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ORIGINAL RESEARCH

Integration of Social Capital and Organizational Learning Theories to Improve Operational Performance

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Abstract *This study focuses on integrating the premises of social capital theory and the theory of organizational learning to improve the operational performance of firms nurturing the buyer–supplier relationship. Social capital theory highlights the importance of developing social relationships between firms to create valuable resources and collectively access critical resources. Organizational learning theory highlights that the learning capacity of an organization strongly depends on top-level leaders' behaviors, organizational structure, culture, and flexibility, and uncertainties in the environment in which the organization functions. Though many studies have focused on the impact of social capital on performance improvements in the buyer–supplier relationship, the interlinkages between social capital and organizational learning have not been given much attention. Based upon these theories, a system-focused perspective, which showcases the antecedents and outcome of the relationship between collaborative communication and learning, has been proposed in this study. A literature review has been carried out to support the linkages in the proposed conceptual model. Findings suggest that transformational buyers support creating cognitive capital with suppliers. This cognitive capital influences the structural capital, which supports improving the understanding of each party's processes in the buyer–supplier relationship when parties have high long-term orientation. Improved learning capability reshapes organizations into flexible systems capable of responding quickly to customer requirements, and consequently, they realize a higher performance level.*

Keywords Collaborative communication · Information technology competency · Long-term orientation · Organizational learning · Supplier knowledge · Transformational leadership

Introduction

Firms strive to collaborate with supply chain partners to develop new products and to make sure that these products reach the market at the right time to maximize their market share. At the same time, they pay equal attention to improve the alignment between operational activities and employees (Droge et al. 2004). Since the intensity and speed of the flow of raw materials affect manufacturer capabilities to deliver products at the right time and at the right cost to customers, manufacturers place a high emphasis on identifying and developing relationships with suppliers. Further, buyer–supplier relationships have been viewed as a social network in which resources are embedded in and jointly owned by all of the partners in the relationship, and such resources make the supply chain very unique and provide competitive advantage to the supply chain partners. Studies in the operations

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management literature have shown that supplier integration leads to joint product development (Petersen et al. 2005), improved product quality (Koufteros et al. 2007), and improved delivery speed (Stank et al. 2001; Zailani and Rajagopal 2005; Musa and Dabo 2016). Developing an enduring relationship with suppliers also enables suppliers to improve their knowledge and engage in the speedy delivery of raw materials (Joshi 2009; Birasnav et al. 2015; Khorasani 2018). On the other hand, during a volatile environment that reduces the predictive capability of buyers, maintaining long-term relationship supports manufacturers in producing a variety of products and enjoying the high delivery speed of materials from suppliers (Wong et al. 2011; Lu et al. 2018).

Though supplier integration with buyers improves the performance of the supply chain, top-level management support is required to keep suppliers motivated and to synchronize operational activities with the activities of suppliers. Different types of behaviors of top-level leaders needed for strengthening internal capabilities and influencing suppliers to engage with internal operations have been investigated in the literature. Empirical evidence in the operations management field shows that transformational leaders effectively convey their mission and vision to internal partners and motivate them to elevate their potential. As a result, they contribute toward faster functioning of the purchasing cycle (Hult et al. 2000). The leadership literature shows that transformational leaders intrinsically motivate employees to improve their job performance (Wang et al. 2005; Piccola and Colquitt 2006), empower and support employees to be innovative (Jung et al. 2003), and contribute to improved organizational performance through developing employees' skill and knowledge (Zhu et al. 2005; Garcia-Morales et al. 2008). Further, Pfeffer (1992) argues that organizational leaders should exhibit symbolic behaviors as these behaviors strongly influence suppliers and bind them with the organizations to achieve mutual benefits. In general, charismatic leaders exhibit symbolic behaviors that convey the symbols of their values to external partners, who thereafter will have positive perceptions and beliefs about the organization (Fanelli and Misangyi 2006). Studies also present evidence that transformational leadership behaviors improve organizational innovation by creating social capital (Chen et al. 2016), and the presence of transformational leader in a team strengthened the impact of the team's social capital on team's performance (Gupta et al. 2011). However, there have been no studies conducted to explore the influence of transformational buyers on creating social capital with suppliers. If a manufacturer buyer needs to improve operational performance and have a sustained advantage, they should create a collaborative mechanism for interlinking top-level managers, internal employees, and suppliers and provide a favorable environment for this mechanism to work effectively.

Empirical evidence in the leadership literature highlights the influence of leadership behaviors over followers to facilitate organizational learning (Vera and Crossan 2004) and to achieve improved performance (Zhu et al. 2005). Tippins and Sohi (2003) have also shown that firms that invest in implementing information technology (IT) competencies to strengthen organizational learning capabilities will subsequently improve performance. These empirical studies have predominantly showcased the presence and importance of interlinkages between social capital theory and organizational learning theory. Studies in the operation management literature show the importance of integration among internal and external partners to improve operational performance (Flynn et al. 2010; Shibin et al. 2016). According to the resource-based view of a firm, firms develop resources that are unique, inimitable, not available in the market, and not transferrable to other firms (Barney 1991). Leaders are viewed as resources of the firms and sources of sustaining a competitive advantage. However, studies have not focused yet on how transformational leaders leverage external resources to improve the learning capability of the supply chain to sustain a competitive advantage. To understand the mechanism to realize achieving competitive advantage, this study focused on integrating social capital theory and organizational learning theory together to achieve supply chain performance. However, researchers have not explained the interrelationships between improving internal and external capabilities to attain improved performance from these theoretical perspectives. Specifically, the linkages within the buyer–supplier relationships that transform the influence of transformational leaders into improved operational performance is a gap of inquiry in the literature.

This study addresses this research gap within the operations management literature by integrating the aspects of social capital theory and theory of organizational learning. Specifically, we address the following research questions:

1. How do transformational leaders promote collaborative communication with suppliers?
2. How does capital derived from a social network affect the learning capacity of manufacturers?, and
3. How does collaborative communication between manufacturers and suppliers affect the operational performance of manufacturers?

Figure 1 depicts the conceptual model of this study showing the antecedents and outcomes of the relationship between collaborative communication and learning. It also shows the moderating role of long-term orientation. With

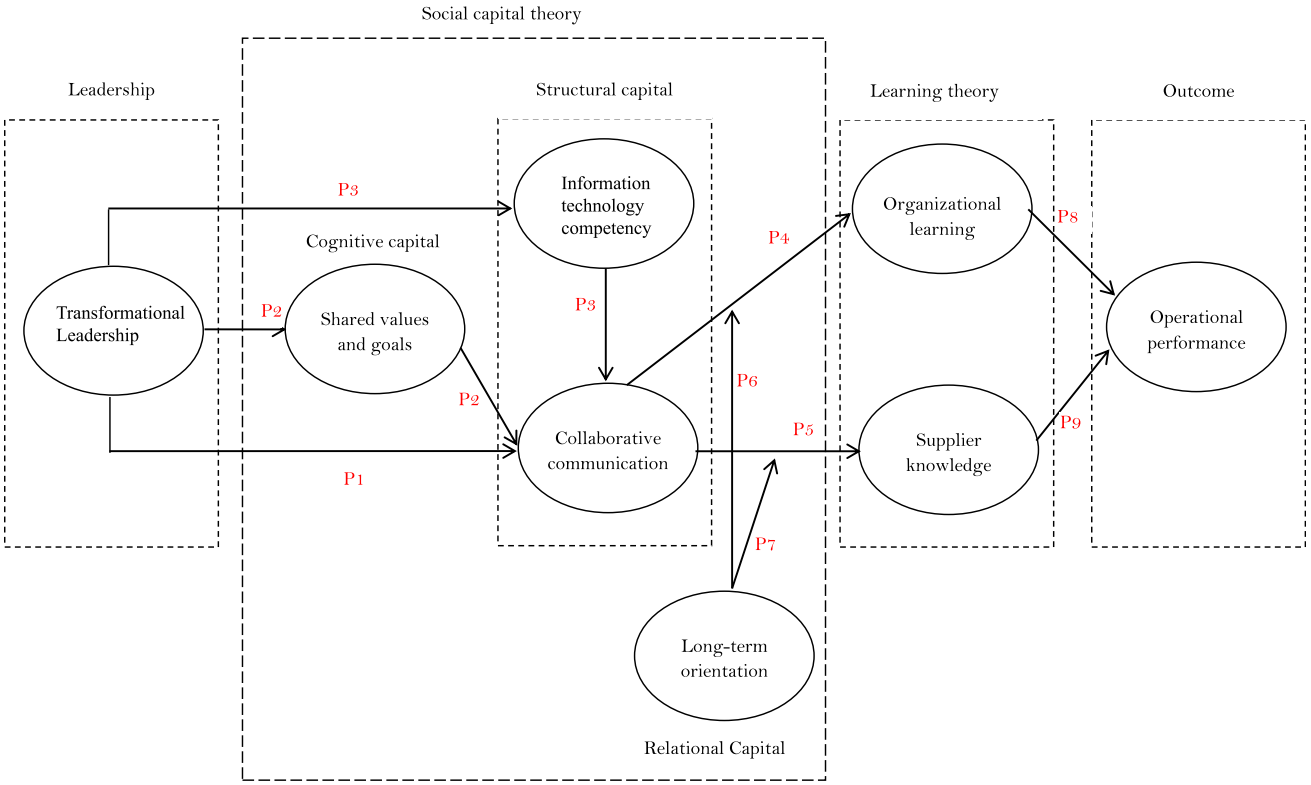

Fig. 1 Conceptual model of this study

the help of this conceptual model, we address all three research questions of this study.

Theory and Propositions

Social capital Theory

Social capital theory posits that networks support developing and maintaining relationships, encourage actors in the network to engage in beneficial activities, and provide opportunities for network actors to own collective capital (Bourdieu 1986). Making connections with firms within the network increases the probability to engage in social interactions to gain a better understanding about other firms and, consequently, each firm derives benefits. Nahapiet and Ghoshal (1998) view social capital as the collective resources entangled within the network of firms, made available for all the firms in this network, and derived within this network. Thus, the structure of network and actual and potential resources available in the network constitute social capital, and this social capital is comprised of cognitive capital, structural capital, and relational capital.

According to Nahapiet and Ghoshal (1998), cognitive capital is a resource that provides shared representations, shared values and goals, and shared interpretations. When parties engage in defining and developing new products, they undergo sense-making processes to interpret the functions of the products and attain a shared understanding. In this study, we focus on derived shared values and goals as cognitive capital.

According to Nahapiet and Ghoshal (1998), structural capital is a combined resource of the properties and patterns of a social network. This capital explains the pattern of how parties are connected to each other, how densely they are connected, and at what level they are connected to other firms. Thus, network ties and their configuration describe structural capital. Studies in the operations management literature evaluate structural capital in terms of evaluating and developing upstream supply chain partners to include into the social network and the amount of sharing of information among these partners in the network (Krause et al. 2007). Since IT connecting both manufacturers and suppliers is an important source for sharing information in the network, we focus on both technology and collaborative communication to describe the amount of structural capital in the buyer–supplier relationship.

Further, according to Nahapiet and Ghoshal (1998), relational capital is a resource that is created and shared in the network with the help of close interactions held with each other, and thus, each party recognizes and approves

other party's contribution. Therefore, the length of relationship developed between manufacturers and suppliers strengthens the amount of relational capital built up in the network (Krause et al. 2007), and exhibiting long-term orientation in this relationship shows the intention to accumulate this relational capital.

Theory of Organizational Learning

Most of the studies in the learning literature have focused on the spiral of learning within the organization through 1) interactions between leaders and employees and 2) collaborative exchange of information among individual employees and formal/informal groups working within an organization (Crossan et al. 1999; Vera and Crossan 2004). However, some researchers have highlighted the need and importance of expanding the learning horizons beyond the organizational boundaries (Powell et al. 1996; Steensma 1996). Since firms improve their learning capabilities by sharing their achievements, knowledge, and experiences with one another, creating an environment for establishing mechanisms to learn from each other, and exchanging intangible assets would be helpful to sustain a competitive advantage.

In this competitive business environment, firms cannot rely solely on internally created knowledge as the likelihood of contributions of this knowledge to improve supply chain performance is expectedly low or limited in scope. It should be commingled with the network of partners to strengthen its impact throughout the supply chain. Learning from partners supports firms to speed up the process of developing capabilities and tackling technological uncertainties (Lane and Lubatkin 1998). It is obvious that such learning enables the manufacturers to proactively respond to the changing needs and expectations of the customers in downstream markets.

Organizational learning originates from employee learning, which is evolved from the subconscious mind of an individual employee and modified at various levels of the organization by the internal and external environment. Organizational learning systems are built in such a way to transfer learning in the form of values, norms, acceptable behaviors, routines, practices and structure to future employees and to interpret the business environment for the formulation of business strategies (Hedberg 1981; Fiol and Lyles 1985). Like individual employees whose learning behaviors are shaped by their own personalities and beliefs, organizations create cognitive systems and build organizational memories based on a continuous process of making changes in the performing of jobs and thinking, either at individual, group, or institutional level (Crossan et al. 1999). Ideologies and dynamic changes in the environment are also considered in this continuous process.

Specifically, organizational learning is conceived by (1) a feed-forward flow that shifts learning that is occurring at individual employee level to the group level and the group level to the organizational level through the 4Is processes (namely intuition, interpretation, integration, and institutionalization) and (2) a feedback flow that shifts learning at the organizational level to the group level and the group level to the individual employee level through the same 4Is processes (Crossan et al. 1999). In the process of intuition, learning starts at the individual employee's subconscious mind as new insights are interpreted many times, and these crystallized insights form cognitive maps that become an individual employees' stock (Bontis et al. 2002). During the processes of interpretation and integration, these individuals share their knowledge/stock to a group of employees through dialogue, and these groups integrate every member's views and generate shared understandings (Bontis et al. 2002; Vera and Crossan 2004). Finally, organizations institutionalize these shared understandings and provide a final shape to organizational learning that are reflected through their practices, routines, and organizational structure (Vera and Crossan 2004). Specifically, organizational learning is "the process of improving actions through better knowledge and understanding" (Fiol and Lyles 1985, p. 803). In this study, we concentrate on the supply chain learning through organizational learning occurring among buyers and suppliers.

Transformational Leadership

Highly performing organizations across the world embrace leaders who highly prioritize either the development of cordial relationships with employees or achievement of the goals of the organization (Fiedler 1967). The former group of leaders tends toward a participative style with employees, and the latter group of leaders is more directive and authoritative. These organizations have also even witnessed that (1) their leaders are task-oriented leaders who show their employees a path to accomplish their jobs (House and Mitchell 1974), and (2) their leaders are charismatic sometimes by going beyond their self-interests and follow moral standards to allow their followers believe in and respect them (Shamir et al. 1993).

Following Burns (1978), who described political leaders across two categories namely transformational leadership and transactional leadership, numerous researchers have empirically shown that these leadership styles also prevail within the organizations (Bass 1985). Importantly, transformational leadership was given more importance due to its strong influence over organizational functions. Empirical studies have shown that, like charismatic leaders, transformational leaders collaborate effectively with employees even during uncertain environments to attain

improved organizational performance and innovativeness (Waldman et al. 2001; Ensley et al. 2006; Jansen et al. 2009). Apart from being trustworthy and a proponent of ethical principles, transformational leaders most frequently convey to employees what they need to accomplish as a group and inspire dedication among employees to pursue these organizational goals (Bass and Riggio 2006). They guide employees to strengthen their intellectual capabilities and challenge their assumptions to induce creative thinking. Understanding that employees' needs should be satisfied first to develop a committed and inspired workforce, these leaders mentor their employees in order to understand their personal goals (Bass et al. 2003). In this study, we focus on transformational leaders as source of creating social capital.

Bass et al. (2003) describe transformational leadership with the following behaviors in the work environment:

Idealized Influence: This behavior describes leaders who comply consistently with ethical principles and values, and thus, employees admire, respect, trust, and even emulate these leaders.

Inspirational Motivation: This leadership behavior helps develop meaningful and challenging tasks for employees and encourages employees to set a vision for their future.

Intellectual Stimulation: This behavior stimulates employees' intelligence to be creative and unique and encourages employees to solve work problems in new ways.

Individualized Consideration: This behavior involves paying more attention to identifying the needs of employees to increase their potential for growth. It also allows leaders to realize the individual differences among employees.

Information Technology Competence

Sambamurthy et al. (2003) view IT competence as the ability of a firm to generate IT-related innovation and deliver useful applications with the help of available IT resources and assets this firm owns. Significant investments are required to generate IT assets for developing and maintaining value-added and competitive IT capabilities to gain advantage over competitors. Bhatt and Grover (2005) focus on IT infrastructure as a value-added capability of a firm that supports developing a competitive capability. This infrastructure also includes electronic data interchange (EDI) and the Internet that connect global suppliers and customers with manufacturers to reduce complications arising in the buyer–supplier relationships. The importance of this infrastructure could be seen from the investments made by General Electric that created an online trading process network, which helped it to make approximately $1 billion transactions with their global suppliers (Gunasekaran and Ngai 2004).

Ross et al. (1996) emphasize that IT infrastructure should embrace a definite technological structure and standards to deliver quality outcomes. According to Ross et al. (1996), a definite technological structure is a platform that supports sharing of readily available data and information among employees. Articulated standards are the standards that describe the technologies to be used to achieve set goals to reduce costs and improve reliability. For any organization, it is important that their IT investments do not violate the above two characteristics and at the same time, create awareness among employees regarding what information and data is to be shared to achieve the organizational vision. Thus, investing more on strengthening IT infrastructure would help organizations to improve the value of their products or services.

Since employees are the major elements in developing partnerships with suppliers, formulation of a human capital strategy becomes a prerequisite for strengthening IT competency. In order to develop competitive capability, firms must make investments in employees engaging with IT to develop their skills and knowledge. Since conversations between a firm and its suppliers always need a holistic perspective to make joint decisions, a team comprising of individuals with diversified knowledge must be formed and trained so that problems can be focused across disciplines to make decisions (Henderson 1990). Therefore, we cannot imagine building an IT infrastructure without providing autonomy and responsibility to IT employees to make decisions. Specifically, this asset provides an emphasis on the capabilities of employees to coordinate all users together and to persuade all users to engage with the IT system (Ross et al. 1996).

Collaborative Communication

The importance of communication in managing supply chain relationships cannot be underestimated since communication binds supply chain partners together to ensure the speedy distribution of raw materials and finished products. Mohr and Nevin (1990) define collaborative communication in terms of frequency, bi-directionality, formality, and content of communication. According to Mohr and Nevin, frequency refers to the sizeable amount of contact and information sharing. It represents the quantity of communication and the amount of contact, i.e., how often channel partners connect with one another. Bi-directionality refers to a two-way exchange of information in the channel. Formality refers to the degree in which interactions between the channel members are structured or routinized. It measures whether there are formal and explicit mechanisms of communication prevailing in the

supply chain relationships as opposed to unplanned, vague or informal interactions. Content of communication involves the use of non-coercive strategies to attain influence. It measures the extent to which the channel partners use information sharing based influence strategies that exert compliance directly at others rather than through third party. Unconvinced with two of the dimensions of collaborative communication, Joshi (2009) proposed (1) reciprocal feedback—each party builds on what the other says rather than talking past one another– instead of bi-directionality and (2) rationality—providing adequate justification and facts for why one party should comply with the wishes of others—instead of non-coercive tactics.

Specifically, we define collaborative communication between manufacturers and suppliers as the structured interactions occurring frequently in which both partners exchange information derived rationally to influence each other and gain compliance. Emphasizing the role of suppliers in this relationship, Joshi (2009) asserts that suppliers are prepared to be responsive to the ever-changing needs of manufacturers by either anticipating the requirements in advance or by responding to them as soon as they surface. Krause et al. (2000) also suggest that suppliers can align their performance with manufacturer's expectations by providing continuous feedback through extensive and repeated interactions.

Long-Term Orientation

Winning a low-cost deal with suppliers would merely help manufacturers accomplish short-term goals and make them efficient. However, the accrued benefits they achieve from these suppliers would comparably be insignificant to achieve competitive advantage. It is due to the reason that firms achieve advantage over their competitors by developing resources and capabilities that are very specific and most valued to these firms, are not imitable by competitors, and are not ubiquitously available in the market (Barney 1991). To strengthen the firm-specific capabilities, manufacturers make transactions with certain suppliers to reap mutual benefits and improve effectiveness. The value of the synergetic outcomes derived from this relationship is higher than the sum of the outcomes derived by each party when they make efforts individually. Thus, long-term orientation plays an important role in the supplier–buyer relationship (Kelly and Thibaut 1978). It supports building a relational competency and discourages transaction-specific investments. In addition, quality management theorists have also acknowledged that a long-term orientation perspective reduces a significant amount of inspection costs and variation in the products (Anderson et al. 1994; Covin et al. 2006).

The closeness in the relationship between manufacturer and supplier supports sharing resources and capabilities. Such sharing leads to developing relationship-specific assets and both parties wishing to invest in these assets providing there is a long-term orientation (Kalwani and Narayandas 1995). It is, thus, obvious that the length of the relationship merely would not help such exchange to prevail. It is the long-term orientation in this relationship that drives both parties to help each other and increases the chances for interactions to happen in the future (Ganesan 1994). Long-term orientation will be predicted as long as the performance of a supplier meets the standard and the manufacturer depends on this supplier for accessing resources (Kalwani and Narayandas 1995). Since short- and long-term orientations promote pure transactions and relational transactions, respectively, these perspectives differ in terms of the strategies to be pursued and processes to be carried out (Wang and Bansal 2012). Thus, Ganesan (1994) views both short- and long-term orientations as a continuum in which there is a lessor chance of interactions in the future at one end and higher chances of interactions in the future at the other end.

Operational Performance

The outputs of manufacturing systems are directly associated with the satisfaction of the downstream supply chain. Corporate firms compare these outputs to measure the relative performance of their manufacturing plants. Speedy delivery, low production cost, high product quality, and flexibility of the production system are emphasized to assess operational performance of manufacturing systems (Jayaram et al. 1999; Wong et al. 2011; Kazemian and Aref 2016). High performing plants produce products with low raw material and overhead costs, and they also offer a sales price lower than their competitors. These plants emphasize reduced variations in processes and products and are able to meet the expectations of their customers. These plants have a flexible production system that is capable of changing its production volume and deliver a broad product mix and highly customized products. Further, high performing plants make sure that their customers receive the correct quantity of products at the right time. In addition, some researchers have included employee morale, utilization of equipment, minimization of waste, and the rate of introducing new products to assess the performance of the plants (Youndt et al. 1996; Ahmad and Schroeder 2003).

Transformational Leadership and Collaborative Communication

Establishing a conducive climate for promoting collaboration and conveying the necessity for collaboration among

different internal functions and employees fall under the purview of top-level leaders. In line with Huxham and Vangen (2000), leaders concentrate on three essential collaboration elements (organizational structure, processes, and participants) that shape the behaviors of collaborating parties to execute the relationship to achieve common organizational goals. When organizations have an open management structure, they will have more chances to overcome the barriers that preclude achieving mutual benefits. Sharing personal incidents and objectives in a very clear and unambiguous manner are the kinds of openness needed in organizational communication (Eisenberg and Witten 1987). Transformational leaders discuss specific encounters that have occurred and how they tackled those challenges through individualized consideration behaviors. This openness attracts trust from suppliers and encourages them to reciprocate. Since a change-creativity paradigm is the main focus of transformational leaders, they listen to others' views and appeal to their members to understand and accept others' views (Judge and Bono 2000). This prevalence of openness to experience would also encourage suppliers to attend more meetings with manufacturers and to share more information. Understanding the complexities of locating value-added knowledge, leaders have the task of supporting the formation of collaborative teams comprised of inter- and intra-organizational members. It should also be noted that a decade ago, theorists have highlighted the emergence of a huge demand for executing charismatic leadership behaviors in the top level of organizations that have flexible structures to make better decisions (Pillai and Meindl 1998).

Since organizational processes focus on the mode of communication to collaborate with others and empower employees involved in the collaborative process, these processes enable organizations to frequently carry out interactions and make quick decisions. Given that collaborative processes are executed to achieve goals in the future, it is more likely that transformational leaders would highly encourage internal members to more frequently connect with external members and allocate resources toward such endeavors. Adding support to this notion, empirical evidence shows an association between transformational leadership in an organization and the empowerment of employees to make decisions (Kark et al. 2003; Jung et al. 2003). To achieve future goals, groups designated for engaging in collaborative processes would effectively deal with suppliers to reach an agreement if they have worked under transformational leaders. At the same time, the visionary behaviors of these leaders can interfere in situations that have a potential for the emergence of conflicts between members who are involved in creating new products by clarifying questions and providing opportunities to openly express their doubts to other members (Lovelace et al. 2001). Mehta et al. (1996) found that participative and supportive behaviors of an automobile manufacturer who exercises its leadership over their dealers showed a greater extent of cooperation in the relational process. Further, transformational leaders provide enough support for establishing mechanisms that attract feedback from both internal and external members (Vera and Crossan 2004). Since members of the manufacturing company engaging in this collaborative process are highly stimulated to learn from the external environment, their focus is also converged to analyze what benefits their company and suppliers achieve. In this direction, these employees become highly rational, have high determination, and gain insights from the proposed processes that suppliers suggest for implementation.

Proposition 1 *Transformational leadership behaviors would be positively related to collaborative communication.*

Charismatic behaviors of transformational leaders are very effective in influencing the processes and values of other firms in the business network. In particular, their symbolic behaviors alter the values of their stakeholders to align with the organization and modify the attitudes of stakeholders to achieve shared goals (Pfeffer 1981). Further, this behavior also supports buyers to convey values and visions to their stakeholders and, thus, they increase identification among their suppliers. They also provide rationality and meaning for their actions and, as a result, charismatic leaders influence stakeholders to adopt their visions and goals (Fanelli and Misangyi 2006). Firms focusing on developing relationships with other firms should seek to achieve fit in the alignment of goals and visions. Therefore, if goals and visions are incongruent, misinterpretations and conflicts can emerge during the conversion. As a result, information sharing would be restricted (Krause et al. 2007). When buyers and suppliers engaging in social affairs, sharing of goals and values would help each party to understand the motives and objectives to be achieved. Thus, shared goals and values encourage both buyers and suppliers to be involved in a process of improving cognitive abilities, and it is expected that this process will encourage reciprocal feedback and rationality for the continuous improvement activities. Thus, we expect that manufacturers and suppliers would increase their level of collaborative communication based upon the extent that they share their goals and values.

Proposition 2 *Transformational leadership behaviors would be positively related to collaborative communication through conveying of shared goals and values.*

Role of Information Technology competency

Since the prime focus of a transformational leader is to transform an organization into a flexible organization, it is more likely that they would display high readiness and make tremendous effort to develop IT competencies by investing in IT assets within the organization. Establishing a reliable IT infrastructure is necessary to connect all departments together to support employees access to required information and data for making joint decisions. In parallel, it also provides ample opportunities for shaping learning behaviors through technologies that interconnect various sources of knowledge. Armstrong and Sambamurthy (1999) highlighted that top-level managers, who understand the importance of knowledge sharing and have knowledge about IT, involve in supporting all the activities that effectively integrate IT with their organizational strategies and improve the value of all IT activities that can transform products or services. Since transformational leaders are supportive in establishing an environment that promotes employee learning behaviors, it is also believed that these leaders would be involved in the activities of establishing and improving the quality of an IT infrastructure to ensure better communication with their external partners.

Firms should provide adequate training to employees who are in close contact with external partners to understand each aspect of the IT system and improve interpersonal and decision making skills. At the same time, these firms should also concentrate more on recruiting and selecting employees for positions that deal closely with supply chain partners and on identifying the skills and knowledge to be assessed for evaluating their performance. Top-level managers alone can make decisions about formulation and implementation of human capital strategies and control the amount of investments to be made on employees. Empirical evidence shows that transformational behaviors are very supportive of implementing practices that enhance human capital in their organizations (Zhu et al. 2005) and the charisma of transformational leaders encourages employees to be involved in IT activities (Neufeld et al. 2007). Since most IT projects require project managers to act independently and engage all users connected to these projects, these managers should be empowered. Studies have found that exhibiting transformational leadership behaviors is essential to support empowerment in challenging situations (Avolio et al. 2004). Top-level leaders exhibiting transformational leadership behaviors in the context of developing relationships with suppliers would provide adequate empowerment among IT employees aiming to build an IT competency and motivate these employees to engage in the collaborative communication. When an organization improves the quality of the IT infrastructure, it will have a direct impact on the collaborative processes the organization carries out with its suppliers. Since technologies are implemented within the organization to communicate with employees and supply chain partners, investments made to improve the quality of the infrastructure will have a direct impact on the amount and quality of collaborative communication between the organization and its partners.

Proposition 3 *Transformational leadership behaviors would be positively related to collaborative communication through organizational information technology competency.*

Collaborative communication and organizational learning

Inter-organizational learning among channel partners is a function of 'how an organization learns' and 'how much it learns' (Azadegan et al. 2008). In other words, organizational learning depends upon to what extent an organization has access to knowledge and capabilities for utilizing and developing the acquired knowledge (Powell et al. 1996). Access to knowledge is largely determined by effective collaborative communication between suppliers and manufacturers. When both suppliers and buyers are involved in face-to-face communication, they provide immediate reciprocal feedback, customized communication, and improve their ability to collect more data (Cannon and Homburg 2001). When the amount of this interaction increases, manufacturers improve their ability to understand their suppliers about operational processes, inventory levels, and customer policies. The external tacit knowledge, which resides within an individual, can only be acquired through direct contact and interaction. In this direction, Mariotti (2007) highlighted the significance of collaboration among network members for greater knowledge sharing through frequent face-to-face interactions. Since they share more formal procedures and standards through electronic and written communication, explicit knowledge transfer further strengthens manufacturer's understanding about supplier procedures and standards. Studies in operations management assert that informal dialogue and group discussions between development teams of manufacturers and suppliers can significantly enhance manufacturer learning (Azadegan et al. 2008).

Continuous interaction among channel partners provides an opportunity to develop a common understanding of how their respective knowledge base could be combined together to generate collective inter-organizational knowledge. Empirical evidence shows that bi-directional, direct, non-coercive, and frequent communication between channel partners creates an environment of mutual trust and,

consequently, supports better cooperation, coordination, and satisfaction (Sahadev 2008). Further, communication will overcome security concerns and increase the level of comfort between suppliers and manufacturers and, expectedly will result in improved organizational learning capacity.

Apart from enhancing coordination, regular exchange of information between manufacturers and suppliers provides insights to change the needs and desires of each party and insights into the intricacies of competitive issues and, consequently, they acquire and develop knowledge (Kogut and Zander 1992; Grant 1996). We refer to supplier knowledge as the extent at which a supplier clearly understands the expectations and requirements of manufacturers (Gwinner et al. 2005). Further, engaging in collaborative communication is found to be correlated with the improvement of supplier knowledge (Joshi 2009). When manufacturers increase the frequency of their communication with suppliers, it is more likely that suppliers would be given opportunities to understand what manufacturers expect from them.

Proposition 4 *Collaborative communication would be positively related to buyer's organizational learning.*

Proposition 5 *Collaborative communication would be positively related to supplier knowledge.*

Role of Long-Term Orientation

The extent at which an organization learns and grasps information or knowledge from their partners depends upon how both parties express honesty and show faith in their relationship. Developing a long-term orientation provides more opportunities for an organization to look for ways to strengthen the commitment in the relationship. According to Okun (1980), when organizations maintain a mutually beneficial relationship, they can efficiently manage each other through "understandings and conventions involving fair play and good faith" (p. 8). Manufacturing companies can grasp knowledge from suppliers through internal processes and learn about novel ideas when they have a long-term orientation. In contrast, learning from external arbitration would not be effective to achieve mutual benefits when they have a short-term orientation (Paulraj et al. 2008). New external knowledge acquired through this communication may be transformed into organizational processes and structures at any cost, when an organization has a long-term orientation to develop a relationship with its supplier. When an organization carries a short-term orientation, it would take a longer time to institutionalize learning even though the knowledge has been acquired through frequent, formal and reciprocal exchange of information using rationality. Similarly, the extent at which a supplier grasps knowledge from collaborative communication also depends upon the degree that suppliers have a long-term orientation.

Proposition 6 *The effects of collaborative communication on buyer's organizational learning would be greater when long-term orientation is high.*

Proposition 7 *The effects of collaborative communication on supplier knowledge would be greater when long-term orientation is high.*

Organizational Learning and Operational Performance

There is a greater chance that customers would be highly satisfied if new knowledge is directed and utilized to fulfill their requests. Spending time to learn about customers would help to understand customer behaviors and their buying patterns. Companies that have a better understanding of their customers' needs have a higher potential to increase their market share. Thus, we can expect more frequent transactions between manufacturers and suppliers to comprehend customer patterns. A learning-orientation also fosters employees to express their production-related complications on the shop floor and make suggestions to their departments that, in turn, will make the necessary steps to resolve and adapt as a mechanism to continuously improve the quality and cost performance of their processes as well as products. This new knowledge contributes to eliminate sources of variations in products and, thus, it has the potential to contribute to reduced defective rates and improved quality.

Learning from the external environment also makes employees aware of the requirements of customers and capabilities of competitors. In order to retain existing customers and attract new customers, learning behaviors can help organizations create new products and increase production volume. When manufacturers learn from their suppliers and adopt their suggestions in regard to improvement of production processes or products, it is more likely that suppliers will make an effort to deliver the manufacturers' orders as quickly as possible. Providing empirical evidence to support this notion, Hult et al. (2003) found that companies that are involved in the creation of organizational learning systems, with support from their suppliers, have witnessed short and efficient ordering cycles. Importantly, the number of defective materials would expectedly be low in the transaction as a high number of defective materials will negatively affect the buyer–supplier relationship. In this direction, manufacturers could fulfill customer orders on time and achieve higher customer satisfaction.

Proposition 8 *Organizational learning would be positively related to operational performance.*

Supplier Knowledge and Operational Performance

The core capabilities of both suppliers and manufacturing firms are distinctive and, since the operative spaces of both parties are different and scattered, the way they think about the future may be entirely unique. When they interact through a network to achieve mutual benefits, suppliers who are actively changing their processes or products to address the need of their manufacturers are involved in the continuous improvement activities of manufacturers that strengthens their relationship. The suggestions provided by highly innovative suppliers carry significant potential to affect the operating capability of manufacturers (Azadegan et al. 2008). We expect that these suppliers would deeply scan the environment to make their manufacturing system more productive and, thus, satisfy their customers. The quality of feedback and their process capability to meet the expectations of the manufacturer would be exceptionally high. Further, operations management literature highlights the benefits of supplier integration with manufacturers to improve new product development (Ragatz et al. 2002; Petersen et al. 2005).

Proposition 9 *Supplier knowledge would be positively related to operational performance.*

Summary

The resource-based view of a firm postulates that firms achieve competitive advantage through developing unique, nontransferable, and inimitable resources that are also not available in the market. Following this theory, the above stated propositions clearly show that organizational leaders, through leveraging resources or social capital that are jointly developed with suppliers, increase the learning capability of their firms and suppliers to achieve operational performance. In specific, organizational leaders showing transformational behaviors create alignment between the values of their companies and suppliers and achieve goal congruence with suppliers. While they provide significant support to technologically integrate suppliers with their organizations to share information, they provide significant support to the representatives of both parties to carry out collaborative communication. Created shared values in the relationship also provides a conducive environment to carry out collaborative communication with suppliers. To strengthen the effects of the structural capital created in the relationship on the learning capability of partners, both parties leverage the relationship that they maintain long-term. A lengthy relationship between buyers and suppliers provides a conducive environment in the relationship for buyers to learn quickly out of the contents shared in the communication and for suppliers to increase the breadth of knowledge about the requirements of buyers. Both buyers and suppliers engaging in the social network use their learning capabilities to improve the performance of buyers.

Limitations and Future Research Directions

This study focuses on the transformational behaviors of strategic leadership. Unlike leadership theory that highlights the behaviors of leaders in any level of the organizational hierarchy, strategic leadership theory concentrates on the styles of top-level leaders of the organizations (Hambrick and Pettigrew 2001). The transformational leadership behaviors we have investigated in this study embrace the involvement of top-level leaders in the strategic activities of the organizations and symbolic actions of these leaders toward suppliers. Though transactional leadership provides support for promoting organizational learning through internal organizational processes (Vera and Crossan 2004), we believe the impact of this behavior in this buyer–supplier relational context has been underestimated. The symbolic behavior of transformational leaders influences suppliers and leverages them with the organization to achieve mutual benefits. Actions of these leaders symbolize their values that significantly influence perceptions of external partners about his/her organization and their beliefs about the organization (Pfeffer 1992). Charismatic or transformational behaviors result in external partners committed to the firm and identification with leaders and the firm (Fanelli and Misangyi 2006). In addition, Hult et al. (2000) also found that transactional leadership behaviors encourage relational commitment between buyers and suppliers. Therefore, this study concentrated completely on the transformational style of strategic leadership theory. However, we can control the effects of transactional leadership while empirically testing the proposed model due to the reason that leaders exhibit both transactional and transformational behaviors in different situations.

In addition, there are no definite ways to measure the dimensions of social capital such as cognitive capital, structural capital, and relational capital. Some researchers concentrated on shared values and goals (Krause et al. 2007), shared vision, ambition, and values (Carey et al. 2011), and shared vision (Roh et al. 2013) to represent cognitive capital in the buyer and supplier relationship. Some researchers focused on information sharing, supplier evaluation, and supplier development (Krause et al. 2007),

managerial communication, technical exchange (Lawson et al. 2008), social interaction ties (Carey et al. 2011), and information sharing (Roh et al. 2013) as structural capital or embeddedness in the buyer and supplier relationship. Relational capital or embeddedness has been measured through length of buyer relationship with supplier and buyer and supplier dependency on the relationship (Krause et al. 2007), supplier integration, supplier closeness, and relational capital (Lawson et al. 2008), trust, obligation, and identification (Carey et al. 2011), and trust (Roh et al. 2013) in the buyer and supplier relationship. In line with the previous studies, this study used shared values, information technology, collaborative communication, and long-term orientation as ways to represent the three dimensions of social capital. This exploration of factors representing social capital dimensions results in the necessity of creating a common scale for social capital developed in the buyer–supplier relationship. In this direction, we invite researchers to make efforts to develop a common scale for each dimension of social capital in line with Villena et al. (2011) and Whipple et al. (2015).

Apart from the above, there are other factors that have not been examined in this study. For example, relational commitment and relational trust in the buyer–supplier relationship are not investigated in the conceptual model. Ganesan (1994) pointed out that long-term orientation will be determined by credibility, a component of trust that expresses how other partners make reliable commitments in the buyer–supplier relationship. Since there are many antecedents of long-term orientation in the buyer–supplier relationship, the proposed model would become too complex for empirical testing if we include all the factors in the study. Therefore, only significant factors were considered in this study. In this direction, this study provides an arena for researchers to investigate relationships among long-term orientation and relational trust and commitment to predict organizational learning capability. In addition, we also invite researchers to consider the impact of collaborative inertia in the proposed model. Collaborative inertia emerges due to the complexities involved in inter-organizational relationships for deriving collaborative advantage (Vangen and Huxham 2003).

By proposing and presenting a comprehensive and holistic conceptual model of organizational learning, this study is among one of the pioneer attempts toward linking theories of social capital and organizational learning in the context of buyer–supplier relationships, which provide avenues for future deliberations and developments. Such efforts will result in the development of more enhanced and amalgamated theories in future. The proposed model needs to be empirically tested in varying organizational contexts and cultures to analyze the generalizability of the model. The multifactor leadership questionnaire developed by Bass and Avolio (1995) would be very useful for researchers to assess transformational leadership behaviors with the help of the four dimensions namely idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. The transformational leadership measure developed by Podsakoff et al. (1990) would also be very useful for researchers who are looking for alternative measures. In addition, a short scale is also available in the leadership literature to measure transformational leadership (Carless et al. 2000). To measure shared values in the supply chain relationship, Krause et al.'s (2007) measure for shared values created between buyers and suppliers would be very useful. Chen and Paulraj (2004) have developed a scale to measure at what extent companies have implemented information technology. Researchers can use this measure to assess the extent of implementation of information technology. Further, collaborative communication can be measured with the help of the four dimensional scale developed by Joshi (2009), who has also developed a five-item scale to measure supplier knowledge about manufacturer's needs. Long-term orientation can be measured by adapting the measure developed by Ganesan (1994) to the context of buyer–supplier relationship. Organizational learning can be measured with the help of a five dimensional measure developed by Tippins and Sohi (2003). Finally, scales to measure operational performance are widely available in the operations management literature ranging from a short scale (Ahmad and Schroeder 2003) to long scale (Wong et al. 2011).

Theoritical and Practical Contributions

Studies in the leadership literature showcase the interrelationships between the behaviors of transformational leadership and different types of learning (Vera and Crossan 2004; Yukl 2009) and the impact of these interrelationships on organizational performance (Garcia-Morales et al. 2012). Researchers, who have investigated the concepts of organizational learning theory and extended this theory to predict the antecedents and outcomes of organizational learning, have also explored the role of the internal environment of an organization to improve organizational learning capacity. In this study, we attempt to integrate social capital theory with organizational learning theory by proposing how relational exchanges between channel partners, in addition to the organizational infrastructure, influence organizational learning in supply chain relationships between manufacturers and suppliers. We identified the significance of transformational leadership in facilitating organizational learning through promoting collaborative communication between channel partners from a social capital theory perspective.

In this study, we explain how relationships between social capital and organizational learning theories predict operational performance. Whenever firms develop relational structures, establish supportive climates, and exercise symmetrical power, inter-organizational communication tends to be more frequent through informal modes and across both directions via indirect contacts (Mohr and Nevin 1990). Importantly, this frequent social exchange between the partners develops trust among them and increases their willingness to commit resources and adapt to each other's requirements. When one partner invests in a relationship in the form of knowledge and resource sharing, it creates an obligation on the part of other party to commit to the relationship by adding more resources thereby increasing the joint pool of skills, knowledge, and resources. This reciprocal commitment of both parties facilitates greater information sharing, collaboration, and exchange resulting in the development of new skills and competencies and, hence, higher levels of organizational learning (Muthusamy and White 2005). A manufacturing firm having an intention to improve its organizational learning invests in infrastructure and encourages the other party to invest. A manufacturing firm can also invest in developing transformational leaders at the top level, building a strong IT infrastructure, and developing its ability to capture external knowledge. Suppliers invest their knowledge and competencies to support manufacturing firms to enhance their performance. Since most of the knowledge is tacit and is embedded in the contextual relationships, organizational learning depends to a great extent on the abilities of both parties to continue in long-term cooperative relationships.

This study not only contributes to theory building and an understanding of channel dynamics but also carries significant implications for practice. It shows the various factors influencing operational performance based on a model built upon the strong theoretical foundations of leadership, organizational learning, and social capital theories. Understanding these relationships can guide managers toward making the right effort to improve organizational performance. The role of transformational leadership and collaborative communication on improving organizational learning, through encouraging shared values and goals and implementing IT competency, cannot be underestimated. Thus, organizations should highly invest in IT infrastructure and make sure that they select leaders exhibiting transformational behaviors to improve its performance at various levels. This study also highlights the significance of long-term orientation in accelerating collaborative exchange. At this juncture, we want to highlight to practitioners that continuous interactions generated through collaborative communication is also related to improved supplier knowledge. Therefore, manufacturing organizations should focus on maintaining long-term relationships with suppliers by investing in rare and unique resources and competencies, which will enhance the chances of further interactions between the two parties. Exhibiting the behaviors leading to supplier knowledge improvement should be encouraged and improved.

Compliance with Ethical Standards

Conflict of interest We have no conflicts of interest to declare.

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Key Questions

1. What are the components of social capital?
2. Which leadership behavior supports creating social capital?
3. What are the roles relational capital play to improve learning capacity of both buyers and suppliers?
4. Which behavior of a transformational leader is essential to create shared values with suppliers?

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