

[DOI: 10.20472/IAC.2018.043.053](https://doi.org/10.20472/IAC.2018.043.053)

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THE MODERATING EFFECT OF COLLABORATIVE CULTURE ON SUPPLY CHAIN COLLABORATION TOWARDS COMPETITIVE ADVANTAGE: THE CONCEPTUAL MODEL

Abstract:

In the current challenging business environment, firms find it difficult to be exclusively. Not only do the firms continue to leverage their internal sources for competitive advantage but also collaborate with partners along the supply chain vertically and horizontally. The collaboration results in revenue enhancements, cost reductions, and operational flexibility, especially, in managing an uncertain demand. Many previous studies have relatively emphasized on the conditions or factors affecting supply chain collaboration but still lacked one of the main supporting elements, known as collaborative culture. Thus, the role of collaborative culture on supply chain collaboration is unclear. The aim of this research is to investigate the moderating effect of the collaborative culture on the relationship between supply chain collaboration and competitive advantages.

This paper is proposing a conceptual model to explore the role of collaborative culture. Reviewing literature from the preceding research is employed as the research methodology to construct a conceptual model. Measurement of each latent variable is performed by supply chain collaboration, competitive advantages, and collaborative culture. Supply chain collaboration is analyzed by resource sharing, decision synchronization, and incentive alignment. Competitive advantage is investigated in terms of process efficiency, offering flexibility, business synergy, quality, and innovation. Lastly, the collaborative culture is examined by four factors, namely, collectivism, long-term orientation, power symmetry, and uncertainty avoidance. The implication of this research is to create a better understanding of the role of collaborative culture in order to enhance and sustain supply chain collaboration. Moreover, the results will help in resolving the obstacles of supply chain collaboration and in promoting the positive collaborative culture element(s) to strengthen the collaboration along the supply chain.

Keywords:

Collaborative culture, Supply chain collaboration, Competitive advantage

INTRODUCTION

Nowadays supply chain management concept is adopted because of the change in the formation of the business competition. It is not a competition between firms but between the supply chains. Therefore, collaboration among all stakeholders in the supply chain is crucial in order to be more competitive (Mathuramaytha, 2011). The collaboration activities result in revenue enhancements, cost reductions, and operational flexibility, especially, in managing an uncertain demand (Cao & Zhang, 2010). The conditions or factors affecting supply chain collaboration have been emphasized but still lacked one of the main supporting elements, known as collaborative culture, which can make collaborative activities in supply chain realized (Kumar & Banerjee, 2014). Thus, the role of collaborative culture on supply chain collaboration is unclear (Bititci & Mokadam, 2010). The aim of this research is to investigate the moderating effect of the collaborative culture on the relationship between supply chain collaboration and competitive advantages.

LITERATURE REVIEW

Supply Chain Collaboration

Supply chain collaboration is considered as a critical factor for managing supply chain. It has received more attention in the field of supply chain management with the increasing number of articles published over the years (Soosay & Hyland, 2015). Supply chain, comprising of different members both internal and external the organizational boundary, is known to be more effective with the collaboration efforts among supply chain partners. This concept is first coined by Ellram and Cooper (1990). The meaning of collaboration is very broad and encompassing term. Especially, in the context of supply chain, the collaboration needs further clarification (Barratt, 2004). Supply chain collaboration is often defined as two or more firms working together to create competitive advantage and to gain higher profits which a firm cannot achieve by itself (Haider, 2014; Moharana et. al., 2012; Soosay & Hyland, 2015). In more details, working together in supply chain can be accomplished through coordination, or cooperation, or collaboration. These three terms are usually used interchangeably but there are differences among them. First, it is the sequence of activities starting from coordination, cooperation and collaboration, respectively, which is the highest value. Second, the results of working together from these activities are more complex when stepping further. Coordination means working together to work well and fulfill a good result. Thus, partners in supply chain only share information and mutual support. Cooperation means working together to reach a common purpose. Collaboration means working together to carry out mutual benefits that a firm itself cannot make it independently (Haider, I., 2014; Kozuch & Sienkiewicz-Malyjurek, 2016).

Competitive Advantage

Competitive advantage is defined as “the capability of organization to create a defensible position over its competitors” (Vanathi & Swamynathan, 2014, p.11). Three issues about this definition must be clarified (Ma, 2000). First, competitive advantage is not superior performance but leads to superior performance. Second, competitive advantage should be assessed between any pair of rivals on a certain dimension(s). Third, competitive advantage is a relational term between a focal firm and rival(s) within a specific context of competition. It is not a universal, general, and overall characteristics of a firm.

Many theories explain the sources of competitive advantage (Wang, 2014). The market-based view argues that the industry factors and external market orientation are the primary determinants of competitive advantage. The resource-based view draws attention to firms' internal environment as a driver for competitive advantage and emphasizes on the resources firms have developed to compete in the environment. Knowledge-based view suggests that knowledge, know-how, intellectual assets and competencies are main drivers of competitive advantage in the information age. The capability-based view argues that capabilities are the source of competitive advantage while resources are the source of capabilities. The relational view of strategy focuses on routines and processes as important units of analysis for understanding competitive advantage. Transient advantage theory proposes that opportunities for leveraging competitive advantage are transient because the current business environment has evolved rapidly.

Influence of supply chain collaboration on competitive advantage

Several cross-sectional studies reported that higher levels of collaboration tend to provide a competitive advantage to the firms in the supply chain (Kohli & Jensen, 2010; Natour, et.al., 2011; Vanathi & Swamynathan, 2014). It is supported by many theories, namely, resource based view; relational view; extended resource-based view; and resource dependence theory (Arya & Lin, 2007; Cao & Zhang, 2013; Gray & Wood, 1991; Warnier et. al., 2013; Wong, 2011). According to resource based view, strategic resources with VRIN attributes (valuable, rare, inimitable and non-substitutable) will help firms to create competitive advantage. Therefore, firms employ supply chain collaboration to gain accessibility to those strategic resources. In terms of relational view, it emphasizes on common benefits that firms cannot generate these benefits independently but accrue at the collaboration level for mutual benefits. It complements the resource-based view by arguing that critical resources may span firm boundaries. From extended resource-based view standpoint, there are two different perspectives. On one hand, in addition to strategic resources, it takes into account the contribution of all kinds of resources; including ordinary and junk resources; in building and sustaining competitive advantage. On the other hands, it extends the resource-based view by explaining how interconnected firms in collaboration combine external resources and internal resources to achieve competitive advantage for the focal firm. Corresponding to resource dependence theory, supply chain partners as a whole are

less relying on their environments through resource sharing. Firms collaborate with supply chain partners to acquire vital resources and to increase their power relative to others in the supply chain.

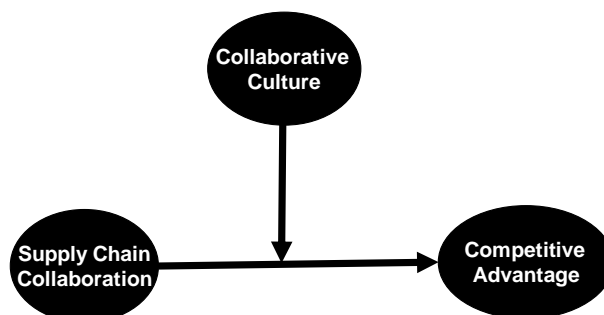
Collaborative Culture

In long term, firms in the supply chain cannot produce an outcome of their collaborative strategy without collaborative culture (Kumar, et. al., 2016). Collaborative culture is different from organizational culture. It is one part of organizational culture. It focuses on confrontation, cooperation, and mutuality orientation (Kuzuch, 2009; Lei, et. al., 2017). Therefore, collaboration culture deals with a relationship emphasized on maintaining long term, multi-faceted relationships. Firms with collaborative culture will have a tendency to coordinate with their supply chain partners based upon their trust, goodwill, and social norms rather impersonal and legal contracts, firm rules, and fixed goals (Zhang & Cao, 2018).

CONCEPTUAL MODEL

A conceptual model (Figure 1.) shows that supply chain collaboration is an independent variable, competitive advantage is a dependent variable, and collaborative culture is a moderated variable that influences the strength of relationship between the two aforementioned variables. The measurement of each variable will be described in subsequent section.

Figure 1. A conceptual model



VARIABLES MEASUREMENT

The measurement items for each variable were developed as follows:

Supply Chain Collaboration

Supply chain collaboration is measured by three items, namely, incentive alignment; decision synchronization; and resource sharing (Kohli & Jensen, 2010; Mathurametha, 2011; Simatupang & Sridharan, 2005; Vanathi & Swamynathan, 2014; Zacharia, et. al., 2009; Zhang & Cao, 2018;)

Incentive alignment refers to the process by which supply chain partners jointly determine, devise and share costs, risks, and benefits among them. For successful supply chain collaboration, each participant should share gains and losses equitably.

Decision synchronization refers to the process which supply chain partners harmonize their decisions in planning and operations that create mutual benefits. These decisions are strategic planning, demand management, production scheduling, procurement, inventory replenishment, order placement order delivery, distribution management, problem solving, performance measurement, etc.

Resource sharing refers to the process which supply chain partners leverage and invest in capability and asset with each other. Resources may be physical resources, such as manufacturing equipment, facilities, and technology or may be information, such as demand forecast, point-of-sale data, on hand inventory level, inventory policy, delivery schedule, order status or order tracking, promotion events, price changes, and inventory holding costs.

Competitive Advantage

Five items are employed to measure the competitive advantage, namely, process efficiency, innovation, offering flexibility, quality, and business synergy (Awwad, et., al., 2013; Boyer, & Lewis, 2002; Cao & Zhang, 2010; Jitpaiboon, et. al., 2016; Russel & Millar, 2014; Sachitra, 2017; Ward, et., al., 1998;)

Process efficiency refers to the extent to which a firm's collaboration with supply chain partners is cost competitive.

Innovation refers to the extent to which a firm works jointly with its supply chain partners in introducing new processes, products, or services.

Offering flexibility refers to the extent to which a firm's supply chain linkage supports changes in customer demand.

Quality refers to the extent to which a firm with supply chain partners offer superior products that create higher value for customer.

Business synergy refers to the extent to which supply chain partners combine complementary and related resources to achieve spill-over benefits.

Collaborative Culture

There are four measures for collaborative culture: collectivism, long-term orientation, uncertainty avoidance and power symmetry (Barratt, 2004; Cao & Zhang, 2013; Qu & Yang, 2015; Zhang & Cao, 2018).

Collectivism refers to the extent to which supply chain partners perceive that they are one part of group of people who work together for their supply chain. Working together, supply chain partners should have trust, mutuality, and openness communication.

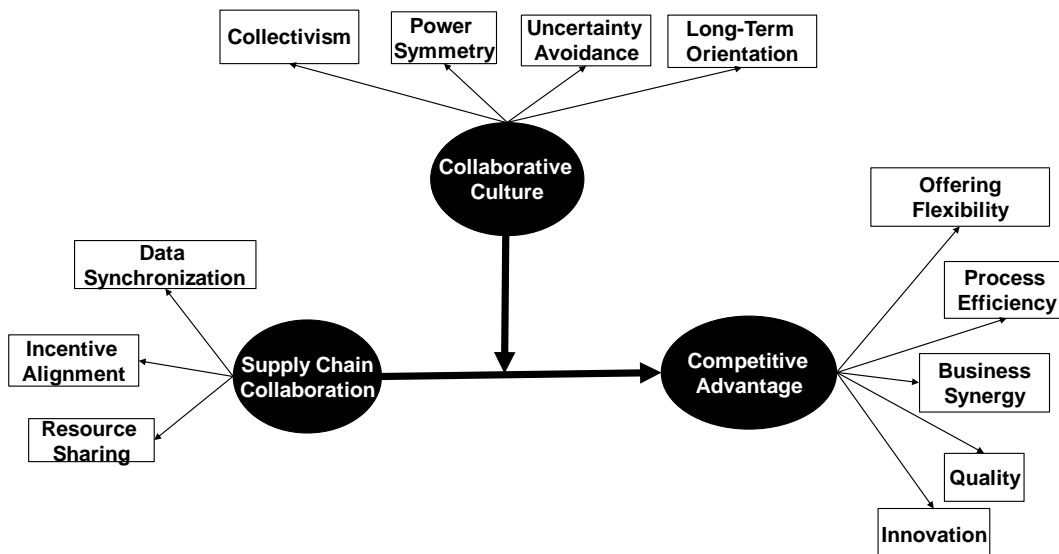
Long-term orientation refers to the extent to which supply chain partners are willing to maintain long term relationships. It is shown by committing resources to supply chain collaboration, giving assistance during difficult times, and solving conflict of interests.

Uncertainty avoidance refers to the extent to which supply chain partners feel that ambiguous situation should be eliminated. It is shown by establishing formal rules for working together, regularly exchanging their information, and frequently making mutual understanding.

Power symmetry refers to the extent to which supply chain partners believe that they have an equal say in their relationships. Supply chain partners should have equalities in decision making, bargaining power, and beneficial arrangements.

A conceptual model with the measurement model is concluded in Figure 2.

Figure 2. A conceptual model with measurement model



IMPLICATION

The implication of this research is to have a better understanding about the role of collaborative culture in order to enhance and sustain supply chain collaboration. Collaborative planner could form a constructive and relational bonding environment to strengthen the relationships among supply chain partners. Moreover, the results will help in resolving the obstacles of supply chain collaboration and in promoting the positive collaborative culture element(s) to strengthen the collaboration along the supply chain.

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