007) is used in this study to measure the relationship quality in three dimensions, including relationship strength, relationship fairness and relationship duration. The Likert five-level table is used to measure the variable, 1 stands for completely disagree, while 5 stands for completely agree.

#### 2.2.2 Explanatory Variables

(1) Relationship understanding: this research defines relationship understanding as the process for both parties to evaluate the fitness of internal and external conditions in three aspects such as target relativity, compatibility of enterprise culture and mutual complementarity of resources. The target relativity means that whether the cooperative members have the same target and their supporting degree to the target of each other. Compatibility of enterprise culture represents the similarity of enterprise culture, mutual agreement in business philosophy and management style of cooperative partners. The mutual complementarity of resource emphasizes on the ability of both parties to supply complementary resources to each other, the sharing degree of resources and the ability to make use of mutual complementary resources to produce mutually beneficial effect as well as to obtain the necessary resources.

(2) Relationship specific investment: This paper defines the relationship specific investment in two aspects according to the concepts of Williamson(1985). (specific investment for common relationship): 1) tangible relationship specific investment with land and mechanical equipment etc.; 2) intangible relationship specific investment with human resource etc.

(3) Human-relationship investment: The items for measuring human-relationship investment in this research is described on the basis of the human-relationship investment under Chinese cultural background, together with the features of Chinese enterprise culture. These items mainly include if the cooperative partners invest sufficient time and power to maintain their relationship during cooperation.

(4) Trust between enterprises: This paper adopts the results of Ganesan (1994), and Doney and Cannon (1997) to measure the trust in following aspects: 1) when a cooperative partner makes a crucial decision, whether the influence on and equity of the sample company are considered by the partner; 2) when a sample company encounters a problem or makes any crucial decision, whether the well-meaning response can be obtained from

the cooperative partner.

The Likert five-level table is used to measure the above-said variables, 1 stands for completely disagree, while 5 stands for completely agree.

### 2.2.3 Control Variables

To reflect the influence of economic environment on relationship quality, the variables of market environment and financing environment are adopted in this research. Market environment mainly means to the fierce degree of market competition in the field of cooperation. 0-1 dummy variable is used for measurement, in which 0 stands for that the market competition is not fierce, while 1 stands for that the market competition is fierce. Financing environment signifies the cooperative parties can obtain the capital required by cooperation. 0-1 dummy variable is used for measurement, in which 0 stands for the capital is available, while 1 stands for the capital is unavailable.

### 3.3 Research Sample

In this study, the data was collected from questionnaire surveys. The questionnaire was prepared by integrating the existing questionnaire with theoretical base of empirical hypothesis. The mature items from the existing questionnaire had high priorities to be selected for our questionnaire. If there was no such an item, the most proper item will be found based on theoretical discussion.

We totally issued 640 sets of questionnaire and called back 148 sets of effective questionnaire. The effective ratio of questionnaire was 23.13%. Our questionnaires were mainly answered by members of EMBA and President Class, and some middle or high level managers participated in postgraduate courses in Business School of Nanjing University.

## 3. EMPIRICAL RESULT AND ANALYSIS

### 3.1 Factor Analysis and Descriptive Statistical Analysis of Main Variables

Table 1 shows the results of factor analysis of all main variables. This paper applies factor analysis and reliability analysis to check if the definition of each variable in research design is practical. The approach of factor analysis should be implemented as follows: firstly, analysis of main components is made through varimax orthogonal rotation. Then the indexes with factor load that are larger than 0.5 will be selected. Lastly, the meaning of factor according to factor matrix is explained as the result of factor analysis. The analysis results show that the Cronbach's  $\alpha$  value of the above factors are all larger than 0.6, which shows that the selection of variables for this research completely meet requirements and the selected factors have relatively high coherence with contents of questionnaire.

**Table 1**  
**Results of Factor Analysis of Main Variables**

Variables	Sub-variable	Cronbach' $\alpha$	Cumulative Rotation Sums of Squared Loading (%)
Relationship Quality	Relationship strength	0.8442	28.926
	Relationship fairness	0.6882	54.457
	Relationship duration	0.6892	79.579
Relationship specific investment	Common relationship specific investment	0.6802	53.676
	Human-relationship investment	0.7201	78.047
Relationship understanding	Cultural compatibility	0.6716	42.329
	Mutual complementarity of resources	0.6395	59.034
	Target relativity	0.65	70.414
Trust between enterprises	Trust between enterprises	0.6706	75.294

It should be clarified that we found the variable of relationship specific investment and the variable of human-relationship investment can be brought into one variable during the process of factor analysis. For the convenience, tangible and intangible assets investment can be defined as the common relationship specific

investment. At the same time, the common relationship specific investment and human-relationship investment can be integrated into one variable of relationship specific investment (Table 1).

Table 2 shows the results of analysis on mean value, standard deviation and correlation coefficient of each main variable.

**Table 2**  
**Mean Value, Standard Deviation and Correlation Coefficient of Each Main Variable**

Variables	Mean Value	Standard Deviation	Correlation Coefficient of Each Main Variable										
			1	2	3	4	5	6	7	8			
1. Relationship strength	2.782	1.117											
2. Relationship fairness	3.66	0.687	0.058										
3. Relationship duration	3.853	0.703	0.08	0.289**									
4. Common relationship specific investment	3.694	0.76	0.083	0.344**	0.312**								

To be continued



Continued

Variables	Mean Value	Standard Deviation	Correlation Coefficient of Each Main Variable								
			1	2	3	4	5	6	7	8	
5. Human-relationship investment	3.378	0.88	0.239**	0.368**	0.094	0.388**					
6. Cultural compatibility	3.45	0.72	0.251**	0.259**	0.327**	0.254**	0.339**				
7. Mutual complementarity of resources	3.731	0.809	-0.045	0.342**	0.245**	0.193*	0.144	0.420**			
8. Target relativity	3.943	0.723	0.05	0.196**	0.195*	0.135	0.093	0.335**	0.510**		
9. Trust between enterprises	3.429	0.74	0.083	0.324**	0.274**	0.142	0.237**	0.411**	0.380**	0.317**	

Note: \*\* shows the level deviation of p at 0.01 is obvious, and \* shows the level deviation of p at 0.05 is obvious.

### 3.2 Results of Regression Analysis

Table 3 shows the results of regression analysis of this research. It can be seen from the regression results that variables such as relationship specific investment, relationship understanding and trust between enterprises all have influences on factors such as relationship strength, relationship fairness and relationship duration to a certain extent after adjusting the variables of market and financing environment. However, the factors and degree of influence are different.

Specifically, among the factors influencing relationship strength, the influence of two control variables is not obvious. For the variable of relationship specific investment, the common relationship specific investment has no obvious influence on strength of cooperative relationship, which shows that there is no necessary connection between the quantity of intangible and tangible resources invested in cooperation between enterprises in China and the specific purpose of resources. The human-relationship investment plays a certain role of improving relationship strength, which shows that the investment in human-relationships between cooperative parties will encourage both parties to improve resources with higher specific level in cooperation. Among variables of relationship understanding, the cultural compatibility of cooperative partners plays an obvious role of improving relationship strength ( $\beta=0.265$ ,  $p<0.01$ ). While the mutual complementarity level of resources has relatively obvious negative correlation with relationship strength ( $\beta=-0.209$ ,  $p<0.05$ ), which may be caused by that the cooperative parties worry that too specific invested assets may face the opportunistic risk from the other party during the cooperation with relatively high mutual complementarity level of resources. Then this will reduce the specific level of the invested resources. There is no empirical result that supports the conclusion that target relativity and trust between enterprises can improve relationship strength.

Among the factors influencing relationship fairness, the financing environment in control variables has certain

negative correlation with relationship fairness ( $\beta=-0.129$ ,  $p<0.10$ ), which shows that the worsening of financing environment will reduce the level of relationship fairness. Among the variables of relationship specific investment, the common relationship specific investment ( $\beta=0.213$ ,  $p<0.01$ ) and human-relationship investment ( $\beta=-0.230$ ,  $p<0.01$ ) plays an obvious role of improving relationship fairness, which shows that the investment of intangible and tangible assets and human-relationships will help the cooperative parties to achieve fair communication and reasonable allocation of profits during cooperation. For variables of relationship understanding, the correlation between the variable of cultural compatibility and target relativity and the variable of relationship fairness is not obvious, while the weaker the mutual complementary level of resources, the more helpful to the accomplishment of relationship fairness. Moreover, the trust level between both parties will also promote the realization of relationship fairness to a certain extent ( $\beta=0.171$ ,  $p<0.05$ ).

In the factors influencing relationship duration, the influence of control variables is not obvious. In the variables of relationship specific investment, the common relationship specific investment plays an obvious role of improving relationship duration ( $\beta=0.282$ ,  $p<0.01$ ). There is no empirical support for the influence of human-relationship investment on relationship duration, which shows that the investment of pure human-relationship cannot guarantee the relationship duration and the key of persistent relationship lies in the investment of tangible assets. Among variables of relationship understanding, the cultural compatibility of cooperative parties plays an obvious and continuous role of promoting cooperation ( $\beta=0.209$ ,  $p<0.01$ ), while there is no empirical evidence for the influence of mutual complementarity of resources and target relativity on relationship duration. The empirical results also show that the trust between enterprises plays a certain role of promoting the persistent development of cooperative relationship ( $\beta=0.150$ ,  $p<0.10$ ).

**Table 3**  
**Results of Regression Analysis**

Variables	Relationship strength		Relationship fairness		Relationship duration	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Control Variables						
Investment Environment	0.018	0.021	-0.069	-0.129+	-0.02	-0.043
Market Environment	-0.015	-0.022	0.055	0.012	0.038	0.013
Explanatory Variables						
Relationship specific investment		-0.026		0.213**		0.282**
Common relationship specific investment						
Human-relationship investment		0.189*		0.230**		-0.121
Relationship understanding						
Cultural compatibility		0.265**		-0.05		0.209*
Mutual complementarity of resources		-0.209*		0.238**		0.043
Target relativity		0.061		-0.03		0.031
Trust between enterprises		0.005		0.171*		0.150+
R <sup>2</sup>	0.01	0.122	0.008	0.292	0.002	0.208
F	0.041	2.338*	0.583	6.894**	0.134	4.361**

**Note:** \*\* shows the level deviation of p at 0.01 is obvious, and \* shows the level deviation of p at 0.05 is obvious. +shows the level deviation of p at 0.10 is obvious

## CONCLUSIONS AND SUGGESTIONS

This paper conducted an empirical study on the factors influencing relationship quality between cooperated enterprises in China and drew following conclusions with practical significance:

First, the influence of financing environment on relationship fairness shows that the worsening of financing environment may causes that the enterprises in dominant position in cooperation makes use of its advantages to reduce the occupation of its own resources or even occupies more resources from the other party to reduce its own capital pressure by the changes of external financing environment, which will reduce the fairness of cooperation.

Second, the changes of market competitive environment and financing environment have little influence on relationship duration between enterprises, which shows that no matter how the external economic environment changes, as long as the cooperation can create profit for enterprise, it will not change the willingness of cooperation due to changes of environment. It is notable that there is no empirical support for the influence of human-relationship investment on relationship duration, which shows that the investment of pure human-relationship cannot guarantee the persistence of cooperative relationship. The cooperated parties shall make practical resource investment, communicate equally, and allocate profits reasonably during cooperation, which will enable the persistence of cooperation.

Third, among the factors influencing relationship strength, the influence of two control variables is not obvious, while the cultural compatibility of both parties plays an obvious role of improving relationship strength.

The above conclusions show that during the cooperation of enterprises in China, the quality of cooperative relationship will not change significantly

with the changing of external economic environment. The enterprises always pay more attention on the practical investment and the rationality of allocation system of income. Besides, the improving cultural compatibility and trust between cooperative parties are also beneficial for keeping more stable and long-term cooperation relationship. However, for enterprise in a non-dominant position in cooperation, its profit may be squeezed to a certain extent in economic environment, especially when the financing environment is worsened. Therefore, these enterprises may add related terms and conditions into the cooperation agreement when establishing cooperation relationship so as to effectively protect their profits.

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