A review of research on cooperation experience and trust in engineering project cooperation

Xiaodong Li¹*, Jianhui Liao¹, Haixu Song¹

¹STATE GRID ENERGY RESEARCH INSTITUTE CO., LTD, Future Science and Technology Park North Area, Beqijia Town, Changping, Beqijia, P. R. China

*Corresponding author’s e-mail: lixiaodong4792@163.com

Abstract. This paper reviews the relationship between cooperation experience and trust in engineering project cooperation from different theoretical perspectives. The main conclusions of this paper are as follows. First, based on the perspective of social exchange theory, the governance mechanism such as norms generated in the cooperation experience plays an important role in generating trust. Second, based on the learning perspective, the collaborative experience will not be directly generated. Only when the alliance has the potential for future development can the cooperation experience gradually generate trust.

1. Introduction

Alliances are an important way for companies to enter new markets or acquire new technologies. Long-term cooperation helps to promote the generation of trust in the alliance, which in turn leads to a lasting competitive advantage. Collaboration experience refers to the past transaction history of a company for a specific partner [1]. Early research generally agreed that trust generated in long-term cooperation is an important factor in promoting alliance performance. The core point of social trading theory is that both parties in the transaction want "reciprocity" and fair exchange relations. In long-term cooperation [2], alliance members can compensate for the imbalance between revenue and contribution. Therefore, expectations of reciprocity and fairness are more likely to occur in a long-term cooperation. In the initial cooperation, it is difficult for alliance members to agree with the "reciprocity" norm [3]. Moreover, the norms formed at the beginning of the cooperation exist only in the small scope of the operation of the alliance [4]. It has not yet played an important role in the entire coalition. As the cooperation deepens, the resources invested by the alliance members in the cooperation are increasing. Informal mutual commitments between organizations have gradually been established [5].

However, recent studies have found different perspectives. Many studies have argued that trust is derived from future gains and costs rather than collaborative experiences [6]. When the benefits of future cooperation are greater than the cost, trust will be generated. Therefore, based on the relevant research of social exchange theory and learning perspective, this paper reviews the relationship between cooperation experience and trust from different theoretical perspectives, and points out the future research direction [7].

2. Trust

The concept of trust was first mentioned in the study of psychology. Trust has become an important concept in many fields such as management, sociology and even economics. Early research on trust focused on trust between people [8]. They believe that trust is a lubricant for improving relationships. In
recent years, more and more organizational researchers have begun to notice the importance of trust at
the organizational level, especially the important role of trust in strategic alliances. The existing research
has a consensus on the definition of trust. When there is a risk in the environment, trust can be generated.
It contains the choice of the party to the other party's attitude [9].

Based on previous research, this paper believes that trust in the alliance is a kind of positive
psychological expectation. In other words, even if there is a risk that the interests of the company will be
encroached, the company believes that the partners will actively perform their duties and will not
implement self-interested behavior. Trust is a multidimensional concept [10]. Many scholars have
divided the dimensions of trust from different perspectives. The most representative one is to divide
trust into goodwill trust and ability trust. Goodwill trust means that the company believes that the partner
will not carry out the behavior of harming others. The ability trust means that the company believes that
the partner has the ability to fulfill the duties assigned by the alliance.

3. the relationship between cooperation history and trust

3.1 Perspective of social exchange theory
Exchange is a phenomenon that is ubiquitous in human social activities[11]. Behaviors of human is
governed by rewards and rewards generated by exchanges. Early research suggests that exchange
behavior is based on the measurement of the benefits and costs[12]. When the reward is greater than the
exchange cost, people will believe that the exchange is attractive. The study of social psychology points
out that people are not just simple rational people. In the process of participating in social activities,
people not only realizes economic exchange to obtain resources in materials, but also realizes social
exchange to obtain non-material resources, such as emotion and respect. Based on the theory of social
exchange theory, the purpose of social exchange is to obtain the economic and social resources. Humans
are willing to pay corresponding costs in the exchange process.

The interaction between people is mostly based on the exchange of reciprocity principles. Social
exchange relations are a manifestation of a relationship of responsibility[13]. When gaining a partner's
economic or emotional resources, the party receiving help or favor will naturally generate a sense of
responsibility for the other party. Meanwhile, the party providing help or favor will naturally expect to
receive future returns. Numerous studies have shown that reciprocity rules have an important advantage
in the context of business and management[14]. For example, it will strengthen employee loyalty and
organizational citizenship behavior, promote trust in cooperation and reduce opportunistic behavior in
cooperation.

Social exchange theory is an important theory in the study of strategic alliance. Social exchange
theory mainly focus on the relationship among alliance members [15]. It is believed that with the
development of cooperative relations, mutual trust and common goals are established among alliance
members. It is useful for eliminating the self-interested behavior tendency of both parties and promoting
cooperation performance. Commitments, reciprocity and trust generated in the alliance are important
factors in the development of the alliance. Based on social exchange theory, the help and support of
terprises is an important factor affecting partner commitment and opportunistic behavior. If the
partner perceives the company's emotional support, the partner will be more willing to adopt a friendly
attitude and more cooperative behavior than self-interest in the alliance in return. For example, Zhou and
Poppo (2010) found that due to the lack of a stable legal enforcement environment, Chinese inter-firm
coopration relies more on trust to constrain partner behavior. Liu et al. (2009) found that the relational
governance mechanism is weaker than contract governance in inhibiting the opportunistic behavior in
the alliance. But it has more advantages in promoting relationship performance. Zhang and Zhou (2013)
found that trust in cooperation can effectively promote knowledge transfer.

Previous studies which focus on the impact of long-term cooperation in alliances have mostly
emphasized the benefits of trust generated in long-term cooperation. Previous studies have generally
believed that cooperation experiences will lead to trust in the alliance. The core point of social exchange
theory is that firms in the trading relationship want to acquire "reciprocity" and fair exchange relations.
In the ongoing process of collaboration, alliance members can resolve the imbalance of revenue and contribution in the collaborative experience. Therefore, reciprocal and fair expectations are more likely to occur in long-term cooperation. However, in the initial cooperation, it is difficult for alliance members to establish an identity with the “reciprocity” norms. In addition, the norms formed at the beginning of the cooperation exist only in the small scope of the alliance, which cannot play an important role in the entire alliance. As the cooperation continues to deepen, the resources invested by the alliance members in the cooperation are increasing. The informal mutual commitment between the organizations is gradually established.

Social trading theory focuses on trust related to reciprocity and believes that trust can be generated through continuous exchange of interests. Based on social trading theory, the cooperative experience mainly produces two kinds of trusts: institutional trust and emotional trust. Institutional trust means that no one in the alliance will implement opportunistic behavior because self-interested behavior violates the principle of reciprocity arising from the cooperation experience. Institutional trust is mainly derived from the principle of reciprocity proposed by social trading theory. Both parties involved in the exchange of social relations want to maintain the principle of reciprocity, so companies that are assisted by partners are morally obligated to repay. Emotional trust argues that opportunistic behavior is not implemented in alliance because these behaviors can seriously undermine interpersonal relationships based on partnerships and emotional binding. As an intrinsic psychological benefit, these emotional relationships do not produce any direct economic benefits. Empirical studies show that institutional trust and emotional trust play an important role in the organizational relationship. Noordhoff et al. (2011) found that institutional trust and emotional trust significantly reduce the risk of opportunistic behavior in the union. Bercovitz et al. (2006) trust generated from the principle of reciprocity can reduce the opportunistic behavior in the alliance and thus have a positive effect on the performance of inter-organizational relationships.

3.2 Perspective of learning
Although the study of social transaction perspective emphasizes the promotion of cooperation experience to trust, many studies have proposed different views. Unlike the idea of social exchange theory, research based on game theory perspectives believes that trust is derived from future gains and costs. When the benefits of future cooperation are sufficient, the benefits of cooperation are greater than the cost. Therefore, trust comes from expectations of the future. These studies suggest that the collaborative experience is only a sunk cost. It is no significant impact on trust. Based on game theory, collaborative experiences can generate trust only when they generate long-term willingness to cooperate. Different from social trading theory, the study of learning perspectives believes that past cooperation does not directly generate trust. The cooperation experience promotes mutual understanding between enterprises, increases the continuity of alliances, and indirectly promotes the generation of trust. Firms gather relevant information and enhance their knowledge of partners when they select partners. However, the understanding of partners is still very limited in the initial stage of cooperation. The initial learning is mainly based on the goal of the alliance, focusing on understanding whether the partner has the ability and willingness to complete the alliance task. Due to the limited number of interactions between alliance members, the company's information about partners is fragmented. There is still a lot of uncertainty in the judgment of the ability and willingness of the partner. Therefore, the level of trust between alliance members is relatively low.

However, as the cooperation deepens, the accumulation of specific knowledge among the members not only helps to control the opportunistic behavior in the alliance, but also helps to promote the coordination. It will improve the efficiency of the operation of the alliance. For example, if a company can reasonably anticipate the behavior of a partner's day-to-day operations, it can better coordinate its behavior with its partners and exert greater synergies. At the same time, the cooperation experience has accumulated knowledge of partner technology and capabilities. This knowledge promotes the company's understanding of partner behavior and better predicts the behavior of partners as they perform alliance collaborative tasks. In order to reduce transaction costs in day-to-day operations and
gain potentially huge benefits in future cooperation, companies want to maintain long-term relationships. In other words, the cost reduction and coordination advantages of learning how to get along with partners make the company's willingness to switch unfamiliar partners weaker and the alliance continues to increase. Only when the alliance has the potential for future development can the social system gradually generate trust. For example, if they can reasonably anticipate the behavior of their partners, firms can better cooperate with their partners and play a greater synergy. At the same time, the knowledge of partner technology and capabilities accumulated in the cooperation experience. This knowledge promotes the company's understanding of partner behavior. In order to reduce transaction costs and gain potential huge gains in future cooperation, firms want to maintain long-term relationships. Only with the possibility of future cooperation, trust can gradually generate.

4. Summary

Early research found that collaborative experiences can contribute to the performance of the alliance. However, based on game theory and learning perspective, cooperation experience can only generate trust when generating long-term cooperation willingness. Therefore, this paper reviews the relationship between cooperation experience and trust. This paper mainly has the following conclusions and contributions. First, based on the perspective of social exchange theory, long-term exchange of mutual benefits can generate trust. With the development of the cooperative relationship, the alliance members will gradually form a relational governance mechanism such as norms, which plays an active role in the operation of the alliance. Second, based on the learning perspective, if the future earnings expectation exceeds the cost of maintaining cooperation, cooperation experience will generate trust.

Acknowledgement

This work was supported by the SGGCC science and technology project “Method, Scheme and Effectiveness Evaluation of the Reform of Mixed Ownership”

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