
Insight from industry

Competition through collaboration: insights from an initiative in the Turkish textile supply chain

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Abstract

Purpose – To gain an understanding of the benefits, bridges, and barriers associated with supply chain collaboration.

Design/methodology/approach – Insights from extensive field research of a successful collaboration example in the Turkish dyeing and finishing industry.

Findings – The competition among firms is increasingly shifting from company vs company to supply chain vs supply chain. The insights obtained from the collaborative model in this textile supply chain provide a good understanding of the benefits, bridges, and barriers associated with supply chain collaboration. Benefits can be grouped as customer-oriented benefits, productivity benefits, and innovation related benefits. Factors supporting collaboration are observed as trust, common goals for cooperation, and existence of cooperation mechanisms, while barriers are related to three factors: lack of trust, risk-benefit evaluation, and lack of common goals for cooperation.

Research limitations/implications – Findings are based on interviews and questionnaires conducted with the managers of 3T, 30 dyeing and finishing firms (ten are partners) and six technology-supplying partner firms, from various regions in Turkey.

Practical implications – Highlights the importance of trust and collaboration mechanisms in managing collaborations. As the case of 3T in the dyeing and finishing industry shows, collaborations might significantly contribute to the competitiveness of textile firms.

Originality/value – This paper presents a successful collaboration model in creating new technologies and products by bringing the resources of competing partners together. This collaboration might be a tool for firms in developing countries to become competitive in their respective industries at the global level.

Keywords Supply chain management, Turkey, Textile industry

Paper type Viewpoint

Introduction

Firms try to develop value-added processes that deliver innovative, high-quality, low-cost products on time, with shorter cycle times and greater responsiveness than ever before. One of the ways of realizing this goal is to evaluate how the resources of their suppliers and customers can be utilized. Efforts to align objectives and integrate resources across organizational boundaries in order to deliver greater value are studied under different names, including supply chain collaboration (SCC), industrial networks, strategic alliances, and inter-firm collaboration.

The typical supply chain involves various tiers of materials suppliers, service providers, the firm itself, and one or more

levels of customers, each of which depends on the others to a greater or lesser extent to achieve competitive advantage. Even though collaboration is frequently observed frequently empirical evidence of the benefits of and barriers to collaborations is scarce. In this paper, we present an innovative example of collaboration in the Turkish textile dyeing and finishing industry to provide an understanding of the benefits, bridges, and barriers associated with SCC.

The collaboration model of 3T

The textile sector continues to be one of the major contributors to the Turkish economy, being one of the fastest growing sectors in the 1990s with an average annual growth of 12 per cent. In excess of 50 billion USD as been invested in the last ten years and the sector is an important part of the Turkish economy – generating over 10 per cent of GNP and 40 per cent of industrial production, accounting for 30 per cent of the manufacturing labour force and 35 per cent of exports.

Textile Dyeing Technologies (3T) was founded in 2000 as an industry-wide collaboration model that has never been applied to any Turkish industry before. 3T is owned by six technology providers and ten dyeing and finishing companies,

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each having a one-sixteenth share. Partner dyeing and finishing companies are medium and large sized companies employing between 70 and 1,000 employees while the partner suppliers are mainly small firms employing seven to 68 employees. 3T develops and implements integrated automation systems ranging from feasibility studies to after sales services.

The 3T model of collaboration is built on technology development, technology intelligence, and technology diffusion. In order to realize this sharing and diffusion, 3T meets with its partners regularly. In these meetings, partner dyers share customer needs and fashion trends they have determined with other partners and partner suppliers share their technological innovations and capabilities. Then, 3T matches these customer needs and fashion trends with the supplier capabilities and develops new products. In the projects, 3T attempt first, to use the products of its partner suppliers. However, for the exact integration of the system, it also uses additional foreign and domestic resources for the products that it cannot supply from its partner suppliers. Through this collaborative model, 3T partner suppliers also force themselves to produce better, more innovative products and enhance their R&D activities. Furthermore, with this synergy, the partner suppliers acquire the capability of improving new solutions for both hardware and software requirements of the dyers and gain the capability of developing new processes and methods to enhance the productivity of dyeing and finishing companies.

The dynamics of the 3T model

We conducted interviews and surveys to collect information about the benefits, bridges, and barriers in the 3T collaboration model. We interviewed all of the partner firms and half of 3T's customer dyers.

Benefits of collaboration

We observed that over half of the companies do not collaborate with any other companies outside of 3T and those that do have relatively few companies with whom they collaborate. Thus, it may be claimed that collaboration is a new concept for the dyeing industry in Turkey.

3T's experience suggests a hierarchy of benefits of collaboration. On one hand, each partner can receive individual benefits; on the other hand the collaboration can supply overarching macro benefits of collaboration that are related to increased potential for competitive advantage arising from pooled resources and innovative capabilities developed through collaboration in 3T. Besides the main operational goals of 3T mentioned earlier, the fundamental aims of this collaboration are:

- promoting the development of the Turkish textile dyeing and finishing industry, to create an atmosphere of solidarity and collaboration among the members of the industry, and to represent the voice of the industry;
- supporting textile dyeing and finishing in Turkey in order to compete with foreign competition in dyeing;
- extending the concept of collaboration all over the textile dyeing and finishing industry in Turkey;
- following the domestic and international developments of the industry, to organize meetings among the partners, to promote R&D and educational activities within the sector;

- arousing consciousness on the environmental issues concerning the industry, to be aware of the developments and act accordingly; and
- producing high value-added, innovative, and high-tech products.

The example of 3T shows that strategic behaviour leads firms to enhance their competitive advantage through resource sharing, which results in innovation and organizational learning.

The benefits of collaboration identified by the members of 3T may be categorized as customer related benefits, productivity related benefits, and innovation related benefits. Customer oriented benefits include lead time reduction, market share increase, responsiveness to customer needs, on time product delivery, enhanced customer satisfaction, and improved product quality. Productivity increases, energy, labour, and material cost reductions are identified as productivity benefits while ability to implement new processes and improvement in product/process development cost and time are highlighted as innovation benefits. Almost all of the partner dyers set goals related to customer-oriented factors compared to only half of the non-partners. Partner dyers also value productivity much higher in their co-operation decision than non-partners.

Bridges of collaboration

There were three major factors that seemed to support collaboration in 3T: common goals for co-operation, existence of co-operation mechanisms, and trust. Bridges related to common goals for cooperation include belief in the economic and non-economic benefits of collaboration and risk/benefit sharing among partners. Co-operation mechanisms consist of communication mechanisms, consistent performance measures, common procedures, and collaborative teams. Trust oriented bridges are trust in the partners and information and technical expertise sharing.

Although having common goals is regarded as a major factor the greatest importance is given to trust. More than half of the partners consider trust as extremely important. Companies aiming to increase their innovative capability also regard co-operation mechanisms as an important aspect of collaboration.

Companies that have more partners see trust in their partners as a significant bridge and the lack of confidence in partners as an important barrier to SCC. Furthermore, the companies with more partners attach a high importance to performance measurement systems that engender that confidence. This is an area in which 3T needs to develop as 3T does not have consistent performance measures.

Companies that emphasize willingness to share information with partners as a bridge to effective SCC participate the most in 3T meetings. These companies understand the importance of the meetings for information sharing and building trust among the partners. Not surprisingly, as the frequency of the participation in the meetings increases, so the level of the trust and information sharing between companies increases.

Barriers to collaboration

The three main barriers may be categorized as: lack of common goals for cooperation, risk-benefit evaluation and lack of trust.

Lack of trust appears as the most important reason behind difficulties in establishing co-operation (the majority of

partners find this an extremely important issue). This can be considered as the underlying factor in setting up relations with companies and is consistent with experience in many other industries around the world. Technology deficiencies and the non-alignment of objectives are also important reasons for a lack of co-operation. As mentioned earlier, lack of common procedures and information channels as well as performance measures also hinder the management of co-operation. Interestingly, the perception of risk-benefit evaluation is somewhat polarised: just under half of non-partner dyers consider problems with risk-benefit sharing as a barrier to collaboration whilst two thirds of partner companies regard this as an important reason for developing partnerships.

Conclusion

The benefits of collaboration are many and varied but the example of 3T shows that benefits are not only operational benefits for each participating company but also macro benefits shared by all partners. Partners create innovative products together as well as informing each other about new technologies. Although they compete in the local market by developing innovative products they increase their competitive

capability, contributing to the overall competitiveness of the dyeing and finishing industry against global competitors.

Our interviews revealed the importance of trust and collaboration mechanisms and the need for collaborating partners to tackle the problems of confidence in other companies that results in a reluctance to share information. Building communication mechanisms increases trust building as well as information sharing, thus contributing to the overall management of collaboration. The development of well-designed performance measurement systems are important, not least in removing the barriers to risk-benefit sharing.

3T is a successful collaboration: it has developed six new products in 17 projects and has become profitable in only two years. 3T has proved its capability in creating technology and producing high value-added products for the industry. This demonstrates that SCC among both small and large firms in a developing country context can be a successful tool in creating and diffusing innovation. Furthermore, long-term collaborative goals, such as continuous product innovation can, as the 3T experience shows, increase the overall competitive advantage of an industry in a developing country relative to global competition.