CHAPTER 3

CONCEPTUAL FRAMEWORK
This chapter is organized as follows: In Section 3.1, we develop a conceptual framework to address the research gaps identified in Chapter 2. In Section 3.2, we propose intervening variables and their linkages with the conceptual framework to examine the relationship and importance of supply chain orientation (SCO) and supply chain performance (SCP). We also propose relevant hypotheses to address the research questions discussed in Chapter 2.

3.1 Conceptual Framework

As discussed in Chapter 2, SCO mainly entails the implementation of SCM philosophy among supply chain partners. There are two types of SCOs: i) Strategic and ii) Structural. Each SCO comprises three sub constructs as shown in figure 2.1. “Strategic SCO is integration of SCM philosophy into the firm’s strategy development, and reflects the extent to which top managers’ decisions and strategic direction incorporate an SCM philosophy.” (Mentzer et al., 2001, p. 14). However, “Structural SCO includes operational-level behaviours and actions of the firm that reflect the SCM philosophy, as embodied through strategic SCO.” (Mentzer et al., 2001, p. 14). The sub constructs a) Top management support, b) Organizational compatibility and c) Commitment pertain to strategic SCO, whereas sub constructs a) Cooperative norms, b) Credibility and c) Benevolence constitute structural SCO. Figure 3.1 shows SCO as a construct.
We will now explore each sub construct of SCO individually.

i) Commitment: This may be defined as “an implicit or explicit pledge of relational continuity between exchange partners.” (Dwyer, Schurr, & Oh, 1987, p. 19). Commitment is a prerequisite for maintaining long-term relationships with business partners, which is the basic element of SCM implementation (Gundlach, Achrol, & Mentzer, 1995). Commitment is one of the crucial elements for the successful implementation of SCM, because it promotes long-term relationships (Gundlach, Achrol, & Mentzer, 1995); reduces supply chain vulnerability (Liping, Qiang, & Jingyuan, 2014) and enables joint achievement of desired goals (Lambert, Stock, & Ellram, 1998).

ii) Organizational compatibility: “Organizational compatibility has been defined as complementary goals and objectives, as well as similarity in operating philosophies and corporate cultures” (Bucklin & Sengupta, 1993). Rajaguru & Matanda (2013) pointed out that organizational compatibility facilitates supply chain capabilities. Organizational compatibility in an alliance positively impacts and enhances network performance (Bucklin & Sengupta, 1993).
iii) Top management support: This is the driving force of the organization, and it plays a crucial role in setting up vision, mission, values, strategy development, direction, etc. (Bourne & Jenkins, 2013; Kotter, 1990; Webster, 1988). Top management support is an important element because it severely impacts firm performance (Day & Lord, 1988; Nielsen & Nielsen, 2013) and firm networking (Liang, Saraf, Hu, & Xue, 2007); new technology adoption (Dong, Neufeld, & Higgins, 2009); change management (Wiersema & Bantel, 1992) and SCM implementation (Lambert, Stock, & Ellram 1998).

iv) Credibility: “Credibility is a firm’s belief that its partner stands by its word (Anderson & Narus, 1990), fulfils promised role obligations, and is sincere” (Dwyer & Oh, 1987). Credibility leads to a feeling of togetherness among supply chain partners (Cachon & Lariviere, 2001), information sharing (Li & Lin, 2006) and fosters innovations (Gupta & Wilemon, 1988).

v) Benevolence: This is the desire to do nice things. The presence of the benevolence factor in the supply chain relationship leads to a feeling of mutual welfare among partnering firms (Deutsch, 1958; Rempel et al., 1985); willingness to sacrifice for the betterment of the relationship (Anderson, Lodish, & Weitz, 1987) and curbing of self-profit maximizing behaviour (Anderson & Narus, 1990).

vi) Cooperative norms: These have been defined as “the perception of the joint efforts of both the supplier and the distributor to achieve mutual and individual goals successfully while refraining from opportunistic actions.” (Siguaw, Simpson, & Baker, 1998, p. 102).
3.2 Developing the Hypothesis

3.2.1 SCO to SCP

Based on the SCO study conducted by Patel et al. (2013), we will also try to link SCO sub constructs to SCP. Hult et al. (2008, p. 527) defined SCO as “A supply chain orientation is defined as the extent to which there is a predisposition among chain members toward viewing the supply chain as an integrated entity and on satisfying chain needs in an integrated way.” We will now try to establish the relationship between SCO sub constructs and SCP using the contingency approach.

SCO manifested in top management support leads to better-informed strategic decisions (Mentzer et al., 2001; Patel et al., 2013), efficient use of firm resources (Young & Poon, 2013), leveraging of the firm’s supply chain capabilities (Wisner, Tan, & Leong, 2015), enhancement of flexibility of resources (Qian, Cao, & Takeuchi, 2013) contribution to the ambidexterity of organizations, which lead to higher performance levels (Beckman, 2006; Lubatkin et al., 2006). SCO manifested in inter-organizational commitment leads to a direct and positive impact on performance (Prahinski & Benton, 2004); promotes efficiency, productivity and effectiveness in outcomes (Moorman et al., 1993; Sahin & Robinson, 2002) and decreases costs of monitoring and controlling relationship (Patel et al., 2013).SCO manifested in inter-organizational compatibility leads to consistency of goals/objectives and operating philosophy between partnering firms (Bucklin & Sengupta, 1993), improvisation of customer-focused performance by focusing on value creation for the final consumer (Roethlien & Ackerson, 2004); enhancement of inter-organizational learning, relationships and financial performance (Beugelsdijk, Koen, & Noorderhaven, 2009).
SCO manifested in cooperative norms leads to enhancement of efficiency through seamless transfer of experiences to new situations (Cohen & Bacdayan, 1994), sharing of responsibilities and stimulation of relationship-specific investments. These factors increase process efficiency and value (Saeed, Malhotra, & Grover, 2005), create relational capital (Nahapiet & Ghoshal, 1998) and enhance supply chain outcomes (Cousins et al., 2006; Lawson et al., 2008). SCO manifested in benevolence leads to achievement of joint outcomes of supply chain partners (Dekker, Sakaguchi, & Kawai, 2013), tendency to refrain from selfish behaviour (Anderson & Narus, 1990), improvement of relational performance of partnering parties by promoting collaboration, betterment of working relationship, along with enhanced trust among supply chain members (Selnes & Gonhaug, 2000). SCO manifested in credibility leads to high reputational goodwill among partners. This positively impacts their survival (Rao, 1994), growth (Podolny & Phillips, 1996) and profitability (Shapiro, 1982).

Therefore, in summary, SCO leads to improved strategic decision making, optimization of resource deployment, superior customer satisfaction and efficient execution of business plans, cost control and enhancement of process efficiency. We therefore propose the following hypothesis:

\[ H1: \text{SCO is positively associated with SCP.} \]

3.3 Intervening Variables

Using support of the theoretical foundation along with the research gaps identified in Chapter 2, the outcomes and the facilitators of SCO are valid areas of research (Patel et al., 2013; Omar et al., 2013). Here we tried to capture the alternate route through which SCO impacts SCP, that is, intervening variables. We investigated the effect of two variables that might impact the SCO-SCP relationship. The variables are Supply
Chain Integration and Supply Chain Agility as found through our pertinent literature review. The detailed explanations of these variables along with the proposed hypothesis on the SCO-SCP relationship are explained in this section.

3.2.1 Supply Chain Integration (SCI)

Flynn, Huo, & Zhao (2010, p. 59) defined SCI as “the degree to which a manufacturer strategically collaborates with its supply chain partners and collaboratively manages intra- and inter-organization processes.” SCI includes internal and external integration with suppliers and customers.

3.2.2 SCO to SCI

SCO manifested in top management support acts as the driving force of an organization’s strategic programmes and initiatives (Mintzberg, 1979). It serves as a strategic tool to support functional objectives, to collaborate different functional groups to execute firms’ plans, and to coordinate strategic and operational objectives (Joshi, Kathuria, & Porth, 2003; Kearns, 2006). It overcomes barriers to supplier involvement (Ragatz et al., 1997; Primo & Amundson, 2002; Lockstrom et al., 2010). SCO manifested in inter-organizational commitment leads to cooperation among business partners (Friman et al., 2002), enhancement of long-term relationships and degree of external integration (Zhao, Huo, Selen, & Yeung, 2011), maintenance of healthy business transactions (Kwon & Suh, 2005). SCO manifested in inter-organizational compatibility leads to harmony among business partners (Lambe, Spekman, & Hunt, 2002), evenness of objectives and operating philosophy between business partners (Bucklin & Sengupta, 1993) and feeling of oneness and motivation to collaborate (Riketta & Nienaber, 2007).

SCO manifested in cooperative norms fosters coordinated interaction patterns (Heide & John, 1990; Lusch & Brown, 1996), collaboration to attain shared goals, tendency
of avoiding selfish behaviours (Cannon & Perreault, 1999; Hennig-Thurau, Gwinner, & Gremler, 2002) and adherence of relationship management via transparent inter-organizational governance (Heide & John, 1992). SCO manifested through credibility leads to prediction of future behaviour of partners (Herbig & Milewicz, 1996). It positively impacts the survival of the relationship (Doney & Cannon, 1997), and inter-organizational coordination (Baker & Sinkula, 1999). SCO manifested in benevolence leads to achievement of joint outcomes of SC partners (Selnes & Gønhaug, 2000), feeling of indebtedness along with obligations to reciprocate positively (Wang & Wee, 2007), cooperation among partners, enhancement of working relationships and relationship performance of partnering firms (Doney & Cannon, 1997; Selnes & Gønhaug, 2000), inter-firm trust and relational outcomes (Delbufalo, 2012).

In summary, SCO manifested through top management support, commitment, benevolence, cooperative norms, credibility and compatibility impacts the collaboration of supply chain members in internal and external integration, and eventually leads to SCI. We therefore propose the following hypothesis:

**H2: SCO is positively associated with SCI.**

**SCI to SCP**

SCI entails the strategic integration of both intra- and inter-organizational activities carried out by a firm in conjunction with its supply chain partners (Flynn et al., 2010). SCI gauges the degree to which supply chain partners work collaboratively to gain reciprocally beneficial results (Pagell, 2004). SCI is crucial for business performance, and seeks to exploit the potential of the supply chain to build sustainable value (Kannan & Tan, 2010). A high level of SCI empowers manufacturers to enhance flexibility to customers’ requirements by allowing them to reduce inventories,
delivery times and various obstacles to efficient supply chains (Barratt, 2004). Most studies found a positive correlation between SCI and SCP (Ettlie & Reza, 1992; Frohlich & Westbrook, 2001; Li et al., 2009). Resource-Based View (RBV) and RV theories predict that supply chain integrative capabilities act as drivers of company performance (Saini, & Johnson, 2005 ; Bharadwaj, 2000; Schroeder et al., 2002). We therefore propose the following hypothesis:

**H3: SCI is positively associated with SCP.**

**SCO-SCI-SCP**

A mediator variable accounts for a substantial portion of the association between an independent and a dependent variable (Baron & Kenny, 1986). We propose that SCI mediates the association between SCO and SCP, which means that SCI acts as a particular alternative approach for proliferation of SCO along the supply chain. To examine the possibility of this mediating effect, it is hypothesized that SCI mediates the effect of SCO (independent variable) on SCP (dependent variable).

As we know that “**SCO is the extent to which there is a predisposition among chain members toward viewing the supply chain as an integrated entity and on satisfying chain needs in an integrated way**” (Hult et al., 2008, p. 527). As stated by Barney (1991) and Wernerfelt (1984) in the RBV and RV theory, a firm can develop distinctive capabilities and grow only by integrating with its supply chain partners. So integration with supply chain partners is essential for survival in the marketplace. SCI can act as a strategic resource, and this can result in a sustainable competitive advantage (Chen et al., 2009) and higher firm performance (Mesquita et al., 2008). Thus, it is plausible that the relationship between SCO and SCP may be mediated by SCI. We therefore propose the following hypothesis:
H4: SCI mediates the relationship between SCO and SCP.

3.2.2 Supply chain agility (SCA)

Gligor et al. (2013, p. 95) defined SCA as “A firm’s ability to quickly adjust tactics and operations within its supply chain to respond or adapt to changes, opportunities, or threats in its environment.” As per the argument of Gligor & Holcomb (2012), SCA is one of the most salient areas of contemporary SCM. As the business landscape is changing unpredictably, firms are operating as a part of global SCM resulting in “it’s not the big that eat the small . . . it’s the fast that eat the slow”. (Jennings & Haughton, 2002, p.13).

3.2.2.1 SCO to SCA

SCO manifested in top management support leads to support in responding to changes in the external environment (Liang et al., 2007), successful implementation and assimilation of information systems (Thong et al., 1996; Liang et al., 2007; Fui-Hoon Nah et al., 2001; Chatterjee et al., 2002), effective response to competitive forces (Metts, 2007), managerial actions that may increase the level of adoption (Gangwar et al., 2015). SCO manifested in inter-organizational commitment leads to a higher permission level for information sharing (Chen & Paulraj, 2004; Zhao et al., 2011), sound and rapid decision making affecting the performance of partnering firms (Garbarino & Johnson, 1999). SCO manifested in inter-organizational compatibility leads to seamless and efficient exchange of knowledge and technology (Leischnig, Geigenmueller, & Lohmann, 2014), efficient flow of information across partnering firms (Sarkar et al., 2001; Teo, Ranganathan, & Dhaliwal, 2006).

SCO manifested in cooperative norms provides partners with flexibility to handle inevitable uncertainties emanating in an business environment (Poppo & Zenger,
2002), institutionalizes inter-organizational knowledge and facilitates transfer of the necessary resources to new situations to enhance the responsiveness of the system (Ashmos, Duchon, & McDaniel, 1998; Cannon & Homburg, 1999) and better adaptation and control (Mohr & Spekman, 1994; Lusch & Brown, 1996). SCO manifested in credibility leads to transparency and prediction of future behaviour (Herbig & Milewicz, 1996) and information symmetry (Marchand, Kettinger, & Rollins, 2002). SCO manifested in benevolence leads to knowledge sharing in SCM (Cheng et al., 2008), reduced vulnerability in relationships, to facilitate business activities (Canning & Hammer-Lloyd, 2007), inter-firm trust and relational outcomes leading to effective decision making (Delbufalo, 2012).

In summary, SCO through top management support, commitment, organizational compatibility, benevolent, cooperative norms and credibility affects accessibility, alertness, flexibility, swiftness and decisiveness of the supply chain, that is, leading to SCA. So we hypothesize:

**H5: SCO is positively associated with SCA.**

### 3.2.2.2 SCA to SCP

SCA impacts cost efficiency, that is, ‘ability to execute plant operations using relatively few total input resource’ (Swink, Narasimhan, & Kim, 2005 p. 432). SCA calls for specific investments to reap the benefits of customization, flexibility, ability to respond to changes, in business environments. So the collaboration between supply chain partners fostered by SCA serves to safeguard against opportunistic behaviour, and allows for transactions, economizing on bounded rationality (Lai et al., 2008). So transaction cost and resource consumptions are reduced. This leads to higher SCP. Transaction cost economics advocates that SCP can be improved by reducing the
uncertainty and conflict in the supply chain relationship. SCA creates value within a supply chain through cost efficiency (Lambert & Pohlen, 2001). This is achieved through logistics/transportation activities to improve profits, sales, inventory turnover, and customer satisfaction (Halley & Guilhon, 1997). SCA allows better allocation of resources and cost leveraging to create value for the final customer. This will ultimately result in a superior performance (Langley & Holcomb, 1992). There are ample support for SCA leading to SCP in the operations management literature (Gligor & Holcomb, 2012; Khan & Pillania, 2008; Lui et al., 2013; Swafford, Ghosh, & Murthy, 2008). So we propose the following hypothesis:

**H6: SCA is positively associated with SCP.**

**SCO-SCA-SCP**

“SCO is the extent to which there is a predisposition among chain members toward viewing the supply chain as an integrated entity and on satisfying chain needs in an integrated way” (Hult et al., 2008, p. 527). This predisposition is very important, because today’s competition is not firm versus firm but SC versus SC in the dynamic business environment. The agility concept has thus gained a lot of importance (Chen & Paulraj, 2004; Christopher, 2005; Holcomb & Stank, 2013).

Dynamic capabilities (DCs) represent “the firm’s ability to integrate, build, and reconfigure internal and dynamic capabilities take on depends on the firm’s environment.” Within stable industries, DCs are complex, detailed analytic processes that depend heavily on prior experience and knowledge to deliver expected results. As per Eisenhardt & Martin (2000), in unstable industries, DCs are uncomplicated, unstable, experimental processes that are heavily contingent on hastily shaped knowledge to yield unpredictable results. DCs are superior level capabilities (Winter,
2003) that are devoted to improvement of operating procedures (Helfat & Peteraf, 2003). They allow firms to reconfigure their resources and thus capitalize on environmental changes (Teece, 2007). SCA displays these characteristics and, therefore, can be considered a DC resulting from the reconfiguration of individual firms and supply chain resources (Gligor & Holcomb, 2012; Blome et al., 2013). Blome et al. (2013) posit that SCA is a complex capability that is a central component of the firm’s competitive strategy, particularly in an uncertain environment. Because DCs are hard to replicate, they may provide a sustainable competitive advantage. As such, SCA can positively impact firm performance (Gligor & Holcomb, 2012). So we propose the following hypothesis:

_H7: SCA mediates the relationship between SCO and SCP._

**SCO-SCI-SCA-SCP**

Researchers have proved that superior performance can be achieved via relation-specific investments and collective efforts of the business partners (Dyer, 1996). RV theory and DCs have argued that SCA is a collective effort of the partnering firms and cannot be achieved in isolation. SCA is developed by investing resources in the partnering firms and via mutual cooperation. Various other researchers have found positive relationship between SCI and SCA (Agarwal, Shankar, & Tiwari, 2007; Braunscheidel, & Suresh, 2009; Naylor, Naim, & Berry, 1999; Swafford, Ghosh, & Murthy, 2008). So it is logical to infer that SCI is an antecedent of SCA. Therefore SCO positively impact SCI which is turn affects SCA leading to SCP, (hypothesis H2, H6), so we can propose:

_H8: SCI and SCA mediate the relationship between SCO and SCP._
3.4 Proposed Conceptual Model

Based on the above hypothesis, the conceptual model for this study is proposed as shown in figure 3.2.

![Diagram showing the proposed conceptual model](image)

**Figure 3.2 Proposed conceptual model**

In this chapter, we have discussed the SCO and SCP constructs and have identified their sub constructs. For SCO, the sub constructs are benevolence, commitment, credibility, organizational compatibility, cooperative norms, and top management support whereas for SCP, these are operational and customer-based performance. Further, we have built upon the research gap identified in Chapter 2 and have included two intervening variables, namely, SCI and SCA in the SCO-SCP relationship. Furthermore, we have proposed a conceptual framework to link all the four variables. Using the contingency approach, we have proposed a set of hypotheses to relate SCO to SCP and to determine the mediating role of SCI and SCP. The methodology of the study for empirical testing of the framework and proposed hypothesis is discussed in the next chapter.