

Research on the Structural Theoretical System of Inter-organizational Relationships

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Abstract—As the mutual integration between organizations and market as well as the emergence of non-boundary enterprises, the inter-organizational relationships have become the focus of academic circles. Firstly, the connotation of inter-organizational relationships is illustrated minutely through referencing to primary literature. Secondly, the constituent components of the inter-organizational relationship are analyzed. Finally, the theoretical model of inter-organizational relationships is constructed and systematic perception of inter-organizational relationships is formed. As a systemic study, the theoretical model of inter-organizational relationships mentioned in this paper will, to some extent, provide guidance and references for subsequent studies.

Index Terms — inter-organizational relationships; components; structural system; theoretical model.

I. INTRODUCTION

It is an era that is full of changes and reforms, and newly emerging science and technology revolutions represented by information technologies have thoroughly overhauled industry rules and broke the traditional models of production so as to completing the connection with diversified, personalized and differentiated market demands. Further deepening of division of labor will promote the vertical development of these changes and reforms, hence some novel organizational models of production and collaborative ways such as intermediate organizations, modular organizations and cross-organizational mass collaborations gradually become an important and widely popular mechanism to allocate resources. In essence, the primary purpose of organizational models and behaviors that located in the “Handshake Zone” is to develop and maintain inter-organizational relationships, which causes the booming researches of inter-organizational relationships. By sorting out the main literature, it is easy to find that the inter-organizational relationships were studied in *Relationship Value* (Fred, 1998, Simpson, 2002), *The Model and Evolution of Relationship* (Golicic, 2005; Ring et al., 1994), *The Knowledge Interaction in Relationship* (March, 1991; Daniel, 2004), etc. Ring, etc. For example, Ring et, al. (1994) analyze the emergence, development and disappearance of the inter-organizational relationships and point out that cooperative inter-organizational relationships is circulatory, not sequential, and the key element to keep the relationships is to maintain a balanced relationship. Oliver

(1990) summarizes six kinds’ models of inter-organizational relationships: trade alliance, agent alliance, joint ventures, joint planning, financial interlocking, agent-funding chain; Meanwhile, Olive puts forward six determinants of inter-organizational relationships: necessity, asymmetry, mutual benefit, efficiency, stability and rationality. Based on that, Golicic (2005) argues the factors that determine the strength of inter-organizational relationships includes compatibility, expected revenue, external influence, history, importance, interpersonal relationship and the consistency between performance and strategies. There is no doubt that the analyses of issues about inter-organizational relationships are pervasive and unique in current literature.

Unfortunately, related researches mostly deal with the “spot” or “line” of inter-organizational relationships without forming a set of relatively perfect theoretical system of inter-organizational relationships. In fact, as an important branch of organization theory, the inter-organizational relationships are not only the channels to capture values for the organizations, but also have their own theoretical system. In this paper, the connotation of inter-organizational relationships will be studied and the constituent components of inter-organizational relationships will be explored; afterwards, the logic system of the theory of inter-organizational relationships will be analyzed to construct a more impeccable theoretical framework.

II. CONNOTATION OF THE INTER-ORGANIZATIONAL RELATIONSHIPS

Oliver (1990) states that the relationship is an organization establishes relatively long transaction, communication and connection with many organizations, which is absolutely correct, but it is only semipermeable for the contents and nature of the relationship without clarifying accordingly. In the light of the contents of inter-organizational relationships, cooperation is the ultimate cause of inter-organizational relationships, which distinguishes the inter-organizational relationships from the short-term and instant trades or exchanges. The inter-organizational relationships can be treated as exchange of interests as well as the complementary components (Su Chenting, 2002) or interdependent components (Holmlund, 1997). In the meantime, the reputation and trust of two sides in a relationship are very important, which need the organizations to have trial-and-error experiments repeatedly in the network environment. Furthermore, through a wide range of information exchange and knowledge accumulation, the stable cooperative relations can be established. In a stable framework of inter-organizational relationships, the materials

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flow, knowledge flow and information flow will be formed intricately: the first class is an unidirectional flow of materials, knowledge and information in principle and subordinate relations, for example, in modular organizations, the core enterprise delivers information and knowledge as dominate rules to its member companies, while member companies directly transport the module products to core enterprise; the second deals with the crossing interactions among materials, knowledge and information in equivalent relations, such as the mutual interactions about materials, knowledge and information in researching alliances of organizations. Mutual interaction of components in organizations is a relatively long and repeated activity or process which involves mutual matching of targets, mutual coordination of the interests and mutual fusion of culture. And the essence of mutual interaction of components in organizations concerns about the process of value integration. Thus, it is believed that the inter-organizational relationships refers to the continuous integrated relationships that are founded on the basis of reputation and trust between organizations and other independent organizations in the network environment.

In terms of the construction of inter-organizational relationships, structure, medium and information are basic components. The structures are the mutual connected models between organizations and components of organizations in the inter-organizational relationships, which represent the basic structural models of inter-organizational relationships. Medium are constituted by basic components of inter-organizational relationships, including knowledge property and physical assets. Information especially demonstrates the information that is adopted to communicate with others by organizations, which is the fundamental guarantee for maintaining the functions of inter-organizational relationships.

From the perspective of economics, inter-organizational relationship represents a new mechanism of resources allocation, which surpasses the traditional two-dimensional system of bureaucratic mechanism and price mechanism and get rid of the barriers that hierarchy and market exact on the utilization of the creative abilities. As for the highly complex and diversified information of product design in the new economy era, the mechanism of inter-organizational relationships show strong bearing capacity and digestion. This developmental trend reflects a two-way industrial operational mechanism that “market module” embeds “organization module”, in turn, “organization module” includes “market module”, which is exactly the original ideas of “Handshake” theory of Larsson (Larsson, 1993), that is to say, the three-level analyzing framework of market, the hierarchical enterprises and inter-organizational relationships should replace the dichotomy analyzing framework of traditional enterprises and market.

III. CONSTRUCTION AND COMPONENTS OF THEORETICAL MODEL

As a kind of mechanism for allocating resources, inter-organizational relationships have already replaced the traditional trading mechanism applied by autonomous enterprises to carry out business activities from the

perspective of utility maximization so that the organizations can get information, channels, capitals and services more easily and then maintain or improve competitive advantages. Moreover, it is often difficult to imitate the means to create resources and the channels to attain the resources and information. Under the network environment, organizations in inter-organizational relationships interact with each other by the relation interface which constitutes the channels of inter-organizational relationships as well as makes the organization can embed separated superior components by relation interfaces so as to achieve the complementing and sharing of components. According to the embedded contents, inter-organizational relationships are divided into information embedded relationship, knowledge embedded relationship and structure embedded relationship. During the unceasing evolution of trust and cooperation, the embedded contents will transit from information to knowledge and finally form the embedded structure. Moreover, inter-organizational relationships are increasingly consolidated and deepened. Relation embedding emphasizes the role and structure of relation in the process of generating trust and reducing opportunism (Dayasindhu, 2002), and boosts effective operation of the relationship by promoting the coordination between the organizations.

The embedding of inter-organizational relationships accompanies certain modes of action of relationship, and different modes of action generate varied results in lowering the risk of opportunism in the trade exchanges, reducing the uncertainty of the future, increasing the investment of proprietary assets and strengthening mutual trust and commitment, etc. At the same time, mode of actions also represents the basic patterns of combining knowledge of organizations and achieves the efficiency and innovation of knowledge interaction for organizations on different levels. The interactions among organizations not only reduce the necessity of expanding entity boundary, but debase the complexity for the internal management of organizations.

As a result, the theoretical model of inter-organizational relationships is proposed and then constructed, which mainly includes four aspects: the network environment, relation interface, relation embedding and modes of action of inter-organizational relationships.

IV. STRUCTURAL SYSTEM OF THEORETICAL MODEL

In accordance with the theoretical model of inter-organizational relationships, the operation of inter-organizational relationships is actually composed of four aspects that constitute the structural system of theoretical model of inter-organizational relationships from outward appearance to inner essence.

A. Network Environment

The network environment differs from the traditional external environment, which especially refers to external environment that is composed by all external organizations which have already established or may establish relationship with organizations. Network environment includes both organizations within the industry for establishing the horizontal or longitudinal collaborations with the

organizations and organizations outside the industry for carrying out the interactions between knowledge and innovations. In other words, the network environment represents any possible node collections of inter-organizational relationships. The network environment is attached to and stem from the inter-organizational relationships, which also improves the development of inter-organizational relationships and facilitates the abilities of organizations to cope with the market turbulence. Organizations takes the network environment as the background for survival and development, which access to all kinds of resources in the relationships and use the high-level trust in organizations to lower costs of transactions and supervisions as well as seek for long-term development.

Generally speaking, different network environments will produce sharply disparate behavior patterns, system structures, tacit knowledge, etc, which thus affect the inter-organizational relationships in the environment. Organizations should, first of all, recognize the network environments in which relative lasting inter-organizational relationships will be founded. Simultaneously, in order to choose the appropriate relational subjects and cooperative strategies, organizations should know distinctly the positions and roles in the network environment and form unique influences in the inter-organizational relationships by integrating the abilities and knowledge of other independent organizations.

B. Relation Interface

Relation interfaces are the channels, medium or specifications of the interactions among organizations and also important approaches and methods of the formation and evolution of inter-organizational relationships, which construct an embedded platform for the components of organizations. Put another way, the relation interface is not only a surface, but a paradigm of resources integration, which can be applied to deal with the relationships between organizations. Relation interface primarily reflects the connections of reciprocity, trust, entrust and collaboration for each cooperative party, which is the core mechanism for the integration of network resources and the improvement of the operational efficiency of organizations and becomes the basic norm and standard to protect the interests of all parties. Through the platform of relation interface, organizations in the network realize the universal connections of information, knowledge and ability, contributing to the different levels of cooperation for organizations.

As the channels, medium or specifications of the interactions among organizations, the compositions of relation interface include tangible components, such as the relevant departments and agencies for the communications of all organizations and mutual connections of personnel. Relation interface is also composed by intangible factors, such as the technologies for maintaining or improving relationships and the mechanism and system for promoting the maintenance and deepening of relationships. It is the existence of intangible factors that demonstrates the features of relation interfaces like inactive, stickiness, hierarchy and dynamics, which is one of the reasons that relation resources are difficult to duplicate. In summary, the relation interface

has influence on relation connections, information communication, resource integration and network maintenance in the network. With the deepening of relationships, the interactions in organizations become stronger and stronger so that the ulterior degrees of information of each organization gradually reduce. The business risks are increasing due to the leakage of information, hence, the effects of relation interface has to face challenges. In addition, information disclosure doesn't fully offset the asymmetry information, so the transaction costs are still high. Concerning about that, relation interface needs to be optimized through improving rules and dynamic balance.

C. Relation Embedding

The purposes of identifying the network environment are to specify the roles of organizations and embed relevant components that can enhance the competitiveness of organizations. Relation embedding makes the motivations of the participants fail to the narrow pursuit of immediate economic benefits and seek for trust and mutual benefits to enrich the inter-organizational relationships(Powell, 1990). It is believed that the embedded models of inter-organizational relationships are roughly divided into information embedding, knowledge embedding and structure embedding in which information embedding is the original form of organizational components. Through accessing to relevant information, organizations identify the network environments and form the relationships of information exchanges as well as the integration and employment with other organizations. In order to strengthen the synergy among organizations and attain more network values, knowledge embedding is needed by organizations. Between the antecedent and consequent variables (synergy), knowledge embedding exerts its influence as an important intervention mechanism (mediator) (Nielsen, 2005). Structure embedding is a relative higher-level components embedding of organizations, which refers to the overlapping degree of organizations(Wellman, 1982), besides, the nature and degree of structure embedding provide foundation for the occurrence of most interactions within organizations(Granovetter, 1985). Compared with other types of embedding, structure embedding tends to be more stable (Feld, 1997). The embedded degrees of the three models show an increasing trend in order. When the inter-organizational relationships are unstable, the principle aim of all parties of relationships is to obtain the demanding information; With the stability and deepening of relationships, organizations tend to share and transfer knowledge. Because the continuous evolution of trust and cooperation relationships, organizations can adopt modes of structure embedding so as to deepen the coupling degree of inter-organizational relationships.

D. Modes of Action of Relation

The embedding of information, knowledge and structure between organizations and other organizations is in line with specific modes of action. Modes of action define how the organizational components interact with each other. The degree of relation(loose and tight) and the direction of relation(unidirectional and bidirectional) respectively regarded as dimensions, so the modes of action of the

inter-organizational relationships are classified as four types: diffusion, antithesis, penetration and fusion.

Diffusion relationship shows that the operational mechanism of organizations is only unilateral, and there is no two-way interactive relationships in organizations, what's more, diffusion relationship has obvious contingency and looseness as well as lower stability; As the deepening of degree, the dependent factors in the relationship of diffusion are increasing and the trust and stability are enhanced; Therefore, this is a kind of permeability relationship. The antithesis relationship refers to that directional interactions or benefits exist in the organizations, which eventually evolves into the fusion relationship along with the deepening trust and cooperation. Diffusion relationship and antithesis relationship are employed to indicate the loose inter-organizational relationships, while the levels of trust and cooperation are lower. With the deepening of mode of action, trust and cooperation begin to change, and eventually develop relationships of penetration and fusion.

It is necessary to point out that different components embedding require various modes of action of relation. Loose especially one-way inter-organizational relationships usually correspond to low-level components embedding. However, close especially the two-way inter-organizational relationships can contain a variety of embedded modes of components.

V. CONCLUSION

There is no doubt that we have entered an era of inter-organizational relationships. The emergence of cross-organizational boundary cooperative modes like modular manufacturing, and virtual operations both illustrate the importance of relations to the organizations. Relation resources have become the core resources that make the organizations survive and constantly improve the abilities of organizations. Thus how to better develop the potentials of inter-organizational relationships and more fully utilize relationships to develop competitiveness have become important issues in the field of organization and strategy.

Researches show that the theoretical model of inter-organizational relationships is a multilevel system that consists of network environment, relation interface, relation embedding and mode of action of relation, among which different levels coordinate with each other, so the structural theoretical system of inter-organizational relationships is constructed logically.

Obviously, constrained by space, this research just explores the framework and lays the foundation for further studies. For deeper studies, such as the mechanism of action of the relation interface, the value effect of relation embedding, the formulation of formal contracts in relations, the coordination and structural adjustment of the formal contracts and relational contracts, etc. All of that remain to be investigated and perfected deeply in future studies.

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