

Keys to Effective Supply Chain Collaboration:
A Special Report from the
Collaborative Practices Research Program

Supply and Value Chain Center
The M. J. Neeley School of Business

TCU

Executive Summary

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Collaborative Practices Research Program

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Summary

Recently a research team, under the direction of Dr. Nancy Nix from the Supply and Value Chain Center at the Neeley School of Business at Texas Christian University, completed a study on effective collaborative endeavors in supply chains. This research focused on understanding (1) the nature and scope of collaborations occurring in supply chains, (2) the factors that determine high levels of collaboration intensity, (3) the outcomes businesses expect from successful collaborations, and (4) the key knowledge resources and organizational capabilities that drive or determine successful collaborations. This research project included a thorough review of trade, professional and scholarly publications; in-depth interviews with supply chain professionals; and a broad survey of supply chain professionals with experience in collaboration (Exhibit 1). The team analyzed survey data from 477 respondents representing multiple industries and organizational roles to identify key principles required for successful collaboration (Exhibits 2 and 3). These findings provide important insights for managers to enhance the effectiveness of their collaboration efforts.

Overall, the research findings consistently indicate successful collaboration requires *a commitment to collaborate with intensity and a desire to improve a firm's organizational capabilities* in three specific areas: (1) collaborative capability (the skills, capabilities, and supporting processes required to collaborate well), (2) absorptive capability (the ability to learn and apply new knowledge), and (3) problem specific capability (skills related to the specific collaboration effort). Managerially important and statistically significant differences in the benefits achieved through collaboration, such as successful performance of the specific task and improved relationship quality, were striking when comparing companies that focused on these key principles with companies that did not.

Introduction

In today's business environment, with rapidly changing technologies, global competition, increased emphasis on outsourcing, and the growth of highly specialized companies, it is increasingly important that companies within the supply chain collaborate. However, collaboration is a complex process that does not always lead to success. In fact, approximately 29% of our respondents indicated their collaboration was unsuccessful. The purpose of this research was to identify key principles that can help managers ensure success in their collaboration efforts.

Early in our research, we discovered there is considerable confusion about the definition of collaboration. Often, supply chain academics and professionals use the words collaboration, coordination, and cooperation interchangeably. However, in other cases, these terms are used to describe very different activities. To provide clarity for this research, we defined collaboration as “managing interdependencies *to maximize shared goals and enhance individual goals,*” with a focus on complex problem-solving or joint innovation. Collaborating companies work closely together to “make the pie bigger” for everyone involved, rather than simply to increase the size of their own “piece of the pie.” Collaboration, which is most appropriate when issues or opportunities faced by supply chain partners are too difficult or complex to be resolved individually, requires joint planning and decision-making; open sharing of information; a free flow of creative ideas; and rich communication through face-to-face meetings.

There are other ways to manage interdependent activities between supply chain partners. For less complex problems, simply sharing information and synchronizing activities may be sufficient for each firm to achieve their goals. Given the intense competitive pressures and the rapid and dynamic change in technology companies face today, many supply chain managers face the need to work more effectively with supply chain partners. However, these managers should realize that not all situations require

an intense collaborative effort. In some cases, coordination of activities through a straightforward exchange of information or cooperation in support of the partner firm may be sufficient.

Conversely, effective collaboration is a difficult process requiring much effort. A collaborative approach is appropriate only in situations where such efforts are justified. Even then, there is no guarantee of success. Collaboration is most beneficial when the problem or opportunity addressed is highly complex and interdependent. Highly complex problems are those that are difficult to solve, have no easy solutions, and require a lot of effort. Interdependent problems or opportunities are those that are dependent on other companies for effective resolution, where there is a need for knowledge or skills other firms possess. A key message for supply chain executives is to engage in collaboration only in those cases where the problem is sufficiently complex and interdependent to warrant such an investment of time, energy, and resources.

Benefits of Successful Collaboration

Successful collaborations can benefit participating firms in two distinct ways. First, there are direct benefits derived from the specific task that is the focus of the collaboration efforts. Second, a successful collaboration effort will enhance the quality of the relationship between the collaboration partners.

Task Performance

Improvements in supply chain performance are the most frequently mentioned benefits of successful supply chain collaborations. Organizations in the supply chain collaborate because they want some combination of lower costs, improved product or service quality, better customer service, quicker project results, reduced cycle time or lead-time, and improved value to customers. When the means to achieving these benefits are particularly complex and dependent on both parties for successful implementation, intense collaboration is required.

Relationship Quality

Our research also provided strong evidence that another major outcome from collaboration is improved relationship quality with supply chain partners. A side benefit from intense collaborations is a more effective working relationship and greater mutual commitment between supply chain partners. As partners collaborate, they learn to share information openly and communicate in an honest and truthful way. These practices contribute to an improved feeling of partnership and solidarity and an overall more productive working relationship.

Key Principles for Successful Collaboration

There are several key principles managers should consider to ensure success in their collaborations with supply chain partners. These are *a commitment to collaborate with intensity* and *a desire to improve a firm's organizational capabilities* in three specific areas: collaborative capability (the skills, capabilities, and supporting processes required to collaborate well), absorptive capability (the ability to learn and apply new knowledge), and problem specific capability (skills related to the specific collaboration effort).

Intense Collaboration

Intense collaborations are necessary to yield successful collaborations. While this sounds obvious, many companies say they wish to collaborate, but are unwilling to devote the time, energy, and resources to collaborate effectively. We have found that intense collaborations are characterized by frequent meetings, a high level of joint decision-making, open sharing of information, a free flow of useful and novel ideas, and an openness to new ways of thinking or discovering new knowledge. Companies unwilling to adopt these practices in their collaboration efforts are less successful than those who do.

Collaborative Capability

Early in our industry interviews, we began to find evidence that some organizations have an organizational culture embedded with a capability to collaborate with other organizations. From the outset, these organizations have the support of senior management to engage in intense collaborations. They also have a realistic understanding of the time required and the risks involved in a true collaboration effort. These firms recognize opportunities to benefit from collaboration and select partners who share compatible ways of doing business, who are open and willing to share what they know. Additionally, these organizations openly communicate ideas and can recognize and resolve conflicts as they arise. Organizations with collaborative capability typically establish processes to monitor and manage collaboration efforts.

Our research showed companies with high levels of collaborative capability and highly intense collaboration had a 40% improvement in task performance and a 55% improvement in relationship quality in comparison to companies with low levels of collaborative capability and collaboration intensity (Exhibits 5 and 6).

Absorptive Capability

Absorptive capability is a firm's ability to recognize the value of new external knowledge, assimilate it, and apply it to commercial ends. Firms with absorptive capability are committed to investing in knowledge accumulation and creating an environment that encourages new and useful ideas to improve business performance. They utilize new technology to develop innovative products that are successful in the market. Predictably, one key source of information is a firm's supply chain partners. Firms with high levels of "absorptive capability" can absorb new knowledge from these supply chain partners and apply that knowledge to improve the outcomes of their collaboration efforts.

Our research showed companies with high levels of absorptive capability and highly intense collaboration had a 40% improvement in task performance and a 50% improvement in relationship quality in comparison to companies with low levels of absorptive capability and collaboration intensity (Exhibits 7 and 8).

Problem Specific Capability

Companies engaged in collaboration activities but lacking specific skills required to solve the problem being addressed may not do well. The temptation of many firms is to collaborate with a strong partner to compensate for their own lack the skills, knowledge, capabilities, or understanding of the issues. Unfortunately, if you do not bring problem specific capabilities to the collaboration effort, you are not a very good collaboration partner and perhaps worse, you may become too dependent upon the other firm. It is difficult to be a productive partner and collaborator if you lack problem specific capability and potentially this puts you in a vulnerable position where you may damage your credibility with the partner firm.

Our research showed companies with high levels of problem specific capability and highly intense collaboration had a 42% improvement in task performance and a 53% improvement in relationship quality in comparison to companies with low levels of problem specific capability and collaboration intensity (Exhibits 9 and 10).

Conclusion

Successful collaborations, just like successful marriages and other partnerships, are not magic. They require hard work and a strong commitment from both parties. There are number of steps that can help improve the chances of achieving a successful collaboration. Begin by ensuring the problem to be resolved merits the commitment and investment required for successful collaboration. If the problem at hand is highly complex and requires skills, capabilities, and intense involvement from both you and

your supply chain partner for resolution, engaging in a collaboration effort is worthwhile. Second, be willing to commit the appropriate level of time, energy, and resources necessary to collaborate intensely. Third, improve or enhance your organizational capabilities in terms of absorptive capability, collaborative capability and problem specific capability. These capabilities contribute to the overall success of the collaboration. Finally realize successful collaborations are difficult but when achieved can an important source of competitive advantage.

Additional Information

A copy of this executive summary and a complete set of PowerPoint slides with highlights from this research are available at www.svcc.tcu.edu/collaborate. The PowerPoint slides include:

1. Research Overview.....1 - 4
2. Keys to Effective Supply Chain Collaboration.....4 - 8
3. Research Findings.....9 - 15
4. Characteristics of Reported Collaborations.....16 - 24
5. Characteristics of Collaborating Organizations.....25 - 33
6. Demographics of Research Respondents.....34 - 40
7. Demographics of Respondents' Organizations.....41 - 45

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We would like to thank all of you who participated in this research effort. We know your time is valuable, and appreciate your willingness to give us your input and contribute to this research effort.

Exhibit 1

The Collaborative Practices Research Program

The Collaborative Practices Research Program was undertaken to better understand: (1) the nature and scope of collaborations that are occurring in supply chains, (2) the factors that determine high levels of collaborative intensity, (3) the outcomes that industry expects from successful collaborations, and (4) the key knowledge resources and organizational capabilities that drive or determine successful collaborations.

Research began in 2002 with a thorough review of the trade, professional and scholarly literature. This was followed in 2003 by a series of personal in-depth interviews with professionals that had been intimately involved in an intense and recent collaborative effort with supply chain partners. Also during this period, members of the executive advisory board of the Supply and Value Chain Center were briefed on the research. They provided valuable input to help further refine the scope of the research. The organizations providing input included:

- Alcon Laboratories
- Alliance Operating Services
- BNSF
- Frito-Lay
- Har-Conn Chrome
- Lockheed Martin
- Neoris, Inc.
- RadioShack
- Transplace
- Trident Solutions Group
- Williamson-Dickie

In early 2004, the research instrument was pre-tested extensively. Based on pre-test results, the survey instrument was further refined. During spring and summer 2004, over 1000 respondents who had been recently involved in a collaboration outside their firm and were willing to participate in the research project were pre-qualified. Contact lists from the Institute of Supply Management and the TCU Supply and Value Chain Center were used to identify potential respondents. Questionnaires were completed by 490 respondents from a wide range of industries and companies in the U.S. Using only those questionnaires with over 90% of the questions completed resulted in a final sample of 477 respondents. Demographics of the survey respondents are shown in Exhibit 2. All of the data described in this report are statistically valid and reliable.

Exhibit 2

The primary industry in which my organization competes :

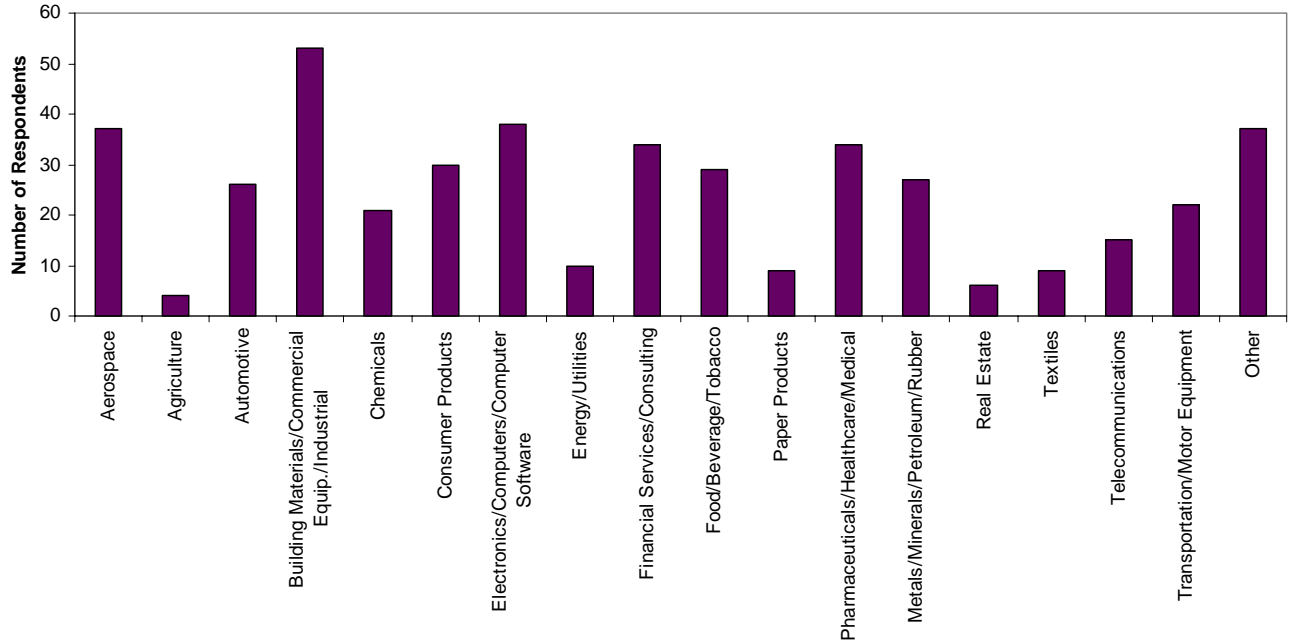


Exhibit 3

Job Title of Respondents

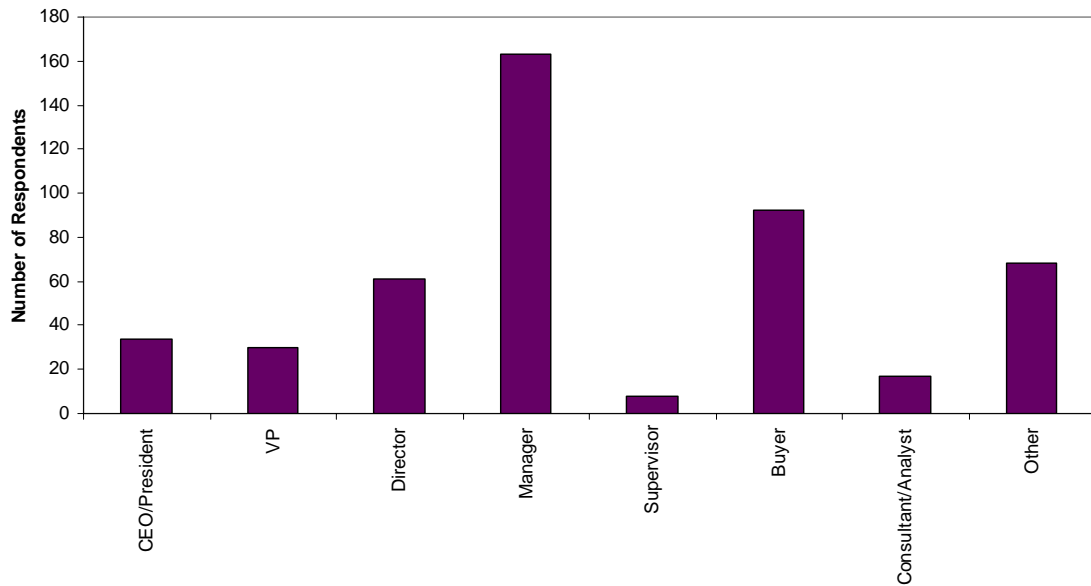
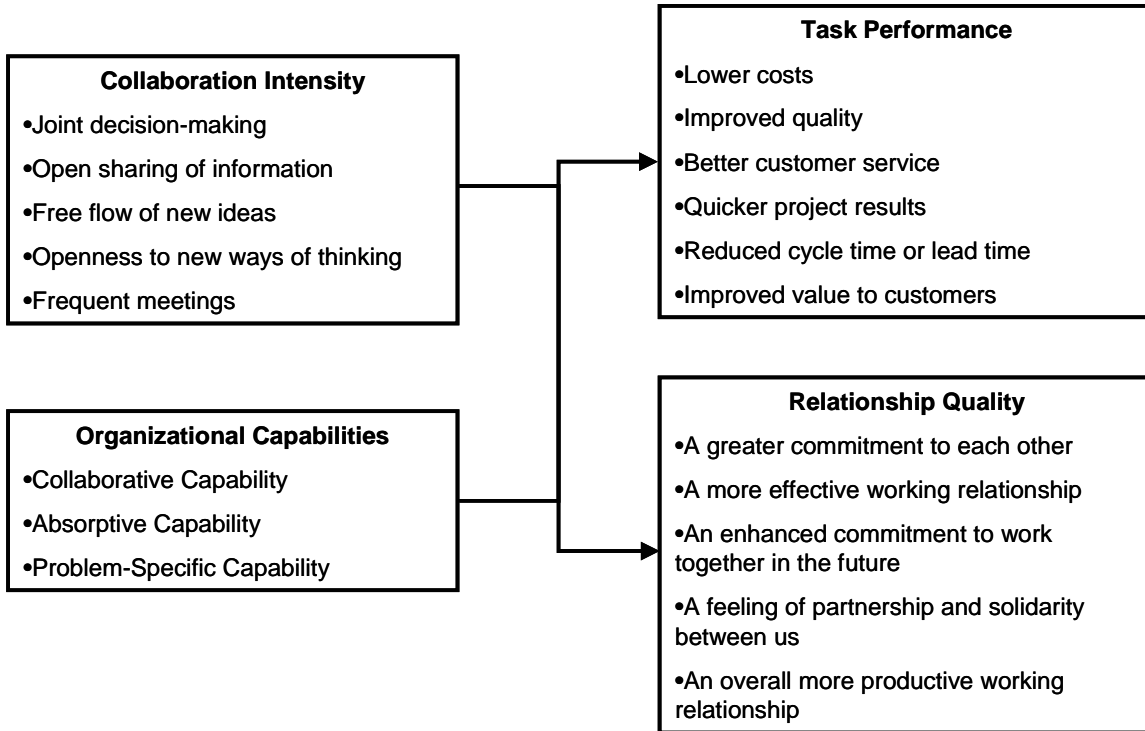


Exhibit 4

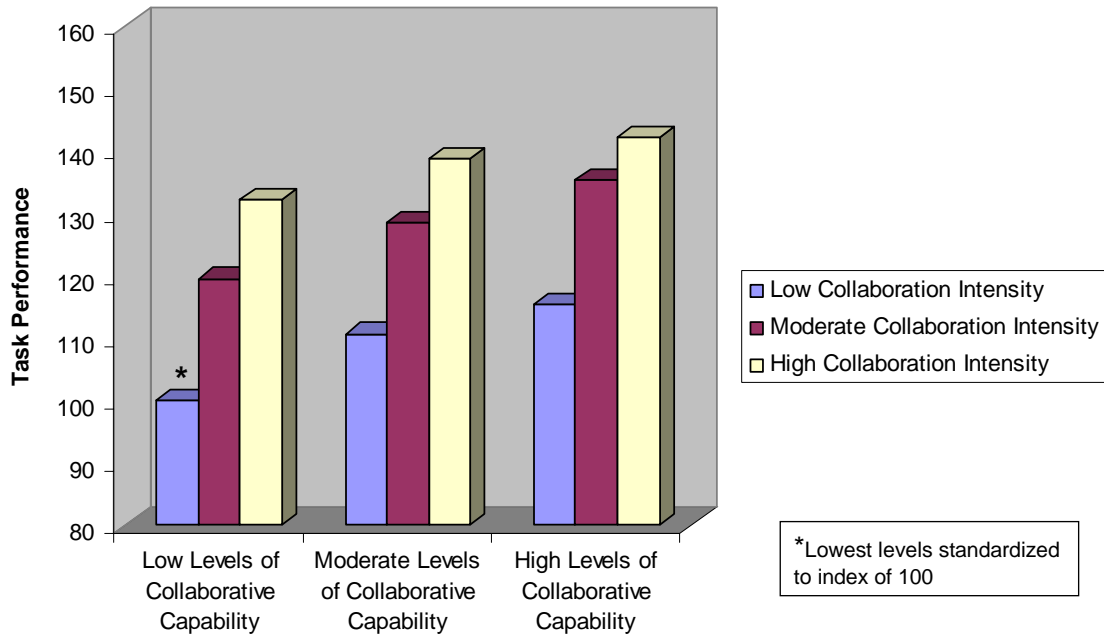
Collaboration Intensity, Organizational Capabilities & Collaboration Benefits



Firms that develop the right organizational capabilities and collaborate intensely with supply chain partners can achieve dramatic improvements in performance and enhance the quality of relationships with supply chain partners.

Exhibit 5

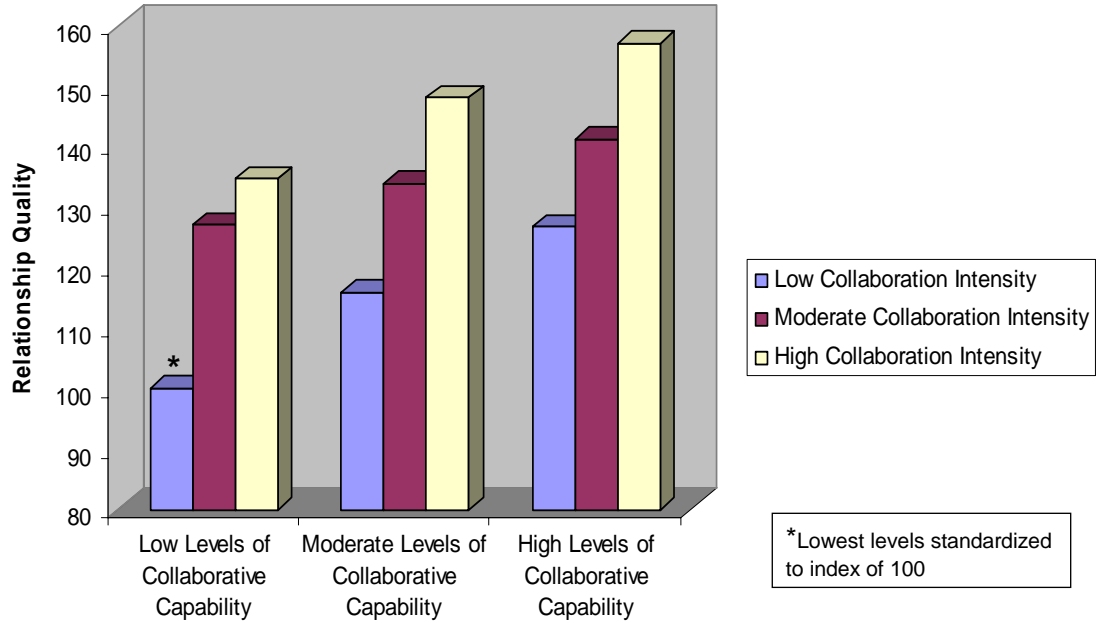
Influence of Collaborative Capability and Collaboration Intensity on Task Performance



Firms with strong collaborative capabilities and a commitment to collaborate intensely with supply chain partners can achieve as much as 40% improvement in collaboration performance.

Exhibit 6

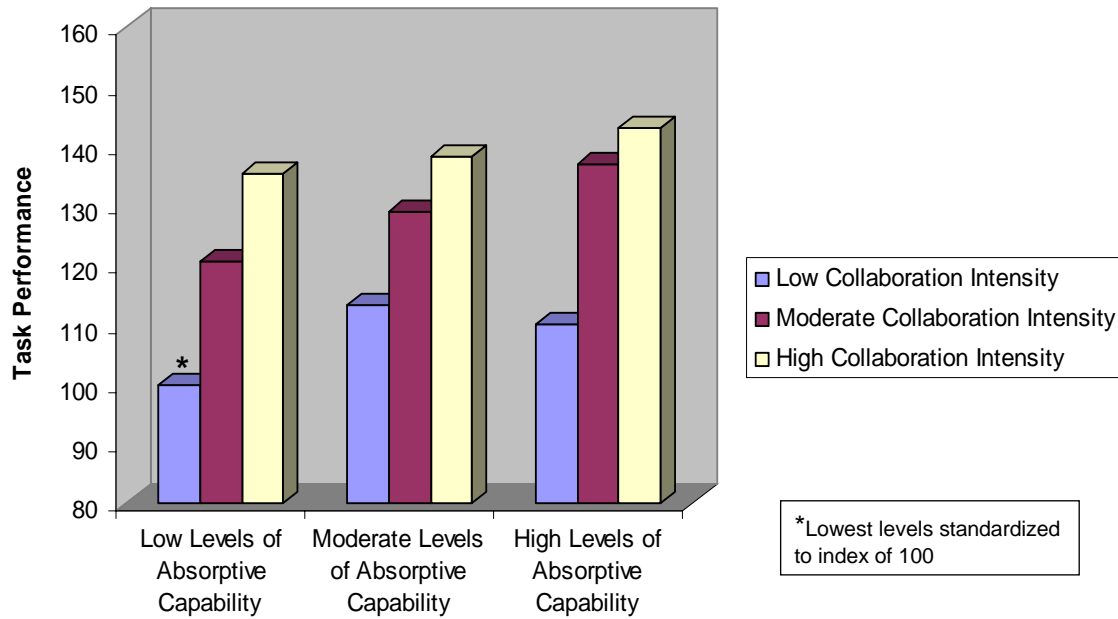
Influence of Collaborative Capability and Collaboration Intensity on Relationship Quality



Firms with strong collaborative capabilities and a commitment to collaborate intensely with supply chain partners can achieve as much as 55% improvement in relationship quality.

Exhibit 7

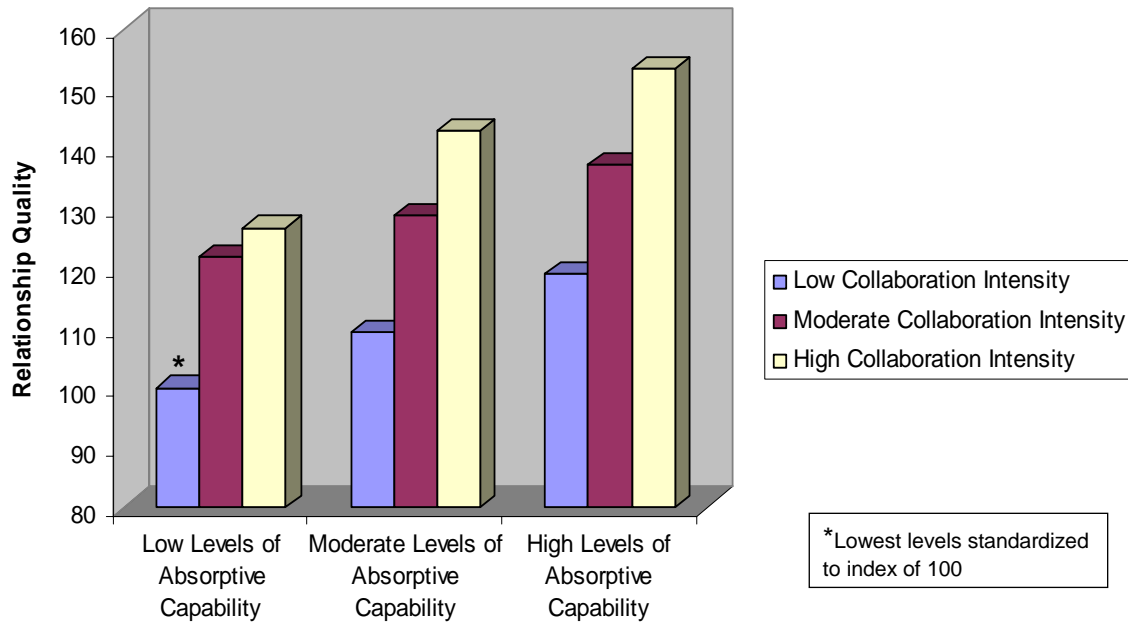
Influence of Absorptive Capability and Collaboration Intensity on Task Performance



Firms with the capability to learn from supply chain partners and a commitment to collaborate intensely can achieve as much as 40% improvement in collaboration performance.

Exhibit 8

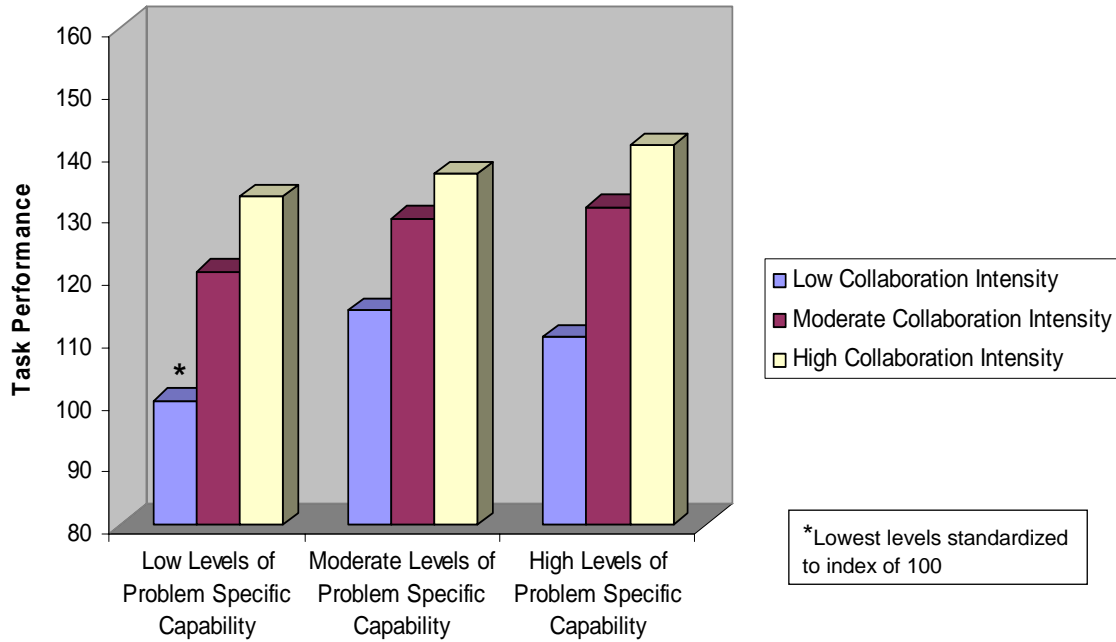
Influence of Absorptive Capability and Collaboration Intensity on Relationship Quality



Firms with the capability to learn from supply chain partners and a commitment to collaborate intensely can achieve as much as 55% improvement in relationship quality.

Exhibit 9

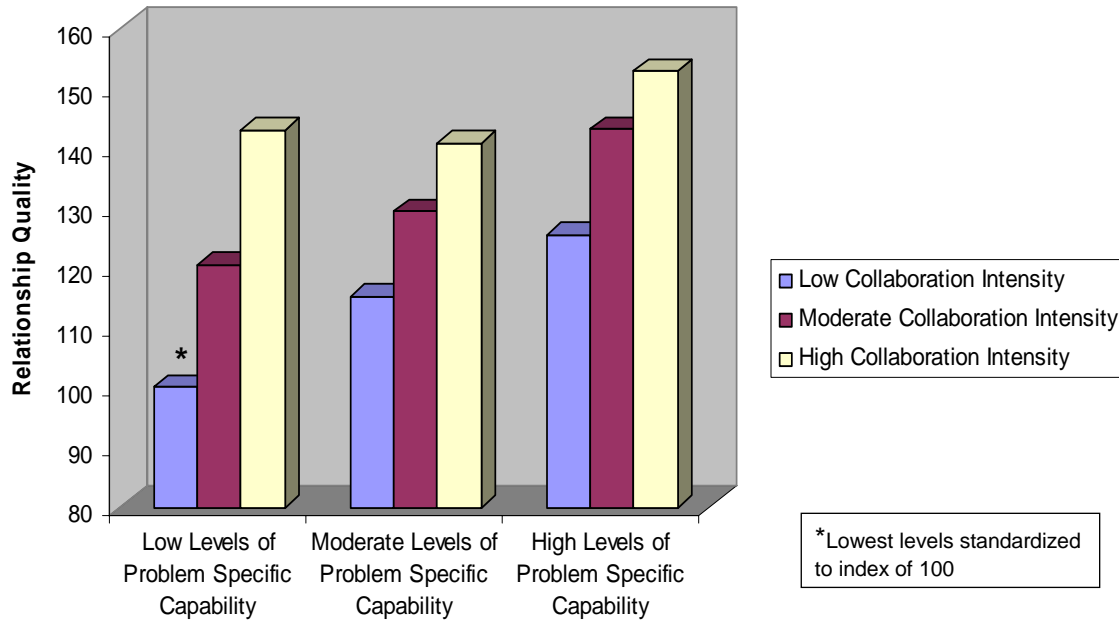
Influence of Problem Specific Capability and Collaboration Intensity on Task Performance



Firms with higher levels of problem-specific capabilities and a commitment to collaborate intensely with supply chain partners can achieve as much as 42% improvement in collaboration performance.

Exhibit 10

Influence of Problem Specific Capability and Collaboration Intensity on Relationship Quality



Higher levels of problem-specific capabilities and a commitment to collaborate intensely with supply chain partners can dramatically enhance relationship quality.