



## MIT SCALE RESEARCH REPORT

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**Research Report: ZLC-2011-15**  
**Supply Chain Integration and Customer Relationship Orientation**  
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# Supply Chain Integration and Customer Relationship Orientation

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## Summary:

This thesis confronts the challenging topic of inter-organizational learning from and together with customers and the elements of successful customer integration. Through survey-based research, it was found that trust and alignment are key elements to enhance customer integration, which further impacts the learning cycle of exploration, assimilation, and exploitation.



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## KEY INSIGHTS

1. The capability to learn from and with customers in a trusting relationship has a significant impact on perceived customer performance
2. Learning with customers is positively impacted when the relationship is aligned and integrated, even more so with unpredictable market conditions

## Introduction

*“One of the most significant paradigm shifts of modern business management is that individual businesses no longer compete as solely autonomous entities, but rather as supply chains”. “In this emerging competitive environment, the ultimate success of the single business will depend on management’s ability to integrate the company’s intricate network of business relationships” (Lambert & Cooper, 2000).*

Integrating the network of relationships in an environment of an increasing number of decision makers and complex, interdependent markets is a

massive challenge. This requires organizations in supply chains to continuously grow their capability to jointly learn about their customers and design supply chains that can meet and exceed those requirements. *“This then is the basic meaning of a “learning organization” – an organization that is continually expanding its capacity to create its future.”* (Senge, 1990)

Although these topics have been the focus of past research, many factors have prevented successful initiatives such as functional silos, short term financial thinking, lack of common IT architecture, defensive reasoning and a poor understanding of what organizational learning actually is.

The goal of this research was to answer the following questions:

1. What are the key elements of successful customer-facing supply chain integration?
2. What are the expected effects of inter- and intra-organizational learning in a customer-facing supply chain relationship?

## Approach

This research is a continuation of past research by Gradin and Jansson (2010), which focused on inter-organizational learning with suppliers. The company that was studied is the logistics division of a major manufacturer in the heavy machinery industry. In order to complete the supply chain perspective on inter-organizational learning, almost 200 independent dealers across six continents were analyzed using survey research. Dealers are both 1<sup>st</sup> tier customers and sales- and service agents interfacing with end-customers.

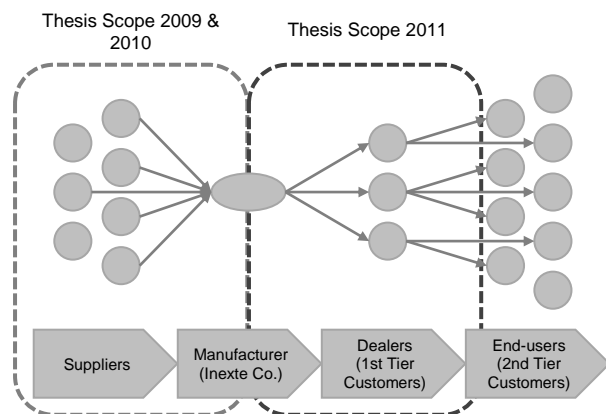


Figure 1: Thesis Scope & Supply Chain Structure

In order to design the survey, past research relating to absorptive capacity (the cycle of exploration, assimilation and exploitation) and integration with end-user customers were reviewed. Several hypotheses were also defined (Figure 2), which were later statistically tested.

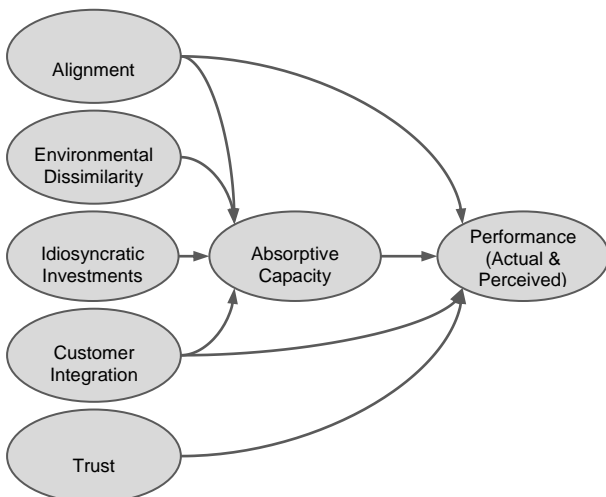


Figure 2: Theoretical Framework

After developing the theoretical framework, data was gathered about the dealers' perception on the various constructs and performance. The final number of responses received was 215 from a distribution list of approximately 500 (43% response rate). Of the 215, a total of 134 responses were fully

completed (62%). The majority of respondents were highly experienced and from North and South America. Additional KPI data for 2010 was obtained for each of the dealers to be used as actual performance data.

After testing the reliability for the data, hierarchical multiple regression as well as cluster analysis was used to test the statistical relationship between the different constructs and performance. Perceived performance was broken down into efficiency, improvement, agility and innovation, to test how inter-organizational learning might affect each one differently (Figure 3). The model explained the impact on all the perceived performance outcomes, with the exception of innovation. This might be due to the fact that innovation is focused internally on product research and development, and not on innovating supply chain processes. This is an area with substantial strategic potential, since it indicates that supply chain innovation is not yet well understood. Unfortunately the relationship with actual performance was not statistically reliable.

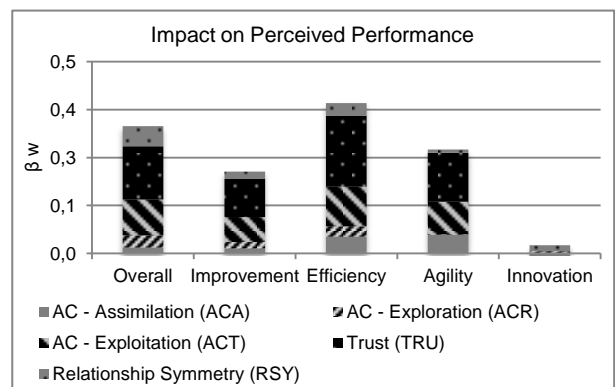


Figure 3: Impact on Perceived Performance

Regression was also used to test the impact the other constructs had on absorptive capacity and end-user customer integration (Figure 4). The research did not find any direct impact by customer integration on performance. Instead, it further facilitates joint learning.

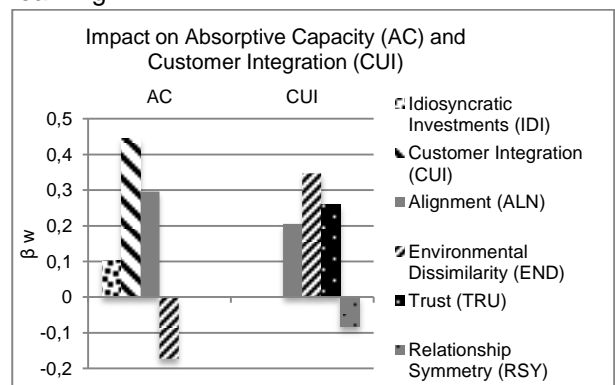


Figure 4: Impact on Absorptive Capacity and Customer Integration

## Results

The results confirmed most of the hypotheses and found additional insights with regards to the relationship between customer integration and absorptive capacity as well as the different performance measures. These findings were summarized in order to facilitate application and further development (Figure 5).

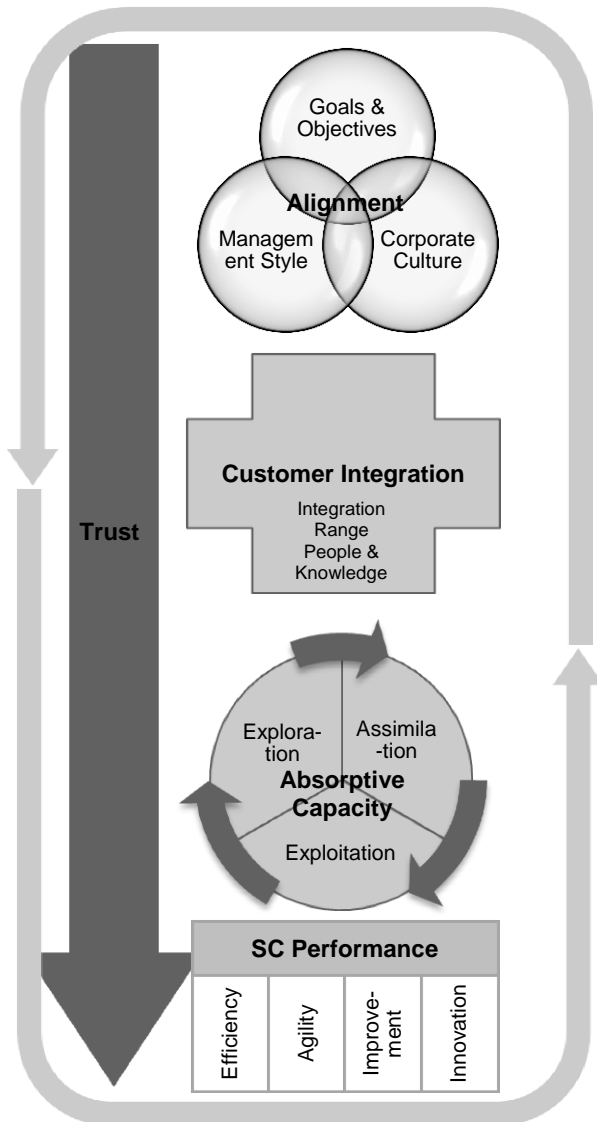


Figure 5: Practical Framework

### Trust

It all starts with trust. Trust is an antecedent of both customer integration and perceived performance; it can be viewed as both a facilitator and a mechanism to sustain the process. It facilitates integration in the sense of making information and knowledge available to trusted supply chain partners, and enhancing the probability of shared investments. Trust as a mechanism sustains the relationship when making joint decisions, with partners knowing that the desired outcome is mutually beneficial. Building and maintaining trust does not happen overnight and requires both parties to actively and vigilantly maintain an open and frank relationship.

Keeping promises, not misusing sensitive information, as well as sharing any potential bad news without fear of damaging the relationship is important.

### Alignment

Before integrating information or starting the learning process, it is important to select the right partners. Sharing the same goals, beliefs and mechanisms can smoothen the process of integration and prevent conflicts of interest, which can derail the learning cycle.

### Customer Integration

There is no one correct way to develop a collaborative relationship. Sharing long-term goals and an unpredictable environment can be reasons to increase integration. With regards to learning from customers, frequent socio-technical interactions, joint planning and sharing of resources can enhance learning. Participation in collaborative projects can be open to encourage a wide range of ideas or closed for a focused approach. Governance can be flat when sharing risks and rewards is important, or hierarchical when not.

### Absorptive Capacity

To continuously thrive, not only survive in a complex and interdependent world, requires the shared capability to learn from and with customers. Once a trusting partnership has been formed between aligned entities (individuals, teams, organizations), absorptive capacity can be developed and grown through the continuous process of exploration, assimilation and exploitation. Critical elements of this process are feedback, simulation or low cost experimentation, productive reasoning, as well as understanding the current situation and how systems, delays and policies affect it.

### Continuous Process

Inter-organizational learning is a never-ending process and frequent reviews of successes and failures must be fed back to other levels of the organization and supply chain. Similarly, as drivers for integration change with market conditions, the level of integration should be reviewed.

### Conclusion

This research uncovered valuable insights with regards to the benefits of integrated, customer facing learning. Using these insights for customer focused supply chain innovation has substantial potential for enhanced and continuously evolving strategic positioning.