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Why Supply Chain Collaboration Fails: The Socio-Structural View Of Resistance To Collaboration Strategies

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WHY SUPPLY CHAIN COLLABORATION FAILS: THE SOCIO-STRUCTURAL VIEW OF RESISTANCE TO RELATIONAL STRATEGIES

1. Introduction

Supply chain collaboration—"the ability to *work across organizational boundaries* to build and manage *unique value-added processes*" (Fawcett *et al*., 2008a: 93)—has been touted as a source of differential firm performance (e.g., Frohlich and Westbrook, 2001; Flynn *et al.*, 2010; Swink and Schoenherr, 2015). When the benefits of working collaboratively outweigh its costs (Terjesen *et al*., 2012), firms may seek to combine complementary capabilities to create value that they could not achieve independently (Barratt, 2004; Daugherty *et al*., 2006; Allred *et al*., 2011). The view that firms collaborate to obtain supernormal "relational rents" is referred to as the Relational View (Dyer and Singh, 1998). Despite the widely hyped benefits obtained by relational exemplars like Honda and Toyota, few firms have demonstrated a consistent ability to collaborate in a way that leads to distinctive advantage (Daugherty *et al*., 2006; Jacobides, 2006; Nyaga *et al*., 2010).

Further, the cost of collaboration failures asserts a need to investigate why effective supply chain collaboration is so rare. Hendricks and Singhal, for instance, conducted a series of event studies to quantify the operational and stock price effects of supply chain glitches. Firms that experience and announce disruptions report on average 6.92% lower sales growth, 10.66% higher growth in cost, and 13.88% higher growth in inventories (Hendricks and Singhal, 2005). Hendricks and Singhal (2008: 787) conclude,

> The fact that disruptions caused by external sources (supplier and customers) experienced a higher penalty suggests that these problems can be more expensive and time consuming for the firm to fix. This may be due to the firm's limited power to change their external partners' operations to solve the problems. *This further underscores the need to form*

close and collaborative relationships with the various links in the supply chain. A firm must make sure that its supply chain partners see the value of working together.

Assessing why firms fail to execute collaboration strategies is therefore timely. Indeed, it has been almost twenty years since Dyer and Singh (1998: 676) said, "Given the poor track record of many alliances, researchers might examine, in detail, the factors that impede the realization of relational rents." Although diverse explanations for collaboration failures have been proposed (e.g., Park and Unsung, 2001; Fawcett *et al*., 2008b), few empirical studies delve into the details and dynamics of relational resistors. By conducting a quasi-longitudinal inductive study of firm's collaborations strategies to identify and classify factors that hinder collaboration, our research redresses this deficiency, responding to Dyer and Singh's unanswered call for deep insight into the factors that impede relational rents. We contribute to the study of relational strategies in two ways. First, we provide a typology of relational resistors. Second, we propose a model that shows how sociological and structural forces interact to destabilize collaboration and impede the growth of relational skills.

2. Theoretical Development: Resistance to Supply Chain Collaboration

Park and Ungsun's (2001) observation that *what actually happens* when firms pursue relational rents often departs from *what managers seek to achieve* reiterates the need to deeply understand the forces that hinder relational strategies. Several streams of literature inform the collaboration challenge. Each stream's relevance derives from insight provided into why firms struggle with the *process* of organizing network resources to create distinctive value (Barreto, 2010). As relational rents accrue from redefined roles and reconfigured resources among firms, literature related to organizational transformation is particularly pertinent.

Within the organizational transformation literature, social interaction (Staw *et al*., 1981) and organizational structure (Hannan and Freeman, 1984) are sources of relational resistance. Inter-firm rivalry, for instance, arises from mixed incentives, which create tension between doing what is best for the alliance's interests and doing what is best for firm's individual interests (Das and Teng, 2000; Khanna et al, 1998). Also, the structure-induced complexity that emerges from functional and firm-centric orientations introduces misalignment among decision makers and decreases visibility regarding links between decisions and outcomes, exacerbating existent conflicting motives (Gerwin, 2004; Gulati and Singh, 1998; Fawcett *et al*., 2012a).

To date, various relational resistors have been identified, but the discussion is ad hoc and fragmented. The literature fails to explain why so few relational exemplars—beyond archetypes like Honda and Toyota—have emerged or why effective inter-organizational collaboration is so difficult.

2.1 Organizational Transformation

For most of the twentieth century, strategists employed a transactional approach to buyer-supplier relationships (Coase, 1937; Williamson, 1979). The goal was twofold: leverage scale economies and mitigate risks. By the 1980s, the success of Japanese manufacturers led decision makers to reassess relationships among organizations (Schonberger, 1986; Womack *et al*., 1990). Analysts perceived that much of the advantage gained by companies like Honda and Toyota came from tightly coupled buyer/supplier relationships, which enhanced learning, drove down costs, and improved quality (Fawcett and Birou, 1993; Nelson *et al*., 1998; Liker and Choi, 2004). As managers sought to emulate the relational approach, they discovered that the organizational structure and routines required to minimize costs are quite different from those needed to effectively govern collaboration strategies (Barney and Hansen, 1994). Yet, unable to

collaborate well, many firms reverted back to more traditional relationships (Worthen et al, 2009).

Force field theory explains why a firm's transition from a transactional approach to a relational view is so difficult (Lewin, 1951). Force field theory submits that organizations persist in a steady state until an external force dictates change. Motivated by this driving force, the firm enters a transition phase during which adaptation is pursued. Resisting forces, however, counterbalance change. Zand and Sorensen (1975) found that if resisting forces are stronger than driving forces, organizations persist in previous behaviors. In our context, transactional relations are the steady state and a desire for relational rents in a threatening market is the force driving collaboration. The nature of the resisting forces and how they interact to hinder the collaboration needed to instill a relational capability is not well understood (Dent and Goldberg, 1999).

2.3 Sociological Resistance

Forces that resist change—e.g., policies, processes, and people—pervade value co-creation relationships (Dent and Goldberg, 1999; Kotter, 1995). Threat-rigidity theory, for instance, emphasizes sociological resistors, maintaining that individuals react to threatening events in a maladaptive manner (Staw *et al*., 1981). When faced with the threat of change, psychological anxiety limits an individual's ability to acquire and process information. A rigid, often feeble response emerges (Moon and Conlon, 2002). As a bottom-up approach, threat-rigidity theory views the individual as the input and organizational effectiveness as an output. Individual decision makers hinder organizational change. Hambrick *et al*. (2001) applied threat-rigidity theory to alliances, noting that partners fail to cooperate because dysfunctions among decision makers lead to conflict, diminishing alliance performance.

Specifically, collaboration exposes decision makers to vulnerability. They are therefore unwilling to make investments and take risks needed to create a positive, collaborative exchange environment (e.g., McCarter and Northcraft, 2007; Villena *et al*., 2009; Day *et al*., 2013). Partner's non-collaborative behavior manifests itself in two ways.

1. In exchange relationships, value is created when at least one partner makes an initial investment (Zeng and Chen, 2003). Yet, the hope that other partners will invest, generating gains for all alliance members, tempts each participant to forego investments. But, if no one invests, collaborative benefits do not emerge. Individual, short-run rationality leads to collective, long-term irrationality (Messick and Brewer, 1983).
2. Managers often fear that one or more partners will use power to expropriate nascent benefits, creating risk. Uncertainty constrains managers' ability to motivate relationship formation and sustain long-term interactions (Gulati and Kletter, 2005; Lavie, 2006; Chen *et al*., 2007; Fawcett *et al*., 2012b; Perez and Cambar-Fierro, 2015).

Although the literature identifies the threat of non-cooperation as a source of relational resistance, it does not provide deep insight into the mechanisms through which such behaviors are manifest or managed.

2.4 Structural Resistance

Structural-inertia theory, by contrast, highlights the change-inhibiting nature of structural elements (Hannan and Freeman, 1984). As a top-down, firm-level approach, structural-inertia theory posits that structural aspects of the organization—e.g., routines, rules, and roles—restrict individuals from adapting to external threats (Barnett and Carroll, 1995). Long-standing structures are especially resistant to change (Barron *et al*., 1994). Greve *et al*.'s (2010) research on alliances in the ocean-liner industry found that previous alliance relationships and ship size acted as resisting forces to increase a partner's prospect of retreating from a shipping alliance.

Specifically, because organizations are structured to promote task mastery and specialization, existing structured routines are likely to impede collaboration (Coase, 1937; Anderson, 1982; Koufteros *et al*., 2010). Hiring, training, work rules, and metrics all inculcate

"specialists" who pursue their own goals—often to the exclusion of holistic performance. Goal incongruence drives both inter-functional and inter-organizational conflict, leading to frequent disagreement, frustration, and diminished performance (e.g., Ruekert, and Walker, 1987; Duarte and Davies, 2003; Allred *et al*., 2011). Thomas (1992, p. 653) noted that conflict "begins when one party perceives that the other has negatively affected, or is about to negatively affect, something that he or she cares about." As managers operate within distinct reporting structures, non-collaborative behavior is exacerbated (Dyer and Song, 1997; Fawcett *et al*., 2008c). Over time, structure-induced conflict is an impediment to relational advantage (Duarte and Davies, 2003; Fawcett *et al*., 2012b).

To summarize, organizational transformation sets the stage and social interaction and organizational structure inform the cast of characters that keep organizations from working together to achieve a relational advantage. Extant literature, however, does not fully identify and classify what Dyer and Singh (1998: 676) called, "the factors that impede the realization of relational rents." Nor does existing theory explain how these resistors interact to undermine collaboration strategies. Managers thus continue to struggle to remediate collaborative failures. As diagnosis precedes prescription (Sutton and Staw, 1995), we seek to redress these deficiencies by enriching theory on a socio-structural view of resistance to relational advantage.

3. Research Methods

Although the relational view had been articulated as a vital strategic theory, it was evident as we initiated our study that issues regarding relational advantage were complex and not well understood. Three steps grounded the research:

1. We conducted an extensive key word literature search via *ABI Inform* and *ProQuest* databases. Because the literature had poorly defined and interchangeably used relational concepts, we searched the words "supply chain" in combination with "integration,"

"coordination," and "collaboration" to assure a comprehensive review. The 159 articles identified were used to design the interview guide. Even now, scholars acknowledge that conceptualization and theorization related to these relational concepts remain imprecise and underdeveloped (e.g., Fawcett *et al*., 2014; Autry *et al.*, 2014; Knemeyer and Fawcett, 2015).

2. We conducted informal managerial interviews to refine the guide and ensure relevance.
3. We assembled an advisory board of managers and academics to give feedback on the research process.

This pre-field work also provided context to interpret our findings. Because our interest was in the struggle managers encounter over time as they seek to build a relational capability, we repeated the study after six years—that is, we employed a quasi-longitudinal method. This time interval was long enough to yield insight into process questions regarding how and why relational resistors emerge and/or persist, impeding relational strategies.

3.1 Sample and Context

We employed a multi-case, interview methodology to explore the dynamics of resistance to relational strategies (Yin, 1981; McCutcheon and Meredith, 1993). Interviews are robust as they enable managers to elaborate on multi-faceted challenges they encounter as they build deep functional skills while simultaneously promoting relational capabilities (Eisenhardt, 1991). Our unit of analysis was companies' supply chain collaboration strategies/capabilities. To yield meaningful results, we selected extreme cases—that is, companies that had publically committed to compete via collaborative supply chain strategies. We specifically selected companies that were either 1) identified in the trade press as relational exemplars or 2) on the programs of professional associations to share the results of their collaboration initiatives. Each company was involved in one or more collaborative initiatives at the time of the interviews. Extreme cases amplify (i.e., better define and expose) the dynamics under investigation to help build theory (Eisenhardt, 1989; Pratt *et al*., 2006). Multiple cases enable replication logic, allowing

researchers to confirm or disconfirm inferences drawn from each case (Yin, 1981; Eisenhardt and Graebner, 2007).

Given the focus on understanding why collaboration strategies fail to deliver desired results, we conducted interviews across multiple channel positions. Retailers, finished-goods assemblers, direct materials suppliers, and service providers possess the complementary capabilities that collaboration strategies are designed to bring together. The multi-channel approach enabled us to evaluate strategic dimensions derived from the literature, which were perceived to influence collaboration: customer contact, resource access, and idiosyncratic know-how. The literature viewed these factors as sources of power and thus key influencers of relational dynamics, including rivalry and opportunism. Importantly—and contrary to a priori expectations—no meaningful differences in relational resistors and dynamics were identified across the channel positions.

The actual interviews were conducted on site across the U.S. and in Europe. Managers at 49 companies were interviewed in Period 1. For Period 2, managers at 57 companies were interviewed. Fifteen companies participated in both rounds of interviews, providing a control in that their status and behavior was compared to the other companies in each time period. No substantial differences were observed between these 15 companies and their contemporaries. Table 1 shows essential demographics for the interviewed companies. By design, the interviewed companies in the two panels possess similar characteristics. The findings from the Period 1 interviews led us to include several smaller firms in Period 2.

*** *Insert Table 1 about here* ***

Once a company agreed to participate, we provided an overview of the research objectives and a copy of the interview protocol (Spradley, 1979). The protocol was populated

with open-ended questions to 1) allow managers to describe events and processes, 2) assure comparability of findings, and 3) provide insight into unique practices that emerged during the interviews. The typical interview lasted 2 to 4 hours and involved senior supply chain managers who had responsibility for collaborative initiatives. Because collaboration crosses functional boundaries, the contact manager often invited IT managers, logisticians, new product managers, purchasers, and project leaders to participate in the interviews. Multiple informants mitigate subject biases and provide nuanced insights into complex phenomena like resistance to collaborative transformation (Miller *et al*., 1997; Schwenk, 1985).

In addition to extensive interview notes, secondary sources such as business case analyses, news releases, process documentation, program descriptions, and scorecards were gathered. These materials were used to 1) create rich and reliable structured case write-ups (Graebner and Eisenhardt, 2004) and 2) avoid "data asphyxiation" from the large amounts of data (Pettigrew, 1990). An iterative discussion-based process was used to compare notes on process and content and to improve research reliability and validity (Eisenhardt, 1989).

3.2 Data Analysis

Each case write-up was used for both within-case and cross-case analyses (Eisenhardt, 1989; Ellram, 1996). First, each case was viewed as a "stand-alone entity" to identify and describe the resistors encountered and how they influenced behavior. Although we noticed similarities and differences among the cases, to maintain the independence of the replication logic, we refrained from further analysis until we had completed the interviews. Second, after we completed all of the write-ups, we followed the inductive process and searched across the cases for emerging themes. Our goal was to identify and match patterns to develop a more robust and

complete theoretical picture (Eisenhardt, 1991; Eisenhardt and Graebner, 2007). We pursued a three-step iterative evaluation process to obtain the best interpretation of the interviews.

1. Using the literature as background, we pursued an iterative, open-coding process—i.e., we traveled back and forth among the case write-ups, the literature, and emerging constructs. As we identified common statements, we formed provisional categories and first-order codes, which we tracked using a spreadsheet.
2. The three-person analysis team used a process of individual coding, collaborative discussion, and concurring to derive theoretical meaning from the cases. The team consisted of one of the original interviewers as well as two new researchers. The new researchers were brought in to avoid data processing bias (Pagell and Wu, 2009). We repeated this process for every ten cases until all of the cases were coded. As new concepts were discovered, the researchers returned to the previously coded cases to look for evidence of newly identified phenomena.
3. Because the provisional categories were tightly defined, their number expanded greatly. To focus our findings on the most frequently observed and problematic resistors, we employed two decision rules as part of the axial coding process. First, we consolidated narrow, but closely related codes into broader, more theoretical categories. Second, we deleted phenomena that were encountered in fewer than 10% of the companies (Pratt, 2008).

The analysis process lasted four months and yielded Figure 1: An overview of the data structure. As we continued to evaluate the cross-case patterns and apply what we were learning to individual case studies, we identified both sociological and structural resistors. More importantly, we noted a self-reinforcing interaction among the various resistors. This interplay builds a "wall of resistance" to high-level collaboration. The co-mingled, reinforcing nature of the diverse resistors helps explain the challenge companies encounter as they seek to employ collaboration strategies to achieve relational rents (e.g., Cousins and Menguc, 2006; Das *et al*., 2006; Wong *et al*., 2011; Fawcett *et al*., 2012a; Jin *et al*., 2013; Sweeney *et al*., 2015). We continue by classifying specific resistors and proposing a socio-structural theoretical model of resistance to collaboration.

**** Figure 1: Overview of Data Structure ****

4. Findings and Discussion: Understanding the Wall of Resistance

A poignant theme across time periods was that managers perceived relational advantage as highly valued but difficult to achieve. Most companies exhibited only modest progress—primarily via investments in information technology—toward more collaborative behavior over the previous six years. Managers noted that a variety of resistors stood in the way of distinctive collaboration (see Table 2). Relational advantage among organizations remained "the goal rather than the reality."

*** *Insert Table 2 about here* ***

As we sought to understand the nature of relational resistance, two categorization dimensions emerged from the analysis (see Figure 2):

- Origin—that is, whether the resistor is embedded at the firm or individual level.
- Timing—that is, whether firms have recognized the resistor over time or only more recently.

Insight into why origin informs classification derives from the organizational transformation literature. Specifically, top-down theories view resistance to change as coming from structure whereas bottom-up theories maintain that change is stunted at the human level. This top-down versus bottom-up pattern matched what we were discovering in the interviews. We found that both *structural resistors* (e.g., cross-functional conflict and misaligned goals) and *sociological resistors* (e.g., low trust, and unwillingness to share information) actively infused every case study, hindering the development of relational advantage.

*** *Figure 2: Taxonomy of Relational Resistors* ***

As we compared findings between the two time periods, we found managers in Period 2 were still frustrated with the many of the same resistors—e.g., structural conflict, misaligned metrics, low trust, and poor information sharing—that their Period 1 counterparts had identified. More importantly, they described years of unsuccessful efforts to mitigate these resistors. We labeled these embedded, persistent resistors as *entrenched resistors*. Similarly, we found that

some resistors that were infrequently mentioned in Period 1—e.g., leadership, alliance know-how, and finding employees with collaborative skills—had moved into managers' view (mention rates had increased to 30% or more). We called these resistors *emerging resistors*. Combining these two classification dimensions yielded four distinct types of relational resistors—*Structural Resistors*, *Sociological Resistors*, *Organizational Routines*, and *Individual Skills*—that reinforce each other to freeze companies in non-collaborative strategies.

4.1 The Nature and Influence of Structural Resistors

For rational reasons, structural resistors are embedded within organizational design. For example, companies exist as organizational forms distinct from market mechanisms to achieve economies of scale and minimize transaction costs (Coase, 1937; Williamson, 1979). Firms are designed functionally to build the deep skills needed to create economic value (Anderson, 1982). However, interviewed managers repeatedly described how tension within and between firms created by this quest for efficiency impedes the emergence of collaborative mechanisms and mindsets. One manager expressed the consensus feeling, saying, "Too many managers are functionally obsessed."

4.1.1 Territoriality. Managers described "siloed" organizations that lead managers to "see things through their own little windows" and to "devalue colleagues' contributions." One elaborated, "Each one . . . focuses on its own little 'garden' and forgets that there are other gardens that make up the whole." Another fretted, "We have good people who do not accept that others do great work." Managers are thus "concerned that others may be touching their piece of the supply chain puzzle." They are "worried about losing control of their own business unit's performance" and "feel no need to collaborate." Territoriality is systemic and enduring: "Once you create turf, it is tough to take it away. That guy isn't going to give his power up!"

Territoriality's anti-collaborative behavior is the most prevalent and problematic resistor. Exchange partners are often unduly preoccupied with protecting local, immediate goals and initiatives at the expense of value co-creation. One manager described the reluctance of territorial colleagues to participate in meaningful collaboration, noting, "People are more concerned about who will get the glory or the blame rather than evaluate whether or not a decision will benefit the entire company." Structure that promotes territoriality cripples collaboration.

4.1.2 Strategic Misalignment. Territoriality's reach is expansive, instilling non-aligned metrics. A manager stated, "Metrics stand in the way of improved internal and supply chain collaboration. Each group has its own metrics, so each group does its own thing." Another noted, "Conflicting objectives are supported by performance measures. Counterproductive behavior is incented." Local measures enable managers to justify non-collaborative behavior, reasoning that if they were supposed to work more collaboratively, surely the metrics would communicate and reinforce that goal. Performing to metric convinces managers they are doing exactly what they should be doing.

Managers were adamant regarding the negative influence of cost-driven metrics on relationship quality. One maintained that "excessive emphasis on short-term costs on the supply side" imposes a huge disincentive to upstream collaboration with suppliers. One manager noted, "We are too finance oriented. The result is a short-run mentality. Keeping our eyes on long-term goals is difficult." Another manager queried, "Everything is price driven, but at what overall cost?" Others informed the tradeoff, saying,

- "We still source for costs *instead of sourcing for capabilities*"
- "There is too much emphasis on costs, costs, costs. *Measurements do not promote collaboration or creativity*."
- "It all comes down to price. *There was a time when relationships meant something, not anymore*."

Poorly aligned goals and metrics emphasize short-term results, undermining relationship quality. Just as territoriality feeds misalignment, misalignment buttresses territoriality. Managers describe a conundrum where efforts to remove either resistor—in isolation—seldom succeed.

4.1.3 Poor Systems Connectivity. Technology investments are often defensive. That is, managers say they are "needed to stay in the game." In Period 1, we found two companies that had developed Internet interfaces to share information on historical sales, real-time inventory status, and rolling production forecasts with suppliers. By Period 2, such capabilities had become common. Managers explained that since competitors were implementing the latest technologies, including ERP and RFID, investments were needed to avoid fighting today's competitive battles with yesterday's technology. Consistent, substantial investment means that connectivity is one structural resistor where mitigation efforts over time have delivered tangible benefits.

Yet, connectivity gains were described as meager when compared to those promised in the companies' business case analyses. The connectivity challenge is rooted in the complexity that emerges from territoriality and strategic misalignment. For instance, alliance partners are often unable to connect. Typical comments include, "IT systems at certain links in the chain are weak. . . . We run into suppliers or customers that have not invested in needed technology," and "Some [partners] are missing the key technologies to enable information sharing." One manager succinctly summarized: "Systems are the biggest barrier. Not everyone has the capability to seamlessly communicate." When partners are unable to support relational goals because they lack connectivity, enthusiasm for the collaborative strategy dissipates.

Overall, traditional structures and their managerial artifacts engender territoriality, focus attention on local optimums, and increase complexity, magnifying resistance to collaboration. The interplay among structural resistors is what entrenches them and demotivates managers from

expending resources, making sacrifices, or taking risks to design and execute collaboration strategies across organizational boundaries.

4.2 The Nature and Influence of Sociological Resistors

Although collaboration strategies provide prospects for distinctive competencies (Prahalad and Hamel, 1990; Stalk *et al*., 1992), they make managers dependent on others to pool resources and to make collaborative decisions. Interdependency increases risk. Managers told us that this risk elicits strong resistance as managers react to the vulnerability and stress that attend collaboration. This finding confirms research that argues people are more "concerned about the risk of change than about the risk of failing to change" and consequently choose to "preserve current systems and beliefs" (Baron *et al*., 2006: 126). Through the interviews, we identified three sociological resistors that interact to thwart collaboration strategies.

4.2.1 Low Trust. Although they observed that trust underlies collaboration, most managers noted that meager trust exists—even in key relationships. Managers expressed reservations not just about the existence of trust but also regarding the behaviors that build it. For example, managers emphasized how asymmetrical power leads to a "what-have-you-done-for-me-lately" mindset that impedes trust and teamwork. The following stories illustrate this reality.

1. During a supplier visit, the supply manager described a recent negotiation with a long-time customer. The customer had invited several suppliers to its corporate headquarters to discuss a major bid. Each supplier was assigned to a room where the negotiations were carried out in an iterative, serial fashion. The buying organization's purchasing team proceeded to go from room to room talking about its need to reach its "target cost." During each session, hints were given regarding lower prices obtained from rival suppliers. The buyer was engaged in a face-to-face reverse auction, pitting suppliers against each other in real time.
2. During visits to each side of a dyad involved in the research, we observed that there are often two distinct sides to a story. Buyer managers expressed pride in their willingness to share risks and rewards to build strong supply relationships. The supplier's response to our question about risk and reward sharing was simple: "Yes, they know very well how to share risks and rewards. They keep all of the rewards and pass all of the risks on to us."

Managers related that experience has taught them that the answer to the question, "Can we really trust someone outside our firm to do what is best for our company?" is "No!" One manager said simply, "It is tough to find companies that will follow through on commitments." Most managers related that asymmetrical power not only motivates opportunistic behavior but also magnifies feelings of vulnerability. Managers frequently noted, "It is too easy to abuse power," or "It all comes down to power—at the end of the day, power rules." A manager from a large consumer products company commented that his firm's buyers openly admit to smaller, weaker suppliers that, "It sucks to be you." Managers at several suppliers noted, "When a buyer says, 'We need to squeeze costs out of the process,' they really mean they plan to squeeze the margin out of us." One manager summarized that a super-ordinate emphasis on short-term financial goals undermines trust and collaboration: "If the goal is only to save money, you can't build trust." Managers thus confirmed that few companies know how to appropriately build trust—a reality that hinders open communication and proactive change (Day *et al*., 2013; Fawcett *et al.*, 2012a; Villena *et al*., 2011).

4.2.2 Information Hoarding. Managers noted that an unwillingness to share information hinders effective collaboration. Surprisingly, managers often observed that information hoarding is as prevalent across functions within their organization as with external partners. One manager made the point emphatically, saying, "It is easier to get information from suppliers than from other groups within our firm." This reality reiterates the power of territoriality, foreshadowing the interconnectedness of structural and sociological resistors.

Similarly, as connectivity has improved, managers have come to realize that being connected is not the same as being collaborative. Specifically, most leading companies rely on enhanced Internet-based connectivity to share tactical, order-related information on a real-time,

rolling-horizon basis. Few, however, are willing to share strategic information regarding market entry, product development, and technology roadmaps. Inadequate trust motivates companies to retain this "proprietary" information. Yet, managers argued that they need this strategic information to justify the investments required to support key customers' strategic initiatives. Understanding future needs early is critical to developing capabilities as well as investing in capacity over time rather than as a last-minute response.

4.2.3 Opposition to Change. To achieve relational advantage, managers must adopt new approaches and build new skills. For instance, managers know how to employ power to achieve short-term goals, but as noted above, they lack the skills to build trust and improve relationship quality. Such skill deficits led managers to emphasize that people—in their firms and across supply relationships—view collaboration apprehensively, arguing against change. Managers complained colleagues hold firmly to old, non-collaborative ways of doing business, claiming,

- "It's worked! Why should we change now?"
- "That's the way we've always done it."
- "Your argument makes sense, but we're different!"

The language and tone of managers throughout the interviews underscore that managers do more than avoid collaborative change—they oppose it. As one manager noted, "Management is not at all open to change or new ideas." Another spoke of the consequence, saying, "Companies are afraid to change. They resist leaving their own little comfort zones at all costs. This is one of the top three reasons companies fail." One was more creative, noting, "Some people need to get their butts kicked by the competition before they will make the needed changes." Ultimately, as one manager related, "Top management really does not understand the need for change and collaboration." Ironically, even as managers admitted that their firms are not

adept at managing collaborative change, they noted that the marketplace is changing at an unprecedented pace, threatening their firms' long-term survivability.

In summary, we found low trust, information hoarding, and opposition to change seldom—if ever—exist in isolation. The willingness to share sensitive strategic information depends on relationship trust. Similarly, without trust, people are unwilling to change behavior. Sociological resistors thus disguise and compound one another. Managers may diligently push open information sharing, but fail to invest in greater trust. When communication failures persist, people blame technology. More IT investment often ensues, but it too fails since the root cause—i.e., low trust and information hoarding—is not addressed. This illustrates how the collaboration challenge is exacerbated as structural and sociological resistors interact. Indeed, territoriality and myopic measures magnify opposition to change, undermine trust, and limit information sharing. The unique, inimitable value encouraged by the relational view cannot emerge as these entrenched sociological and structural resistors comingle to stifle collaboration.

4.3 Inadequate Organizational Routines as Resistors

Dyer and Singh (1998: 668) identified organizational routines as a source of relational rent: "Although complementarity of strategic resources creates the potential for relational rents, the rents can only be realized if the firms have systems and cultures that are compatible enough to facilitate coordinated action." The interviews revealed that firms have not developed three routines that are essential to identify and integrate resources across organizational boundaries.

4.3.1 Relationship Intensity. The Period 1 interviews revealed that few firms had learned to articulate and manage to the principle that "not all relationships are created equal." Managers explained that their firms had been "caught up in the collaboration hype." They had invested scarce resources in relationships that offered no unique value co-creation potential. The resulting

poor return on investment tarnished the reputation of collaboration strategies. By Period 2, managers discussed the challenge of rebooting collaboration strategies only to discover that their firm's lacked the routines to manage relationship intensity. Managers explained that their firms had not developed the skills to identify the right partners and then to build the right relationships with them. Several specific relationship-development skills were identified.

1. *Ability to view suppliers as a source of advantage*. A company's attitude toward suppliers influences collaboration strategy. One manager explained the problem, a symptom, and its effect, saying, "Top management sees suppliers as sort of second-class. We aggressively use charge tags for mistakes. This really drives our suppliers nuts."
2. *Ability to assess value co-creation potential*. Managers emphasized that firms must be able to assess value creation potential. One manager shared a common experience, "Most of our vendors lack the sophistication and capabilities to collaborate effectively. Many lack the ability to fulfill a promise. Many also lack the capitalization to invest in improvement initiatives." Another related the consequence of failing to build collaboration assessment routines: "we waste time trying to collaborate where little value can be created."
3. *Ability to assess partner collaboration capability*. Even when a firm identifies strong value co-creation opportunities, partners may not be willing or able to collaborate. One manager observed, "We have no collaborative relationships with customers. They tell us, 'I don't see a need to collaborate, so why should we talk?'" Another manager concurred, saying, "It is a cultural failure at many customers—they are not willing to collaborate." He then offered some advice, "You have to show them why and how. Compelling facts are a must."
4. *Ability to dedicate time to collaboration strategies*. A common theme was that managers are too consumed with tactical decision-making and putting out day-to-day fires to invest in strategic relationships. One manager summarized the challenge, saying, "We are too busy to collaborate and share ideas."
5. *Ability to share benefits mutually*. Managers pointed out that if an "imbalance in benefits exists, a relationship is not sustainable."

One manager summarized the state of relationship building, saying, "We don't know how to work together!" Managers pointed out that many "strategic" alliances emerged from a desire to manage volume and costs rather than from the recognition that a closer relationship could drive strategic growth. Ultimately, many firms have yet to inculcate a culture of collaboration, poisoning the soil from which value co-creation grows.

4.3.2 Process Integration. Managers made it clear that value co-creation requires active process integration. To comingle complementary competencies, each entity and each individual must perform assigned value-added roles well. In Period 1, companies were beginning to experiment with re-imagined roles and responsibilities. By Period 2, managers were frequently asking "What if?" But managers noted that accepting new roles was still problematic, saying:

- "We struggle with the question: Who really owns the responsibility? Marketing? The Development Organization? or the Global Business Unit?"
- "We are constantly arguing with other managers over revenue streams and PandL responsibilities."
- "We are struggling with the loss of power and to adapt to changed roles and responsibilities."

The failure to address these issues causes tension and reluctance to collaborate. At one firm, a purchasing manager complained, "Finance keeps entering the negotiations late—after we have already negotiated the relationship—and insists on changing items such as payment terms or funding for new initiatives." Such behavior injures internal and external relationships. One manager described the dilemma, saying, "It is very difficult to get everyone on board and to come to a consensus on how we should move forward, especially with respect to standardized processes." As one manager concluded, much of the role-redefinition challenge lies in the details of process integration: "It is not just passing the baton from firm to firm, but we must consider how to hold the baton so the receiving firm gets it in a way that supports their strength."

4.3.3 Complexity Management. Almost twice as many managers decried network complexity in Period 2 as in Period 1. Many referred to complexity as the 21st-century supply chain challenge. They complain that 1) they "have no visibility into the details," 2) they must deal with "forecasts that are garbage" and are "not very good at looking too far down the road and 'crystal balling' the future," and 3) they "lack the resources and discipline to manage complexity." They

noted that ambiguity, confusion, and higher costs result from complexity and described four issues (two causal; two capability oriented) that make complexity a "nightmare to manage."

1. *Global value networks are inherently complex*. Managing a global network to turn worldwide resources into products / services global customers expect means managers must make myriad daily decisions across 1) many dispersed manufacturing and distribution facilities, 2) thousands of stock-keeping units, 3) thousands of materials suppliers and tens of thousands second- or third-tier suppliers, 4) hundreds of customer relationships, and 5) tangled logistics systems. In a global setting, the decision process is complicated by culture, language, regulatory, political, and infrastructure differences.
2. *Complexity is often driven across boundaries*. Managers do not own the costs associated with complexity. They thus make decisions that increase it. For instance, marketing's desire for added SKUs creates production disruptions and increases inventory costs. Likewise, a customer's request for faster delivery may necessitate dispersed inventories.
3. *Not all complexity is bad, but managers struggle to differentiate between needed and excessive complexity*. Some complexity—like a backup supplier or another stocking point—is needed to provide customer value no one else provides. As consequences, good and bad, occur across boundaries and over time, evaluating complexity's effects is difficult.
4. *Rationalization efforts are initiated prematurely*. Pressure to reduce costs via simplification leads companies to rationalize before they understand network dynamics and associated tradeoffs. Such efforts lead to unintended costs and/or service disruptions.

Managers note that because complexity is a mix of external stimulus and internal sub-optimization, establishing effective routines to deal with complexity is difficult. Managers struggle to select the right actors, place them in appropriate roles, and provide the direction so they can perform together—delivering value even when the unexpected happens. Hampered by entrenched sociological and structural resistors, companies are unable to cultivate the systems thinking, holistic analysis, and relational influence needed to proactively manage complexity.

To summarize, the absence of any of these routines—i.e., relationship intensity, process integration, or complexity—makes mitigating the negative influence of the others difficult. For instance, the complexity of global value networks exacerbates the relationship-intensity and process-integration challenges. Companies need all three routines to reassess supply chain

partners and reconfigure key relationships and the value-added processes needed to achieve relational advantage.

4.4 Inadequate Individual Skills as Resistors

For organizational routines to foster collaboration strategies, decision makers must possess collaborative mindsets and skill sets. Threat-rigidity theory, however, warns that if managers do not possess the skills needed to create a positive exchange environment, their sense of vulnerability will lead them to resist collaboration (McCarter and Northcraft, 2007). The interviews revealed that this reaction to a skill deficit is a real concern. Managers describe how existing cultures and structures fuel functional rather than process thinking and autocratic decision-making over collaborative effort, seriously impeding relational advantage.

4.4.1 Leadership Deficit. Managers identified leadership deficiencies twice as often in Period 2 as in Period 1, making a lack of leadership the 3rd most prevalent resistor. Managers explained that only senior executives possess the power to redress entrenched socio-structural resistors and then lamented:

- "The lack of managerial commitment to collaboration is a major barrier."
- "We need commitment at the top management level."
- "Our last CEO was not interested in supply chain collaboration, we could not do anything, we could not succeed."

Absent executives who set the tone, commit resources, and promote appropriate risk-taking, collaboration initiatives fail. Even if some managers grasp collaboration's potential, the conviction is not held widely enough to engender inimitable joint action. One manager noted, "We lack the collaborative mindset, the understanding, and know-how. We are still stuck in the old school." Another pointed out, "Our leadership team is not modeling correct behaviors."

A focal point for managers' criticism of leadership was leaders' incessant drive to cut costs—a behavior that can undermine collaboration. One manager explained,

> Everything is price driven, but at what overall cost? How often does a plant get shut down because of late, low-cost shipments? How much extra inventory is held to compensate for late shipments? How much airfreight is used to compensate for late shipments? How much demurrage is paid? Most managers don't know what the overall impact of their "low-price" decision is! We are constantly bombarded by mandates from top management to "CUT COSTS!" It is easier to take short-term costs out while increasing longer-term costs.

Managers noted that collaboration requires upfront dedication of scarce resources, but promises delayed, often uncertain, returns. In such a setting, an unrelenting drive to lower costs chases collaboration out of many strategic discussions. One manager emphasized this point, saying, "Senior management is unwilling to take the risks associated with uncertainty." Managers caught in a cost-cutting culture have neither the time nor the incentive to identify and promote difficult collaboration initiatives.

4.4.2 Collaborative Skill Gap. The lack of collaboration vision has a trickle-down effect on the entire workforce. By Period 2, many managers shared a common story. As they gained experience with collaboration strategies, they realized their management teams lacked critical skills. Managers communicated this as follows:

- "As the work changes, we will require new talent. We don't have this talent today."
- "Employee development is a real challenge."
- "Perhaps the most difficult issue is to find people with the right skills."
- "People need the mindset, the personality, and the capabilities to really be able to collaborate. We don't always have the right people in the key places to be able to collaborate."

Managers described the ideal collaborator as someone who possesses strong functional skills, sees the big picture, analyzes tradeoffs rigorously, executes with discipline, leads by example, and embraces change. Few managers who touch critical processes possess this skill set.

One vice president at a global high-tech firm provided a meta-description of the challenge. He spent half an hour relating and emphasizing his firm's supply chain talent crisis. He drew a picture depicting functional managers as spokes on a wheel and said,

> We can find great entry-level people, the ones with strong functional skills. But, finding people who can bring everyone together to work as a cohesive team is a real challenge. They're just not out there. . . . This person in the middle (the hub) is missing. . . . Although the spokes are needed for the wheel to roll forward, the wheel falls apart without the hub. Hub managers possess a holistic vision and collaborative skills, but they are rare.

He also explained that most "spoke" managers fail to evolve into "hub" managers on the job. Overall, managers emphasized that value co-creation will remain rare until managers are compelled to examine how their decisions and behavior influence larger value systems.

Ultimately, the Period 2 interviews reveled that as companies gained more collaborative experience, managers recognized that their firms have failed to build the talent needed to envision and execute collaboration strategies. Unfortunately, the problem is compounded by the interplay between organizational routines and individual skills. Without collaborative routines, as firms hire relationally inclined managers, existing decision-making processes stifle their collaborative tendencies. Managers either conform to the non-collaborative norm—or leave the company. Without collaborative thinkers, it is difficult to build enabling routines. A holistic approach to building organizational routines and individual skills is a prerequisite to achieving relational advantage.

5. Relational Resistance and the Dynamics of Collaborative Transformation

Among the interview firms, the intent to develop a relational capability began as a strategic response to an emergent opportunity or threat, which prompted managers to engage in collaboration strategies. Because collaborative behaviors are not the norm, managers described

the quest for relational rents as a transformation process. In each instance—regardless of the type of initiative observed—managers discussed the pain they felt as they met resistance to collaboration. Managers were perplexed that something that made so much sense on paper was so hard to do in daily practice.

Our interviews informed the underlying causes for the gap between desired and actual behavior—identifying not just the factors that impede the realization of relational rents but more importantly the intricate interactions that make mitigating their negative influence so difficult. Because systems diagrams depict dynamic transformations well (Senge, 2006), we employ systems diagramming conventions to illustrate the multiple, interactive reinforcing cycles that exist among the four types of relational resistors delineated in our typology (see Figure 3).

*** *Figure 3: A Socio-Structural View of Resistors to a Collaboration Capability* ***

We first explicate the reinforcing cycles that exist among entrenched resistors. Firms are structured to inculcate deep functional skills and to seek economic efficiencies—both vital goals. Yet, the dark side of organizing for deep skills is that silo thinking grows and conflict emerges. Goals and metrics take on a local, short-term orientation, bolstering territoriality. Poor systems connectivity increases the bias toward non-collaborative behavior. Alone, each of these factors inhibits collaboration. When they exist together—as we typically found—they reinforce each other. For instance, local measures do not provide the process transparency needed to break down silo thinking. Managers noted this at several organizational levels, saying,

- "We really do not have a metric that measures across the company."
- "We are still looking for measures that cross company boundaries."
- "There is no silver-bullet metric. We haven't come across any metric that helps us measure end-to-end performance."

Since managers do not understand broader interactions, they lack the insight and incentive to co-create value. Metaphorically, structural resistors act as overlapping and reinforcing bricks in a wall of resistance that frustrates collaboration.

In the context of modern organizations, human behavior also resists collaboration. Most decision makers possess an innate desire to avoid vulnerability. Yet, because collaboration requires new skills—e.g., coaching, conflict resolution, team ideation, and trust building—it exacerbates the sense of vulnerability. Many managers intuitively realize that their skills are better suited to a power-based, transaction-oriented setting. They thus oppose change; i.e., the adoption of collaboration strategies. Scarce trust further hinders adoption. Managers do not trust others to forego opportunistic behavior and are prone to withhold emotional and financial investments in collaboration initiatives. The propensity to hoard sensitive information typifies this behavior. Managers fear that if they disclose sensitive information, they might give up a source of power or enable someone to take advantage of them. Independently, each of these sociological factors limits collaboration. Additionally, these resistant forces arise and reside together. Their interaction hinders efforts to isolate and treat the source of resistance, making sociological resistors resilient to mitigation efforts.

Whereas we described structural resistors as bricks in the wall of resistance, sociological resistors act as the mortar that holds the bricks in place. The reinforcing nature of sociological and structural resistors makes it difficult to bring down the wall of resistance. Specifically, almost every manager across both time periods described efforts to remove a single brick or to chip away at some of the mortar. Such efforts typically begin with investments in information technology or the establishment of cross-functional teams. Occasionally, companies launch major change initiatives. These efforts are resource intensive, requiring investments of capital,

time, and emotion. Yet, investments in technology often fail to recognize the sociological factors. Similarly, team-building efforts seldom encompass changes in measures. Likewise, change management programs may discuss territoriality, but they almost never address trust and they rarely alter structural impediments. As a result, efforts to cultivate a more collaborative environment seldom lower the height of the wall meaningfully.

Worse, as managers step back from their resistance-mitigation efforts to assess what steps might be taken next, it is not uncommon for someone else to come along and replace the bricks that have been chiseled free. Frustration naturally arises and, over time, cynicism toward collaboration strategies emerges. One manager summarized the dilemma, explaining, "We spend too much time putting out fires and not managing strategically to build robust, holistic processes." Another manager described the consequences that follow, "We get awards for putting out fires and unfortunately, that is a recipe for mediocrity."

We now address the reinforcing cycles among the emerging resistors. The interviews show the collaborative challenge does not end at the wall of resistance. Determined managers may eventually find a way to move an initiative beyond the wall of resistance. When they do, they inevitably find that the deeply embedded socio-structural resistors have suppressed the cultivation of needed organizational routines and managerial skills (the emerging resistors not widely perceived in the Period 1 interviews). Managers noted that only as their firms had persisted in pushing against the wall of resistance, did they begin to see they were missing key routines and skill sets. They described these skill-based resistors as stumbling blocks that raised costs and slowed progress toward effective collaboration.

We observed the following pattern. Collaborative champions leveraged personal persuasion and relationships to initiate collaboration strategies. After making the business case,

they employed pilot programs to document both the benefits of and the roadmap to successful collaboration. When it came time to extend these pockets of collaborative excellence, impetus was lost. Critical routines to manage relationship intensity, integrate processes, and mitigate the complexity's downside were missing across the firm and among alliance partners. These routines are needed to identify complementary competencies and to make effective decisions regarding relationship-specific investments, knowledge sharing, and governance. Absent these organizational routines, supply chain collaboration does not deliver promised benefits. Managers misinterpreted the relational challenge and instead of redressing these routine-based resistors, they tended to invest in information systems to drive collaboration.

Socio-structural resistors not only limit the establishment of relational routines but also negatively influence an organization's culture and its ability to nurture a collaborative workforce. One manager warned, "Some managers are tired of making suggestions only to be ignored. They express frustration—almost a loss of hope that they will be able to really make a difference." Another manger lamented, "Truly committed people don't shut up; they just leave." As the pool of collaborative talent is depleted, managers who remain lack either the desire or the ability to pursue a relational advantage. Managers portrayed collaboration strategies as emotionally draining. It is not uncommon for colleagues to describe champions of collaboration strategies as "tired" or "worn out." Without supportive organizational routines to teach collaborative skills and instill appropriate behaviors, a small team of committed individuals must bear the weight of collaboration strategies. Thus, few people are willing to engage in removing the wall of resistance—further entrenching non-collaborative structures and behaviors.

6. Conclusions and Implications

Efforts to transform corporate strategy through the pursuit of new capabilities always engenders resistance. When the new capability requires substantive changes to organizational structures as well as investments in unfamiliar skills, the magnitude and breadth of resistance is strong. Jim Collins (2002) used the metaphor of a flywheel to illustrate a process of build up and breakthrough. Success comes only after managers persistently push on the flywheel to build momentum for transformation. With sufficient time, effort, and forward motion, the momentum of the flywheel begins to help rather than hinder progress.

Our findings reveal that relational resistors impede the buildup of momentum. That is, when managers are forced to scale the wall of resistance, they lose momentum for collaboration. Managers may keep pushing, but skill-based stumbling blocks once again undercut momentum. Finding their path impeded by an entrenched socio-structural wall of resistance and beset with stumbling blocks of inadequate organizational routines and individual skills, few firms achieve the momentum to escape non-collaborative structures and behaviors. As collaborative initiatives stall, they yield disappointing returns, which feeds cynicism. At some of our interview companies, failed efforts to remove the wall of resistance have actually made the wall more entrenched and immovable.

6.1 Theoretical Contributions

We contribute to the supply chain collaboration literature by not just creating a taxonomy of the impediments to collaboration but more precisely by showing how they work together to actively resist higher levels of collaboration and value co-creation. Understanding the interplay among the sociological and structural resistors is critical to explaining why collaboration strategies fail.

The socio-structural view delineates how organization design and human nature interact to not just impede collaboration but also hinder the development of organizational routines and

individual skills needed to transform pockets of collaborative success into a relational capability. Specifically, the socio-structural view explains that the way we design firms—that is, to achieve economic efficiencies and maximize short-run market valuation—creates structural resistors that impede collaboration strategies. Embedded in the organizational framework, structural resistors are hard to mitigate. The sociological make up of modern organizations further buttresses structural resistance. In other words, these two entrenched resistor types reinforce one another like bricks and mortar to form a formidable barrier to relational advantage. They also inhibit the emergence of essential organizational routines and individual skills, pushing relational advantage further out of reach.

More important than identifying and classifying resistor types, the socio-structural view shows how the distinct resistors are nested and interconnected. That is, socio-structural and skill-based resistors never exist in isolation. Rather, they work together to obscure diagnosis, frustrate managerial remediation, and stall efforts to build momentum and migrate toward relational business models.

6.2 Managerial Contributions

By delving into the interplay and re-enforcing nature of relational resistors, the research explains why consistent relational rents are so difficult to realize. Individual resistors could be removed. Indeed, this focus on removing individual resistors is the approach pursued by most firms. However, the four types of resistors work together to freeze organizations in non-collaborative behavior. Understanding the intricate interactions among the relational resistors provides the insight needed for effective mitigation. Since no single, predominant resistor (e.g., inadequate technology) is responsible for the lack of progress toward collaborative strategy, no simple

response to resistor mitigation exists. Isolated initiatives (e.g., investing in technology and hiring consultants) are ill suited to the challenge posed by socio-structural resistors.

Although each of our interview companies has experienced relational failures, managers at the most collaborative companies are starting to comprehend that the mitigation challenge is one of accrual. One manager emphasized this point, saying, "You have to understand what you are up against. You need to understand all the different things that can kill you!" As such, a small, but increasing number of managers is beginning to realize that ad hoc mitigation strategies neither change organizational structure nor alleviate sociological stress points. Fragmented efforts are destined to disappoint, diluting resources and discouraging managers.

Investing in an effective relational architecture capable of mitigating socio-structural resistors requires a holistic and disciplined approach. Patience and persistence also precede the establishment of a relational capability. The good news: Because managers have experienced firsthand the difficulty inherent in changing the composition of their organizations and the skills of their employees, they are confident that strong relational capability will be a rare source of valuable, inimitable advantage.

6.3 Limitations and Future Research Directions

Like all research, this research is subject to certain limitations. As inductive research, our findings may not be fully generalizable to companies across diverse industries, geographies, and channel settings. Future deductive research is needed to define better how the wall of resistance affects specific collaborative initiatives and relational performance. Further, by exploring the nature of and interaction among various resistors, we have not fully examined the composition and detail of each individual resistor.

Future research is needed to investigate in greater detail the individual resistors and potential architectural remedies. However, by identifying and discussing four resistor types, we have provided a starting point for future researchers to evaluate the efficacy of diverse relational enablers. One goal of future research should be to develop a comprehensive, integrative theory of collaboration that links resistors and enablers to guide development of a proven path to distinctive collaboration. Research that yields such insight would help assure that more companies migrate from the vicious cycle of entrenched resistance to the virtuous cycle of relational advantage.

References

Allred, C. R., Fawcett, S. E. and Wallin, C. (2011), "The evolving role of a collaboration orientation in mitigating functional and inter-organizational conflict", *Decision Sciences Journal,* Vol. 42 No. 1, pp. 129-161.

Anderson, P. F. (1982), "Marketing, strategic planning and the theory of the firm", *Journal of Marketing,* Vol. 46 No. 2, pp. 15-26.

Autry, C. W., Rose, W. J. and Bell, J. E. (2014), "Reconsidering the supply chain integration–performance relationship: In search of theoretical consistency and clarity", *Journal of Business Logistics,* Vol. 35 No. 3, pp. 275-276.

Barnett, W. P. and Carroll, G. R. (1995), "Modeling internal organizational change", *Annual Review of Sociology,* Vol. 21, pp. 217-236.

Barney, J. B. and Hansen, M. H. (1994), "Trustworthiness as a source of competitive advantage", *Strategic Management Journal,* Vol. 15 No. 1, pp. 175-190.

Baron, J., Bazerman, M. and Shonk, K. (2006), "Enlarging the societal pie through wise legislation: A psychological perspective", *Perspectives on Psychological Science,* Vol. 1 No. 2, pp. 123-132.

Barron, D. N., West, E. and Hannan, M. T. (1994), "A time to grow and a time to die: Growth and mortality of credit unions in new york city 1914-1990", *American Journal of Sociology,* Vol. 100 No. 2, pp. 381-421.

Barratt, M. (2004), "Understanding the Meaning of Collaboration in the Supply Chain", *Supply Chain Management: An International Journal*, Vol. 9 No. 1, pp. 30-43.

Barreto, I. (2010), "Dynamic capabilities: A review of past research and an agenda for the future", *Journal of Management,* Vol. 36 No. 1, pp. 256-280.

Chen, M., Su, K. and Tsai, W. (2007), "Competitive tension: The awareness-motivation-capability perspective", *Academy of Management Journal,* Vol. 50 No. 1, pp. 101-118.

Coase, R. H. (1937), "The nature of the firm", *Economica,* Vol. 4 No. 16, pp. 386–405.

Collins, J. (2002), *Good to Great*, HarperCollins, New York.

Cousins, P. D. and Menguc, B. (2006), "The implications of socialization and integration in supply chain management", *Journal of Operations Management,* Vol. 24, pp. 604–620.

Das, A., Narasimhan, R. and Talluri, S. (2006), "Supplier integration—finding an optimal configuration", *Journal of Operations Management,* Vol. 24 No. 5, pp. 563-582.

Das, T. K. and Teng, B. S. (2000), "Instabilities of strategic alliances: An internal tensions perspective", *Organization Science,* Vol. 11 No. 1, pp. 77-101.

Day, M., Fawcett, S. E., Fawcett, A. M. and Magnan, G. M. (2013), "Trust and relational embeddedness: Exploring a paradox of trust pattern development in key supplier relationships", *Industrial Marketing Management*, Vol. 42 No. 2, pp. 152-165.

Daugherty, P. J., Richey, R. G., Roath, A. S., Min, S., Chen, H., Arndt, A. D. and Gechev, S. T. (2006), "Is collaboration paying off for firms?", *Business Horizons,* Vol. 49 No., pp. 61-70.

Dent, E. B. and Goldberg, S. G. (1999), "Challenging resistance to change", *Journal of Applied Behavioral Science,* Vol. 35 No. 1, pp. 25-41.

Durate, M. and Davies, G. (2003), "Testing the conflict-performance assumption in business-to-business relationships", *Industrial Marketing Management,* Vol. 32 No., pp. 91-99.

Dyer, B. and Song, X. M. (1997), "The impact of strategy on conflict: Across-national comparative study of U.S. And Japanese firms", *Journal of International Business Studies,* Vol. 28 No. 3, pp. 467-493.

Dyer, J. H. and Singh, H. (1998), "The relational view: Cooperative strategy and sources of interorganizational competitive advantage", *Academy of Management Review,* Vol. 23 No. 4, pp. 660-679.

Eisenhardt, K. M. (1989), "Building theories from case study research", *Academy of Management Review,* Vol. 14 No. 4, pp. 532-550.

Eisenhardt, K. M. (1991), "Better stories and better constructs: The case for rigor and comparative logic", *Academy of Management Review,* Vol. 16 No. 3, pp. 620-627.

Eisenhardt, K. M. and Graebner, M. E. (2007), "Theory building from cases: Opportunities and challenges", *Academy of Management Journal,* Vol. 50 No. 1, pp. 25-32.

Ellram, L. M. (1996), "An application of the case study method in logistics research", *Journal of Business Logistics,* Vol. 17 No. 2, pp. 93-138.

Fawcett, A. M., Hofer, A. R. and Fawcett, S. E. (2014), "Relational strategies and firm performance: Insights from an orienting conceptual framework", *Journal of Business Logistics,* Vol. 35 No. 2, pp. 151-152.

Fawcett, S. E., Fawcett, A. M., Watson, B. J. and Magnan, G. M. (2012a), "Peeking Inside the Black Box: Toward an understanding of supply Chain collaboration Dynamics", *Journal of Supply Chain Management*, Vol. 48 No. 1, pp. 44-72.

Fawcett, S. E., Jones, S. and Fawcett, A. M. (2012b), "Supply chain trust: The catalyst to collaborative innovation", *Business Horizons,* Vol. 55 No. 2, pp. 163-178.

Fawcett, S. E. and Birou, L. M. (1993), "Just-in-time sourcing techniques: Current state of adoption and performance benefits", *Production and Inventory Management Journal,* Vol. 34 No. 1, pp. 18-24.

Fawcett, S. E., Magnan, G. M. and McCarter, M. W. (2008a), "A three-stage implementation model for supply chain collaboration", *Journal of Business Logistics,* Vol. 29 No. 1, pp. 93-112.

Fawcett, S. E., Magnan, G. M. and McCarter, M. W. (2008b), "Benefits, barriers, and bridges to effective supply chain management", *Supply Chain Management: An International Journal*, Vol. 13 No. 1, pp. 35-48.

Fawcett, S. E., Magnan, G. M. and McCarter, M. W. (2008c), "Supply chain alliances and social dilemmas: Bridging the barriers that impede collaboration", *International Journal of Procurement Management,* Vol. 1 No. 3, pp. 318-341.

Flynn, B. B., Huo, B. and Zhao, X. (2010), "The impact of supply chain integration on performance: A contingency and configuration approach", *Journal of Operations Management,* Vol. 28 No. 1, pp. 58-71.

Frohlich, M. T. and Westbrook, R. (2001), "Arcs of integration: An international study of supply chain strategies", *Journal of Operations Management,* Vol. 19 No. 2, pp. 185-200.

Gerwin, D. (2004), "Coordinating new product development in strategic alliances", *Academy of Management Review,* Vol. 29 No. 2, pp. 241-257.

Graebner, M. E. and Eisenhardt, K. M. (2004), "The seller's side of the story: Acquisition as courtship and governance as syndicate in entrepreneurial firms", *Administrative Science Quarterly,* Vol. 49 No., pp. 366-403.

Greve, H. R., Baum, J. A. C., Mitsuhashi, H. and Rowley, T. J. (2010), "Built to last but falling apart: Cohesion, friction, and withdrawal from interfirm alliances", *Academy of Management Journal,* Vol. 53 No. 2, pp. 302-322.

Gulati, R. and Kletter, D. (2005), "Shrinking core, expanding periphery: The relational architecture of high-performing organizations", *California Management Review,* Vol. 47 No. 3, pp. 77-104.

Gulati, R. and Singh, H. (1998), "The architecture of cooperation: Managing coordination costs and appropriation concerns in strategic alliances", *Administrative Science Quarterly*, Vol. 43 No. 4, pp. 781-814.

Hambrick, D. C., Li, J., Xin, K. and Tsui, A. A. (2001), "Compositional gaps and downward spirals in international joint venture management groups", *Strategic Management Journal,* Vol. 22 No. 11, pp. 1033-1053.

Hannan, M. and Freeman, J. (1984), "Structural inertia and organizational change", *American Sociological Review,* Vol. 49 No., pp. 149-164.

Hendricks, K. B. and Singhal, V. R. (2005), "Association between supply chain glitches and operating performance", *Management Science,* Vol. 51 No. 5, pp. 695-711.

Hendricks, K. B. and Singhal, V. R. (2008), "The effect of supply chain disruptions on shareholder value", *Total Quality Management,* Vol. 19 No. 7/8, pp. 777-791.

Jacobides, M. G. (2006), "The architecture and design of organizational capabilities", *Industrial and Corporate Change,* Vol. 15 No. 1, pp. 151-171.

Jin, Y., Fawcett, A. M. and Fawcett, S. E. (2013), "Awareness is Not Enough: Commitment and Performance Implications of Supply Chain Integration", *International Journal of Physical Distribution and Logistics Management*, Vol. 43 No. 3, pp. 205-230.

Khanna, T., Gulati, R. and Nohria, N. (1998), "The dynamics of learning alliances: Competition, cooperation, and relative scope", *Strategic Management Journal,* Vol. 19 No. 3, pp. 193-210.

Knemeyer, A. M. and Fawcett, S. E. (2015), "Supply chain design and integration: Why complex collaborative systems are easy to talk about but hard to do", *Journal of Business Logistics,* Vol. 36 No. 3, pp. 1-2.

Kotter, J. P. (1995), "Leading change: Why transformation efforts fail", *Harvard Business Review,* Vol. 73 No. 2, pp. 59-67.

Koufteros, X. A., Rawski, G. E. and Rupak, R. (2010), "Organizational integration for product development: The effects on glitches, on-time execution of engineering change orders, and market success", *Decision Sciences,* Vol. 41 No. 1, pp. 49-80.

Lavie, D. (2006), "The competitive advantage of interconnected firms: An extension of the resource-based view", *Academy of Management Review,* Vol. 31 No. 3, pp. 638-658.

Lewin, K. (1951), *Field Theory in Social Science*, Harper Row, London, UK.

Liker, J. K. and Choi, T. Y. (2004), "Building a deep supplier relationships", *Harvard Business Review,* Vol. 82 No. 12, pp. 102-113.

McCarter, M. W. and Northcraft, G. B. (2007), "Happy together?: Insights and implications of viewing managed supply chains as a social dilemma", *Journal of Operations Management,* Vol. 25 No. 2, pp. 498-511.

McCutcheon, D. and Meredith, J. R. (1993), "Conducting case study research in operations management", *Journal of Operations Management,* Vol. 11 No. 3, pp. 239-256.

Messick, D. M. and Brewer, M. B. 1983. Solving social dilemmas. *Review of Personality and Social Psychology*. Wheeler, L. and Shaver, P. Beverly Hills, CA, Sage Publications. 4**:** 11-44.

Miller, C. C., Cardinal, L. B. and Glick, W. H. (1997), "Retrospective reports in organizational research: A reexamination of recent evidence", *Academy of Management Journal,* Vol. 40 No., pp. 189-204.

Moon, H. and Conlon, D. E. (2002), "From acclaim to blame: Evidence of a person sensitivity decision bias", *Journal of Applied Psychology,* Vol. 87 No. 1, pp. 33-42.

Nelson, D., Mayo, R. and Moody, P. E. (1998), *Powered by Honda*, John Wiley and Sons, Inc., New York, NY.

Nyaga, G. N., Whipple, J. M. and Lynch, D. F. (2010), "Examining supply chain relationships: Do buyer and supplier perspectives on collaborative relationships differ?", *Journal of Operations Management,* Vol. 28 No. 2, pp. 101-114.

Pagell, M. and Wu, Z. (2009), "Building a more complete theory of sustainable supply chain management using case studies of 10 exemplars", *Journal of Supply Chain Management,* Vol. 45 No. 2, pp. 37-56.

Park, S. H. and Ungson, G. (2001), "Interfirm rivalry and managerial complexity: A conceptual framework of alliance failure", *Organization Science,* Vol. 12 No. 1, pp. 37-53.

Perez, L. and Cambra-Fierro, J. (2015), "Learning to work in asymmetric relationships: insights from the computer software industry", *Supply Chain Management: An International Journal*, Vol. 20 No. 1, pp. 1-10.

Pettigrew, A. M. (1990), "Longitudinal field research on change: Theory and practice", *Organization Science,* Vol. 1 No. 3, pp. 267-292.

Prahalad, C. K. and Hamel, G. (1990), "The core competence of the corporation", *Harvard Business Review,* Vol. 68 No. 3, pp. 79-91.

Pratt, M. G. (2008), "Fitting oval pegs into round holes: Tensions in evaluating and publishing qualitative research in top-tier North American journals", *Organizational Research Methods,* Vol. 11 No. 3, pp. 481–509.

Pratt, M. G., Rockmann, K. W. and Kaufmann, J. B. (2006), "Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents", *Academy of Management Journal,* Vol. 49 No. 2, pp. 235-262.

Ruekert, R. W. and Walker, O. C. (1987), "Interactions between marketing and randd departments implementing different business strategies", *Strategic Management Journal,* Vol. 8 No. 3, pp. 233-248.

Schonberger, R. J. (1986), *World Class Manufacturing*, The Free Press, New York.

Schwenk, C. R. (1985), "The use of participant recollection in the modeling of organizational decision processes", *Academy of Management Review,* Vol. 10 No., pp. 496-503.

Senge, P. M. (2006), *The Fifth Discipline: The art and practice of the learning organization*, Doubleday, New York.

Spradley, J. (1979), *The Ethnographic Interview*, Holt, Rinehart and Winston, New York.

Stalk, G., Evans, P. and Schulman, L. E. (1992), "Competing on capabilities: The new rules of corporate strategy", *Harvard Business Review,* Vol. 70 No. 2, pp. 57-69.

Staw, B. M., Sandelands, L. E. and Dutton, J. E. (1981), "Threat rigidity effects in organizational behavior: A multilevel analysis", *Administrative Science Quarterly,* Vol. 26 No. 4, pp. 501-524.

Sweeney, E., Grant, D. B. and Mangan, D. J. (2015), "The implementation of supply chain management theory in practice; an empirical investigation", *Supply Chain Management: An International Journal*, Vol. 20 No. 1, pp. 56-70.

Swink, M. and Schoenherr, T. (2015), "The effects of cross-functional integration on profitability, process efficiency, and asset productivity", *Journal of Business Logistics*, Vol. 36 No. 1, pp. 69-87.

Sutton, R. I. and Staw, B. M. (1995), "What theory is not", *Administrative Science Quarterly,* Vol. 40 No. 3, pp. 371-384.

Terjesen, S., Patel, P. C. and Sanders, N. R. (2012), "Managing differentiation-integration duality in supply chain integration", *Decision Sciences,* Vol. 43 No. 2, pp. 303-339.

Thomas, K. W. 1992. Conflict and negotiation processes in organizations. *Handbook of Industrial and Organizational Psychology*. Hough, M. D. D. L. M. Palo Alto, CA, Consulting Psychologists Press. 3.

Villena, V. H., Gomez-Mejia, L. R. and Revilla, E. (2009), "The decision of the supply chain executive to support or impede supply chain integration: A multidisciplinary behavioral agency perspective", *Decision Sciences,* Vol. 40 No. 4, pp. 635-665.

Villena, V. H., Revilla, E. and Choi, T. Y. (2011), "The dark side of collaborative buyer-supplier relationships: A social capital perspective", *Journal of Operations Management,* Vol. 29 No. 6, pp. 561-576.

Williamson, O. E. (1979), "Transaction cost economics: The governance of contractual relations", *Journal of Law and Economics,* Vol. 22 No. 2, pp. 233-261.

Womack, J. P., Jones, D. T. and Roos, D. (1990), *The Machine that Changed the World*, First Harper Perennial, New York.

Wong, C. Y., Boon-itt, S. and Wong, C. W. Y. (2011), "The contingency effects of environmental uncertainty on the relationship between supply chain integration and operational performance", *Journal of Operations Management,* Vol. 29 No. 6, pp. 549-638.

Worthen, B., Tuna, C. and Scheck, J. (2009), “Companies more prone to go 'vertical'”, *Wall Street Journal*, November 30, pp. A1, A16

Yin, R. K. (1981), "The case study crisis", *Administrative Science Quarterly,* Vol. 26 No. 1, pp. 58-66.

Zand, D. E. and Sorensen, R. E. (1975), "Theory of change and the effective use of management science", *Administrative Science Quarterly,* Vol. 20 No. 4, pp. 532-545.

Zeng, M. and Chen, X. P. (2003), "Achieving cooperation in multiparty alliances: A social dilemma approach to partnership management", *Academy of Management Review,* Vol. 28 No. 4, pp. 587–605.

Table 1: Interviewed Company Demographics: Channel, Sales, Profits, and Employee Levels

	Period 1			Period 2		
Channel Position	**Number**			**Number**		
Retailer	14			15		
Finished-goods Assembler	13			19		
Direct-materials Supplier	13			12		
Service Provider	9			11		
Descriptive Statistics	**Sales ($M)**	**Profits ($M)**	**Employees**	**Sales ($M)**	**Profits ($M)**	**Employees**
Mean	$28,751	$1,704	124,706	$24,077	$2,168	94,408
Median	$9,045	$589	44.750	$4,954	$679	16,300
Minimum	$103	-$705	2,701	$3	-$4,183	35
Maximum	$285,222	$10,267	1,700,000	$378,799	$12,731	2,100,000

Table 2: An Inventory of Relational Resistors: Period 1 versus Period 2

Resistors	P1	P2	Representative Proof Quotes
Territoriality	73%	75%	"This has led to turf battles between two groups;" "Functional silos and conflicting goals create high levels of turf protection;" "They don't feel the impact of their own decisions"
Strategic Misalignment	53%	68%	"We don't see across the organization;" "Our structure is not prepared to share or change;" "No one knows what the whole thing looks like;" "We don't have the same goals, structures or systems"
Leadership Deficit	39%	63%	"Lack of leadership;" "Who is steering the ship?" "We need commitment at the top management level;" "Lack of decision-making at upper levels;" "Short-term thinking and tactical decision-making"
Opposition to Change	59%	61%	"Change the mindset, 'Because you always did it like that;'" "That's the way we've always done it;" "Resistance to changed roles and responsibilities;" "Empowerment scares the hell out of top management"
Low Trust	47%	53%	"We are the two-ton gorilla and we wield tremendous leverage;" "Still legislates 'trust' via very tight contracts;" "Culture has reduced trust and collaboration;"
Poor Systems Connectivity	73%	53%	"IT investment is inadequate;" "We have plenty of data, but we can't get it to decision makers so they can use it;" "Information and technology systems are not as refined as they need to be"
Information Hoarding	73%	53%	"Suppliers are frustrated that we do not share strategic information;" "They don't do a good job of sharing information, but they still expect great service;" "Inadequate information sharing is huge;" "COMMUNICATION"
Relationship Intensity	12%	35%	"Lack of buying power;" "Structuring contracts in a 'one-size-fits-all' approach;" "Most of our vendors lack the capabilities to collaborate effectively;" "Defining 'partnering' is a challenge"
Complexity Management	29%	33%	"Customer forecasts are off by 50-100%;" "Complexity will be tomorrow's constraint;" "Where does the handoff occur?" ". . . difficult to manage multiple systems"
Process Integration	10%	32%	"Who really owns the responsibility?" "We are struggling to define our role;" "Resistance to the loss of power and to changed roles and responsibilities"
Collaborative Skill Gap	18%	30%	"Perhaps the most difficult challenge is to find people with the right skills;" "We don't have the talent we need for today;" "Employee development is a real challenge;" "Worker turnover and loss of talent"

Figure 1: Overview of Data Structure

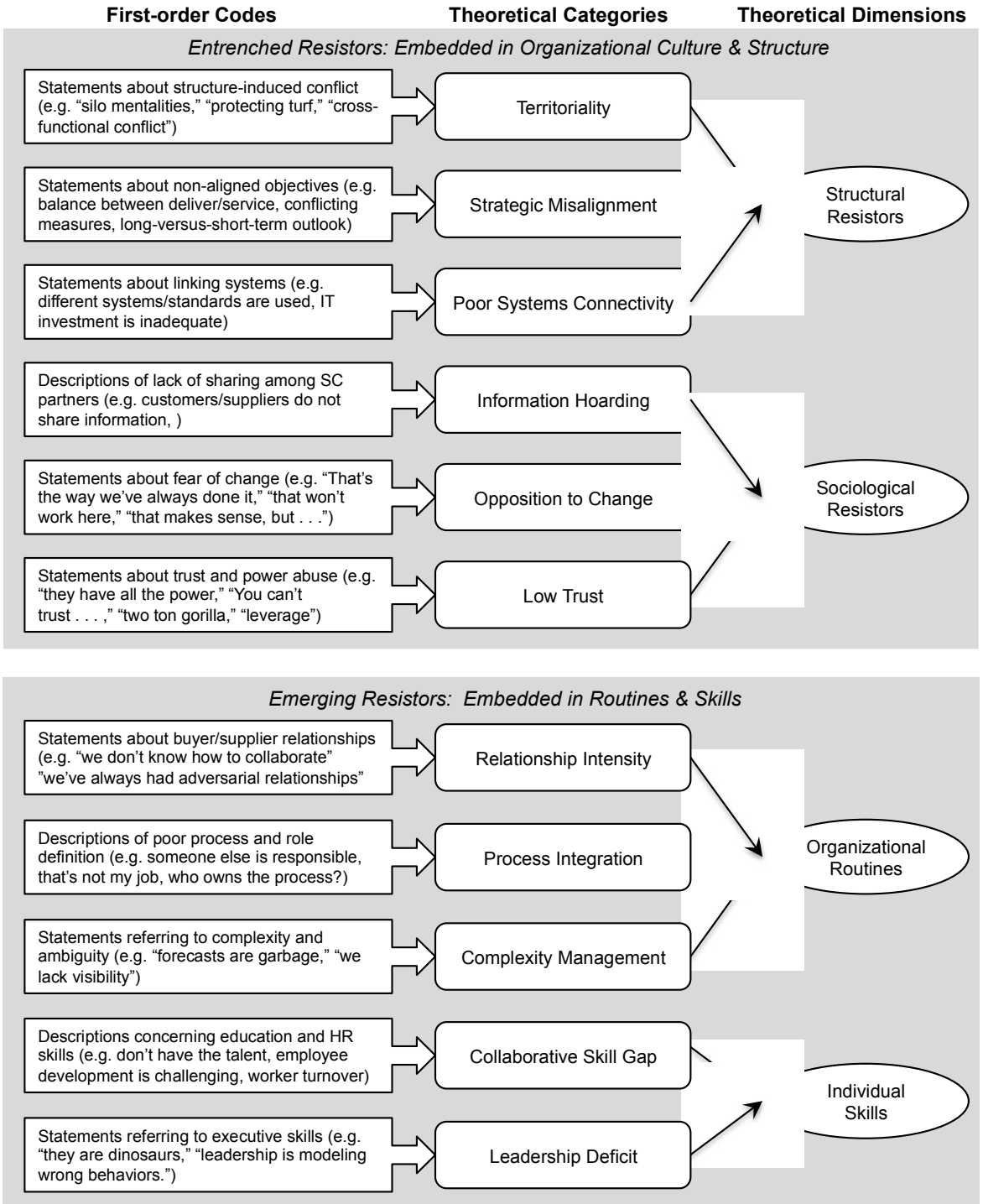

Figure 2: Taxonomy of Relational Resistors

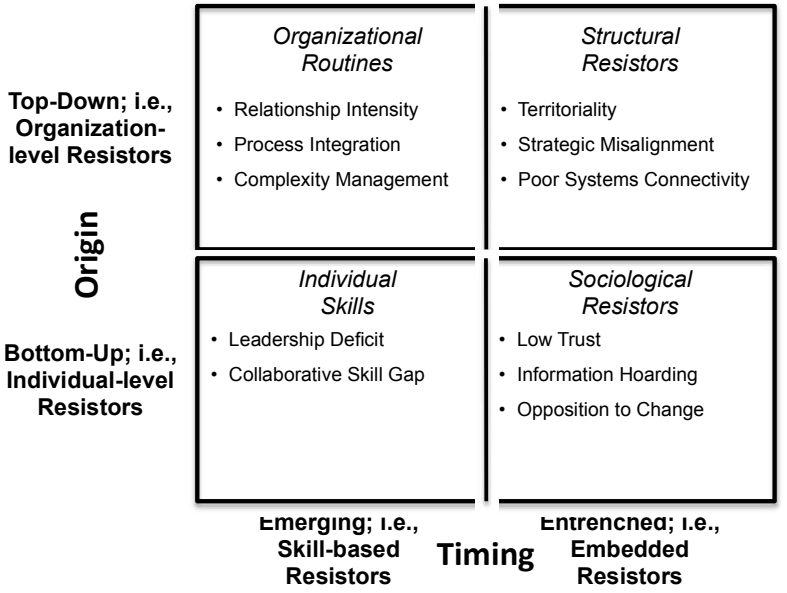

Figure 3: A Socio-Structural View of Resistors to a Collaboration Capability